Dental clinicians frequently categorize treatment decisions providing potentially inappropriate treatment plans. In our attempts to simplify treatment, we often group patients into categories, such as edentulous, medically compromised, financially challenged, periodontal patient, pedo, average/normal, as well as many other politically correct (or incorrect) terms. In doing so, we risk overlooking many of the unique variables that each patient possesses, and the many other products and techniques available to treat them. Many dentists have a wide arsenal of solutions, procedures and products to treat a variety of patients. Some even have a formula or recipe to know exactly how to treat each category of patient, while others find it easier to use a few select products, techniques or procedures to treat all patients, regardless of individual situation, which is often based upon treatment cost. This approach of “panacea-based dentistry” is not only illogical and unethical, but seriously limits the dentist and the patient.

Whenever we become aware of a new product or technique that is inferred by the manufacturer, researcher or key opinion leader as being the “silver bullet” for a given patient or procedure, or touted as the new standard of care, caution and anxiety sets in and causes us to question the claims. Very infrequently has there ever been or ever will be a product or technique that can be applied to all dental patients in all situations. The introduction or over-hype of a new product or technique is no different in dentistry than it is in many other industries. In an attempt to simplify the many different options, products and techniques, dentists sometimes cope by defining the clinical situations in “black and white” terms. We, like many of you, have discovered this to be far from the truth – dentistry is not just black and white or even many shades of gray, but full of colors, variables and a three-dimensional field of options with which we must become intimately familiar.

The purpose of this article is to address a few of the main areas of panacea-based dentistry and help you determine what treatment or product should be provided for your patients. For those who provide a panacea-based approach to dentistry, this article will provoke thought and reconsideration to provide an individual-based approach to dentistry.
Factors Influencing Oral Rehabilitation

Often, we clinicians state to our patients something similar to, “If you were my mother, I’d place (this product or technique) in your mouth.” Other statements allude to the ideal treatment option versus the “poorer option,” emphasizing how less desirable the latter option is regardless of individual patient situation. Interestingly, we sometimes see the same statements used on all patients. While some of these statements are comforting to the patient, very few patients are actually knowledgeable concerning what products or techniques are the best, as most simply trust our judgment. It is the dentist’s responsibility to provide adequate informed consent by discussing all the treatment options, while considering the patients’ individual situation. The following factors must be considered when proposing and deciding upon the best treatment for our patients. In addition to patient factors, we need to also consider material and product choices.

- Systemic health
- Patient life expectancy
- Financial resources and third-party benefits
- Aesthetic considerations
- Vital vs. non-vital teeth
- Previous trauma to teeth
- Patient psychological status
- Previous and current caries experience
- Periodontal health and condition
- Patient interest in treatment
- Many others!

Onlays vs. Crowns

Presently, less than two percent of all indirect, lab-fabricated restorations are onlays. For many years, onlays and inlays were taught to a significant level in dental school. In fact, many of you passed your regional board by prepping and seating a cast gold inlay. However, today it is evident that our profession has decreased the emphasis from onlays to crowns. When a patient has a fractured cusp or two (typically from a Class II amalgam or trauma, see Fig. 1), many dentists immediately condemn the tooth to a crown, when an onlay would be the preferred choice in most cases.

An onlay should be viewed as a precursor to a crown, and we suggest that more dentists provide this valuable service. Tooth structure can be preserved and the cost might be less in comparison to a full coverage crown. Most third-party benefit organizations are now reimbursing for this procedure. Onlays can be quickly and effectively provided to patients, due to the supragingival margins providing easier ability to make an impression, and superior resin cements.

Endodontics vs. Extraction and Implant Placement

Unfortunately, we frequently hear from lecturers and new and experienced implant dentists alike, that when a patient needs root canal therapy, they heavily encourage implant placement instead of endodontic therapy. Their justification is usually that the tooth will eventually fail and need to be extracted anyway. This panacea thinking is confusing to patients and might be unscrupulous. Individual patient factors need to be considered. Evaluate the remaining periodontal support, the restorative history of the tooth, the patient’s financial ability, adjacent tooth support, aesthetics, the patient’s interest in saving the tooth and many of the other above-mentioned factors.

Often, we see partially edentulous patients with teeth that are slightly mobile, some requiring endodontics, that could easily benefit from root canal therapy and a removable partial denture or fixed partial dentures or both. Instead, the patients are told that their teeth are hopeless and that four to six implants are required on each arch, followed by a fixed-detachable implant prosthesis or a full ceramo-metal fixed prosthesis on each arch. In such cases referring the patient to an endodontist or providing the root canal therapy yourself needs to be accomplished before condemning the tooth for extraction and implant placement (see Fig. 2).
Periodontal Crown Lengthening vs. Implant Placement

For some dentists, implant dentistry is a seemingly instinctive treatment choice. This is especially true when comparing cases in which a tooth can be extracted, the socket grafted, an implant placed and when observing the simplicity of restoring the implant to the alternative of periodontal crown lengthening. Implant dentistry appears to be a very popular choice when considering the proven longevity of implant dentistry and the greater financial reward for this treatment. Dentists are now more inclined to emphasize implant dentistry for patients rather than providing simple periodontal crown lengthening. Examples are patients with a healthy periodontium and a single tooth with severe decay requiring extensive bone removal which will compromise not only the aesthetics but also the bony support of the adjacent teeth. Other examples are patients with a tooth broken off at the gingival line (or below the gingival line) and the adjacent tooth is an implant-supported crown (see Fig. 3). Often, significant crown lengthening would be required to create an appropriate ferule for the long-term stability to the restoration.

Some dentists fail to provide or even offer crown lengthening to their patients for a variety of reasons, including: the belief or observation that the body will provide its own natural crown lengthening; the added cost to the entire procedure, which might influence the patient to reject the proposed treatment; the added time for the entire procedure, which can take up to three months, post-surgically; and even the decreased emphasis by the specialists themselves in favor of the implant option. Regardless of the reason, patients need to be informed when crown lengthening is the most appropriate treatment and the risks and benefits of the procedure. Additionally, the surgically oriented and experienced restorative dentist can provide simple crown lengthening at the time of the tooth preparation for a reasonable fee, increasing patient acceptance and decreasing overall treatment time, while ensuring that the patient is offered all available options.

Resin-based Composite vs. Amalgam

Composite restorations dominate most of the direct restorations being provided in the U.S. and in many parts of the world. Amalgam, despite its continued support by the ADA and other organizations, has been relegated to patients with minimal third-party financial benefits, government-supported programs, children, or those who are financially challenged. Amalgam is still taught in most U.S. dental schools; meanwhile, is outlawed in some countries. Amalgam restorations face the challenges of fractured cusps and staining, however, they have a known longevity that can last up to two decades. Despite the ongoing controversy about this material and its unaesthetic properties, amalgam has withstood the test of time and has been proven to be an effective restorative material. This is especially true in terms of its longevity compared to resin-based composites and its moderate cariostatic properties. Without question, resin-based composite creates superior aesthetic results. However, it is technique-sensitive, more expensive, lacks cariostatic properties and typically results in deeper and more extensive decay after a service period.

Although much more popular, resin-based composites do not enjoy the same overall success rate as amalgam, in terms of longevity, recurrent decay and depth of decay. Despite this, resin-based composite is reserved for our “best” patients and amalgam for our “worst” patients. If a dentist believes that resin-based composite is the superior option, he or she needs to present it to all patients regardless of their specific situation, discussing the expected longevity of the restoration compared to other options. If a resin-based composite is properly placed, using a rubber dam and well-established materials, the restoration might last up to 10 years. In some patients with some dentists, it can last longer. However, in a patient with a moderate to high caries index, the average longevity is somewhat shorter (about five to six years – see Fig. 4). Careful selection of the dental materials, techniques used, with patient education and frequent monitoring, can maximize the success rate of these restorations. Post-operative and continuing fluoride treatment should be used to assist in preventing recurrent decay.
Chairside CAD/CAM vs. Laboratory-fabricated Restorations

Chairside CAD/CAM-based dentistry is continuing to grow and gain interest among many dentists. It is reaching beyond simple inlays, onlays and crowns. The technology is advancing into relationships with cone beam computed tomography (CBCT), surgical guides and immediate implant loading. While highly exciting for the technology-oriented dentist, some dentists shun this new direction out of disinterest, disbelief or ignorance. It seems as if conventional dentistry has a competitor instead of an alternative solution. Most manufacturers are predicting digital dentistry as a significant growth center in the years to come and are investing heavily to be a part of the movement.

While not all dentists are interested in chairside CAD/CAM or digital dentistry, the technology and its ability to produce highly acceptable restorations is proven. The dental laboratory industry is incorporating much of the technology and learning how to work with dentists who are using the technology instead of working against them. Many laboratories are converting their business model to direct their solutions to other dental labs, instead of the dentist, via digital scanning, design and fabrication for those labs. Dentists and their lab partners should discuss what is best for their practice and recognize the available options. In some practices, the chairside CAD/CAM model might not be appropriate. Intraoral digital imaging alone might be the next logical step for such practices continuing to use the existing dentist-laboratory relationship.

PFM vs. All-ceramic

In the past 10 years, a tremendous amount of money has been spent making dentists and laboratories aware of the new, more aesthetic all-ceramic crown options. Advertisements linking attractive women to the ceramic systems infer the absolute beauty of these new systems compared to the gray or yellow appearing metal-based systems of the past. Improvements to past ceramic systems, such as the addition of leucite, reformulation of lithium disilicate, zirconia as a framework, monolithic ceramic options, as well as the rising cost of alloys, has increased the use of these all-ceramic options. Despite this, porcelain-fused-to-metal (PFM) still remains the number-one prescribed crown system in the U.S.

There are some dentists who refuse to use anything but gold alloy restorations (they are dying with the gold), while others use only zirconia, and still others only use lithium disilicate. The long-term success rates of many of these newer all-ceramic systems are being established and clinical judgment is advised on knowing when to use them and when not. But to use one system for all cases without providing the patient with options can be considered negligent and unethical.

The aesthetic result of a well-fabricated PFM crown can equal that of any of the newer all-ceramic systems, with the added benefit of more than 50 years of proven success. However, the laborious waxing, investing and casting are being replaced for the simpler CAD/CAM lab systems that can be completed much quicker with consistent results. The dental ceramist/technician is becoming a digital dental designer. It is highly recommended that the dentist and the lab technician/ceramist discuss the available ceramic systems, including metal options, such as conventional PFM (layered) and press-to-metal and when it is best to use each.

Other Areas of Panacea Dentistry

While only a few of the main areas of panacea-based dentistry are addressed in this article, other examples include:

1. The placement of porcelain veneers on all patients desiring an aesthetic improvement instead of providing a minimally-invasive approach that might include minor tooth movement, enamel recontouring, bleaching or direct resin-based composite placement.

2. The general dentist business model of “everything under one roof” when some procedures that the general dentist is not experienced in would be best treated by a specialist.

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3. The approach that everything that has a flaw, fracture or evidence of age should be replaced instead of conservative repair or refurbishment.

4. The attitude and practice that only conventional-sized implants should be used in patients when small diameter implants (minis), as well as short/wide implants are viable options.

The common theme with all of the above examples is that the dentist is limiting the options to themselves and patients by using a “one or the other” approach.

**Conclusion**

Dentists should continue to educate themselves in all areas of dentistry, learn of the many treatment and material options available and provide a variety of services based upon research and facts. We suggest that dentists provide informed consent to every patient, reviewing all available treatment options, the advantages and disadvantages of each, as well as the associated risks and costs. Ultimately, educating patients and providing them with the autonomy to choose the best option for their individual situation is ethical and rewarding for dentists and provides the best service for patients.

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