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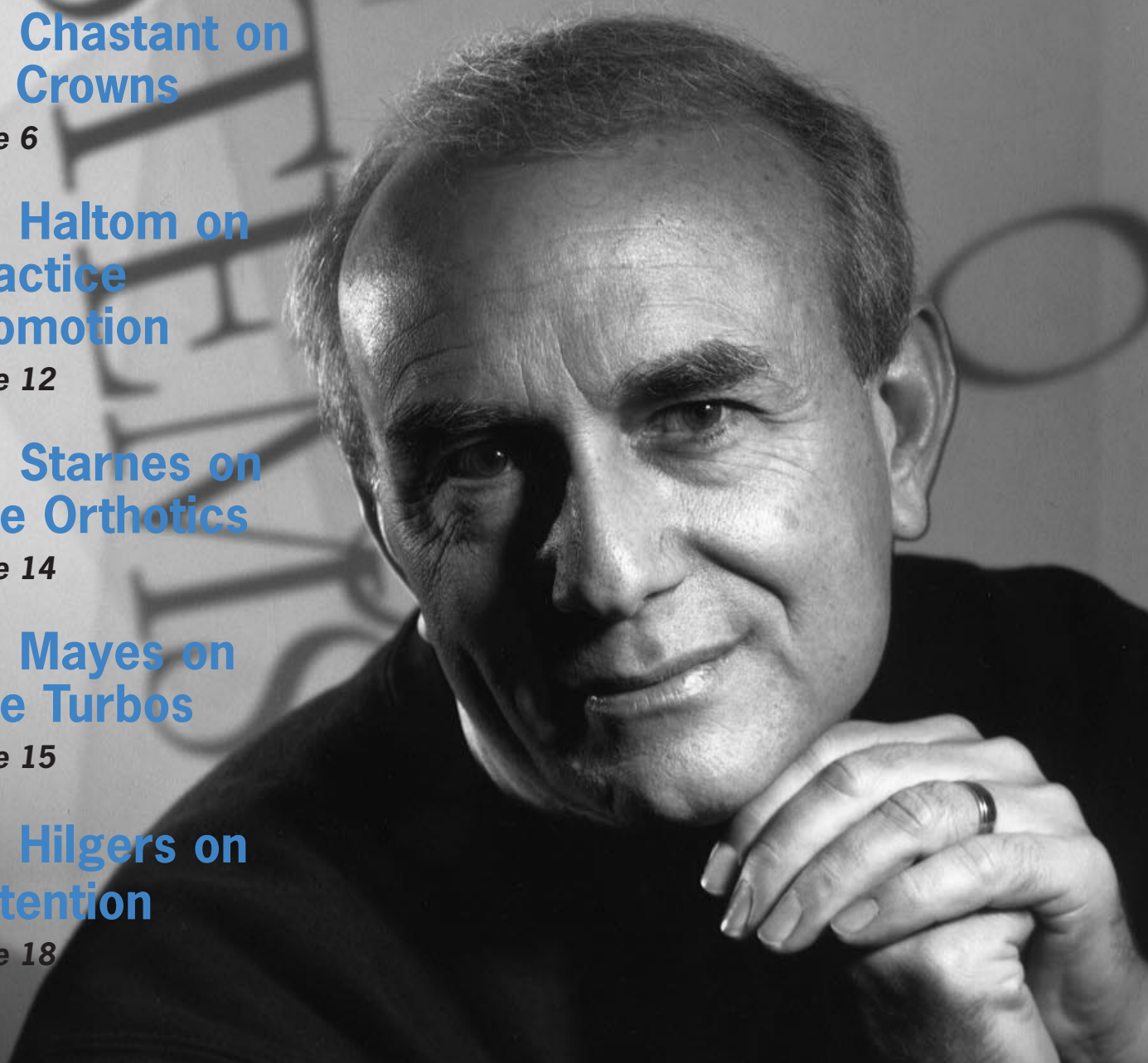
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Developing an Effective Marketing Plan for Your Practice

by Jerry R. Clark, D.D.S., M.S.
Greensboro, North Carolina

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he best way to market your orthodontic practice is to produce such a great experience for your patients that they will tell everyone they know. That's not easy! It not only requires technical excellence to produce quality orthodontic results in a reasonable length of time, but the patient must also receive quality treatment in every other aspect of their relationship with your practice.

There are two parts to any marketing plan: the *plan* and *making sure the plan works*. Just like straightening teeth, you can have a proper treatment plan, but if you don't have the brackets, wires and technical skills to accomplish the treatment, the case will be a failure. Never start an aggressive marketing campaign until all your internal systems and procedures are in place and running smoothly. *The last thing any business should do is create demand and then not be able to properly service that demand.* The marketing plan then becomes a negative because of customer dissatisfaction. If you can't schedule properly now, so patients don't wait, how will you do it with even more patients? Once jobs are properly delegated, training has been completed

and everyone knows what is expected of them, then and only then should the marketing plan be implemented.

In the first part of this two-part series we will discuss how to prepare your office by implementing:

- Job descriptions
- Performance reviews
- Systems development
- Organization and management of the practice

In the second part we will actually explore the development and implementation of a strategic marketing plan which can significantly impact the growth and profitability of your practice.

Job Descriptions

Why are they important? First, recognize that your staff is the biggest asset you have in your practice. Staffing problems can become a major headache, taking valuable time from your patients and taking all the fun out of your job. It is the responsibility of the doctor to create an atmosphere and environment within the practice that energizes and excites staff members to feel enthusiastic, proud and productive in their jobs. This is best accomplished by clearly establishing *job descriptions* so that each staff member is



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Clinical Chairside Technician Job Description

PATIENT RELATED

- Answer telephone after 4th ring.
- Visit orthognathic patients in the hospital as needed.

OFFICE RELATED

- Keep monthly “practice driver” graphs updated – to doctor by 10th of the following month.

JOB RELATED (technical)

- Perform orthodontic procedures per doctor’s directions and specifications.
- Instruct in elastic wear, appliance wear and oral hygiene.
- Take and develop X-rays.

JOB RELATED (clerical)

- Properly stock units daily.
- Order supplies and materials before they run out.
- Inventory control.
- Properly sterilize and clean instruments daily.
- Constantly police the bay.
- Constantly fill mouthwash bottles and keep the oral hygiene area clean.
- Clean evacuation canisters from underneath patient chairs as needed.
- Keep storage closet organized and check weekly.

GENERAL

- Turn on and plug in all equipment in the morning daily.
- Turn off and unplug all equipment in the evening daily.
- Make coffee daily.
- Keep juice in refrigerator for patients daily.
- Help change light bulbs.
- Lounge duty – clean up after self on a daily basis.
- Replenish game tokens as needed.
- Fill bird feeders when they are low on birdseed.
- Keep hallway clean of incoming supplies.

Figure 1

Doctor’s Job Description

PATIENT RELATED

- Constantly build relationships with current patients and parents.
- Greet patients.

OFFICE RELATED

- Organize and manage the practice and personnel.
- Take responsibility for all personnel issues:
 - Hiring and firing*
 - Solving personnel problems*
 - Training*
 - Performance reviews*
 - Salary/benefits*
 - Staff meetings*
- Develop scheduling system for practice.
- Assure office is in compliance with OSHA regulations.
- Market new patients for the practice both internally and externally, with professionals as well as current and former patients.
- Develop systems for all correspondence to patients and referring doctors.
- Take responsibility for all financial issues surrounding the office:
 - Revenues*
 - Expenses*
 - Cash Flow*
 - Budgeting*
- Set goals and vision for the office.

JOB RELATED (technical)

- Diagnose cases and develop treatment plans.
- Provide quality care to patients.
- Oversee technical performance of clinical personnel.

JOB RELATED (clerical)

GENERAL

Figure 2

Doctor’s Job Description – Redesigned

PATIENT RELATED

- Constantly build relationships with current patients and parents.
- Greet patients.

OFFICE RELATED

- Organize and manage the practice and personnel.
- Market new patients for the practice both internally and externally, with professionals as well as current and former patients.

JOB RELATED (Technical)

- Diagnose cases and develop treatment plans.
- Provide quality care to patients.

JOB RELATED (Clerical)

GENERAL

Figure 3

aware of what you, as the doctor, expect of them and what their responsibilities are in performing their job. Then – and this is the hard part for any manager – you must hold them accountable for performing their job to the level expected by you. Regular *performance reviews* are essential to give appropriate feedback to each employee to let them know exactly how you perceive they are performing their assigned tasks. Job descriptions reduce conflict within the practice by making sure that each person is completely aware of their responsibilities and that they

match exactly what is expected of them.

How do I begin? Developing job descriptions is not that difficult, but it does take time to develop and refine them. Here is a simple three-step process:

Step 1. *Document* what you do – each staff member is to write down everything they do on a daily, weekly and monthly basis. Everything! The good news is that the doctor is not responsible for trying to figure out what everyone does or should do. Each staff person writes down their

responsibilities as they see them.

Step 2. *Organize* duties into five responsibility areas: *Patient related* – Anything having to do with direct contact or communication with the patient (past, present, future) or referring doctors.

Office related – Anything having to do with the actual growth of the business or day-to-day functions of running the office.

Dr. Clark

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Job-technical – Anything requiring some type of technical expertise.

Job-clerical – Anything not requiring technical knowledge, but clerical in nature.

General – Anything which anyone could do – related mostly to keeping the office attractive and pleasant for the patients.

Step 3. Review, refine and finalize – At a staff meeting all responsibilities and job duties are recorded on a flip chart clearly visible to everyone, and then each duty is discussed. During this process, you will learn many things, including: what each staff member *thinks* their job is, that different people view the same job in different ways, and that their view of how the job is to be done may differ from yours. This provides an excellent opportunity to discuss these issues, to let everyone know expectations and to write those expectations into their job descriptions. Also include a timetable for each job duty describing when or how that duty is to be accomplished.



At a staff meeting, all responsibilities and job duties are reworded on a flip chart and then each duty is discussed.

How will this help me in the long run?

The rewards will be incredible. The staff will gain new “ownership” of their jobs and will develop a clear understanding of what is expected of them. They will also have a method of monitoring their proficiency in performing their tasks. Because staff members are allowed to develop their own job descriptions, they will have a greater tendency to accept the responsibility for their job. Rather than having you tell them what to do, they know what needs to be done and are responsible for the proper completion of each task. Their performance level has been established by you and your entire staff. The expectations of job performance have been clearly laid out. Someone not performing their job up to the standards established by the group can then be held accountable for a performance less than expected and required. *You can then fairly and confidently reprimand the person's job performance without feeling you are attacking the person as an individual.* This process makes the difficult task of reprimanding an employee easier, because it allows you to take the personal aspect out of the disciplinary process and concentrate only on job performance. Most people want to do a good job. This system enables them to do a good job and enables you to know they're doing a good job.

What does a finished job description look like?

In Figure 1, you will find the finished job description for a Clinical Chairsides Technician. This is an example and definitely would vary from person to person and office to office. As stated before, the benefits of job ownership can only be achieved if each individual is responsible for the development of his or her own job description.

Is there a job description for the doctor, too?

Absolutely! This is the most important one to develop. Most doctors get hung up on doing so many things they don't need to be doing, thus unnecessarily increasing the stress of the job. The doctor should do *only* what he or she, by training or law, is required to do. Delegate *everything* else to your competent staff mem-



Performance reviews should be held annually or semiannually with each staff member.

bers. In Figure 2, we see a typical job description for a doctor. From this job description, which was originally compiled by a doctor, all duties that could be performed by others were assigned to other staff members so that the final job description looked like the one shown in Figure 3. This allows the doctor to return to doing the things he or she truly enjoyed doing within the practice – orthodontics. This reduces stress, increases free time and elevates the esteem and confidence of the staff members.

Performance Reviews

How are they conducted? Here is the good news! The performance review springs directly from the job description. Two areas are evaluated: first – how the individual is doing their job as outlined in their job description; second – job performance is evaluated and rated. This second part is important because many times staff members will do everything listed in their job description well, but in a manner that does not create harmony within the practice. Example: “Doctor, your assistant is so good, but why doesn't she ever smile?” Both portions are filled out by the employee and the doctor so discrepancies in perception of job performance can be discussed. An annual or semiannual private meeting with each staff member should be held, allowing ample time to discuss all important issues.

What does a performance review look like? See Figure 4 for an example of a

Performance Review

- 5=Superior
- 4=Above Average
- 3=Average
- 2=Below Average
- 1=Opportunity for Improvement

FINANCIAL COORDINATOR/GENERAL OFFICE

PATIENT RELATED

- Mails birthday cards to patients: 1 2 3 4 5
- Mails all correspondence: 1 2 3 4 5

OFFICE RELATED

- First backup on telephone and appointments: 1 2 3 4 5
- Accounts payable and receivable: 1 2 3 4 5
- Payroll – issues payroll checks: 1 2 3 4 5
- Taxes – makes sure all taxes are paid: 1 2 3 4 5
- Mails monthly statements and collection letters: 1 2 3 4 5
- Maintains attendance records on staff: 1 2 3 4 5
- Bank deposits – daily: 1 2 3 4 5
- Retirement account – deposits semimonthly (distributes all relative information): 1 2 3 4 5
- Stays up-to-date on computer enhancements: 1 2 3 4 5
- Medical insurance information to staff: 1 2 3 4 5
- Orders and purchases office supplies as needed: 1 2 3 4 5
- Office stats and month-end reports: 1 2 3 4 5
- Petty cash: 1 2 3 4 5
- Backs up computer each day before leaving: 1 2 3 4 5

JOB RELATED (technical)

- Second in line to work in the bay: 1 2 3 4 5

JOB RELATED (clerical)

- Prepares charts and labels for diagnostic records, numbered Rolodex cards and computer: 1 2 3 4 5
- Prepares daily schedule: 1 2 3 4 5
- Files consult model boxes biweekly: 1 2 3 4 5

GENERAL DUTIES

- Keeps patient bathroom stocked: 1 2 3 4 5
- Prepares coffee & refreshment area daily: 1 2 3 4 5
- Straightens up reception area as needed: 1 2 3 4 5
- Coke machine (stocks & retrieves money): 1 2 3 4 5
- Stops/starts newspaper when appropriate: 1 2 3 4 5

OVERALL PERFORMANCE TRAITS

- Adheres to all practice responsibilities: 1 2 3 4 5
- Attitude – committed to vision, friendly, cooperative, interested and self-confident: 1 2 3 4 5
- Communication Skills – uses proper grammar, good vocabulary, voice modulation: 1 2 3 4 5
- Initiative and Resourcefulness – requires little supervision, assumes responsibility: 1 2 3 4 5
- Teamwork – is a team player and is willing to help others:
 - Angela: 1 2 3 4 5
 - Christy: 1 2 3 4 5
 - Cindy: 1 2 3 4 5
 - Debbie: 1 2 3 4 5
 - Susan: 1 2 3 4 5
- Efficiency & Accuracy – uses time well, minimum of mistakes, strives for perfection: 1 2 3 4 5
- Customer Service – adheres to the 20 guidelines of Ritz-Carlton quality service: 1 2 3 4 5
- Punctuality & Attendance – always on time, rarely misses work: 1 2 3 4 5
- Learning Skills – accepts criticism, uses it as an opportunity to learn, does not take personally: 1 2 3 4 5
- Gossip – never gossips: 1 2 3 4 5
- Written Communication Skills: 1 2 3 4 5
- Overall Rating: 1 2 3 4 5
- How happy are you with your job overall? Any comments or suggestions? 1 2 3 4 5

- How is the overall morale in the practice? Any comments or suggestions? 1 2 3 4 5

- How do you feel about your job responsibilities? Any comments or suggestions? 1 2 3 4 5

Employee Name: _____

Comments: _____

Evaluation Date: _____

Evaluation Performed By: _____

Figure 4

performance review.

In the performance review, what are the 20 guidelines of Ritz-Carlton customer service? Of equal importance to technical skills are the issues involved with customer service. In order to provide an experience within the practice that patients will then want to tell everyone about, great customer service is essential. The best example of simple steps to great

customer service I have found comes from the Ritz-Carlton hotel chain. The example in Figure 5 was borrowed from them and altered slightly to apply to an orthodontic practice. The creation of job descriptions and performance reviews is the first step in developing your marketing plan. Without efficient, well-trained, competent staff members, any attempt at developing a marketing plan will fail.

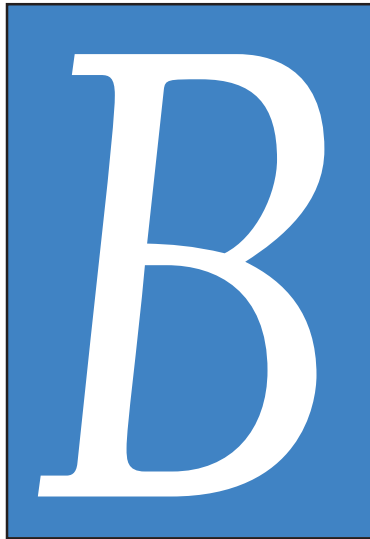
Systems Development

Why are systems needed? Don't you hate it when you have to wait in line for 15 minutes in a fast-food restaurant? Don't you get angry when you're waiting in the checkout line of a grocery store with ten other people and only one cash register is open? Don't you get aggravated when you call a company and get siphoned into eternal voice mail?

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Bite-Jumpers: Effective Streamlining Crown Placement

by Robert B. Chastant, D.D.S.
New Iberia, Louisiana



Bite-jumping appliances, along with stainless steel crowns, have been a vital part of my practice for over 15 years. The Cantilever Bite-Jumper (CBJ) opened many doors to design improvements of expanders, vertical management and even retention. The most remarkable change that has evolved with the application of stainless steel crowns is that of more durable appliance retention.

Efficiency is the Name of the Game

The retired president of our local university was once quoted as saying, "Son, a smart man always learns from another's mistakes. Unfortunately, there aren't many smart men." As I've gained experience, I've purloined procedures that have substantially facilitated the placement and removal of the bite-jumping appliance. This article is designed to minimize the trauma associated with the learning curve as you implement this appliance into your practice. It also will acquaint the reader with additional stainless steel crown orthodontic applications that can contribute to practice efficiency.

For the last several years, my staff and I have focused on patient convenience and comfort and have increased patient appointment spans to an average of approximately ten weeks. Treatment times have been reduced to about 19 months and, most importantly, the number of appointments needed from the initial visit to dismissal has been reduced.

The benefits were even more far-reaching than we anticipated:

- Even though our practice is growing, we see fewer patients in a day, leaving more time for communication and fun.
- Seventy-five percent of our patients are seated before scheduled, meaning parents miss less work, kids miss less school.
- Patients receive consistent results without significant parental supervision.

The single largest influence on these results has been the implementation of the Herbst* appliance as our primary Class II corrector. As we suffered through the learning curve, we found that the cantilever design offered substantial flexibility and convenience; thus we use it almost exclusively. Our friendship and affiliation with Dr. Joe Mayes has even allowed us to participate in the design of the CBJ and, consequently, we have had it in use since its inception.

If the Crown Fits...

Having fitted close to 40,000 bands over the years, I had problems with the idea of implementing new fitting sequences. However, crowns come in only seven different sizes and do not demand the same restraints in accuracy of placement for management of torque, height, rotation, marginal ridge approximation, etc., as do bands. And since only four sizes are used regularly, fitting a crown has actually become significantly easier.

To ensure maximum retention, trial fit the crown, even when making an indirect appliance, prior to actual insertion or



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Strategies for ement and Removal



Figure 1. Precontoured, pretrimmed anatomy simplifies crown placement.

fabrication. Ormco provides a sizing kit to facilitate this procedure. The crowns are precontoured and pretrimmed (Figure 1), eliminating two of the original steps necessary in fabrication.

All patients experience a certain degree of apprehension during sizing of any appliance – whether there are six brackets or bands or the CBJ itself. The AEZ® Crown Remover is of tremendous help in easing the removal of crowns once they've been fitted, particularly if the crown itself has a significant amount of retention. (Although the AEZ Crown Remover's initial application was to permit the removal of an appliance retained by stainless steel crowns without destroying it, it has proven to be of value for other applications.) On crowns from our sizing kits, we create what we call “windows,” large vent holes on the occlusal surfaces. On the lower, we place them directly above the mesiobuccal cusp (Figure 2) and on the upper, directly above the mesiolingual cusp. We create small slots on the lingual surface for purchase points to grasp the crown (Figure 3) and easily pop it off once the plier is inserted. This procedure is a one-step action and does not create any significant discomfort.



Figure 2. The horizontal slot should be placed as far gingivally as possible for better leverage.

size on single try comes quickly. Nonetheless, on your first few tries, start with a size five crown and go up or down from there. The crown itself should slide in easily, with some resistance, and slide down on the occlusal surface without pinching the soft tissues. Once the crown has reached about three-quarters of its seating position, resistance should be gained as the contours begin taking adaptation. At this time, it's beneficial to use a bite stick to complete the seating. If you place the bite stick directly across the entire occlusal surface, the probability of crimping the crown's cusp tips and not allowing it to seat completely is fairly high. Incompletely seated crowns are far less retentive and create significant hyperocclusion, resulting in patient discomfort and open-bite tendencies in high-angle cases. To avoid this problem, place the handle portion of the bite stick in the central groove of the crown at the angle of the cross-tip angulation on the occlusal surface and have the patient squeeze on it to seat the crown completely without distorting it (Figures 4 and 5). (Note: This technique can be utilized on the design of the Herbst appliance that utilizes crowns on the bicuspid as well as the cantilever design.)



Figure 3. The crown remover holds the crown securely after removal to avoid the possibility of the patient's swallowing or aspirating it.



Figure 4. The edge of the nylon handle on a bite stick fits well in the central groove. When held at an angle matching the cuspal incline, the occlusal anatomy will be preserved.



Figure 5. Thumb pressure should seat the crown at least halfway, and then the patient can easily bite it down from there.

Dr. Chastant

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The windows also assist in verifying complete seating. For example, the mesiobuccal cusp of the lower should protrude or come very close to the surface of the crown itself. You can also test the mesiodistal seating by relocating the bite stick on the mesial or distal marginal ridge to check for pivoting or rocking. If the whole crown goes down on the distal wall when biting on the distal marginal ridge, it was not completely seated (Figure 6). However, if the patient bites on the distal marginal ridge and not only does it go down but the mesial marginal ridge elevates, it means the crown was in fact

vent hole in the occlusal surface and then inject cement. This was a very short-lived solution. Crowns not staying cemented, plaque buildup under the crown and the doctor time for the procedure all contributed to the failure of this idea. We later developed the first window application: a large vent hole and the use of a modified band remover. This allowed the plunging part of the band remover to go through the window and remove the cemented crown without harming the appliance (Figures 9 and 10). We were then able to recrimp, clean, microetch the internal surfaces and recement a much

Vent holes were once used in fixed prosthodontics to allow cement release occlusally during delivery. At that time, crown margins were prepared subgingivally and the fear of sulcular intrusion was fairly high. Since stainless steel crowns get their retention as they approach the sulcus, this same concern is shared. The vent action of windows has permitted cement flow to occur in the same manner as this older technique.

Light curing through the window also speeds up cementation while maximizing working time (Figure 15). When using one of the new generation of dual cure cements such as OptiBand,[™] document large restorations before cementation. Crown removal on such teeth during active treatment could produce a fracture, and it may be wise to remove the crown with a 557 bur, cutting it occlusally and down the buccal margin.**

It may be noted that the AEZ Crown Remover is not used routinely in our office at the final removal of appliances but is treated more as an emergency and sizing appliance. When using the new hybrid cements, we find it much easier to place a groove across the occlusal surface in conjunction with one on the buccal to remove the crown. This creates less patient stress by avoiding the additional pressures generated when removing these stronger cements.

When Expansion is Required

When first starting with CBJ Tx, choose a relatively simple Class II case with an arch form of relatively normal width and a moderate transverse bicuspid width, therefore not requiring maxillary expansion prior to the treatment. In more significant Class II malocclusions, maxillary expansion is almost always required (Figures 16 and 17). The larger sagittal discrepancy places the lower anterior segment into a typically wider portion of the posterior occlusion of the maxilla (Figures 18 and 19). Unless the patient is in buccal cross-bite, this causes the maxillary arch to develop narrower than normal.

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“We are continually examining our treatment protocols and have found that our current streamlining gives us the opportunity to reduce the number of appointments, chair time and doctor time.”

completely seated but is pivoting on the contour of the occlusal surface, whether impinging on an amalgam or just the anatomy of the natural dentition (Figure 7).

Windows for Loose Crowns and Crown Removal

The AEZ Crown Remover (Figure 8) was originally designed for removal of appliances that had come uncemented during the course of treatment. Some of our current techniques have almost eliminated that problem; however, it does happen. With the leveraging effect being so efficient on the lower appliance, it is the lower crowns that are most often the culprits.

Emergencies always seem to be reported around four in the afternoon – the proverbial rush hour. Our initial solution to this problem was to place a small

more secure appliance. Windows are now an integral part of our initial cementation protocol. This has allowed emergencies to be dealt with without any doctor time and has all but eliminated the use of high-speed handpieces in the patient's mouth.

The presence of occlusal openings throughout treatment once brought concerns for washouts, leakages and potential demineralization below the crown. We have used windows for crown removal for over two years and our initial concern has changed to appreciation of the benefits they provide (Figures 11-13). We can now monitor washout, because cleanup with a cotton roll leaves a small “caulk line” around the opening (Figure 14). Also, windows permit a quick peek to ensure that final seating is complete prior to light curing.

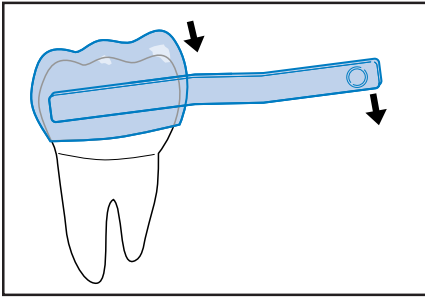


Figure 6. While holding down the crown and moving the cantilever up and down, one can easily find the pivot point to assure a passive fit.

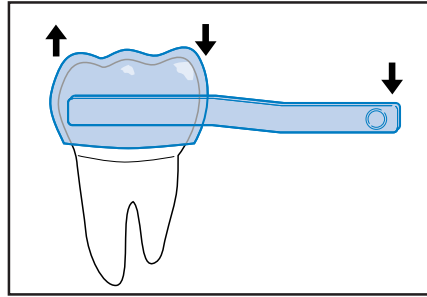


Figure 7. When the pivot point is in the center of the crown, it is fully seated.

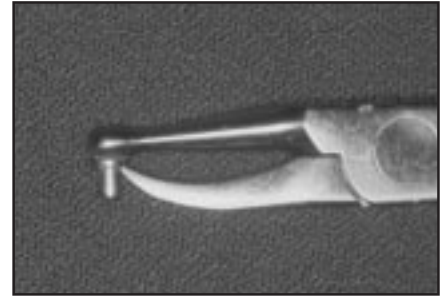


Figure 8. The AEZ Crown Remover is a band remover that has been modified to allow the purchase point to close past the plunger.



Figure 9 (Left). The plunger is placed in the window and the purchasing tip is placed in the retention slot or under the cantilever.



Figure 10 (Right). Upon squeezing, the crown is lifted off the tooth.



Figures 11 and 12. An even coat of cement applied to the crown prevents voids and minimizes excess flow through the window.



Figure 13. Cleanup can easily be accomplished with a moist cotton roll.



Figure 14. A small line of cement around the window "caulk line" assures visibility of washout.



Figure 15. OptiBand light cure can be initiated through the window. We find its strength necessary on the lower crowns.

Dr. Chastant

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In a high percentage of Class II patients, it is necessary to perform some form of expansion. There is a variety of auxiliaries that can be used in conjunction with the CBJ. While it is sometimes recommended to expand first with a conventional expander and then insert the bite-jumper, I typically prefer the use of the expander with the crowns for durability as well as for vertical control (Figure 20). The patient is in a state of hyper-occlusion on the crowns, thus eliminating cuspal interferences as expansion takes place. Patients who start with a true posterior cross-bite often require the use of a transpalatal arch. I find, however, that with just basic expansion, mild to moderate cases can be held during the course of the CBJ, because it produces natural expansion as a result of its built-in forces.

Removal of the expander immediately upon completion of expansion is recommended, because providing more room for the tongue allows for proper function, resulting in greater long-term stability. The converse is that an appliance occupying the tongue space prevents that organ from contacting the palate. This causes the tongue to assume a lower position, promoting tongue thrusting and an anterior open bite at the completion of treatment.

When expansion is necessary, it should always be done prior to insertion of the CBJ bars and tubes. If the maxillary width has not been corrected as you advance the patient into Class I or super Class I, frequently the tubes will impinge on the lower crowns or lower posterior teeth (Figure 21).

Two types of expanders are generally used in the lower arch. One is the basic W arch; the other (my preference) is a modified jack screw expander (Figures 22 and 23) which is adjusted weekly and continues to be adjusted until the desired amount of expansion is obtained. This appliance can be worn and activated while the tubes and rods are actually in place. I prefer it because it can

be made quite rigid and is highly dependable in creating the exact amount of expansion desired.

Streamlining Treatment Protocols

We are continually examining our treatment protocols and have found that our current streamlining gives us the opportunity to reduce the number of appointments, chair time and doctor time. Your office design, expanded duties/capabilities and just what works best for you may indicate a different sequence from ours. Our appointment sequence calls for prefabricating auxiliaries on duplicate models from the records appointment. Auxiliaries can range from lingual arches to the framework of the expanders, etc. Separators are often inserted at the records appointment as well. Along with the preinsertion laboratory procedures, the first molars on the duplicate models are trimmed back as in preparing for dies for a crown (Figures 24 and 25).

At the insertion appointment, sizing generally takes less than ten minutes. Patients and parents are then given instructions, shown videos and given a gameboy or magazine to keep them occupied while the final soldering is done in the lab. The prewelded axle and hinge caps are now placed on the model in the lab and the auxiliary is sticky-waxed in place in preparation for soldering. About 15 minutes later, the patient returns to the operatory for insertion. Upon delivery of the CBJ, the whole appliance is cemented less the rods. It is easier to size and secure the upper tubes prior to recementing the crowns. This also allows placement of an axle screw along with the retentive material, Ceka Bond®, to spare the patient unnecessary discomfort and bad taste. Typically, when expanders are used, upper crowns are cemented with a weak mix of cement, thus facilitating the easy removal of the entire expander on the second visit. This first visit, including educational movies, literature, general instructions, soldering, etc., is scheduled for one hour. Remember to encourage chewing to reduce extrusive forces,

especially important in high-angle cases. (Tootsie Rolls work great! "If it ain't fun, it ain't done.") The next appointment is six weeks later, when the expander is removed.

Depending on the treatment plan, the total appliance can be removed from the crowns or a transpalatal bar soldered. Removing the upper appliance, cutting off the expander or soldering a TPA is all done without any doctor time. If you have elected not to have any form of transpalatal retention, it is wise to leave a small ledge on the solder joint (Figure 26). A small purchase point on the lingual surface of the crown at the gingival margin can be placed prior to cementation. On recementation, we usually use a stronger cement mix (light-cured OptiBand™ is used only on the lower crowns at this point).

Brackets can be applied at this time depending on the treatment plan. In a Class II, division 2 case, it is necessary to intrude and advance the upper incisors to allow maximum mandibular advancement. It is also wise to use upper brackets in a case requiring maximum maxillary anchorage. That, along with the transpalatal wires, will give as much orthopedic effect as necessary and minimize posterior spaces opening in the maxilla. If anchorage is not an issue, brackets are generally left on only long enough to obtain alignment. This second appointment, including bracket and archwire placement, is generally scheduled for 45 minutes and minimal doctor time.

Emergencies Still Occur

Rarely will a patient have a screw come out of the axle. Many times a parent can display home talent by reinserting the screw; however, in tiny mouths, sometimes even the Hex-Head screw is impossible to replace without access directly through the cheek. Removing crowns to replace the components will often be more comfortable, not to mention more time efficient.

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Figures 16 and 17. Large protrusions rarely have posterior cross-bites but almost always result in a constricted maxilla.



Figures 18 and 19. A-P correction without preparing the maxilla will result in an end-on buccal relationship that minimizes lateral movement.

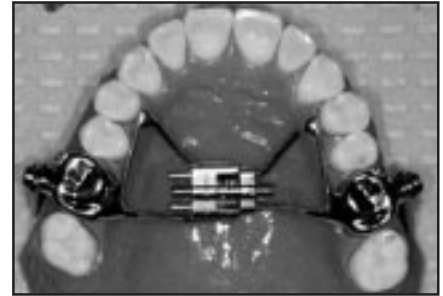


Figure 20. The maxillary RPE is still the expander of choice.



Figure 21. Transverse dimensions should be addressed first to allow the tube to close over the cantilever.



Figures 22 and 23. The lower jack screw expander rarely creates emergencies and is highly predictable.



Figures 24 and 25. Once sizing is complete, soldering can quickly be done on the duplicate models taken at the records appointment. Trimming the molars back will eliminate pouring the crowns in additional impressions.



Figure 26. Make sure to leave a ledge in the solder as a purchase point after removing the expander.

The Golden Rule of Practice Promotion

by Tucker Haltom, D.D.S., M.S.
Albuquerque, New Mexico

C

ompetition is strong throughout most areas of the country. It is simply a way of life in the practice of orthodontics in the United States today. People expect exceptional service in everything nowadays and they spend their money where they receive extraordinary attention. In this regard, I would like to present a compilation of marketing ideas from many meetings, discussions with friends and much reading.

According to Webster, marketing means selling or buying in a market. It has come to mean promotion. Promoting one's orthodontic practice to others is an essential component of conducting our small businesses. Conducting is a wonderful word to describe the everyday directing of an office. Much as in a symphony orchestra, many diverse personalities and performances come together to create an extraordinary experience for those we meet each day. Extraordinary is what we want for every encounter we have every day – a monumental endeavor and exceptional achievement when it comes about. And it can be uplifting for everyone involved – patients, parents, staff and orthodontist.

In my 25 years of practice, I have come to believe that practice enhancement can be boiled down to one word. Without this one word working in your practice, the

odds are against long-term prosperity. And that word is HONOR. Defined in the dictionary as “to regard with respect, to impart dignity to, to acknowledge as worthy of respect,” honor is a verb filled with power when it is used with sincerity.

If we treat those we encounter in our everyday practice lives with honor, a great change comes over everyone involved. You can imagine the excitement if we knew that Michelangelo had an appointment one day at 10 a.m. You know there would be anticipation, preparation and a high level of excitement in the office. When he walked in, surely someone would stand and greet him, smile and say, “We are so pleased to see you.” You know the honor he would feel and the honor the whole office would feel. You know everyone would want to see him, to say hello, to ask if he needed anything. He would be seated promptly and all care taken with his treatment. We would not slip and we would be gentle. Everything would be explained to him and his next appointment would be made to his satisfaction. And what if Albert Einstein came into your office, or Monet or Abraham Lincoln? Can you imagine the excitement Van Gogh or Florence Nightingale would create? What if Charles Tweed walked into your office? What a wonderful thought! We would feel such honor and we would honor him. You know you would bend over backwards for the mayor of your town or your own mother or best friend.



Dr. Tucker Haltom graduated from the dental and orthodontic programs at the University of Missouri at Kansas City in 1968 and 1970, respectively. A member of numerous dental and orthodontic organizations, he has served as president of the Albuquerque District Dental Society, New Mexico Orthodontic Society, Rocky Mountain Society of Orthodontists, Denver Summer Meeting and the Southwest Angle Society. Dr. Haltom helped found the Alexander Discipline Study Club of America and served as president for two years. He has been engaged in the private practice of orthodontics in Albuquerque, New Mexico, for the past 25 years.

Even for an acquaintance we roll out the red carpet. But how about our patients and their families and friends? Why should we not hold them in the same esteem and honor in our offices? Without them, without their total trust in us, we would not have a job. Sam Walton, founder of Wal Mart stores, said, "There is only one boss, the customer, and he can fire everyone, even the president, by simply spending his money somewhere else."

All great companies, what Collins and Porras in their book *Built To Last* call visionary companies, are customer oriented. These are companies that have stood the test of time and outperformed the general stock market by over 16 times since 1925.

Core Ideologies of the Visionary Companies

American Express – *Heroic customer service.*
IBM – *Spend a lot of time making customers happy.*

Marriott – *People are #1. Treat them well and the rest will follow.*

Nordstrom – *Service to customer above all else.*

Wal Mart – *We exist to provide value to our customers – exceed customer expectation.*

Disney Corporation – *Fanatical attention to consistency and detail.*

Carl Sewell, in his book *Customers For Life*, tells how he underpromises and overdelivers to make his Cadillac dealership in Dallas, Texas, the best and largest in the country. His customer satisfaction scores are the equivalent of the three-and-one-half minute mile. He goes for the "Wow Factor" with his 24-hour free emergency service, sparkling clean restrooms, by sending information with every communication and by hiring the best employees available.

These companies go beyond the norm, beyond good. A significant practice, likewise, must surpass "good enough" and commit to a superb daily execution of its *core ideology* and to exceptional encounters every time without fail.

The message our patients and their families should feel from us is:
YOU are very important to us.
We really value YOU.
We will listen to YOU.
We will be here for YOU and THEN SOME.

Visionary practices do what is EXPECTED of them and THEN SOME.

They are THOUGHTFUL of others, they are CONFIDENT and KIND and THEN SOME.

They meet their OBLIGATIONS and RESPONSIBILITIES FAIRLY AND SQUARELY and THEN SOME.

They are GOOD FRIENDS to their friends and THEN SOME.

They can be COUNTED ON in an emergency and THEN SOME.

It does us well to remember that joy is not in things; it is in us. With "and then some" internalized as part of our everyday behavior, we will get more and we will want more from life. It will be a life "and then some." There is no stopping the practice that experiences the excitement of honoring everyone encountered.

Aspirations

- We shall eliminate mediocrity at all levels of operation.
- We shall have purpose before profit, but have a pragmatic pursuit of profit.
- We shall embrace the latest technologies and treatment procedures for our patients.
- We shall place our main emphasis on ability, performance and personal character, so that every staff member can give the best of themselves at all times.
- We shall *honor* everyone we encounter in our practice.

A visionary practice will realize that a core ideology to sincerely honor its patients will provide an absolute foundation upon which to build all practice promotion. It is difficult to allow mediocrity to creep into the daily procedures of a committed office. You are bound not to take a mediocre X-ray on someone you honor, or to spell their name incorrectly, or to place their bands other than ideally. It is simply disrespectful to do so.

Action Plan

1. Accept and consistently follow core ideology "To Honor."
2. Exceptional cleanliness.
3. Exceptional sterilization procedures.
4. Practice with exceptional treatment quality.
5. Exceptional facility.
6. Send flowers and notes to celebrate, thank, congratulate and encourage.

7. Care calls after bandings or intricate procedures.
8. Be on the cutting edge.
9. Morning huddle to reaffirm purpose.
10. Always be happy in the office.
11. Take care of your staff and yourself.
12. Greet and honor everyone who comes through your door each day.
13. Remember that there are no little things. "We wildly underestimate the tremendous power of the tiniest personal touch."
14. Remember the guiding words: *Honor, Civility, Kindness, Sincerity.*
15. Be on time.

"People expect exceptional service in everything nowadays and they spend their money where they receive extraordinary attention."

Can you imagine how you would feel if you were treated in such a way at some minor appointment and how unbelievable it would be if it happened again the next time and how otherworldly you would feel if it happened every time you went to this office? Would you tell someone, "I can't believe those people. Maybe it's a trick, but I don't think so. But it is so nice! I just love to go there." We owe this to our patients who support us and to our specialty which has done such a wonderful job in this area, leading all health professions in patient and family respect. If we can give this one thing, this *honor* in our practices and our lives, we will prosper, orthodontics will continue to ride the crest of the wave of client satisfaction and we will help to create happiness for everyone we touch.

The Starnes Bite Orthotic for Maintaining Mixed Dentition Treatment Improvements

by Les O. Starnes, D.D.S., M.S.
Newport Beach, California

The Starnes Bite Orthotic is a solid one-piece Impak plastic appliance which indexes the upper and lower four incisors and all four first molars (Figures 1 and 2). It is fabricated using a wax bite registration made by positioning the lower teeth to the upper teeth in the desired relationship (Figures 3 and 4).

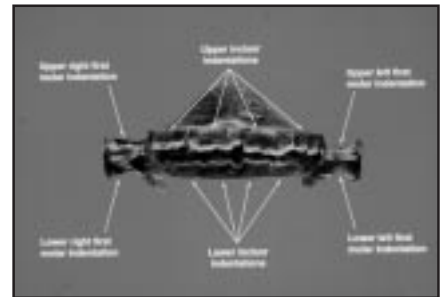
The orthotic is indicated for those patients who have experienced dentofacial orthopedic changes during mixed dentition treatment. If the desire is to retain those changes during continued growth, development and eruption, the orthotic will do this by retaining the relationship of the upper six permanent teeth to the lower six permanent teeth in all planes of space. A Class I dental relationship with corrected arch length and width can be successfully retained while eruption continues (Figures 5, 6, 7 and 8).

In general, the younger the patient, the quicker and easier the dentofacial orthopedic correction. It is typical that relapse of part or all of this correction is imminent while waiting for eruption of the remaining permanent teeth unless sound prevention procedures are taken. The orthotic is capable of preventing this relapse, making the theoretical advantages of two-phase treatment a reality.

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Dr. Starnes received his D.D.S. and M.S. degrees from St. Louis University and has practiced in Newport Beach, California, since 1966. He was part of the teaching staff of the UCLA Graduate Orthodontic Program from 1972 through 1982. He has served as president of the St. Louis University Orthodontic Education and Research Foundation and president of the Orange County Dental Society. Dr. Starnes has lectured and published professionally and is currently involved in researching and devising treatment methods that influence growth and development.



Figures 1 & 2. The Starnes Bite Orthotic.



Figure 3. Taking the wax bite impression.



Figure 4. Wax bite registration.

Bite Turbos...

New Levels of Bite-Opening Acceleration

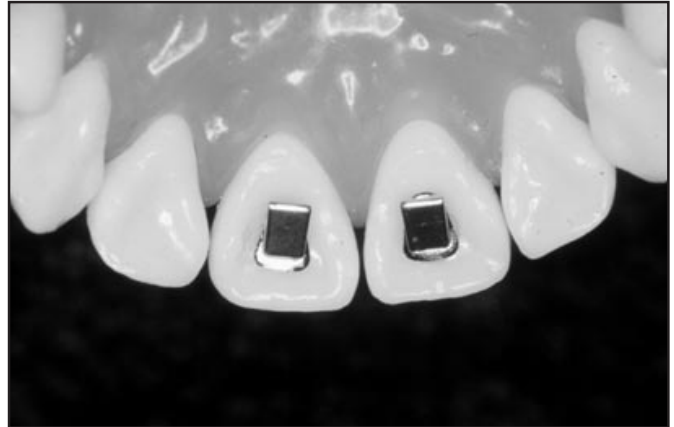
by Joe H. Mayes, D.D.S., M.S.D.
Lubbock, Texas

Bite turbos – more than just a pretty name. I didn't name them and I don't know who did, but bite turbos are appropriately named as they immediately open the bite. Anterior bite turbos allow placing lower anterior brackets without fear of their being knocked loose or causing a potential posterior deflection of the lower jaw. In deep bite cases, they can be placed on the linguals of the upper centrals. This is a takeoff of the lingual orthodontic appliance.

If a Class II or Class III problem occurs, posterior bite turbos may be used. There are two types. One is bonding material on the occlusal surfaces of the posterior teeth, preferably on the deciduous dentition. The other alternative is stainless steel crowns, my preferred posterior bite-opening method. The main reasons are delivery and cleanup after use. The cleanup after removal is very simple – similar to posterior band removal if the occlusal of the tooth is coated with Chapstick® This prevents the cement from adhering to the occlusal anatomy as bonding material does. This simple step greatly speeds cleanup at removal. Delivery is even easier. The correct crown size is selected and the inside micro-etched and loaded with glass ionomer cement. Have the patient close to the correct vertical and clean the excess cement with an air/water syringe. Allow to set and place archwires. Go ahead and start vertical eruption elastics at this time. Teeth that are forcibly erupted have a different bony trabeculation than if they are allowed to erupt and are more stable in their new positions.

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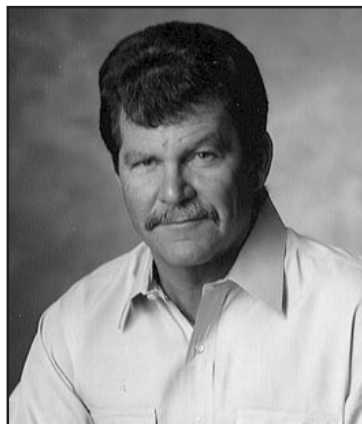
A native of Crane, Texas, Dr. Joe H. Mayes received his B.S. from Texas Tech University, followed by his D.D.S., M.S.D. and Certificate in Orthodontics from Baylor College of Dentistry. Dr. Mayes is engaged in the private practice of orthodontics in Lubbock, Texas, and has been actively involved in new product development.



Bite turbos placed on the lingual of upper anteriors. One to four may be placed.



Lateral view of bite turbos on lingual of upper anteriors. Note occlusal table is horizontal and places no distal force on the mandible.



Dr. Mayes

continued from preceding page

Therefore, bite turbos may be used to open closed bites. Even though having a short lower third of the face is relatively uncommon (about 10 percent), this is a useful tool in our armamentarium.

One of the best things about bite turbos is that they eliminate the muscle responses caused by occlusal programs of how the teeth fit together. Remember, occlusion is how the teeth come together and malocclusion is teeth not fitting properly. If a patient has occlusal irritants caused by the malocclusion, he or she will exhibit inhibited mandibular movements. These inhibited or protective reflexes of the jaw are similar to reflexes in other parts of the body. If something gets in your eye, it will cause you to

squint. This is a neuromuscular reflex in response to the irritation and it is protecting the eye. It will be very difficult to open the eye until the irritant is removed. Once that has occurred, the muscular response relaxes and normal function is restored.

The mandible reacts similarly to noxious stimuli from the occlusal input of the malocclusion. A bite turbo deprograms this, as the teeth do not meet as they did before. This is the basis of occlusal therapy – if the maximum intercuspal position is changed, the rest position of the mandible and condyle also changes.

Malocclusions can cause the condyle or disk to be displaced.



Typical bite opening with bite turbos, allowing placement of lower anterior brackets without danger of dislodgment.



Posterior bite turbos are stainless steel crowns and are placed (preferably) on deciduous dentition.

Accelerate Bite Opening with Ormco Bite Turbos

Ormco Bite Turbos are modifications of lingual incisor brackets. Their bite planes are horizontal to the occlusal plane to avoid creating a distal force on the mandible. The flat surface and deeper anterior-posterior dimension of the bite plane generate faster bite opening while preventing dislodgment of lower anterior brackets. Since there are no slots or tie wings, Bite Turbos are easier to

clean than conventional lingual brackets. Placement and removal are also simpler and quicker than with composites, splints or bite planes. No lab fee. No worries about fit or adaptation. Bite Turbos – the simple, efficient, economical answer to deep bite problems. Order information is provided on page D of the Center Section.



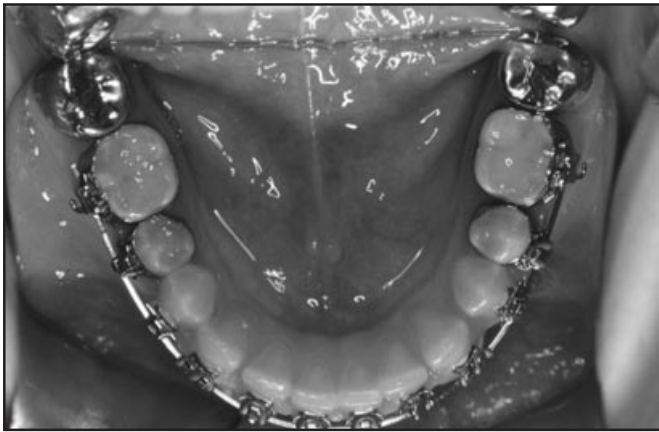
When these malocclusions are not too severe to cause serious displacements, they can still induce tension in the jaw-positioning muscles as well as muscles of the neck. These types of problems often disappear after the placement of bite turbos.

Therefore, bite turbos do more than allow more rapid lower anterior bracket placement. They can increase lower facial height. They also deprogram the musculature to allow the mandible to achieve a more relaxed rest (freeway) position, so detailing of the occlusion orthodontically will be less iatrogenic. Bite turbos offer several advantages:

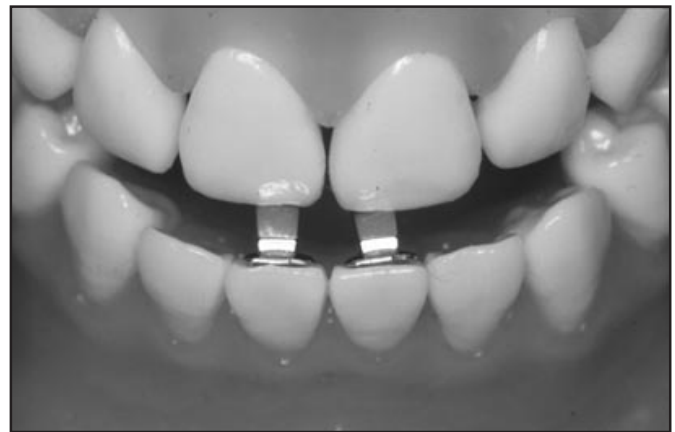
- Brackets can be placed on the lower anteriors earlier.

- The posterior occlusion is freed up, allowing more rapid orthodontic movement.
- The mandible is freed up to unlock occlusal interference inhibiting mandibular growth.
- Both intra- and extracapsular muscular and disk problems may be aided with the deprogramming.
- Removal is as simple as removal and cleanup of a lingual bracket or a stainless steel crown.

We have found that the simplicity and ease of application of bite turbos allow us to offer more rapid delivery of quality care and shorter treatment times.



Posterior bite turbos in the mouth of patient ready for vertical elastics to close the posterior open bite created by the crowns.



Bite turbos may be used in some Class III cases on the lingual of lower anteriors to allow placement of upper anterior brackets.

Ormco Stainless Steel Crowns... Shaped Right for Orthodontic Application



Stainless steel crown usage in orthodontics has been on the increase for bite-jumping, space maintenance and bite-opening therapy. Since the last time many orthodontists worked with stainless crowns was during undergraduate pediatric dentistry, there is not a particularly high level of awareness within the profession of the differences to be found between different stainless steel crowns. Ormco introduced its line of crowns with the orthodontist in mind, and we would like to point out the specific anatomical advantages of Ormco molar crowns in orthodontic applications:

- Correct gingival contouring and reduced height

eliminate or reduce the need for trimming.

- Flatter interproximal walls take up less arch space than the more rounded, bulbous-shaped crowns that are popular for pediatric dentistry.
- Broad, relatively flat occlusal surface accommodates tooth crown anatomy without necessitating reduction of the occlusal surface of the tooth.

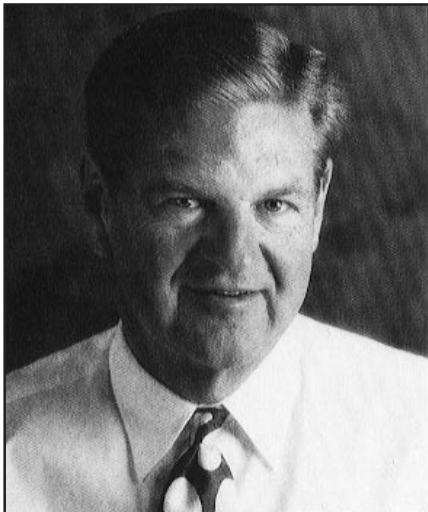
Ormco's complete line of crowns with a full range of sizes is available in kits of 84 crowns each, distributed according to popular usage. Crowns can be reordered in packages of five/size. See page D of the Center Section for order information. For information on Cantilever Bite-Jumper (CBJ) Kits, see page 27.

Retention Made Easy... The Ultimate Catch and

A

ah, the day the orthodontic appliances finally come off. That wonderful day when the patient is euphoric, the parents thankful, the orthodontist proud, the staff pleased and all can glance skyward in a small prayer of relief. Now the capricious part of treatment begins. Keeping a good result a good result can be one of the most vexing challenges in orthodontics. We've had control over the case (*the catch*) for two years (more or less) and it's time for rebound to guide the occlusion (*the release*). This transition between control and release is critical. The orthodontist's main focus is to maintain the result but, just as importantly, to do so in a manner that harnesses the forces of rebound to improve the result as settling occurs. The purpose of this article is to discuss a retention protocol that is simple, efficient and yet unique in what it accomplishes at this crucial stage of therapy. Our objective is not just to maintain but to foster improvement in our result.

by James J. Hilgers, D.D.S., M.S.
Mission Viejo, California



Our Goals:

1. To retain the patient in all critical areas (*the catch*) at the time of appliance removal.
2. To retain in a way that allows the occlusion to move from an ideal orthodontic occlusion to an ideal functional occlusion (*the release*).

This can be accomplished in five steps:

1. Appliance Removal

Appliance removal is accomplished after a final critical examination of the occlusion. The archwire is clipped interproximally between the bands and brackets using a distal end cutter, and the brackets are removed with a debonding plier (Ormco

#803-0105). The archwire is not removed prior to bracket removal. Many patients like to save their brackets as a memento and this is the perfect way to keep them intact. This also prevents the separate brackets from being dislodged and swallowed or aspirated. The pliers are placed around the opposite corners of the bracket wings (not the mesh base) and a slight rocking motion is used to dislodge the bracket. The bands are then removed using a band removing plier (Ormco #803-0609). The clinician should take care in selecting and purchasing band removing pliers, as many are not correctly levered (length and proportion of pliers beaks) or are too thick at the gingival beak to get under the band edge without undue tissue trauma. This is becoming more important as microetching of the bands and glass ionomer cements greatly improves band retention. When a microetched band is used, the cement will come off the tooth and adhere to the band, reducing the need for cement removal from the tooth. Safety glasses are placed so that any debris will not inadvertently get into the patient's eyes. Remnants of the bonding material are removed with an eight-fluted high-speed bur with a pointed tip (Henry Schein #999-4447), using a light wafting motion to get through the bonding medium. A pointed (not a rounded end) bur is used so that its tip can enter the gingival sulcus without damaging the tissue. Spend as little time as possible directly on the tooth surface to minimize scratching the enamel surface. Following that, a high-speed enamel polishing bur (Shofu #195-1823) is used to remove any residual scratching. This is

continued on page 20

Dr. James J. Hilgers, a well-known proponent of simplified orthodontic mechanotherapy, was instrumental in developing the recently introduced Bios™ System. He has published and lectured extensively and conducts a semiannual in-office seminar – “The Essence of Practical Orthodontics.” Dr. Hilgers’ private orthodontic practice is located in Mission Viejo, California. He received his dental education at Loyola of Chicago and graduated from the orthodontic program at Northwestern University.

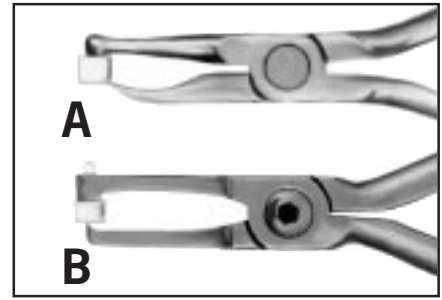
Release



Bracket removal with brackets attached to archwire. Bracket is engaged at opposite corners of bracket wings and loosened with a slight rocking motion.



The band removal plier (Ormco #803-0105) has a thin gingival edge to facilitate placement under the gingival crest without tissue trauma.



Comparison of correctly (A) and incorrectly (B) designed band removal pliers. The correct plier has a shorter gingival beak (to facilitate leverage), a thin, broad blade and a shorter overall shank length. The incorrect plier has a long shank, same-length plier beaks, and a thicker gingival beak.



A pointed eight-fluted bur facilitates bond resin removal in the gingival sulcus.



High-speed Shofu bur used to polish enamel surface, especially in the upper anterior region. Also can be used to remove minor decalcification.



Sandpaper disk used to shape incisal edges of upper incisors.



Small white stone used to shape incisal edges of lower incisors.



Thin SoFlex disks used to round corners of teeth and smooth interproximal contacts after reproximation.



Braided twist wire bonded 3-to-3 to the lingual of all teeth. This light wire can unravel and change the torque; cleaning is compromised and bond failure on one tooth is difficult to detect.

accentuated in the upper anterior region, an area that does not benefit from the natural polishing of the tooth surfaces when eating. The Shofu bur is excellent for polishing thin areas of decalcification, should they exist. Deeper decalcification or stains can sometimes be resolved using a Prema Polishing System from Premier (Henry Schein #378-3877).

2. Artistic Recontouring

I normally wait to artistically recontour the teeth until the time of appliance removal (aside from major reshaping that would interfere with correct bracket placement). This provides the patient with the drama of not only having straight teeth but also the final shaping on this special day. If there are any special considerations about the shaping of the teeth, I like to consult with the patient or the parent at this time. It's surprising how many patients like to keep the mamelons on their incisors – "It looks more natural." I explain the differences between "male-shaped" teeth (more flattened) and "female-shaped" teeth (more rounded) and the possibilities concerning the patient's own individual tooth shapes. In the final detailing of the upper incisors, I leave the incisal edge of the laterals at the same level as the centrals. These teeth will step up naturally during the initial stages of retainer wear, and when the step-up is exaggerated, the esthetic disadvantage is that the laterals are inset and receded, detracting from a full, expressive smile. This is particularly true with smaller or peg-shaped lateral incisors. The final positions of these teeth are created by placing the central and lateral brackets at the same level.

Recontouring the *upper anterior teeth* is accomplished with a large sandpaper disk, as it provides a broad, flat working surface, helps avoid nicking of the incisal edge that can sometimes occur and is thin enough to get into the interproximal corners of the teeth without damaging the adjacent teeth. The *lower anteriors* are reshaped using a small white stone. These teeth are very sensitive and this stone is more comfortable to the

patient than a heatless stone because it is less abrasive.

If the teeth are overly sensitive, I wait to adjust them at a subsequent appointment. Small, thin SoFlex disks (Henry Schein #777-3262) can be used to polish teeth interproximally, to round incisal edges and to access areas of the teeth that can't be reached with the larger disks and stones previously mentioned.

3. Fixed Retention

As a believer in long-term, semipermanent retention, I have long searched for the ideal wire to use as a lower fixed 3-to-3 or 4-to-4. Virtually all of those I have used have had some problems. About five years ago, I started to use .027 TMA® (Ormco #266-0006) bonded to the lingual of the lower cuspids only and found it to be a marvelous wire for this purpose. This wire is unique because TMA has flex characteristics that don't exist in more-rigid stainless steel wires. It can flex 2-3 mm without permanent deformation and yet its small diameter doesn't irritate the tongue or interfere with tooth brushing, flossing or eating harder foods that would permanently distort a more rigid wire. It is thin enough to bond to one or more anterior teeth if needed, yet stable enough to run the span between cuspids. I also have found that the retention of .027 TMA 3-to-3s is better because the flex in the wire takes stress off the bond

Advantages of .027 TMA 3-to-3

1. **Very small wire reduces chance of deformation.**
2. **Can flex slightly without permanent deformation.**
3. **Doesn't require a cuspid bonding pad.**
4. **Facilitates cleansing of lower teeth.**
5. **Easily formed in the mouth.**
6. **Thin enough to allow bonding of individual teeth.**
7. **Excellent at maintaining cuspid width.**
8. **Improved long-term retention.**

sites. More rigid wires either permanently deform or sever the bond when undue pressures occur. Also, the .027 TMA is easily formable. It is shaped in the mouth (not on a model) and can be contoured to

irregularly-shaped lower incisors. *This 3-to-3 is placed at the day of appliance removal so that the lower incisors and cuspids (the most likely teeth to relapse) are retained immediately.* This is important because in the catch-and-release protocol, retention of the anterior segments of teeth is indicated while posterior segments are allowed to settle.

4. The Settling Process – Partial Retention

It also is important to securely retain the upper incisor region on the day of appliance removal. Nothing is more frustrating for the orthodontist or the patient than to have diastemas or rotations recur in the upper incisors while waiting for a retainer. Retention is achieved with a small, thin, clear retainer (Mini-Tain) that covers the four upper incisors only. It is fabricated from the thinnest Tru-Tain material available (.5mm) so that it doesn't act to open the bite. Although this thinner material will not last a long time (it has a tendency to crack), it is excellent for the short-term retention for which it is intended. If the teeth are small or very short, it can be slightly extended over the gingivae to aid in retention. An impression of the anterior teeth (a one-scooper) is taken immediately after appliance removal and artistic recontouring. It is poured in quick-set white plaster, and the Mini-Tain is formed while the lower 3-to-3 is being placed. At this point, the upper and lower incisors have been securely retained, freeing the posterior segments to settle.

5. Final Retention – Full Retention

After the teeth are allowed to settle for a two- to three-week period (wearing only the Mini-Tain and TMA 3-to-3), the patient is scheduled for the final upper retainer. Although we still use acrylic-wire retainers in certain situations, we have found that when an ideal result has been achieved, an overlay or clear retainer can be used in about 85 percent of the cases. The complete clear overlay is excellent because it holds arch perimeter and tooth rotations, is very long lasting

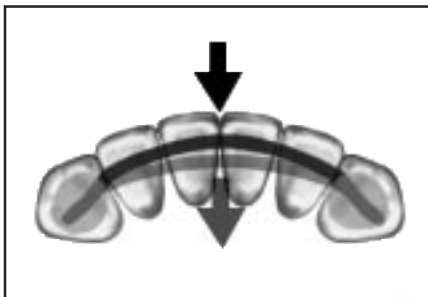
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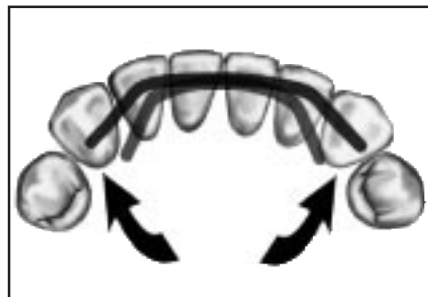
Retainer wire (.045) bonded at cuspids only. When deformed, it is expressed by expansion of the cuspids, creating crossbite.



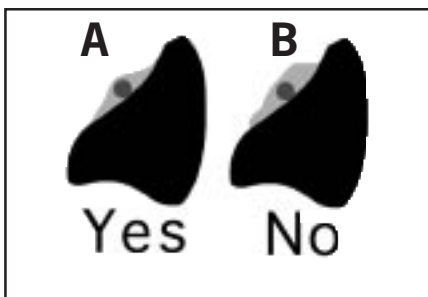
Expanded lower cuspids resulting from deformed lingual retainer.



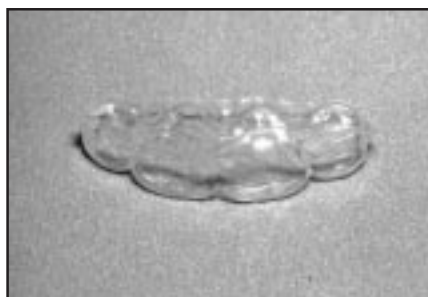
TMA .027 3-to-3 can be deflected 1-2 mm without permanent deformation, permitting use of this smaller wire without concern for adverse change in anterior arch form.



Take care that the .027 TMA 3-to-3 is passive at the time of bonding to avoid undue expansion or constriction of the cuspids.



Smooth resin over TMA wire to thin edge at both incisal and gingival margins (A). This aids in cleanliness and comfort and prevents creating an incisal ledge of resin (B) that can dislodge 3-to-3. Light-cured resin gives the clinician more time to shape the resin on the teeth properly.



Mini-Tain fabricated from .5 mm Tru-Tain plastic retains upper incisors while allowing the buccal segments to settle.

A Better Answer for Fixed Retention – .027 TMA

The ideal flex characteristics of .027 Round TMA® (2-3 mm without permanent deformation) take the stress off bond sites and make it the wire of choice for 3-to-3 retainers. More-rigid stainless steel wires are prone to deformation or can break the bond to the tooth when undue pressure develops. And, of course, TMA is formable. It is easy to shape in the mouth and easy to adapt to irregular tooth anatomy. Providing a unique combination of size and temper for improved long-term retention, .027 TMA is available in packages of ten 14" lengths. Order information is provided in the Center Section.

“The Essence of Practical Orthodontics” Mission Viejo, California April 21-26, 1997

Dr. Jim Hilgers' next hands-on course will provide the solutions to your problems (well, at least to a lot of the clinical ones). The focus is on diagnostics, case presentation, mechanotherapy and management, with an emphasis on noncompliance therapy. “The Essence of Practical Orthodontics” is based on flexible techniques that will provide you with good clinical ideas that can be used in any practice. You'll enjoy the Southern California coastal ambiance as well as the dynamic presentations and participation. For course information, call Kim at (714) 830-4101.

Dr. Hilgers

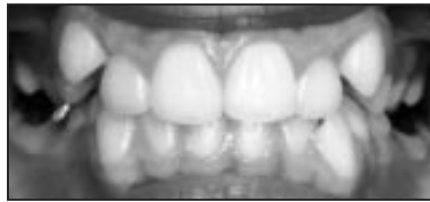
continued from page 20

and doesn't deform as do wire retainers. There are fewer adjustment appointments. The patient waits in the office while the final clear overlay retainer is fabricated. We often do this on a nondoctor day, because it either fits or it doesn't and the doctor cannot adjust it. The material we have found most acceptable is .040 inch polypropylene fabricated by Cope Plastics, 6340 Knox Industrial Drive, St. Louis, Missouri 63139, phone (314) 644-5120. It comes as a large roll that can be cut to width on a band saw and trimmed on a paper cutter to fit the Biostar. Cutting the material is time consuming but very cost effective – one roll should last the rest of your orthodontic career. Another material that also works extremely well as the final retainer is made by Raintree Essix (#1C125, thickness .030). Both of these materials are very resilient and resistant to cracking or deformation. *This final retainer is worn nights only from the time of placement.* This further allows settling of the occlusion, reduces lost retainers and improves patient compliance. I tell my patients, "If you come back 20 years from now and this retainer still fits, I know you have done your job. There is no such thing as complete stability, but there is such a thing as complete responsibility." What allows the liberal use of this easy and cost-effective retention program is that it focuses on techniques that allow the occlusion to settle and for rebound to occur (remember, 90 percent of rebound occurs in the first 48 hours). The catch and release program affords the best of both worlds – stable retention coupled with physiologic rebound.

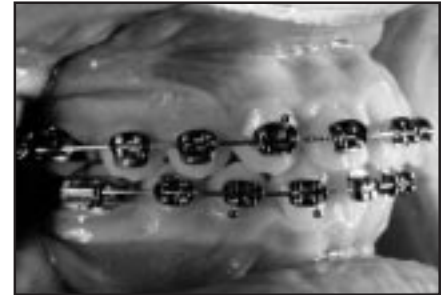
Conclusion

The day of retention is a special time in orthodontics. When a good result is achieved, it can be exhilarating. When a good result eludes us, it can be quite frustrating and humbling. Either way, it is the time when we get to reassess our proficiency in this specialty. I once had a dental colleague ask, "Jim, you must really get frustrated doing orthodontics? It takes so long to see the results of your efforts."

"No, it doesn't," I dissented, "I get to see them every day."



Frontal and lateral views, beginning malocclusion.



Functionally finished occlusion at time of debanding.



After appliance removal with upper 2-to-2 Mini-Tain in place. Allows final settling of buccal segments without compromising upper incisor alignment.



Final, settled occlusion two weeks later.



Full coverage polypropylene retainer placed two weeks after appliance removal. This time period allows the buccal segments to settle and supporting tissues to regenerate prior to final retainer placement. Retainer is worn nights only to avoid creating occlusal interferences.

Hilgers .027 TMA 3-to-3 Bonded Lingual Retainer

WHAT YOU NEED:

.027 TMA® Straight Lengths
 AEZ Tweed Bird Beak Plier
 AEZ Three Prong Plier
 AEZ Mosquito Hemostat
 Marking Pencil
 Cotton Rolls
 Denta-Pops
 Wheel Round Edge
 (Donut Diamond)
 Colored Dental Floss
 Pumice – First and Final
 Dappen Dishes
 Gel Etch
 Light Bond® Sealant Resin
 Light Cure Retainer (LCR)
 Centrix CR Syringe and Tips

WHERE TO GET THEM:

Ormco #266-0006
 Ormco #803-0124
 Ormco #803-0413
 Ormco #801-0037
 Supply Company
 Henry Schein #100-2525
 Henry Schein #114-3736

 Henry Schein #896-0693
 Johnson and Johnson
 Reliance Ortho Products
 Henry Schein #210-2120
 Ormco #740-0150
 Reliance Ortho Products
 Reliance Ortho Products
 Henry Schein #163-2822



1. (Left) Smooth the lingual of the lower cuspids slightly with a high-speed donut diamond bur. This will remove a thin layer of highly calcified enamel and improve bondability.



2. (Above) Form in the mouth a section of .027 TMA from distal of lower cuspid to distal of lower cuspid. Adapt wire so that it lies incisal to the cingulum and as close to the lingual of the lower cuspids as possible. Quite often you need to make a small adaptation or gable bend at the lateral incisor-cuspid embrasure.



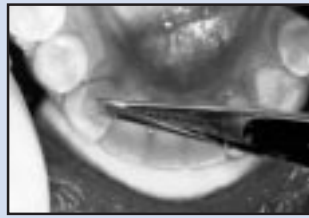
3. Pumice lingual of lower cuspids, making sure there is no calculus in the bonding area. Any scaling of the lingual incisor area should wait until 3-to-3 is in place to avoid any unwanted sulci fluids. Rinse thoroughly.

4. Place cotton rolls (one lingually, two labially). Place and activate saliva ejector. Dry teeth with air syringe.

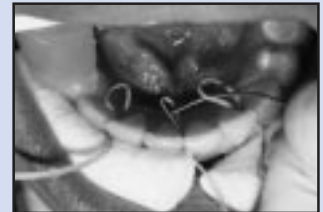


5. (Left) Apply etching gel with syringe on lingual of cuspids. Spread over the entire lingual surface with styrofoam pellet and dab, don't rub.

6. Place fresh cotton rolls and rinse with forceful spray of water for 10-20 seconds. Aspirate water with saliva ejector.



7. Apply Light Bond Sealant Resin to dried, etched surfaces of lower cuspids. Light cure for 30 seconds. Because of the sealant application, should the tongue inadvertently touch the teeth during the rest of the bonding process, they can be rinsed and redried without interfering with their bondability.



8. (Above) Fold each 10-inch strand of floss in half and place in the contacts between the central incisors and between the lateral incisors and cuspids. This will leave a small loop on the lingual of each of these contact points into which the formed .027 TMA wire can be inserted. Use colored dental floss so that it can be seen and not bonded into the retainer wire. Snug the floss through the contacts to pull the wire into its correct position. Twist the three pieces of floss together and clamp with a mosquito hemostat, which the patient can hold. The clinician can then position the 3-to-3 wire ideally on the lingual of the teeth.

9. Place the Denta-Pops isolator/saliva ejector in the back of the mouth. This serves to stabilize the mandible, hold the tongue back and aspirate saliva.



10. Load plastic tip of CR syringe by injecting LCR into it and exude the material over the wire in the cuspid area. Add a generous amount to completely cover the wire.

11. Smooth over the LCR with one drop of Light Bond Sealant Resin. Light cure each side for 30 seconds. If smoothed properly, it will not be necessary to grind or reduce the lingual bonding material in any way.

12. Remove cotton rolls, saliva ejector and floss. The floss is most easily removed by pulling to the lingual with a scaler, cutting the looped end, then pulling the entire piece back through the contacts.



13. Bonded .027 TMA lingual retainer in place.

NOTE: Lower 5-to-5 is typically used in extraction cases. The wire is then bonded onto both the cuspids and into the mesial fossae of the second bicuspids. This is used to stabilize root position and space closure, especially in adult cases.

Dr. Clark

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These are all examples of poor systems. Systems allow organizations to run smoothly no matter which individual is involved in performing the work. Implementing systems involves defining how things are to be done and properly training the individual to perform the job correctly, every time. Proper systems allow you to save time, money, headaches and confusion while providing quality service to your patients.

Which systems are needed in an orthodontic practice? Systems are needed in orthodontic practices for the same reason they are needed in any business – to promote consistency, efficiency and quality service. Systems must be developed for virtually every aspect of the work performed within the practice. It is not in the scope of this article to go into detail concerning every system, since each would require an entire article of its own to fully explore. I will, however, mention the objective of some systems.

- *The New-Patient Experience.* From the initial phone call until the patient leaves the office after their first visit, the entire experience should be second to none and must create the feeling that the patient or parent would not want anyone else to treat them or their child regardless of the distance they have to travel or the fee they have to pay.
- *Scheduling.* The patient's time and schedule are respected. Upon arriving at a personally convenient time (within your

unscheduled procedures).

- *Financial Arrangements and Collections.* Affordable payment arrangements must be provided for the patient and an appropriate follow-up system established for those not in compliance with the prearranged payment program.
- *Technical Training.* Each staff member must know their duties and responsibilities (job descriptions) and be fully trained in all aspects of those duties so they can perform them flawlessly and expeditiously.
- *Customer Service.* It is not enough for staff members to do their job; how they do it is equally important. I highly recommend the book *Raving Fans* by Ken Blanchard. It is the best book on customer service I've ever read. It's a quick, easy read that can transform your practice.
- *Correspondence.* A system of short, concise letters and brochures printed on quality paper with a first class practice logo provides helpful information for patients and referring doctors. All are produced in a systematic fashion to promote consistency of communication so that all correspondence conveys more than just the words printed on paper.
- *Purchasing and Inventory Control.* A systematic way of obtaining products and materials used in the practice is developed so that all necessary items are always in stock and obtained in an organized fashion, so that quality prod-

A system is implemented to ensure that all regulations are complied with for the protection, safety and benefit of employees who provide the services for the patients in your practice.

Proper development of each system will provide the basis for a *Procedures Manual* which allows each employee to perform their job according to predetermined guidelines, correctly every time and in a timely fashion. Systems are the third key component in establishing a marketing plan for your practice.

Organization and Management of the Practice

Can't the doctor delegate this? Partially. However, leadership is critical. The doctor must be willing to make tough decisions. The doctor must be the practice leader even if other important decisions within the practice are made by others. The lines of communication and authority must be clearly drawn and understood to make the entire organization work. The organizational structure of the practice is established first and then a system for managing it is implemented.

What about an office manager?

In many practices, it is best to establish the position of office manager. The benefits to the doctor are significant:

- In many cases, the doctor is not skilled in the area of management, doesn't like it and therefore resents having to be involved in something that doesn't have anything to do with their training to straighten teeth.
- There is only so much time in a day. The office manager can take many things "off the plate" of the doctor (those chores the doctor doesn't need to do and does not enjoy doing).
- Having an office manager gets the doctor out of the fray of the everyday problems that arise in every practice. It is necessary for these problems to be addressed and solved, but it doesn't have to be by the doctor.

“Yearly, a strategic business planning session is necessary to critically assess the previous year and set goals for the coming year.”

prearranged schedule), he or she is greeted warmly and seen on time with zero waiting time and also finished on time (doctor doesn't perform

ucts can be purchased in appropriate quantities at the best possible price.

- *Complying with OSHA Regulations.*

Ritz-Carlton Quality Basics

1. The credo will be known, owned and energized by all staff members. "Our practice is a place where genuine care and the finest quality treatment is our highest mission. We pledge to provide the finest personal treatment for our patients who will always enjoy a warm, relaxed yet refined atmosphere. The patient's experience in our practice will not only meet their healthcare needs but also fulfill their unexpressed personal wishes and needs."
2. Our motto is "We are professionals serving valued patients."
3. The "Three Steps to Quality Service" will be practiced by all staff members.
 - a. A warm and sincere greeting.
 - b. Use patients' names if and when possible. Anticipation and compliance with patients needs.
 - c. Fond farewell. Give them a warm good-bye and use their names whenever possible.
4. All staff members will successfully complete all necessary training to ensure they understand how to perform to the standards of the practice.
5. Each staff member will understand their work area and overall practice goals as established in the practice's action plan.
6. All staff members will know the needs of their internal (other staff members) and external (patients) customers so we may deliver the services they expect.
7. Each staff member will continuously identify and report defects throughout the practice.
8. Any staff member who receives a complaint "owns" the complaint.
9. Instant patient pacification will be ensured by all. Follow up with a telephone call or note to verify that the problem has been resolved to the patient's satisfaction. Do everything you possibly can to never lose a patient.
10. Patient incident action forms are used to record every incident of patient dissatisfaction. Every staff member is empowered to

resolve the problem and to prevent a repeat occurrence.

11. Uncompromising levels of cleanliness are the responsibility of everyone.
12. "Smile – We are onstage." Always maintain positive eye contact. Use the proper vocabulary and tone of voice with patient. (Use phrases like, "Good morning," "Certainly," "I'll be happy to" and "My pleasure.")
13. Be an ambassador of the practice in and outside the workplace. Always talk positively – no negative comments. Never discuss other patients in front of patients.
14. Escort patients rather than pointing out directions to another area of the office.
15. Be knowledgeable of practice information to answer patient inquiries.
16. Use proper telephone etiquette. Answer within three rings with a "smile." When necessary, ask the caller, "May I place you on hold?" Do not screen calls. Eliminate call transfers when possible. Protect the doctor from unnecessary calls, have a preapproved list of individuals whose calls will be accepted.
17. Uniforms are to be immaculate. Wear proper footwear (clean and polished) and your correct name tag. Take pride and care in your personal appearance (adhering to all grooming standards; i.e., proper hair length, etc.).
18. Ensure that all staff members know their roles during emergency situations and are aware of fire and life-safety response processes.
19. Notify doctor immediately of hazards, injuries, equipment or assistance that you need. Practice energy conservation and proper maintenance and repair of all property and equipment.
20. Protecting the assets of the practice is the responsibility of every staff member.

Figure 5

• The office manager is an advocate for the staff, someone they feel will "go to bat" for them if problems arise.

When is there time for this management stuff? You must make the time.

Yearly, a strategic business planning session is necessary to critically assess the previous year and set goals for the coming year. Also yearly, the performance reviews are conducted to let staff members know how they are doing and identify areas in which they might improve in the year to come. Monthly staff meetings are held to

address important issues in the running of the practice and to track the practice's progress toward reaching the goals established during the yearly strategic business planning session.

Is now the time to market my practice?

Yes. The development of a smooth-running, efficient, profitable practice does not happen by accident. However, with proper planning and the ability to delegate to well-trained staff members, the practice can grow beyond your wildest expectations. In the next article, we will discuss

the development of a comprehensive marketing plan unlike anything you have ever seen. This plan was developed by a marketing expert who has worked with some of the nation's most successful companies, such as McDonald's and Sara Lee. It can help ignite the growth of your practice – just like it did mine.

Part II of "Developing an Effective Marketing Plan for Your Practice" will be presented in the next edition of Clinical Impressions. It will provide step-by-step procedures for developing the actual marketing plan.

Dr. Chastant

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In the course of treatment, emergencies generally result from tissue impingement when the lingual arch or other lower auxiliary rotates down into the lingual gingiva of the lower incisors. This can easily be avoided by soldering occlusal rests on the auxiliary, resting on the occlusal margin of the lower primary first molar (if intact), primary second molar or first bicuspid (Figure 27).

Occasionally, tissue irritation occurs over the lower axles. Rarely does it occur over the upper axles unless the patient has an extremely long coronoid process. For patients with long coronoid processes, advance them in smaller increments, because as the patient is advanced, impingement on the axles of the upper crowns can occur.

Still, the most common emergency (nevertheless very uncommon) is the patient presenting with a loose crown. Most of the time it's from abuse of diet or habit. Upper crowns are usually very easy to manage, because most patients do not require transpalatal stabilization.



Figure 27. The occlusal rest prevents impingement of the lingual arch into the soft tissue.

However, in those patients with rigid attachments, management of the upper crowns is very much like managing the lowers since they act as one unit, thus necessitating the removal of both upper left and right crowns. Once again, the AEZ Crown Remover comes in handy.

Retention, Retention, Retention

Retention is not always necessary in the “rest” period between the CBJ and fixed appliance. Since emergencies are not a goal of our practices, securing lip bumpers, lingual arches, etc., with crowns has provided added security. Crowns offer added stability to combat the leveraging effects that lip bumpers have in creating loose bands (Figure 28). Crowns also make for longer intervals between adjustments. Using the AEZ Crown Remover at the end of treatment to remove the appliance allows cutting off the cantilever from the lower crowns and recementing a lingual arch when it is the retention of choice. Once again, the AEZ Crown Remover enables you to reuse existing



Figure 28. Like the cantilever, lip bumpers create enough of a fulcrum to create loose bands. Crowns rarely become uncemented.

crowns for needed retainers.

As you gain experience with the use of the CBJ as your basic Class II correction, you'll find many other opportunities for using it: opening deep bites, closing open bites, management of congenitally missing teeth, skeletal asymmetries and even fractured condyles and treatment for dental alveolar movement. Case reports and examples of these types of treatment plans will be presented in an upcoming article.

With treatment efficiencies and inventory control a growing concern for all of us, success can only come through creativity and continual streamlining of treatment applications. The use of the AEZ Crown Remover and windows has increased patient comfort, reduced inventory usage through reuse of the original stainless steel crowns and brought doctor time to a minimum. Most important of all, they have opened time in the practice for more fun (Figure 29) – even an occasional two-step!



Figure 29. Remember that orthodontics should be fun for all!

AEZ[®] Crown Removing Plier

Dr. Bob Chastant designed this instrument to provide a better “leverage force” to aid in crown removal, especially as a quicker, more convenient way to trial fit crowns and to cope with emergen-

cies. This modification of a molar band removing plier has a steel hooked tip that is narrowed and shortened to allow for clearance over the pin on the opposite side of the plier. The pad has been removed to facilitate insertion of the tip into a vent hole in the crown for simplified removal. Order information is provided on page D of the Center Section.

Popular CBJ Kits Available for Immediate Delivery

Due to heavy demand and in-line improvements (addition of solder at the crown area of attachment of axles to upper crowns), shipments of Cantilever Bite-Jumper™ (CBJ) Kits and components have been delayed. Inventories are now in good supply, however, and available for immediate delivery. The 20-patient CBJ™ Kit provides the essential components for the single-appointment CBJ. A complete size range of laser-marked first molar crowns (seven per quadrant) is provided – 80 crowns distributed according to popular usage. Upper crowns are supplied complete with nickel-brazed axles, while all lower crowns come with nickel-brazed cantilever arms that are specifically designed for maximum strength and optimum patient comfort. Each cantilever arm has an axle with a .022 tube occlusal to it for use with bonded cases. All necessary components for 20 cases are also supplied, including rods, sleeves, Hex-Head screws and a Hex-Head Allen wrench.

The CBJ Fit-Kit provides one loose crown in each of the 28 sizes for trial fitting. Prewelded Precision™ Lingual Hinge Caps are an option for the lower arch (and upper as well when TPAs or other auxiliaries are planned) to eliminate all soldering and lab work except for pouring models. Peerless® M/P .022 buccal tubes are also available nickel-brazed to upper molar crowns for use in bonded cases.

Crowns with attachments and Allen wrenches can be reordered separately (no minimum). Loose crowns (any mix of sizes) and other components can be reordered in packs of ten.

Dr. Starnes

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Opening of airway space is one of many advantages to a comprehensive middle mixed dentition (phase 1) treatment. Expansion of a constricted airway space at an early age helps growth and development and relieves distress from serious allergic responses. Early treatment in these maxillary constrictions may be indicated if for no other reason than to create a more normal breathing pattern while growth and development occurs.

The orthotic can be fabricated by Allesee Orthodontic Appliances (AOA), 13931 Spring Street, P.O. Box 725, Sturtevant, Wisconsin 53177, (800) 262-5221. Upper and lower stone models and a wax bite registration are all that are necessary. The working models should have excellent definition of all four upper and lower incisors and all four first molars. The wax bite can be made from four layers of pink baseplate wax. Soften the wax in warm water, then flatten that portion of the wax in which the molars will occlude so the thickness does not prevent mandibular protrusion. Guide the mandible into the desired protruded relationship to the maxilla and have the patient close into the wax. A degree of practice may be necessary to master the bite registration. Initially, I suggest using AOA for fabrication of the orthotic rather than going directly to your local lab. There is a learning curve. You will know what to expect after using an orthotic made by an experienced laboratory.

The patient should be instructed to wear the orthotic a minimum number of sleeping hours (i.e., eight hours). If significant skeletal corrections are to be retained, the appliance should be worn more than just sleeping hours. A typical wear protocol calls for full-time the first month. The second and third month should be four hours plus sleeping hours, then sleeping hours only for the next three months. After six months, the appliance can be discontinued (Figure 9).



Figure 5. Pretreatment.



Figure 6. After 18 months of mixed dentition treatment.



Figure 7. Pretreatment



Figure 8. After 18 months of mixed dentition treatment.



Figure 9. Orthotic in place.