**The New Gold Standard for Temporary Anchorage:**

**Drs. John Graham, Jim Hilgers, Nicole Scheffler and Steve Tracey**

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For additional information on courses listed above, use the contact information shown. For a complete list of courses, visit your region’s Web site: www.ormco.com (N. America, Australia, New Zealand), www.ormco-europe.com (Europe), www.ormco-japan.com (Asia), www.ormco.com.mx (S. America).
Dear Friends,

Ormco prides itself on bringing change to the marketplace, but change in and of itself holds little merit. Time alone brings change. This is not the type of change that we atOrmco advocate. We prefer to be the instigators of change and have, on many occasions, led the profession in advancing technology. Having said that, we’re also intent on ensuring that any product we develop also brings with it significant improvement. We dedicate enormous resources to this end.

To accomplish the latter in the case of miniscrews – to significantly improve on the screws that have been on the market – we deliberately chose not to be first. Certainly, we could have brought out a simple temporary anchorage device far sooner than we did, but we wanted to make sure we had thoroughly explored the concept, designed and manufactured it with important input from our clinician partners, and built it with such intelligence that it would be regarded as the pinnacle in practicality, usefulness and simplicity. The new VectorTAS™ miniscrew system fulfills that criteria, and we feel that it will soon improve the results you achieve not only for complex, maximum anchorage cases but also for the more common cases that you see every day.

Of course, there are the other numerous innovative products on which we have built our reputation for quality and we will continue to honor our pledge to provide you with the finest and widest array of appliances and auxiliaries and the friendliest, most competent customer service support possible. To do so, we depend on you to let us know where, when and how we can continue to improve on this commitment. Please stay in touch and let’s keep working together to keep the world smiling confidently.

Best regards,

Don Tuttle
President, Ormco Corporation

Clinical Impressions is Back

So many clinicians have told us they have missed the useful, often leading-edge clinical information they gleaned from *Clinical Impressions* when we were publishing it quarterly that we are now committed to publishing two editions annually. Watch your mailbox for it early in the year and in the fall.

If you’re interested in having an article considered for publication in *Clinical Impressions*, e-mail us at ci@sybrondental.com. Someone from the editorial staff will contact you about taking the process further, providing writing and editorial support as needed. We look forward to partnering with you to continue the important tradition of this clinician-driven publication.
The Ordeal of Innovation

Any major innovation requires not only a confluence of smaller discoveries before a useful product results but also a shift in assumptions about how the world works. The computer offers an appropriate illustration of this phenomenon. By 1918, every element needed to construct a computer was available: e.g., binary theorem, calculators, punch cards, audion tubes, symbolic logic and concepts of programming and feedback. The Univac, however, didn’t become operational until 1946.

According to Thomas Kuhn, the MIT science historian and philosopher, that 28-year wait is pretty much the norm, and modern technology has not speeded up the process to any appreciable extent. He concluded that it takes from 25 to 30 years for a new scientific theory to shatter the traditions of existing thinking and forge a new operating paradigm. And so it’s been with temporary anchorage devices, a 25-year journey from concept to the beginning of generalized use.

I rather imagine that Tom Creekmore¹ would find considerable pleasure in the extensive interest in and implementation of the concept of skeletal anchorage that he pioneered almost 25 years ago. The cephalometric image of that revolutionizing effort to intrude maxillary incisors with a dental surgical screw still impresses me even now that we have seen more sophisticated use of miniscrews. As he was about so many things, Tom was right about the potential of skeletal anchorage, and his innovative work has finally led to a literal paradigm shift in orthodontics.

Temporary anchorage devices (TADs) that other manufacturers have offered to date have been fragmentary and incomplete. Now, rather than having to rely on one company for drivers and screws, then other companies for springs, wires and improvised hooks, clinicians can turn to one source, Ormco, for a comprehensive, intelligently engineered system – VectorTAS™. Ormco’s talented product development group has produced this simple-to-use, coordinated system designed for orthodontists by orthodontists via a team of knowledgeable, highly skilled clinicians – Drs. John Graham, Steve Tracey, Jim Hilgers and Nicole Scheffler. Their input has been invaluable in delivering an appliance and related auxiliaries that reflect the exacting clinical requirements orthodontists need to make this device a successful component of efficient treatment.

Unique to VectorTAS are two key elements: the coding system that matches the color of the miniscrew with its recommended placement area according to the company’s proprietary skull atlas, and the delta-shaped miniscrew head and coil spring attachments with the same design that fit the head exactly and lock into place. In addition, an educational component combines a workbook that demonstrates multiple ways clinicians can use the miniscrew with multiple courses offered throughout the United States. These courses will give participants the confidence they need to make this new discipline part of their normal clinical repertoire.

Clinicians around the world have recorded the tremendous advantages that temporary anchorage offers orthodontists and patients – reduced anchorage demand for more control, surgical cases treated without surgery, headgear elimination, reduced treatment time and greater patient comfort. TADs represent a quantum leap in anchorage preparation that equals other exemplary innovations such as the edgewise bracket, manufactured bands, bonding and the Straight-Wire® Appliance. Designed as it is, VectorTAS will certainly lead the profession in this latest of overarching technological advancements that have shaped a new way of thinking about what’s possible through modern orthodontic care.

Many indications exist to establish temporary skeletal anchorage as the new gold standard for orthodontic mechanics. Edentulous space closure, segmental intrusion/extrusion, correction of occlusal cants, molar uprighting and many other tooth movements tax conventional orthodontic mechanics to its limits. With the advent of temporary anchorage devices, the simple placement of one or more miniscrews provides the orthodontist a fixed, immovable anchor against which a myriad of movements may be performed while leaving adjacent dentition unaffected. Although we understand the propensity for considering the use of miniscrews in complex orthodontic cases, their greatest strength lies in the treatment of everyday maloclusions. Think about it. There is virtually no Class II case or maximum anchorage extraction case for that matter that can’t be simplified by the use of a miniscrew and a well-conceived system of applied mechanics. In short, temporary skeletal anchorage will give us greater control of our outcomes than we’ve ever had before. In the not-too-distant future, orthodontic residents will wonder how orthodontists ever practiced without temporary skeletal anchorage.
Until recently, most miniscrews used in orthodontics have been just that – minia-
ture screws borrowed from maxillomandibular fixation or dental implant systems
not designed specifically for temporary skeletal ortho-
dontic anchorage. In addi-
tion, orthodontists have
largely been left to their
own devices and, in many
cases, have suffered from
inefficient treatment
mechanics and improper
force levels. The lack of a
systemized approach to the
placement and utilization
of miniscrews has led to
frustration for those ortho-
dontists attempting to use
them and, quite often, less-
than-optimal results.

Recognizing these short-
comings, Ormco took
the tack that what the
profession was craving was
a comprehensive approach
– a complete miniscrew
system not only of superior
design and strength but
also with complementary
auxiliaries and required attachments that supply the
proper force vectors and, as important, a guide for
placement and mechanics. From this strategic
direction, and with the assistance of the four of us
who provided the clinical direction, VectorTAS™
was born. Its design criteria were three things:

- Simplicity
- Design intelligence
- Educational support

**The Mandate for Simplicity**

The mandate that VectorTAS be simple to use is
to ensure that the system addresses all clinical
needs and that each of its aspects works easily and
effectively in the orthodontic environment. We’ll
address two of these features: color coding that
guides placement and painless anesthesia.

**Atlas Guides Miniscrew Placement**

One of the key differentiators of VectorTAS is the
guidance it provides clinicians in choosing the cor-
rect miniscrew for each particular anchorage need
and determining its ideal position in the oral cavity.
This approach minimizes the chance of miniscrew
failure. For ease in matching a miniscrew with its
ideal implant site, the color of each corresponds
with its recommended placement area designated
on the proprietary VectorTAS Atlas1 (Figure 1),
which takes into consideration bone type and
density and interradicular and tissue depth.

**Painless, Needle-Free Anesthesia**

One of the primary concerns among orthodontists
considering the use of miniscrews is how to place
them without using needles to deliver the anesthe-
sia. To address needle apprehension among cli-
nicians and patients alike, two needle-free anesthesia
injectors are available to provide pain-free treat-
ment: the MadaJet XL2 and the SyriJet Mark II3.
The SyriJet, in particular, is designed to provide
clinicians with greater confidence when placing
miniscrews. This premier precision instrument
delivers up to .20 cc of adjustable doses of anesthe-
sia submucosally for a more profound anesthetic

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1 The Atlas and its corresponding color-coded miniscrews serve only as
a guide. As the clinician’s proficiency in miniscrew placement increases,
so too will the placement options for each screw.
effect than what a topical anesthetic alone can deliver (Figure 2). It is ergonomically designed for easy angulation into almost any area of the oral cavity and its cushioned conical head permits close approximation to the injection site with a rubber cap added for patient comfort. The rapidly repeatable, quiet operation facilitates efficiency and clinician and patient acceptance. It is simple to use, virtually pain-free and has excellent patient acceptance. Because there are no needles, there are no needle-related disposal or safety issues and it’s easy to clean, requiring no additional sterilization equipment.

The Mandate for Design Intelligence
Over two years in the making, the VectorTAS miniscrews are designed with elegant form and exceptional function for maximum strength, efficiency, reliability and patient comfort. We were involved in testing its every element and, combined with its research-supported features, can attest to its superior reliability. Its varied attachments offer wide-ranging clinical capabilities for a myriad of case types.

The VectorTAS Miniscrew
VectorTAS miniscrews are all gamma-sterilized and made of biocompatible 6-4 titanium. There are four screws of specific lengths, diameters and cutting configurations to address the different areas of the oral cavity where they will be placed. Figure 3 features one of each type of cutting configuration.

Unique to VectorTAS is its readily identifiable delta-shaped head (Figure 3), which eases loading and removal via alignment with the delta-shaped eyelets of its auxiliaries (Figure 4). The smooth, rounded edges of the head ensure patient comfort and there are no bracket-head corners, trailer-hitch heads, screwdriver grooves or other potential sources of cheek or lip irritation. The head also maximizes retention by capitalizing on unique geometric undercut cuts with no archwire slots.

Advanced Thread Design. All VectorTAS miniscrews are self-tapping and self-drilling, requiring only light to moderate pressure for insertion, which minimizes the need for tissue punches. A simple pilot notch via the VectorTAS Initiator is all that’s required for areas of dense cortical bone or hard-to-access areas. The pitch, lead, size and depth of each miniscrew have been optimized and clinically tested for a level of excellence second to none. The sharp asymmetric buttress threads provide insertion ease with strong pullout resistance (see miniscrew enlargements).

Thread-Forming and Thread-Cutting Designs. The screws are fabricated either as thread-forming or thread-cutting, depending on the type of bone into which they will be inserted (Figure 5). The screws with the thread-forming configuration (6 and 8 mm lengths) are ideal for thinner bone because they create an intimate purchase when cortical bone adapts to
 hoop stress. The screws with the thread-cutting configuration (10 and 12 mm lengths) are ideal for areas of thick, dense bone that requires cutting because of decreased stress adaptation. Dual-cutting threads remove bone debris to aid in advancing the screw into the bone, which decreases bone stress for increased success.

**TAD-Specific Auxiliaries**

**Coil Spring Attachments.** The Ni-Ti® coil-spring attachments of the VectorTAS system are designed specifically for the vectors and forces required of temporary anchorage in orthodontic cases.

**Crimpable Post.** Essential to attaching the miniscrew directly is a crimpable post that clinically adapts for multiple force vectors. The VectorTAS post is robust enough to withstand clinical forces, and its crimping option and comb design offer considerable flexibility (Figure 7). The anti-tip mechanism minimizes wire friction and labial-lingual adjustment allows the post to be bent away from the gingiva, which minimizes tissue impingement. Its flat profile further ensures patient comfort.

**Dual-Action Driver Tip.** The VectorTAS straight and contra-angle drivers seat fully over the screw head with a friction grip for easy retrieval from the sterile packaging and secure transfer and placement (Figure 8). Each driver can snug up a screw without the need to remove attachments.

**The Mandate for Educational Support**

The mandate for educational support resulted in the development of a clinical workbook that provides clinicians guidance in treating the most typically seen cases and a number of course offerings in major cities around the world each year. These hands-on, highly interactive courses provide attendees with the clinical information they need to feel confident about integrating temporary skeletal...
anchorage into their practices, including:

• Evidence-based advantages for proper and rational use of temporary skeletal anchorage devices in orthodontics.
• How to use miniscrews to achieve a wide range of orthodontic movements.
• How to place and remove miniscrews and attachments in your practice easily and painlessly.
• How VectorTAS can increase your efficiency by shortening treatment times and make a positive difference in your practice.
• How to optimize temporary anchorage with passive self-ligating mechanics.
• How to increase your conversion rate by communicating the benefits of temporary skeletal anchorage without putting off prospective patients.

**Conclusion**

With VectorTAS, the potential for temporary skeletal anchorage to forever alter our clinical practice is now within our grasp. If we relegate this remarkable technology to only the more complex cases, we will be missing important opportunities to simplify our practice life and offer appealing nonsurgical adult treatment alternatives. To capitalize on the full value of skeletal anchorage, we ought to consider its use any time we need anchorage control and, by most estimations, that is much of the time.

Adolescent patients continue to comprise a majority of many practices, and many of those cases have anchorage demands. Since miniscrews can virtually ensure tooth movement follows the direction we dictate with no unwanted reciprocal counter movements – while reducing compliance – with miniscrews, we have the opportunity to overcome perhaps the greatest challenge to the treatment success of adolescent cases. Imagine practice life with less need for elastics or headgear. Imagine treatment results that complete bone anchorage provides. While adult patients are usually more compliant with their elastics use, their cases, too, would benefit immensely from such stable anchorage. And imagine also the opportunity to present nonsurgical treatment alternatives to adults for applicable open bites and occlusal plane cants, achieving treatment results that are simply not possible without these devices.

Incorporating any new protocol takes a willingness to change, to learn and to persevere. It also takes being disposed to employing the new technique often enough to gain the competence and skill to make it a relied-upon system considered routine. Ormco is assisting with this effort by offering courses throughout the world that we team members are conducting. These courses aid attendees in becoming familiar with the clinical applications of VectorTAS and to understand how to use the tools Ormco provides for painless placement and ease of use. As we in the profession continue to learn how to make the best use of these devices for various types of orthodontic issues, we will, as we have always done, share this knowledge to advance their successful application. Our hope is that in just a few years, orthodontic residents will wonder how we ever practiced without temporary skeletal anchorage.

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**Case 1 – Dental Cant**

**Pretreatment/Treatment Plan**
Adult female patient (referred by her general dentist for smile-line alignment and leveling prior to replacing crowns on centrals and lateral incisors) presented with obvious hyperextrusion of right upper posteriors, excessive gingival display and smile-arc-to-lip disharmony. Employed full appliance Rx (.018 Ti Orthos™) but with 27° torque buccal tube on the upper right 2nd molar for control during its intrusion to help prevent the lingual cusp from hanging as buccal cusps lifted.

**TAD Placement and Attachment**
After leveling and alignment, placed a .016 x .022 TMA® finishing wire in the lower arch, a .016 x .022 stainless steel wire in the upper arch and a VectorTAS 8 mm miniscrew buccally between the upper right 1st and 2nd bicuspid (the most hyperextruded teeth) at the mucogingival junction. For the intrusive force, attached a VectorTAS 5 mm 150 g double-delta Ni-Ti coil spring from the miniscrew, looping it down and around the main archwire and back to the screw head.

Eight weeks later, placed a second VectorTAS 8 mm miniscrew lingually between the upper right 2nd bicuspid and 1st molar, bonded buttons onto the lingual cusps of those teeth, and stretched elastic chain from buttons to miniscrew to apply additional intrusive force from the lingual (to better intrude hanging lingual cusps of bicuspid and molars). Employed interarch elastics between upper and lower arches on right to extrude lower posterior teeth into occlusion with intruded upper teeth.

**Posttreatment**
Debonded brackets and removed miniscrews after two additional adjustment visits (6.5 months of miniscrew treatment). Patient is scheduled to have crowns replaced.

Case courtesy of Dr. Steve Tracey
Case 2 – Anterior Retraction

Pretreatment/Treatment Plan
Adult female patient transferred into the practice after 15 months of treatment, which included extraction of upper 1st bicuspids and lower right 1st bicuspid to correct a Class II, division 2 malocclusion, deep bite and incisor protrusion. She presented with a bimaxillary dental protrusion and spaces distal to the upper laterals because the upper canines had been individually retracted with a transpalatal bite plate for anchorage. We removed all maxillary appliances and placed Damon® 3 on the upper arch.

TAD Placement and Attachment (not shown)
After progressing to a .019 x .025 stainless steel wire in the upper arch and two VectorTAS 8 mm miniscrews buccally between each of the upper 1st molars and 2nd bicuspids at the mucogingival junctions. Attached one VectorTAS 5 mm 150 g single-delta Ni-Ti coil spring from each miniscrew to the crimpable hooks just distal to the upper laterals for both retraction and intrusive force vectors. Eight weeks later, changed the crimpable hooks to power arms and reattached the same Ni-Ti springs.

6-Month Treatment Progress
Six months after placing the miniscrews, the bite had opened 2 mm, anterior and posterior segments had consolidated and the spaces had reduced in size. At this appointment, reduced the upper .019 x .025 stainless steel wire with a gray stone distal to the power arms to minimize friction of the wire as it was distalizing through the posterior brackets. (We could have performed this protocol when first placing the miniscrews six months previously.)

Case courtesy of Dr. Nicole Scheffler
Case 3 – Anterior Open Bite

Pretreatment/Treatment Plan
A 17-year-old male patient presented with an anterior open bite, a steep mandibular plane and his mandible rotated down and back.

TAD/AOB Splint Placement and Attachment
Cemented AOA Lab’s anterior open-bite appliance (AOB splint) to the bicuspsids and molars. Placed two VectorTAS 8 mm miniscrews at the mucogingival junction between the upper 1st and 2nd molars and attached two VectorTAS 5 mm 150 g Ni-Ti® coil springs to each of the 8 mm screws, then down to the ball clasps of the AOB splint to form an isosceles triangle bilaterally. One month later, bonded Damon® 3MX on the upper arch 3-3, placing a segmental .014 Copper Ni-Ti® wire.

Splint Removal
At six months, removed the AOB splint, direct-bonded the upper posterior teeth and indirectly bonded (our usual protocol) the lower arch with Damon 3MX. Placed a .016 Cu NiTi in the upper 7-7 and tied a ligature wire from the 1st and 2nd molar brackets to each miniscrew to retain vertical correction. After AOB splint removal, followed the typical Damon archwire sequence, maintaining molar-to-miniscrew ligation for vertical stability.

Case courtesy of Dr. Nicole Scheffler
Pretreatment/Treatment Plan
A 15-year-old male patient with severe skeletal open bite presented with congenitally missing lower central incisors and lower right 1st bicuspids, bilateral upper pegged lateral incisors, an impacted upper left canine with molars in Class III due to mesial drift. Family refused orthognathic surgery and dental implants.

TAD Placement and Attachment for Molar Intrusion
Progressed to .018 x .025 Cu Ni-Ti wires and started lower molar intrusion with two VectorTAS 10 mm miniscrews placed parallel to the roots of the lower molars in the area of the 1st and 2nd molar embrasures. (We used 10 mm screws for three months, awaiting the manufacture of 12 mm screws.)

TAD/AOB Splint Placement and Attachment
Progressed to .019 x .025 stainless steel archwires in both arches. Sectioned upper wire distal to cuspids. Cemented4 AOA Lab’s anterior open-bite appliance (AOB splint) to the bicuspids and molars. Placed one 12 mm VectorTAS miniscrew in infrazinggomatic crest of each side adjacent to 1st molars. Because of the amount of intrusion required, placed miniscrews in mobile mucosa high in the sulcus. Tied elastic thread from miniscrews to ball clasps of splint. Open bite measured 12 mm immediately after splint placement.

TAD/AOB Splint Removal
Patient returned every two to three weeks for elastics retying. Removed the splint and miniscrews at seven months and then bonded the upper posterior teeth. The patient’s bite had closed with a 2 mm overbite for a total closure of 8 mm. My current protocol is to leave miniscrews in place until the end of treatment for stability, steel-tying them to the archwire.

Case courtesy of Dr. John Graham
4 Used Excel® (a registered trademark of Reliance Orthodontic Products, Itasca, IL) to cement splint.
I remember vividly the first time I saw Dwight Damon present his cases. He was moving teeth and alveolar bone in ways that I never thought possible with fixed mechanics and completing complex cases, many in only seven or eight appointments, with amazing efficiency. As I sat there studying his serial photographs, meticulously measured study models and CT scans and furiously taking notes on his treatment protocols, it hit me like a bolt of lightning. This man has empirically developed an entirely new therapeutic regimen, one predicated on light force that is less traumatic and works with the hard and soft tissues to elicit a response heretofore not observed with conventional high-friction/high-force mechanics. I was convinced that his treatment philosophy would change the standard of care for our profession. This was a paradigm shift in orthodontic treatment that I wanted for my patients. Furthermore, I knew that the dentists in my community would want this for their patients and that the public would want this as well – I barely slept a wink that night.

Upon returning from Dwight’s seminar, I called my Ormco sales rep and ordered 50 cases of Damon® brackets and Copper Ni-Ti® wires. I had originally intended to complete my own clinical trial on 50 consecutive patients before initiating wider implementation of the system in my practice. It took only a few wire sequences on these patients, however, before I began observing remarkable dento-alveolar responses (Figure 1). My patients were reporting minimal discomfort and were extremely pleased with the significant and rapid improvements to their dentitions. They began enthusiastically referring friends and family to me for consultations. I decided not to wait for the completion of my clinical trial and made this technique available to all of my patients from that point on.

**Figure 1.** Correction of anterior and posterior crossbites in three appointments without palatal expander or interarch elastics.
Educating Myself and My Staff
I owed it to my patients and staff to learn as much as possible about the new protocols and mechanics that we were implementing. I read and reread the Damon Workbook, trying to discover all the treatment nuances of each documented clinical case. I studied Ormco’s Clinical Impressions Learning Libraries on Copper Ni-Ti and the Damon System and joined a regional Damon study club to share and learn with colleagues who were also using the technique. I attended Alan Bagden’s seminar on the Damon System twice and subsequently attended two more of Dwight’s.

During this time, I began to create Lunch & Learn PowerPoint presentations for my staff in order to educate them on the Damon treatment philosophy. I incorporated Dwight’s teaching cases from the workbook and added sections on wire technology, principles of passive self-ligation, the biology of tooth movement, and the effects of light force at the cellular level. My staff began to share my enthusiasm and passion for the Damon treatment philosophy. As the presentations evolved, I combined them into one large 250-slide comprehensive presentation (Figure 2).

Educating the Dental Community
At this point I knew it was time to reach out beyond my office and to begin my own campaign to educate the dental community in my area about the benefits of the Damon System. The first logical step was to build awareness of this new approach to orthodontic treatment. To do so I created and mailed a special edition of my practice newsletter describing the Damon approach to all dentists and hygienists in my area. It discussed passive self-ligation, high-tech wires, and showed one of Dr. Damon’s clinical cases with CT scan images. Its format was a scientific article with references. The response from the dental offices was very impressive, and my office manager began arranging dates for me to present this information to those requesting it.
For the attendees’ convenience, I began offering different presentation formats:

• Lunch & Learn seminars at their office or mine with a catered deli lunch
• An evening seminar with a buffet dinner and refreshments in my office

As the months passed, the presentations became increasingly popular and created a robust base of referring practitioners for Damon to my practice. Many offices that had never sent us referrals began sending new patients. In addition, I presented the lecture to local dental associations and study clubs. Over a 12-month period, nearly the entire dental association in my metro area learned about the Damon treatment philosophy of low-friction, low-force orthodontic treatment and they are now enthusiastic advocates of this for their patients.

Educating My Patients

Since the Damon treatment philosophy was fairly new in my area, parents and patients had many questions about the unfamiliar-looking braces that didn’t require colored ties. Certain patients who presented to my office for second opinions wondered how it was possible for me to propose treatment plans that did not include palatal expanders and extractions as recommended by other orthodontists in the area. I found it essential to spend an extra minute or two at each new-patient exam to explain why low-friction, low-force braces are important and show them examples of treated cases. Using the Ormco 15X demonstration models (Figure 4), I demonstrate how easily the teeth can slide through the Damon self-ligating brackets as compared with the traditional brackets with the elastic bungee ties. I tell them that now that we don’t have to overcome frictional binding, we can lower the tooth-moving forces several hundred times, which induces an adaptive response of the bony dental arches that is healthier, faster and occurs with much less pressure and pain. Patients, young and old, get it immediately.

In my new-patient presentation folder, I include a copy of my special-edition newsletter — the technical version of how it all works (Figure 3) — as well as Ormco’s Damon System patient brochure — the layman’s version.

The Results

Patients not only desire superior results, but they also want to obtain them in a quick, comfortable, and less-invasive manner. Their dentists demand proper occlusion and esthetics and want to be confident that the orthodontist they recommend will deliver these results consistently. With the Damon System I am able to meet these demands by employing uncomplicated treatment protocols that are far more efficient and profitable than the traditional high-friction, high-force treatment modalities I used previously.

Since switching to the Damon System I have experienced a dramatic increase in referrals from dentists and from existing patients. Their recommendations come with an enthusiasm that I have not encountered in nearly 15 years of practice.

Consequently, my practice has doubled in the last 24 months and we are currently building a larger office and hiring more staff to accommodate this growth. In addition, my staff is happier, achieving great smiles for our patients with such a straight-forward clinical technique.

Dwight Damon has pioneered a philosophy of treatment that has provided our profession and our patients with a great gift. He describes the novel dentoalveolar and musculoskeletal response elicited by his low-friction, low-force approach as bio-adaptive in nature. This “bio-adaptive therapy” permits us to deliver better, faster, less-invasive treatment for our patients while achieving results not possible with traditional fixed appliances. We owe it to potential patients, our practices and our profession to spread the word.
Insignia is a fully interactive software and custom appliance system designed to give every patient a truly customized smile. It's a precise, start-to-finish process delivering maximum clinical and practice efficiency. Whether you treat with the Damon® System, Inspire™ ICE or conventional appliances, the Insignia software incorporates your treatment plan into a virtual 3D model of your patient's ideal occlusion.

Enhanced Insignia Approver™ Software and web interface allow you to:

- Upload patient images at the click of a button with Dolphin® or Kodak® systems*.
- Intrude lower anteriors while extruding uppers with a simple “check box.”
- See the contact on all teeth adjacent to those you are editing on the lower arch.

* Dolphin® is a federally registered trademark of Dolphin Imaging Systems LLC. Kodak® is a federally registered trademark of Eastman Kodak Company.

What you see is what you’ll get.

Insignia is the only system that delivers a complete custom solution – patient-specific brackets, computer-assisted bracket placement and custom wires to eliminate time-consuming adjustments in all phases of treatment. Insignia can make difficult cases more manageable and routine cases exceptional. It's the perfect fit for you and your patients.
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and former Damon patient
Jennifer Steele

Jennifer Steele first gained widespread attention when she was named MTV’S Miss Seventeen 2006, gracing the cover of Seventeen with a full, beautiful smile – while wearing Damon® System braces. Jennifer is one of over two million patients who have benefited from the Damon System – a clinically proven combination of advanced passive self-ligating brackets, high-tech light-force archwires and minimally invasive treatment protocols, working together in a low-friction, low-force system.

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Created by a team of orthodontists with the idea that all miniscrew systems are not created equal, VectorTAS offers a full array of orthodontic-specific miniscrews plus an assortment of TAD-specific attachments and auxiliary appliances to provide more controlled movement and better force management. Now with the new VectorTAS, anything else is just a screw…

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A simple aligner system for minor Anterior correction

We at AOA are mindful of the need to apply continuous improvement to the products we develop. Simpli5™ – our latest express aligner system – attests to this focus. Built on the legacy of Red, White and Blue, Simpli5 is the ideal solution for cases of mild to moderate anterior crowding or spacing. It consists of five sets of sequential trays targeted for cuspid-to-cuspid correction that requires up to 2.5 mm of movement per arch. The advantages of Simpli5 are many, including speed, flexibility, simplicity and economy.

Simpli5:
- Turns impressions or models into aligners in just 3 to 4 weeks.
- Is available in single- and dual-arch cases.
- Requires no special certification or time-consuming verification.
- Offers fast, no-hassle ordering.
- Costs 20% less than competitive systems.

Here are answers to the questions I’m most frequently asked about Simpli5 categorized by topic.

Patient Selection. The ideal candidates for Simpli5 are patients with minor to moderate anterior crowding or spacing or who have experienced minor orthodontic relapse and have a stable posterior occlusion and no temporomandibular joint (TMJ) issues.

Getting Started. Call the centralized AOA customer service phone number (800.262.5221) to ask for a starter kit that contains all the material you will need to prepare your cases. It includes case selection examples, prepaid mail packaging (which takes approximately two to three days for us to receive) and a prescription form. You can send stone or plaster models or PVS impressions. Be sure to note the patient’s chief concern on the prescription form.

Treatment Plan. The treatment plan can include planned cosmetic bonding or restorations and you can indicate whether you plan to perform interproximal reduction (IPR) or have already done so. If you have not performed the IPR, our technicians will suggest where and how much IPR to perform.

Delivery. You’ll receive the patient’s Simpli5 aligner system approximately three to four weeks after we receive your request. A series of dots (with the number of dots corresponding to the order of wear) marks each aligner. The maxillary aligners have blue dots; the mandibular, red. Some clinicians present all the aligners to the patient at once; others present only the first ones in the series.

Treatment. For best results, most clinicians recommend having patients wear the aligners for 24 hours a day, except when eating and brushing teeth. A patient’s speech is impaired only slightly during wear. Each aligner needs to be active for approximately
three weeks. Patients can often determine on their own when they are ready to progress to the next aligner because the current one fits easily. We suggest that you recall the patient after the first six to eight weeks of treatment to ensure that the proper wear routine is being followed.

**Conclusion**
The market for adult treatment of minor to moderate anterior crowding or spacing continues to grow and there is a rich source of such patients immediately within your grasp – the parents of each child in your practice. The Simpli5 system of aligners is designed to avail you of a simple, affordable means of treating such patients that can actually solidify their loyalty to your practice.  

**Typical Candidates for Simpli5 Aligner Treatment**

- Upper Arch with Spacing
- Crowded Upper Arch
- Rotated Upper Incisors
- Crowded Lower Arch
- Trapped Lower Laterals
- Generalized Lower Spacing
Recently a number of us experienced in Damon® System mechanics gathered to share our current protocols and discuss how we can enhance treatment to provide greater efficiency and higher quality results for our patients. The consensus of the group was that Damon practitioners can make many decisions in treatment planning and the early stages of treatment that will simplify the finishing stage and greatly improve the quality of our case results. This article summarizes those discussions and includes what I believe are three essential practices to achieving the ultimate in efficiency and excellence with Damon System mechanics: using variable torque, disarticulating the occlusion with bite turbos and beginning light elastics early in treatment.

Essential #1 – Begin with the End in Mind: Match Torque Selection to Case Goals

Simulating a patient-specific prescription using variable torques is one of the most expedient means of achieving the desired final positions of teeth and roots. The Damon System offers a number of torques for upper and lower anterior teeth (Figure 1). Matching ideal torque values to your setup – while taking treatment mechanics such as Class II elastics into account – allows the roots to begin to upright as bracket torque expresses during the light rectangular wire leveling phase. Differential torque can shorten treatment time and, I feel, enhances stability by allowing the crowns to spend as much time as possible uprighted over their roots before the teeth are debonded. In this manner, we will spend less time in the finishing stage of treatment placing selective torque into finishing wires. For example, clinicians can select high-torque maxillary anterior brackets for Class II, division 2 cases or in Class II, division 1 cases, high-torque maxillary anterior brackets and low-torque mandibular incisor brackets to counteract the forces of Class II elastics (to be addressed a little later in the article).

To reiterate, applying variable torque fosters earlier initiation of treatment.

### Figure 1. Damon Variable Torque Options

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<tr>
<td>Upper Centrals</td>
<td>Upper Lateral</td>
<td>Upper Cuspids</td>
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<tr>
<td>High</td>
<td>+17° +5°</td>
<td>+10° +9°</td>
<td>+7° +6°</td>
</tr>
<tr>
<td>Standard</td>
<td>+12° +5°</td>
<td>+8° +9°</td>
<td>0° +6°</td>
</tr>
<tr>
<td>Low</td>
<td>+7° +5°</td>
<td>+3° +9°</td>
<td>N/A</td>
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<tr>
<td>Lower Anteriors</td>
<td>Lower Cusps</td>
<td>Lower 1st Bicuspids</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>N/A</td>
<td>+7°</td>
<td>+5° N/A</td>
</tr>
<tr>
<td>Standard</td>
<td>-1° +2°</td>
<td>0°</td>
<td>+5° -12° +2°</td>
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<tr>
<td>Low</td>
<td>-6° +2°</td>
<td>N/A</td>
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of torque in the rectangular leveling phase and maximal expression of palatal root torque prior to the completion of treatment.

Getting Torque in a Passive Self-Ligating Appliance. To get a better appreciation for the advantages of employing the variable torque options available in the Damon System, it is important to review how bracket torque functions. As we all know, when we engage a rectangular wire of sufficient size into the lumen of a bracket, the torque prescription of that bracket will begin to express itself. There has long been a misconception that an archwire must press firmly against the base of a bracket for it to express the desired bracket torque; however, discounting the wire-to-lumen play operating in any bracket system and any offsetting mechanics, such as Class II elastics, it takes only two edges of a rectangular archwire engaging the opposing walls of a lumen for the torque prescription of a bracket – including a passive Damon self-ligating bracket – to express itself (Figure 2).

Research that Pandis, et. al., conducted demonstrates that Damon passive self-ligating brackets are equally effective in delivering torque to maxillary incisor teeth relative to conventionally ligated brackets. In fact, in the virtually friction-free environment of the Damon System, torquing movement from the angular rotation of a rectangular wire engaging opposing walls of the lumen on two points creates the desired torque without the friction from elastomeric ties or the flat sections of the wire being pressed firmly against the base of the slot as in conventionally ligated appliances. Active self-ligating brackets have similar

Expanding Torque Options Without Further Expanding Inventory

Besides employing the variable torques built into the Damon System appliance, there are other means of expanding torque options without expanding bracket inventories. One such means is to employ reverse torque.

When individual teeth have roots that are not upright under their crowns, treatment will progress more efficiently if you begin moving the roots toward their intended final position during the rectangular Copper Ni-Ti® leveling phase of treatment. If the variable torque options available will not achieve the root torque you want, employ reverse torque by inverting the bracket in the same arch to change the torque value from negative to positive or vice versa.

This case is an example of the most commonly employed use for reverse torque. As the light round wire aligns in such a case, the crown of the upper right lateral incisor will come forward, leaving the root in its palatal position. To combat this “pseudo-torque,” place an inverted +10° upper right lateral incisor bracket (now with reverse torque) to create a -10° torque bracket. Upon engaging the first rectangular wire, the root will begin to detorque and move labially toward its ideal position. With this protocol, you no longer need to await the major mechanics phase of treatment to correct the palatally positioned root. Once the root is in ideal position in relation to the crown, flip the bracket to its normal position and rebond (now with +10°) to ensure that the root does not continue to move labially. Note: When inverting brackets for reverse torque, be sure to keep the brackets on the same side of the arch so the root tip remains the same mesiodistal. See illustrations A and B. Placing them on the opposite side of the arch will change the intended root tip (mesial to distal and vice versa). By the way, we use the term "reverse torque" when discussing inverting brackets to minimize a patient’s fear that we’re placing a bracket upside down.

Inverting brackets changes torque from positive to negative or vice versa (in this case, on the upper right lateral incisor from +10° to -10°), which expands torque options and generates early root torque movement in the desired direction upon insertion of the rectangular wire. Case photos courtesy of Dr. Bill Thomas, Poway, CA.
frictional drawbacks of conventionally ligated brackets. Overcoming this friction requires high-force mechanics, which Damon System protocols are designed to avoid.

**Prevent Torque Loss from Wire-to-Lumen Play and Major Mechanics: Add Wire Torque.** There are two primary means of torque loss: wire-to-lumen play and major mechanics. Because the cross-section of a stainless steel working wire can never reach the same size as the lumen into which it is being engaged, a portion of the torque that is designed into the bracket will not be expressed. This loss of torque is often referred to as wire-to-lumen play and can have deleterious effects on the expressed torque, the axial inclination of teeth and ultimately the ability of the clinician to effectively finish treatment. For example, there is approximately +/-10.5° of play between a .019 x .025 stainless steel wire and a .022 slot (Figure 2). We all have to take wire-to-lumen play into consideration when planning torque values for ideal tooth and root positions.

Major mechanics (e.g., Class II elastics) also attributes to torque loss in maxillary anterior teeth. It is advisable to add torque selectively in the stainless steel wire during the major mechanics phase of treatment to counteract the negative effects of such mechanics. The loss of torque in the maxillary anterior teeth from wire play in combination with the Class II elastics can be easily offset by placing at least +10° (and up to +20°) of palatal root torque in the upper incisor region with the .019 x .025 stainless steel archwire.

**Use Pre-Torqued Wires to Assist Torque Expression.** Proper selection of variable torque bracket options will allow the rectangular leveling wires to provide torque delivery early in treatment. There are times, however, when the .018 x .025 Copper Ni-Ti archwire will not provide sufficient palatal root torque to the maxillary anterior teeth even with the ideal bracket torque. In these instances, it is often advisable to use a .019 x .025 pre-torqued Ni-Ti® (20° of torque) wire to assist in developing the ideal maxillary anterior palatal root torque. The pre-torqued wire can be used in place of a .018 x .025 Copper Ni-Ti archwire if the arch is sufficiently level, or it can be used as an additional leveling wire to ensure proper palatal root torque before progressing to the .019 x .025 stainless steel wire. In cases that require additional palatal root torque for the maxillary incisors, I often place a .019 x .025 pre-torqued Ni-Ti wire after the panorex/repositioning appointment if the repositioned brackets are level enough. In such instances, the additional palatal root torque will develop while the final leveling occurs prior to placing the .019 x .025 stainless steel working wire.

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**Essential #2 – Unlock the Malocclusion: Disarticulate the Arches with Bite Turbos**

Clinicians who use bite turbos normally place them on the lingual surfaces of upper anterior teeth in deep-bite cases to bond both arches at once (Figure 3). As we’re all aware, bite turbos benefit treatment in numerous ways:

1. Protect the enamel from bracket wear / debonding.
2. Improve the effect of light wires on arch development.

---

Figure 3. Anterior bite turbos unlock the malocclusion and allow anterior alignment and arch development. Note: Given the lingual position of the upper lateral incisors, it may have been wise for me to employ reverse torque by inverting the brackets.
3. Improve the effect of early light elastics for A/P, vertical and transverse corrections. See Essential #3.

4. May have an impact on correction of excessively low or high mandibular plane angles (brachyfacial or dolichofacial patients).

In my practice, a bite turbo has come to mean any resin bump that unlocks the malocclusion for greater freedom of movement. Using bite turbos more creatively, however, can have far-reaching treatment implications.

Bite turbos can also assist directionally in Class III cases. For such cases, I often form bite turbos (Mini-Mold starter kit, Ortho Arch, Schaumberg, IL) on the lingual surfaces of the lower incisors in such a way that they have an incline designed to allow the upper incisors to slide down it toward a Class I position. For all anterior bite turbos, I use Blügloo™ two-way color change adhesive, which turns from clear to blue during bonding and debonding, making it easy to see during placement and removal. If the turbo debonds during treatment, the adhesive will turn blue, easing the patient’s mind that it is not a tooth fragment.

I try to select bite turbo locations to enhance the direction of the treatment goals. While this is an admittedly simplistic approach, I generally choose posterior bite turbos for high-angle cases and anterior bite turbos for low-angle cases. For example, in high-angle cases, using bite turbos in the posterior can cause intrusion of the posterior teeth that helps close down the high-angle. In low-angle cases, anterior bite turbos in conjunction with early light posterior vertical elastics will extrude posterior teeth and correct a low-angle deep bite by posterior eruption.

Dr. Stuart Frost shared his idea of using flowable resin to correct posterior crossbites when placing bite turbos in the anteriors is difficult (Figure 4). He flows a transparent pink resin (Triad® Gel Flowable, Dentsply, York, PA) into the occlusal grooves of lower first molars to make a flat plane, which fosters crossbite correction in conjunction with early light crossbite elastics by allowing freedom of interarch movement. The pink color of the resin makes the bite turbo easy to see during placement and removal and its transparency shows the occlusal surface through the turbo. Note: It may be necessary to air cool the Triad Gel because it warms up during the curing process.

Essential #3 – Be Creative: Use Early Light Elastics for Early Interarch Correction

In combination with bite turbos, using light elastics where applicable (Figure 5) early in treatment to begin correcting A/P, vertical and transverse issues is yet another important tool that improves the quality and enhances the efficiency of Damon
System treatment (Figures 6-8). Thanks to Dr. Tom Pitts (Reno, NV), who has been instrumental in devising this protocol, clinicians no longer have to wait for completion of the leveling stage before initiating bite correction. To determine the direction of early light elastics once the occlusion is unlocked with bite turbos, consider the ultimate treatment goals. If Class II correction is the primary concern, “shorty” Class II elastics will assist in early dental base movement. (See a discussion of “shorty” Class II elastics later.) If, in a low-angle case, an anterior deep bite is of greatest concern, posterior vertical elastics will help extrude the posterior teeth, thereby reestablishing the posterior

Figure 7. An anterior open bite has significantly improved in nine months with early light elastics. Case photos courtesy of Dr. Stuart Frost, Mesa, AZ.

Figure 8. This Class III case demonstrates remarkable progress achieved with the use of bite turbos placed lingually on the lower central incisors – which unlocked the occlusion and allowed the lower incisors to slide toward a Class I occlusion – in conjunction with early crossbite elastics. Case courtesy of Dr. Stuart Frost.
occlusion more expediently. If there is a combination of concerns about the malocclusion, consider combining the horizontal and vertical vectors, for example, by running posterior triangle elastics with a Class II vector. In summary, you can attach elastics in virtually any position that enhances the required correction. Figure 9 demonstrates three basic configurations. Types of elastics you should consider are posterior vertical box elastics, posterior triangle elastics, posterior check with Class II vector elastics, posterior crossbite elastics, shorty Class II or Class III elastics, and other anterior and posterior vertical elastics configurations or any combination of these.

"Shorty" Class II Elastics.
Traditionally, Class II elastics run from the lower first molar to the post on the upper wire just mesial to the upper canine. The main concerns with placing Class II elastics in such a configuration early in treatment is that the horizontal pull would be so great that the elastics could cause extrusion of the upper anterior teeth or detrimentally affect the arch form if they are placed around the anterior curvature of the archwire. When using light early elastics on the initial leveling wires, it is important to reduce their horizontal pull to minimize any untoward effects on the ability of the wires to level the arches so different configurations are required.

The term “shorty” Class II elastics is used to differentiate their attachment from traditional Class II elastics because they have a reduced horizontal pull. Figure 10 depicts the configurations of “shorty” Class II elastics that clinicians have reported success in employing.

Conclusion
There are many decisions the Damon System practitioner can make in the treatment planning and early stages of treatment that will simplify the finishing stage of treatment and greatly improve the quality of case results. For the clinician looking to take their Damon System treatment to the next level, consider employing variable torque options, disarticulate the occlusion with bite turbos at the initial bonding and start light elastics for directional bite correction during the leveling phase of treatment. Using these three tools together will enhance the efficiency of Damon System treatment with a focus on clinical excellence.

References
Adult patients look to orthodontic treatment to improve their looks, confidence and self-esteem. To the patient, the psychological benefits from treatment often surpass improvements in function and dental health. We orthodontists know from our clinical experiences, with various studies validating these perceptions, that most patients place primary importance on the appearance of their anterior teeth as the key measure of satisfactory dental appearance. While orthodontists would consider facial balance, function, dental health and overall smile esthetics in any treatment plan as well as in the evaluation of treatment outcomes, patients are often concerned only with having straight anterior teeth.

The popularity of removable aligners to achieve improved dental appearance is evidence of this phenomenon. It also attests to the fact that adult patients prefer not to defer looking attractive until the end of treatment. Patients want quick, comfortable treatment and the most discreet smile transformation possible. While aligners may be an appropriate treatment for patients who require mild to moderate correction of the anterior teeth, they don’t provide the 3-D control of fixed appliances. There is now a simple and easy aligner alternative – STb™ Social 6 Light Lingual system. The STb Social 6 system leverages the breakthroughs we made in full lingual treatment technology to abbreviated treatment. The STb Social 6 system is easy to learn with in-office or indirect setups, which makes it simple for clinicians to introduce into their daily clinical routine. If patients do not have occlusion problems in the molar area, do not have dysfunctional problems, and do not wear fixed/removable prosthetics in the posterior area, they are ideal candidates for anterior treatment with the STb Social 6.

As its name implies, the STb Light Lingual system is based on a new treatment philosophy of simplified procedures, light forces and low-friction mechanics and a much thinner, smaller and rounder bracket than those of all previous lingual appliance systems. The STb appliance has removed the key obstacles that have restricted the use and popularity of conventional lingual systems, eliminating the tongue discomfort, mastication problems, pronunciation difficulty and gingival inflammation that have plagued lingual treatment over the past 20 years. These advances foster the role of lingual treatment as an esthetic alternative and make it easy for practitioners to recommend STb Social 6 to patients who may have a strong predisposition for removable aligners but would benefit from 3-D control.
At 1.5 mm, the STb bracket’s low profile allows the wire to run close to the tooth surface. Its narrow widths increase interbracket distance 50% more than the earlier Kurz 7th-generation lingual bracket (Figure 1). This means that the elasticity of the archwire can be fully utilized to provide rotational control. Light continuous forces move teeth efficiently with minimum discomfort and less possibility of root resorption. The STb Social 6 Light Lingual appliance system represents a better, quicker, easier way to treat simple malocclusions such as relapsed cases, minor tooth movement, rotations, gaps or crowding of the anterior teeth. There are five specific reasons why the STb Social 6 can fit easily into your practice treatment options: quality, speed, comfort, clinical ease of use and value.

Figure 1. The STb bracket (left) is less than two-thirds the size of the Kurz lower anterior bracket (right).

### Two-Archwire Sequence
Most cases treat with one archwire.

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### STb Social 6 Treated Cases
Treatment times ranged from five weeks to four months. Most cases were treated with one archwire.

- **Case 1**  Treatment time: 5 weeks
- **Case 2**  Treatment time: 7 weeks
- **Case 3**  Treatment time: 6 weeks
- **Case 4**  Treatment time: 8 weeks
**Quality.** Treat any case of minor to moderate anterior crowding or spacing with maximum control and without worrying about misplaced aligners or lapses in wearing time. The system’s light forces reduce the negative effects on periodontal tissues and makes biologically compatible tooth movement possible.

**Speed.** STb Social 6 utilizes a passive ligation design and light, high-tech wires to dramatically reduce friction and accelerate treatment. It uses light continuous forces (25 to 30 g), fostering biologically compatible tooth movement. Cases can be completed in as little as six weeks and rarely go beyond four months.

**Comfort.** Low-profile 1.5 mm brackets with rounded contours are clinically proven to reduce lingual interference with the tongue, which minimizes speech difficulties. Patients regain proper pronunciation within a few days.

**Clinical Ease of Use.** The STb Social 6 system is easy to learn and use. A simple two-wire sequence quickly unravels and aligns teeth, and, in most cases, only one wire is required. There is no custom wire shaping and no need for composite buttons. Ligation is with conventional ties with no need for double overties, which shortens chairtime. The small bracket bases adhere well to tooth surfaces and reduce the chance of occlusal interferences. The low bracket profile permits bonding even in severely crowded dentitions.

**Value.** STb Social 6 is an effective practice builder because the patient will benefit from high-quality results in cases that require more complex treatment than aligners can resolve and with true invisibility. Clinicians can create the setups in-office with a simple hot-glue technique. No T.A.R.G. or C.L.A.S.S. setups are required. They may also send their impressions to a qualified lab such as AOA and receive their transfer trays.

**Conclusion**
Lingual orthodontics has moved into a new era with the STb Light Lingual system and the STb Social 6 appliance for mild to moderate anterior correction. This totally invisible technique can easily become part of the orthodontist’s daily practice thanks to the simplification of clinical and laboratory procedures, which satisfies both patients’ and doctors’ expectations.
Setting the Stage for Success: The Importance of Office Staff in Marketing

Jeff Behan, Principal, Vision Trust
Colorado Springs, CO

Shakespeare said, “All the world’s a stage, and all the men and women merely players…” Whether or not you like his message, I think you’d have to agree that it’s a pretty reasonable perspective for a playwright. Likewise, I’m a marketing and branding specialist who has spent the better part of the last decade focused on the orthodontic profession. I don’t like to think that all of life is a stage, but I do believe that every place your practice interfaces with the public is a stage and every member of your team an important player. Ironically, it’s often the most overlooked player who can have the most profound impact on the success and growth of your practice. I refer, of course, to the receptionist and front office personnel.

Former Patient Model vs New

If you’ve been in practice for a while, you’ve probably already begun to notice an important trend in the profession. It’s the trend toward people seeking consultations without the benefit of a professional or patient referral. The growth of consumer brands such as Invisalign® and the Damon® System, along with the proliferation of Internet search engine usage, has increased the orthodontic IQ of the general public. This couldn’t be happening at a better time. For the first time since the post-war baby boom, birth rates are on the decline, making adult treatment a critical path to growth for most orthodontic practices for the foreseeable future. The Internet has combined the power and effectiveness of every medium that preceded it. It brings the allure of print, audio and video together in a single source. More importantly, it puts the consumer in control in a way that was never possible before. Today, consumers go to the Web as a first order of business whenever they’re interested in a product or service. Your presence on the Web is fast becoming the first act in a stage play entitled “Pick me! Pick me!”

The first real people who prospective patients (prospects) see on the stage of your practice are your receptionist and front office staff members. Think about it. People don’t always see you when
they interact with your practice, but they always see and/or speak with your receptionist. These people, perhaps more than any others, need to represent you well. *If your front desk staff cannot represent the mission of your organization in personality and in action, your practice will never convey that mission to the outside world.*

When 80% of your patients come from referrals, prospects will tolerate a first call experience that is less than optimal because a trusted individual told them that you are the person to see. In fact, under the referral model, receptionists were good to go if they were friendly and could answer basic questions about scheduling, pricing and insurance. As stated earlier, the tide has turned and, most likely, the majority of your prospects are already finding you without the benefit of referral. This phenomenon dictates we recognize a new model for dealing with nonreferred prospects: the self-motivated consumer model.

Most of you are intuitive enough to hire front office staff who are friendly and people-oriented. Being warm and welcoming comes naturally to them and, after a little time getting used to the “busyness” of the front desk, they’re usually well able to handle the basic requirements of their jobs.

The increasingly competitive environment of the orthodontic profession, however, mandates that front office personnel need more than a smile that can be seen through the phone and the ability to handle scheduling and transferring calls. They are a critical part of the marketing process and, as such, need to be able to:

- Quickly qualify whether prospects have been referred or are initiating contact on their own and be able to track this information.
- Make callers feel as if they’re the most important part of the receptionist’s day while making people standing at the counter feel the same way.
- Uncover the basic motivation that prompted the prospect to call.
- Find out if the prospect has researched treatment options.
- Field basic questions about what makes you, your treatment approach and your practice special.
- Clearly communicate the value of the consultation.
- Address any concerns the prospect may have.
- Capture information in a way that is valuable to you and the treatment coordinator.

By the time self-motivated consumers make that first call to your office, they’ve already researched treatment options and visited your Web site and those of other practices in your area. Their first call to your office is an important qualifier in their decision to see you so your front office staff needs to be ready to make the right impression every time.
In the referral model, the primary function of the receptionist is to schedule consultations. Accordingly, many of the receptionists I’ve had the opportunity to evaluate leave the impression that their job is to collect information from the caller. This behavior often equates to an interaction that, while friendly, is neither customer-focused nor sensitive to the reality that self-motivated consumers are different from referred prospects.

Self-motivated consumers are not prepared to give a lot of information over the phone. In fact, they’re not calling to give you information at all but rather to get it so they can decide if you’re worth coming to see. As a result, the receptionist should gather only the most necessary information, focusing primarily on getting the message across that the prospect shouldn’t make a decision about treatment without seeing you first.

Let’s take a look at how an understanding of the four phases of learning can help you help your front office staff members succeed.

**The first Phase – Unconscious Incompetence**

All learners begin as unconscious incompetents, unaware of the skills and behaviors they lack. An example for our discussion would be front desk personnel who don’t understand the difference between a referred prospect and a self-motivated consumer, so they have no awareness of how differently the two think. As a result, they’re naturally incompetent in dealing with consumer calls. Since they’re not aware of the difference between the two categories of prospects, they can hardly be expected to recognize the need to change their behavior. To get to the second phase, there has to be an awakening.

**The second Phase – Conscious Incompetence**

To move to conscious incompetence, the learner must first become aware of the reason to develop new skills (e.g., the need to change operating models) as well as the nature of the skills themselves (e.g., a new style of information gathering that doesn’t feel intrusive to the nonreferred caller). The receptionist has to realize from some outside source that the new skills are an important part of the job. Informed doctors, outside consultants, even coworkers can help bring this important perspective into focus; however, behavior change is difficult for all of us and it often proves the most difficult for tenured employees. When they try on new behaviors, they quickly realize that they aren’t competent and that it takes practice to integrate the new behaviors.

**The third Phase – Conscious Competence**

Once learners have had repeated opportunities to practice their new skills, complete with encouragement and feedback from their supervisors, they’re able to consistently perform the job well, but not without actively thinking about it. In the case of front office staff, that would mean they have to consciously think about their behavior every time they interact with a patient in the practice or pick up the phone. Through conscious effort, referring to ready resources (e.g., FAQs) and seeking feedback for improvement, they will become consciously competent. When they reach the level of conscious competence there is reason to celebrate because truly great players will continue to take their success, and that of the practice, to ever higher levels.

**The fourth Phase – Unconscious Competence**

I’m often asked what makes one practice perform better than
others. Why is it that one practice seems to accomplish more with less effort? The answer often boils down to one simple trait – unconscious competence.

Many well-intentioned consultants have helped to perpetuate the lack of understanding between the referred patient and the self-motivated consumer by advocating the “A, B, C” rating system for all prospects. Through a series of qualifying questions, this rating system screens out prospects who are less likely to start treatment. This approach works almost flawlessly in the referral model, but when used with self-motivated consumers, it can also disqualify prospects whom, if handled properly, would be highly likely to start treatment. In a true sales organization, sales professionals are overjoyed when a prospective new customer actually calls in to inquire about their products and services. To them, there is no such thing as a bad or unqualified lead. That’s why uncovering the source of the call (referred or self-motivated) should be the first step in qualifying a prospect.

When learners achieve the level of unconscious competence, key behaviors come naturally. It takes a lot of practice but one day our front office staff learner will routinely and intuitively know how to handle consumer calls, uncover caller motivations that will help the doctor and treatment coordinator quickly connect with the prospect’s motivation for seeking information about treatment and make prospects feel as if calling your practice was the best decision they’ve ever made.

Benefits of Front Office Staff with Unconscious Competence

The benefits of moving your staff to unconscious competence with this new, customer-focused approach to new-patient interactions are staggering – and usually contagious – but they won’t get there on their own. The process begins when you communicate your practice values clearly and invest time in the first actor to appear on the daily stage of your practice. When you invest time raising their awareness of the important dynamic they bring to the life and vitality of your practice and the patients you serve, you will be well-rewarded. You can move the process along by employing the following steps:

• Secret-shop your own practice. Research the consumer-oriented Web sites of your preferred treatment approaches, then develop a list of questions you feel your receptionist should be able to answer. Some general Web sites consumers may research are www.bracesinfo.com, www.archwired.com, www.braces.org, www.wikipedia.com, and www.1stbraces.com. Coax a few friends or get professional help to call your office posing as prospective new patients and elicit feedback from their experience to determine your receptionist’s skillsets and training requirements. (Be sure to cancel the faux consults scheduled and praise desirable behavior.)

• With nonreferred patients at least, delay gathering comprehensive new patient information until the prospect has agreed to start treatment.

• Invest time in your front office personnel and encourage them to offer ideas for how they can connect with consumers both on the phone and when they come in for their initial consultation.

• Ask new patients to tell you about their experience with your staff, from the first phone call forward. Be sure to share words of encouragement (being as specific as possible) with each member of the team who made a positive impression. Do this until you become unconsciously competent with this important skill.

In this article, we’ve only scratched the surface of how your front office staff can develop new skills that will satisfy the self-motivated consumer. It’s an important topic and I hope I’ve inspired you to look at this critical part of your team with newfound respect. After all, you get the chance to succeed with nonreferred prospects only when your front office succeeds.
## ORMCO AROUND THE WORLD • COURSE SCHEDULE AT A GLANCE

**CLINICAL IMPRESSIONS**

**The New Gold Standard for Temporary Anchorage: VectorTAS**

**Drs. John Graham, Jim Hilgers, Nicole Scheffler and Steve Tracey**

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