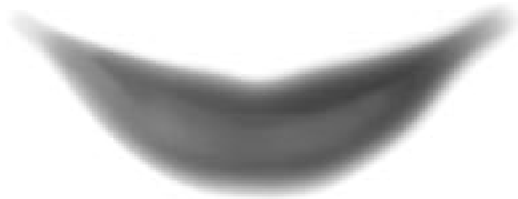
Section I

Looking Through A Different Window



ONE
Understanding the Bigger Picture

The farther backward you look, the farther forward you are likely to see. • **Winston Churchill**

Show Up, Connect, and Infect

My observation is that many team members are not clear on what they want for themselves professionally and do not actually know what business their practices are in. Getting a plan established that consistently provides comprehensive restorative, aesthetic, and periodontal care takes a true team. It takes a shared vision, and it takes independent knowledge.

Success means many different things to many people. Our vision of success is usually measured by our own set of values and goals. Our individual values and goals make up our personal and professional vision.

So, it is discouraging for me to hear that a team member feels pressure to "sell" cosmetic services, or is having some personal conflicts with the office demands. Rallying the practice troops to take sides, or attempting to undermine the doctor/owner, will not solve anything. You, as an individual, must discover what business you are in. Some or all of the following questions may help to clarify your own professional mission. There are no right or

wrong answers—only those answers that fit your professional principles.

Ask yourself:

- How do I want to help others? Why?
- What will make me happy in my work? Why?
- What is my standard of care? And why?
- What type of environment do I choose to work in? Why?
- What is my goal when serving my patients?
- What are my beliefs about comprehensive periodontal, aesthetic, and restorative dentistry?
- What is my ideal smile?
- How do I feel about having optimal aesthetic and restorative dentistry in my mouth?
- What am I willing to do, change, or risk to practice within a team?
- What are the professional goals that I want to achieve?
- How will I go about designing my own professional growth curriculum?

If you cannot answer these introspective questions or visualize your ideal practice environment, or finish statements like "I will be happy professionally when . . . ," how are you able to deliver care in the environment in which you are currently working? Or, if you already know you are unhappy in your current work situation and want to make a shift to a new dental employment home, how will you know what to look for the next time, without clarifying what you want? Or—equally as powerful—what you do not want?

Because the "practice" of dental hygiene is actually a "practice within a practice," and because dental assistants usually work interdependently with the doctor, it is imperative that all team members and the doctor share not only values and goals, but also a vision of where they want to take the practice. This aligned vision is like a road map to the practice they wish to create.

How can everyone be expected to reach the same destination if they don't share the same map? If the doctor is heading down one road and a certain team member is driving in another direction, neither will have created what they wished for—and both

will feel dissatisfied, frustrated, and possibly even under-appreciated or burned out. An impasse to success in many dental practices is this difference between the doctor's paradigm of success and that of the team's.

Though all parties may share the values of high quality care and concern for patients, for example, the players may have very different visions of what those values may look like in a practice.

For instance, what if the hygienist's vision of "concern for the patient" includes worrying about what the patient can afford, or he or she believes that cosmetic dentistry is optional dentistry that only a particular segment of the patient base can afford? The dentist, in fact, may feel very differently about those values. The dentist may feel that patients should have the right to choose for themselves whatever level of care they feel is appropriate. The reality falls somewhere in the middle, but this difference of vision could create aggravation between the doctor and the hygienist and create dissatisfaction for the entire team. However, if the vision for the practice has been fully articulated by the doctor and all aspects of the goals and values discussed, then the collaboration among doctor and team may have the opportunity to grow into an ownership-shared vision.

Ownership is a powerful tool that can move people much more quickly toward the realization of their goals. This partnership and vision can ensure that all parties are traveling the same road in the same direction at the same speed.

Now, it is time to make clear the distinctions of your current practice. Ask yourself the following:

What is the mission of my practice?

- Is my professional mission congruent with my current work atmosphere?
- Do I own that vision and mission with the doctor and the rest of the team?
- What knowledge will I have to gain to support that shared vision?
- What services does the practice want to provide—smile enhancement, periodontal, total-health, emergent care, orthodontics, etc.?
- Do I believe in all the services my office provides?

- What services may need to be reconsidered or added in order to support the shared vision?
- What are the elective services that I am uncomfortable with recommending, and why?
- What are my concerns and questions about these services?
- And finally, do I need to make some dramatic changes in my attitude, beliefs, and behaviors?

This self-actualization and practice analysis will better prepare you for a genuine discussion with your employer and other team members.

If you feel that your fellow team members are traveling down different roads—if your office is not working together cohesively—speak up! Ask to schedule a team meeting. Start the meeting by explaining your desire to understand the doctor's vision for the practice, to learn what other team members are looking for, and to establish a clear set of expectations for all.

Then, do some soul searching to determine your role and how you see yourself functioning in the practice. Clarify your expectations so that they mesh with an office mission or philosophy that is a healthier way to practice. Discovering what business your practice is in, clarifying what services you provide, determining what best serves the people whom you treat—and making sure all are harmonious—will help disarm negative judgments that patients make about a dysfunctional team.

Example of an Aesthetic Team Mission. Delivering clinical, behavioral, administrative, and personal services within the comprehensive framework of the theories and best practices of aesthetic dentistry. (Fig. 1–1)

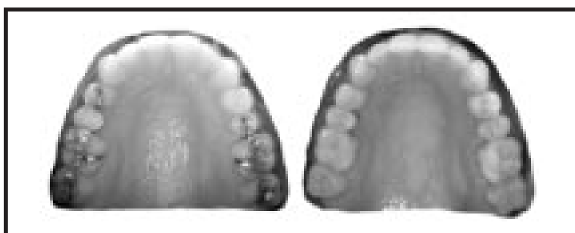


Fig. 1–1: *Fabricated IPS Empress restorations replacing the existing restorative dentistry, fabricated by Advanced Dental Technologies.*

Did We Expect to Learn It All in School?

by Jeffery Dornbush, D.D.S.

I graduated from the New York University College of Dentistry in February 1975 after only three-and-a-half years of formal dental education. We were the transitional class, as the dental school attempted to pare its four-year curriculum to three years. There was much controversy about whether we were adequately prepared for our clinical careers in just three- and-a-half years. It seemed as if the goal of our dental educators was to teach all that we had to know by graduation. Despite my continued pursuit of knowledge in the postgraduate prosthodontics program at Boston University School of Graduate Dentistry, the notion that a formal dental education would prepare us to cope with everything we need to know was dispelled early on.

Looking back with the wisdom of 20-20 hindsight, the metamorphosis that has occurred within what is considered "known" in nearly every discipline of dentistry has been substantial. I can see why this quote is apropos.

It is what you learn after you think you know it all that counts.
• **John Wooden**

In many instances, the way we practice dentistry today is the opposite of the way I was taught to practice in 1975. For example, consider the difference between the fundamentals in 1975 and in 2002.

Participation over many years in hundreds of hours of continuing education, from both the student and teaching perspective, calls for acknowledgement of available postgraduate educational opportunities. Without the ongoing efforts of those active within these institutions, we would not be where we are today.

The process of implementing advances to our clinical practice demands our learning and continuing education, although it can be steeped in controversy. The German philosopher Arthur Schopenhauser said:

All truth goes though three steps.
First, it is ridiculed.
Second, it is violently opposed.
Finally, it is accepted as self-evident.

For example, during the process of incorporating any of the following procedures, we may be chided as being a "bond-o-dontist," a "white-tooth specialist," a "techie," or a cosmetic dentist who gives everyone implants, bleaching, or veneers.

Today's vast advances in media technology mean people are more knowledgeable about what will be going on in their mouths. In 1975, patients were usually informed of indications for treatment to alleviate common complaints of pain and tooth loss, but there existed a shroud of mystery about what dentistry was actually doing for them. Now, patients often come in and ask for treatment! Our ready-at-hand tools for interactive education and effective communication between doctor and patient make our jobs easier. Increased patient/doctor understanding demystifies the whole process. There is less anxiety and this also facilitates better communication. For example, our dental operatory may be equipped with 20-inch video monitors for patient viewing of intraoral images and interactive patient-education programs, such as CAESY DVD formats and instructional videotapes. In addition, a separate computer monitor placed discretely behind the patient in the operatory allows access to practice management software (such as Dentrix Multi-User Software), digital camera images, and cosmetic imaging software (such as Image F/X). (Fig. 1-2)

In fact, the entire realm of audio, video, and computer technology facilitates the manner in which we make case presentations to our patients. Another valuable resource is photographs (or 35-mm slides) of previously treated cases, which are readily accessible for viewing by a prospective patient. Photographs and slides can conveniently be organized and stored as a digital library. Scanned into a digital format, they may be put into categories such as periodontal, prosthesis, crown-and-bridge, implant-supported restorations, aesthetic porcelain-laminate veneers, and amalgam replacement, with all-ceramic restorative dentistry. Storage for this digital library of case-presentation material is conveniently achieved by creating a CD-ROM using a CD burner. A CD-ROM containing before-and-after photos for illustrating clinical scenarios is easily accessed from any computer. In addition to case presentations, the digital format is conveniently available for web site development and patient education.

Fig. 1-2: *Dental hygienist enrolling a patient for restorative care. (Courtesy of CAESY Education System)*

The following documentation of treatment provided for my wife exemplifies a comparison of trends in dental care available in 1975 with those of today. (Figs. 1–3 through 1–9) The "yellow" character of her dentition prior to the advent of tooth whitening dictated the chroma of her four-unit, upper anterior, fixed partial denture that was fabricated for her in 1979. The two central incisors are pontics supported by the lateral incisor abutments. In the retracted pretreatment photo, a luting agent washout of the retainer of the upper right lateral incisor (#7) is evidenced by redness of the marginal gingival tissue.

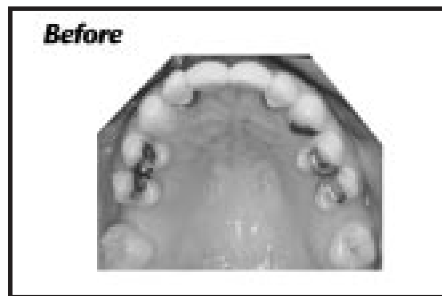


Fig. 1–3: *Maxillary occlusal view of the restorative dental condition prior to the 2001 treatment. There is evidence of tooth discoloration and fracture vulnerability from the existing amalgam restorations. The anterior four-unit fixed partial denture was fabricated in 1979, and there is a lingual collar display of gold from the supporting framework.*

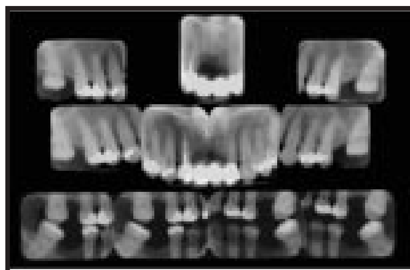


Fig. 1–4: *The magnitude of the gold framework supporting the anterior fixed partial denture can be realized in this pretreatment 1999 radiographic series.*

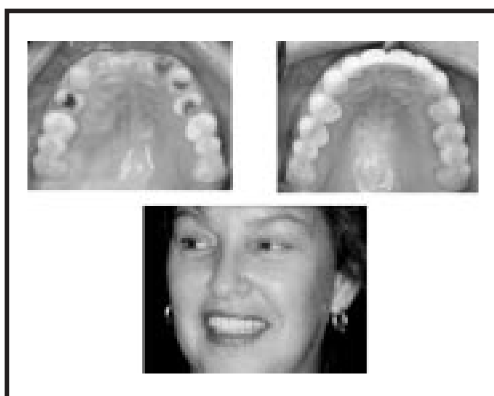


Fig. 1–5: *At the time of the 2001 treatment, all existing restorative dentistry was taken out, the teeth were cleansed of decay, impressions made, and the provisional restoration was constructed using Zenith/DMG Luxatemp. Parameters for establishing occlusal relationships were worked out during the provisional phase of treatment.*

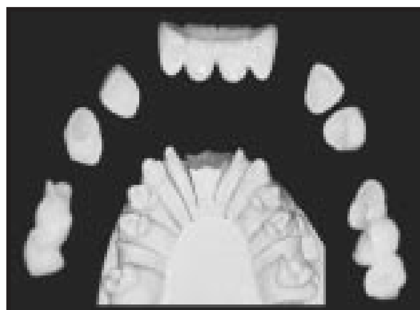


Fig. 1–6: *The stone cast with the definitive restorations fabricated by Jurium Dental Studio. The anterior fixed partial denture is a hybrid bridge consisting of feldspathic porcelain with a small embedded-cast framework.*

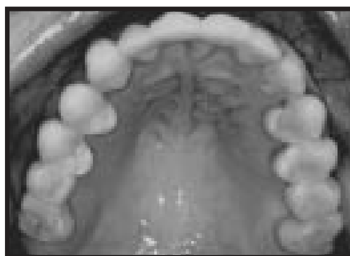


Fig. 1–7: *Occlusal view of the Targus Vectris posterior fixed partial denture restorations luted to place with Variolink II. Injection sites for the administration of the palatal technique to anesthetize maxillary anterior teeth are visible. The reduced bulk of the anterior feldspathic hybrid restoration is evident in the post-treatment full face and occlusal views.*

Fig. 1–8: *The post-treatment 2002 radiographic series illustrates the diminished bulk of the definitive restorations, which allows supra-gingival margin placement and creates an environment for periodontal health.*

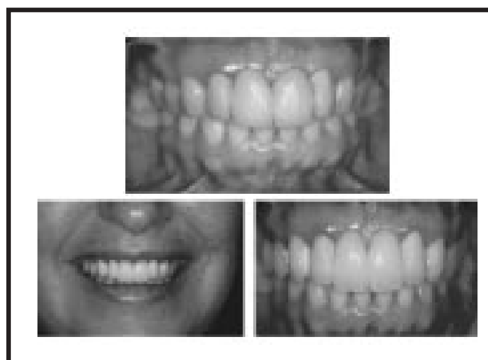


Fig. 1–9: *A comparison of dental technology in 1978 and 2001 is demonstrated in these pre- and post-treatment photographs.*

At times, it may seem overwhelming to learn and implement the vast array of advances pertinent to our clinical practices. It has been helpful to keep in mind a quotation by Henry Ford: "Nothing is particularly hard if you divide it into small jobs."

Merging of the Occlusion

Have you ever wondered why one tooth-colored material appears durable and remains aesthetically pleasing in a patient's mouth, while the same material fractures or breaks down in another's? Or, when evaluating current conditions in a patient's mouth, have you ever noticed an excessive amount of broken posterior teeth or restorations, tooth sensitivity, localized periodontal concerns, and/or muscle problems? Have you ever noted occlusal interferences during opening, closing, lateral, or protrusive movements? Clinical findings in these and other areas may indicate occlusal management problems.

Dental hygienists and clinical assistants are not trained in school to recognize and understand the detailed connection between teeth and the muscles that support the head, neck, jaw joints, face, etc. Those who take the initiative to learn about these connections—through continuing education and by learning advanced occlusion principles—and then apply that knowledge during pre-diagnostic examinations will improve their contribution to the clinical success and longevity of restorative/aesthetic and cosmetic dentistry.

For instance: Have you witnessed clinical failures with some of the modern materials? It may not be faulty restorative product properties, but rather, inappropriate case selection and a lack of focus on comprehensive treatment planning to include the occlusal scheme and muscle forces. For example, if a patient exhibits a pathologic occlusion prior to treatment, and the condition is undiagnosed or not treated, the occlusal force will either destroy the restorative material and/or the opposing dentition, or cause the patient post-operative tooth or jaw pain—no matter what restorative material is used. For a restorative material to survive in the mouth, clinicians must control as many biomechanical force loads as possible.

So, to re-emphasize: If hygienists and dentists are not taking the time to provide a complete occlusal evaluation, they should not be surprised or frustrated when tooth-colored restorations fracture or show signs of wear, or when they hear post-operative complaints about tooth sensitivity or jaw aches.

Understanding the essentials of occlusal and functional concepts supports true comprehensive care and a total oral wellness plan. Gaining such insights helps to break the cycle of ambiguous crown or amalgam placement, which leads to destructive consequences, such as fractured restorations or increased occlusal pathology. Being mentored about the intricacies of occlusion, the diagnostic aids, and the steps for treatment involves a congruency among the entire staff, but it can set the practice apart from others, by providing full-mouth care in the community.

Reading the "signs and symptoms"

Hygienists and team members understand that aesthetics is more than cosmetics and a practice's vision for providing comprehensive dentistry. But they should understand the multiple factors of occlusion in relation to comprehensive care, and be able to identify clinical signs and symptoms during clinical sessions.

Hygienists, specifically, are the team members with the most consistent access to the patient base through recare. A registered dental hygienist's knowledge of the functional reasons for aesthetic dentistry is imperative. Otherwise, many full-mouth cases could walk out the door undiagnosed.

Below are examples of questions to consider during hygiene screening.

1. Do you have, or have you ever had problems with your jaw, or had any injury to your jaw or face area?
2. Are you aware of, or ever had any pain/discomfort when you chew, talk, "open too wide," or close?
3. Do you hear or have ever heard grating, clicks, pops?
4. Does your jaw ever stick, lock, or has it ever "gone out"?
5. Do you or have you ever had difficulty chewing or eating?
6. Are you aware of any grinding or clenching of your teeth?
7. Have you noticed your teeth getting shorter, longer, or chipping easily?

Since occlusal discrepancies can be multi-factoral, no one cause-and-effect relationship can be easily isolated. Clinical signs to consider include the following:

- Class V non-carious lesions
- Para-functional habits (clenching; grinding; biting on pens, pins, or nails; unusual postural habits, etc.)
- Protrusive movements (mandible moves forward)
- Heavy lateral forces (mandible moves from left to right across the maxillary arch)
- Premature occlusal contacts, uncoordinated muscle function
- Tooth mobility
- Open contacts
- Titling or drifting of teeth
- Changes in percussive sounds
- Extreme occlusal wear
- Changes in radiographic anatomy (site-specific variations of the lamina dura, variations of the periodontal space, root fractures, root resorption, hypercementosis, and/or pulpal calcifications)
- Localized soft tissue changes

If a patient answers "yes" to any of the screening questions and/or during the hygiene screening, or if any of the clinical signs are recorded, a hygienist should inform and educate the patient that there may be a concern with how his/her teeth align with each other.

Until recently, the diagnostic tools that clinicians had, such as articulating paper, were not always sensitive enough to determine what was wrong with a patient's bite. In the mid-1990s, an emerging technology called T-Scan (Tekscan, www.tekscan.com) began to aid in the clinician's ability to accurately develop a well-balanced occlusal treatment plan. When a patient bites on a sensor, data are fed into a software program located on a laptop or conventional computer. The T-scan then uses vivid graphics to show results that can be viewed by the clinician and patient. This technology also includes a video component that allows hygienists to measure and see the sequential relationship/forces of the bite.

For comparison, articulating paper can only measure where the patient is biting, i.e., the contact points. T-scan monitors the strength of the force of closure and pressure on each tooth. This information gives clinicians the ability to determine if the patient's teeth are hitting evenly upon closure, or if there is a premature contact of one tooth or a few teeth that interferes with the closure pattern, and thus interfering with all teeth contacting appropriately and so preventing full intercuspation. (Maximum intercuspal position is a definite and stable end point of jaw closure.) This is an invaluable technology for a hygiene department that is easily incorporated into the hygiene assessment phase of service. The evaluation can be performed and the results displayed on the screen and completed in a timely sequence prior to the doctor's examination.

The doctor, upon reviewing the assessment findings, provides a more complete examination and differential diagnosis of the variation and/or provides necessary therapeutic choices.

Hygiene occlusal analysis steps

- Observe and record standards and deviations (T-bite)
- Angle's classification
  - Normal occlusion
  - Class I malocclusion
  - Class II malocclusion
  - Class III malocclusion
- Overbite/ overJet/ open bite
- Maximal incisal opening (MIO)
- Arc of closure
- Occlusal interferences
- Discrepancies in protrusive/ lateral movements

Team members and doctors need to take the opportunity to discuss, develop, and implement protocols, skills, understandings, and rationale to support form-and-function communication and the coordination of re-enrolling patients of record for comprehensive examination of care.

Smile! You're on a Dental Camera!

Whether or not you provide smile-enhancement dentistry or a hygiene service, make sure that you have a complete photography survey completed. It's fun and will allow you to walk in the patient's shoes. Photography strategies—whether taking or assisting—include the following tips:

- Keep the mirror dry (moist-free)
- Rest mirror on opposing arch
- Try to see the facial or anterior teeth
- Remember to include first molars

Curing light strategy

A curing light's baseline intensity should be measured with a radiometer when a curing light is new and, subsequently, at least weekly.

When curing a composite, sealant, or whitening—when utilizing any power light source—follow the manufacturer's instructions as to duration and distance. It is imperative that we do not "doze off" when using a curing light, because excessive heat, possible pulpal damage, and/or lip, tongue, or gingival burning may result.

Restorations and/or sealants cured with inadequate light intensity can result in sensitivity, breakdown, failure, unhappy patients, and, ultimately, loss of income due to the time needed for replacement of dentistry—and patients!

Barrier protection can be used with curing light tips, but they may decrease or interfere with the light-output intensity. Test the light output with a commercial radiometer, with and without barrier protection (even a Mylar strip), and record any difference. Then adjust curing time accordingly.

Keep curing tips free of debris and old resin, which may decrease the lights' effectiveness.

Always turn off a curing unit once the fan has stopped running. If turned off while the fan is still running, the unit could overheat.

Create Your Strategies

If you are not ready today, you will be even less ready tomorrow. • **Ovid**

This exercise is provided at the end of each chapter to assist you in designing a game plan based on each chapter's topics. It will help you develop the skills, knowledge, and expertise necessary to propel you to your next level of personal and professional growth. Ask, answer, and record the following:

My professional goals for understanding comprehensive care in the future are:

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The areas for which I would like assistance and support to achieve my goals are:

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My action steps to get in the game and achieve those goals are:

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My list of specific goals and dates I wish to accomplish them includes:

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Possible obstacles to watch out for: (i.e., fear of rejection, fear of change, lack of accountability, denial, lack of focus, lack of self-evaluation, lack of mentoring relationships):

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