Dentists collect Halloween candy in trick-or-treat buyback

Everyone knows candy causes tooth decay. That means come Halloween, dental care professionals are simply aghast.

Some dentists this year, however, used a clever idea to cut down on the need for drilling and filling. Around the country, a number of dentists gave cash and prizes to trick-or-treaters in exchange for their Halloween candy.

The sweets are being shipped to American troops serving in Iraq and Afghanistan.

“We bought back approximately 70 pounds of candy,” said Dr. Todd Snyder of Aesthetic Dental Designs in Laguna Niguel, Calif., one of the dentists who held an anti-decay promotion this year.

“Surprisingly, I am amazed at how much candy it takes to weigh that much. We had a steady stream every five to 10 minutes of parents with one or two kids who would drop off their candy.”

In addition to getting $1 per pound for the candy they brought in to dental offices, the children also received toothbrushes and the chance to win raffle prizes.

The programs are designed to help kids maintain healthy teeth and gums.

“Ditch the candy, that’s what we’re saying,” said Snyder, who

Greater N.Y. Dental Meeting = no registration fee!

Heading to the Greater N.Y. Dental Meeting? Don’t forget to visit Times Square and pull up a lounge chair to watch the hustle and bustle. (Photo/Julienne Schaer, NYC and Company)

Dentists can help identify cardiovascular risk

A recent study indicates dentists can play a potentially life-saving role in health care by identifying patients at risk of fatal heart attacks and referring them to physicians for further evaluation. Published in the November issue of the Journal of the American Dental Association, the study followed 200 patients (101 women and 99 men) in private dental practices in Sweden whose dentists used a computerized system, HeartScore, to calculate the risk of a patient dying from a cardiovascular event within a 10-year period.

Designated by the European Society of Cardiology, HeartScore measures cardiovascular disease risk in persons aged 40–65 by factoring
Patients who have sensitive teeth may be brushing too hard, AGD says

By Fred Michnerson, Online Editor

Do you have patients who complain about sensitive teeth, sharp pains or discomfort triggered by hot or cold? The culprit, according to the Academy of General Dentistry, might be in their very own hands.

According to a nationwide member survey conducted by the AGD, one in three dentists say that aggressive toothbrushing is the most common cause of sensitive teeth. Acidic food and beverage consumption was found to be the No. 2 cause.

As the AGD pointed out in a news release announcing the survey results, dentin hypersensitivity is a common oral condition affecting approximately 40 million Americans of all ages.

It is characterized by discomfort or sharp and sudden pain in one or more teeth and is often triggered by hot, cold, sweet or sour foods and drinks, pressure on the teeth or even breathing cold air.

Van B. Haywood, DMD, said that aggressive toothbrushing and consuming acidic foods and beverages can lead to tooth sensitivity. This is because over time, they can wear down the enamel on your teeth and even your gums.

“W hen the protective layer of enamel erodes or gum lines recede, a softer tissue in your teeth called dentin can be left exposed,” Haywood said. “Dentin connects to the tooth’s inner nerve center, so when it is unprotected the nerve center can be left unshielded and vulnerable to sensations, including pain.”

The survey also found that several other factors in addition to aggressive toothbrushing and acidic foods and beverages can cause tooth erosion and contribute to the oral condition. These factors include certain toothpastes and mouthwashes, tooth whitening products, broken or cracked teeth, bulimia and acid reflux.

Out of the nearly 700 general dentists who responded to the survey, nearly 60 percent said that the frequency of tooth erosion has increased compared to five years ago.

“Being able to detect tooth erosion in its early stages is perhaps the most important key to preventing dentin hypersensitivity,” said Raymond K. Martin, DDS, MAGD. “Discoloration, transparency and small dents or cracks in the teeth are all signs of tooth erosion and should be discussed with your dentist as soon as possible.”

Fifty-six percent of dentists surveyed say that patients manage tooth sensitivity by avoiding cold foods and beverages, while 17 percent said that patients avoid brushing the sensitive area of the mouth.

“While these may seem like the quickest and easiest ways to prevent sensitivity, none of them will actually solve the problem,” said Gigi Meinecke, DMD, FAGD.

For those who are already affected by sensitive teeth, the AGD recommends patients adhere to the following actions to help alleviate symptoms:

• Switch to a desensitizing toothpaste. There are many brands of toothpaste made specifically for sensitive teeth.

• Use a soft-bristled toothbrush. When a patient uses a hard-bristled toothbrush, he or she may be wearing away the enamel on the teeth or causing the gums to recede.

• Practice good oral hygiene. A patient should floss regularly and brush at a 45-degree angle, brush with at least twice a day for two to three minutes.

• Hold the toothbrush at a 45-degree angle, brush gently in a circular motion and hold the toothbrush in the fingertips rather than in the palm of the hand.

• Avoid highly acidic foods and beverages. A patient should make a conscious effort to limit his or her intake of highly acidic foods and beverages every day.

The person’s age, sex, total cholesterol level, systolic blood pressure and smoking status.

Patients with HeartScores of 10 percent or higher — meaning they had a 10 percent or higher risk of having a fatal heart attack or stroke within a 10-year period — were told by dentists to seek medical advice regarding their condition.

Twelve patients in the study, all of them men, had HeartScores of 10 percent or higher. All women participating in the study had HeartScores of 5 percent or less.

Of the 12 male patients with HeartScores of 10 percent or higher, nine sought further evaluation by a medical care provider who decided that intervention was indicated for six of the patients.

Two patients did not follow the dentist’s recommendation to seek further medical evaluation and one patient was only encouraged by his dentist to discontinue smoking.

Physicians for three patients were not able to confirm their risk for cardiovascular disease.

All 200 patients enrolled in the study were 45 years of age or older with no history of cardiovascular disease, medications for high blood pressure, high cholesterol or diabetes and had not visited a physician during the previous year to assess their glucose, cholesterol or blood pressure levels.

The study’s authors conclude that oral health care professionals can identify patients who are unaware of their risk of developing serious complications as a result of cardiovascular disease and who are in need of medical interventions.

According to the authors, “With emerging tests suggesting an association between oral and non-oral diseases, and with the possibility of performing chairside screening tests for diseases such as cardiovascular disease and diabetes, oral health care professionals may find themselves in an opportune position to enhance the overall health and well-being of their patients.”

(Source: ADA)
**TF is twisted, not ground** – unlike other nickel titanium files – making it more durable. Most endodontic files are made by grinding the flutes, weakening the metal’s molecular structure which can lead to separation. Not so with TF.

Our unique manufacturing process produces a file with optimal sharpness and flexibility. TF allows you to work in difficult situations faster, safer and with a stronger file.

**Bottom line** – TF helps you achieve your goals for saving natural dentition, alleviating your patients pain and managing dental trauma.

Interested in improving your endodontic efficiency? Go to our TF website for the details and the solutions.

For more information on TF visit our website or call 800.346.ENDO. You can now shop online at store.sybronendo.com.
Fiscally fit in 2009*

Tax breaks and limited-time laws make 2009 the right time to invest in your practice

By Keith Drayer

The American Recovery and Reinvestment Act of 2009 was signed into law on Feb. 17 with some of the best benefits having limited remaining time eligibility.

Small business owners have limited time in 2009 to benefit from the most lucrative tax incentives for acquiring technology and/or equipment.

If your practice is ready to buy equipment or software, the tax incentives for doing so are better than ever. These benefits will expire, or be reduced, as of Jan. 1, 2010.

The American Recovery and Reinvestment Act accompanied by lower interest rates make this a strategic time to invest in your practice to meet the demands of today’s health care industry.

Because of these beneficial conditions, installing equipment and technology in 2009 can create a cash flow win-win for health care practitioners “in the know.”

Can you deduct $250,000?

For the 2009 tax year, many small businesses may potentially deduct up to $250,000 if the equipment or software is placed in service.

This valuable break is the Section 179 depreciation deduction privilege, and it is an exception to the general rule that you must depreciate equipment and software costs over several years.

Section 179 is an annual “use it or lose it” accelerated deduction benefit that optimally lowers taxable income.

The bonus depreciation is allowable for regular and alternative minimum tax (AMT) purposes for the tax year in which the property is placed in service.

Property eligible for this treatment includes:
- Property with a recovery period of 20 years or less (almost all dental equipment).
- Standard software/practice-management software.

Who can take the deduction?

This deduction is available whether you are a sole proprietorship, partnership or corporation (S corporations are subject to different rules). If you plan to acquire equipment in the near future, purchasing it before year’s end is prudent.

What type of financing is eligible?

Utilizing a finance agreement or capital lease to acquire technology or equipment will qualify for this benefit, while true leases or fair market value agreements will not.

If you use a finance agreement to acquire your equipment and you have deferred payments, you may file your tax returns and achieve the benefits before you have made any payments.

Avoid last-minute decisions

Don’t wait too long to acquire technology or upgrade your office. Although it is true that you can have equipment placed in service by Dec. 31 to take advantage of the incentives, waiting much longer may mean that you will settle on your selections because of diminished year-end choices.

Now is the right time to meet with an equipment or technology specialist and discuss acquiring the optimal production-enhancing technology and equipment that will help your practice stay fiscally fit.

Don’t forget bonus depreciation

Your practice may generally claim first-year bonus depreciation deductions equal to 50 percent of the cost that is left over after subtracting allowable Section 179 deductions (if any).

If your business uses the calendar year for tax purposes, you only have until Dec. 31 to take advantage of the generous $250,000 allowance.

Don’t wait to see if 2010 will provide the same opportunity. Act now and take advantage of all the benefits available through this current legislative windfall.

---

### Invest in your practice with HSFS

Henry Schein Financial Services (HSFS) business solutions portfolio offers a wide range of financing options that make it possible for you to invest in your practice for greater efficiency, increased productivity and enhanced patient services.

HSFS helps health care practitioners operate financially successful practices by offering complete leasing and financing programs. HSFS can help obtain financing for equipment and technology purchases, practice acquisitions and practice start-ups.

HSFS also offers value-added services including credit card acceptance, demographic site analysis reports, patient collections, patient financing and the Henry Schein Credit Card with 2% cash back or 1½ points per dollar spent.

For further information, please call (800) 853-9495 or send an e-mail to hsfs@henryschein.com.

---

### Annual Internal Revenue Code Section 179 Example

<table>
<thead>
<tr>
<th>Calculations</th>
<th>Equipment not more than $800,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Equipment price</td>
<td>$100,000</td>
</tr>
<tr>
<td>B. Section 179 deduction</td>
<td>$250,000</td>
</tr>
<tr>
<td>C. 50% bonus depreciation (A - B x 0.50)</td>
<td>$23,000</td>
</tr>
<tr>
<td>D. 2009 MACRS deduction (A - B - C x 0.20)</td>
<td>$5,000</td>
</tr>
<tr>
<td>E. Total first year tax deduction</td>
<td>$280,000</td>
</tr>
<tr>
<td>F. Combined federal and state tax bracket</td>
<td>58%</td>
</tr>
<tr>
<td>G. Total 2009 tax savings as a result of capital expenditure (E x F)</td>
<td>$106,400</td>
</tr>
</tbody>
</table>

---

### About the author

Keith Drayer is vice president of Henry Schein Financial Services, which provides equipment, technology, practice start-up and acquisition financing services nationwide.

Henry Schein Financial Services can be reached at (800) 853-9495 or hsfs@henryschein.com.

Please consult your tax advisor regarding your individual circumstances.
When It's Time to Buy, Sell, or Merge Your Practice
You Need A Partner On Your Side

ALABAMA
Birmingham—4 Ops, 2 Hygiene Rooms, GR $673K #10108
CONTACT Dr. Jim Cole @ 404-513-1575

ARIZONA
Scottsdale—4 Ops, 3 Hygiene Rooms, Practice Opportunity 10186
CONTACT Todd Bailey @ 480-651-1211

AHOGA
Albany—4 Ops, HY $611K $1/2 day, 12 mos
CONTACT Dr. Steven Moore @ 912-421-5555

CALIFORNIA
Alturas—4 Ops, GR $161K, 1-1/2 day, 1 yr
CONTACT Dr. John D. Brown @ 707-677-1317

CAROLINA
Charlotte—15 Ops, GR $550K, 1/4 day, 1 yr
CONTACT Dr. Mark Geiser @ 980-669-1234

ILLINOIS
Chicago—4 Ops, GR $709K, Sale Price $161K #22126
1.5 HS of Chicago—3 Ops, 2007 GR $146K, 7 yrs
CONTACT Dr. James A. Jones @ 708-871-1234

INDIANA
St. Joseph County—GR $270K on a 3/4 day, 4 mos
CONTACT Dr. Susan McQuade @ 574-765-1234

MARYLAND
Southern—11 Ops, 1,500 sq. ft., GR $1,480K
CONTACT Dr. Mark Geiser @ 980-669-1234

MASSACHUSETTS
Boston—2 Ops, Hygiene, GR $155K, #8113
Boston—2 Ops, GR $937K, 1 yr
CONTACT Dr. John D. Brown @ 978-677-1234

OHIO
Columbus—15 Ops, GR $650K, 1-1/2 day, 1 yr
CONTACT Dr. Mark Geiser @ 980-669-1234

PENNSYLVANIA
Philadelphia—20 Ops, GR $1,040K, 2 yrs
CONTACT Dr. John D. Brown @ 978-677-1234

SOUTH CAROLINA
Columbia—7 Ops, 2,200 sq. ft., GR $673K #19102
CONTACT Dr. Mark Geiser @ 980-669-1234

TEXAS
Houston—10 Ops, GR $1,240K, 1-1/2 day, 1 yr
CONTACT Dr. Mark Geiser @ 980-669-1234

For a complete listing, visit www.henryschein.com/ppt or call 1-800-730-8883

© 2003 Henry Schein, Inc. No copying without permission. Not responsible for typographical errors.
How often does this simple question — “Will my insurance cover that?” — stand between treatment diagnosed and treatment accepted? Five words that mark the great divide between the care patients truly need and deserve and the bare minimum that they often settle for.

Here’s the typical scenario. You present the treatment plan. The patient is eager to proceed. Then the financial coordinator steps in and unveils the price tag. The patient swallows hard and asks the question that she intuitively knows the answer to. “Will my insurance pay for that?” Now what? Everyone is just looking at each other, not sure how to explain the situation to the patient.

Educate and communicate
Don’t be caught stuttering and stammering through these tricky situations. I recommend you educate and communicate.

First, educate your patients about insurance limitations and other financial options just as you educate them about proper oral health care. Specifically, patients must fully understand that while standards of dental care have improved dramatically in the last 25 years, dental insurance coverage remains virtually unchanged. Most policies have a per calendar year cap that has not been increased in more than two decades — an important detail that patients often aren’t aware of.

Next, communicate. Your financial coordinator should sit down with the patient and review what’s covered in his/her dental plan according to a prepared script (more on this later) in which the situation and options are clearly articulated and the coordinator is well prepared with the answers to those frequently asked patient questions and concerns.

Discuss the calendar year cap, deductibles, co-pays, coverage for preventive care, etc.

Using scripts
For example, “According to the information you provided and additional information I gathered from the insurance company, your employer has purchased a package for you that includes the following benefits and coverage.” Explain those to the patient.

The greatest benefit of a script is that it is clear how you will respond and you are prepared. Dentist and team can better manage the messages to ensure they are clear and professional. Scripts also are ideal for addressing patient financial issues. When insurance plans fall short, as they often do, scripts help staff to clearly educate patients on treatment financing options that can bridge the financial divide.

For example, your financial coordinator might script this approach: “Mrs. Patient, we offer four convenient payment options to help you obtain the care you need. The first is a patient financing program offered through CareCredit. It allows...”
Buy any of the following products and get the 2nd one at 1/2 off!*  

**MEDITORQUE**  
All in One: Torque, speed, motor, and built-in nose cone.  
- 2 or 4 hole  
- 0-20,000 RPM  
- Forward & Reverse  
Price each: **$299**

**MEDITORQUE “E”**  
Buy One Meditordue “E” Type Motor And Get Any Two Attachments Of Your Choice!  
Price each: **$449**

**CERATORQUE H**  
Hygienist Model  
- Ultra lightweight  
- Perfectly balanced in the hygienist’s hand.  
- Swivel Design  
- 5000 rpm  
Price each: **$349**

**AIR KING**  
- Streamlined design  
- Fine spray mist  
- Fully autoclavable  
- Up to 400,000 rpm  
Price each: Regular **$149**; Push-Button **$199**

**BLUE STREAK**  
- Available in Blue or Silver  
- Featherweight - only 1.2oz.  
- Fully autoclavable  
- Up to 450,000 RPM  
Price each: Regular **$149**; Push-Button **$199**

**DENTI-LAB**  
The Kit Includes:  
- Control Box  
- Denti-Lab Motor  
- Variable Foot Control  
- Motor Stand  
Torque compensation features affords maximum strength at all speeds 0-35,000 RPM  
Price each: **$495**

**AIR KING SURGICAL**  
- Spends up to 450,000 rpm  
- High Power Torque  
- Economically priced  
- Completely eliminates air to the surgical site.  
- 35 degree angled head  
Price each: Regular **$349**; Push-Button **$459**

Don’t forget to send in your scrap for refining and get an extra 10% off!  

*May not be combined with any other offers except refining. Expires December 31, 2009. Use offer code D5N09. 1/2 off term must be equal or less value to items purchased.*

**BUY DIRECT AND SAVE!**  
Refining Direct Minus the Middleman = More money in your pocket!  

**REFINING**  
Get full value for your scrap!  
- A trusted name in Dental for 65 years.  
- Deal direct with the refiner and get top dollar, don’t just get your scrap ‘weighed and paid’.  
- Multiple payout options are available!  
- Refine with Medidenta and get a bonus 10% off all products and repairs including current promotions.

**REPAIR**  
Don’t throw away that handpiece!  
SEND IN A HANDPIECE FOR REPAIR AND GET THE SECOND REPAIR FOR HALF OFF!  
- Repair must be $89.95 or greater on each handpiece.  
- 1/2 off repair on equal or lesser items.  
- Offer applies to full price and does not include special offers.  
- Offer void if any paid repairs are refunded or returned.  
- Not valid with any other offer except 10% off with refining.

**ENVIROMENTALLY CONSCIOUS SERVICES!**  
**RECYCLING**  
Sharps Disposal  
- Don’t toss out environmentally bad waste!  
- Don’t be tied into a long-term contract for sharps disposal!  
Medidenta.com can take care of all your recycling needs.

**RECLAMATION**  
Amalgam Separator  
- Protect the Environment!

**REMEMBER**  
Visit Our Website or Call to Order  
**1-800-221-0750**
qualifying patients to secure zero-interest loans for up to 18 months. “The second option provides a 5 percent reduction in the total fee if the procedure is paid in full. The third option would allow you to build a credit on your account and then begin treatment. And the fourth option would allow you to break your payments into equal installments.”

Script the ‘routine’

Scripts are tremendously helpful with insurance and treatment financing discussions, but they also make a huge difference in how staff handles those seemingly “routine” conversations.

They can curb no-shows and cancellations, boost patient retention and improve cash flow. Consider the schedule: one simple question can have a huge impact on whether you reach or fall short of production goals.

In many practices, the scheduling coordinator is charged with making sure patients are in the chair at the appointed time. Unfortunately, the individual is often left to figure out how to accomplish this by trial and error.

Here’s the typical scenario: Scheduling Coordinator Jane confirm appointments every day. She finds the process frustrating because it seems that more patients cancel or reschedule than actually confirm.

The problem is Jane’s approach, which usually goes something like this: “Good Morning, Mrs. Madison. This is Jane from Dr. Krager’s office. I was just checking to see if you’ll be in for your appointment on Thursday.”

Mrs. Madison responds with “No, I need to cancel that. I will call back to reschedule.” Jane wraps up the call with, “Thank you for letting me know,” and promptly goes on to the next person on the list.

However, if Jane had a script, she would know how to phrase the confirmation call so as not to encourage a cancellation. She would be prepared with communication techniques that emphasize the importance of keeping appointments.

She would be ready to politely encourage and redirect the patient to minimize the negative impact on practice production. However, even though effective communication is critical to Jane’s job, without a script she doesn’t have the necessary tools to ensure that she can succeed.

Staff acceptance of scripts

While the justification for scripts is obvious, the concept can be difficult for staff to accept.

Say the word “script” to the dental team you may well be greeted with a chorus of groans and “you must be kidding, right?” Somewhere along the way, the idea of the script became taboo.

The typical responses to the mere suggestion of scripting is, “We’ll sound ‘canned’; it won’t sound natural; what if I mess up my ‘lines’?” Scripts are often mistakenly viewed as barriers to natural conversation when, in reality, they are tools for effective discussion that build patient relationships and keep systems on track.

Scripts ensure that when it comes to day-to-day patient communication, everyone is on the same page and conveying the same messages.

For example, when new patients call the practice a script helps the team ensure that no patient takes the call, he/she is prepared to gather necessary information.

When it comes to collections, a script enables even those most reticent to request payment from patients to do so more effectively.

The schedule has fewer gaping holes because team members understand how to consistently reinforce the value of care in day-to-day discussions with patients.

Patient retention is strong because team members know how to effectively communicate with patients whose payments are past due, with those who have unscheduled treatment and with those who have failed to cancel their appointments. They know what to say, how to say it and when to say it because they are prepared.

They aren’t in a situation in which they have to think on their feet, but the communication is as natural and comfortable as it would be if they were chatting with the patient over coffee.
To retire or not to retire?
By Stephen Safran, DDS

I am a 1965 graduate of NYU College of Dentistry, and I practiced until 2000. I was 58 at the time and somehow bent on retiring in my late or middle 50s when most people thought that way.

Social security was available at age 62 then, and the average age men lived to was 66. My dad died at that age and so did most of my friends' fathers. 'Thus, I figured I could have a good 10 years to live the "really good life." Boy has that changed.

'Dad loves his work'
I was one of the few dentists I knew who really loved his profession. The reason I retired in 2000 was my wife had suffered from breast cancer for 13 years and I wanted to take her places and be with her full-time until her death, which was in 2003.

After her death, I had sufficient funds to live without working, but I had not really considered what I would do when I was alone and had so much free time on my hands.

For two years I was a hermit. I lost 25 percent of my body weight in only a few months and did not answer the telephone. Truthfully, I have little memory of those years. Eventually, my dear brother and lifelong friend convinced me to renew my dental license, go on JDate (an online Jewish dating service) and get back into the real world.

It was not easy, but I managed to shed my hermit life. I met a woman with whom I have become a partner in life. Although this new relationship can never be what a 50-year relationship was that began at the age of 16, it is good to have a romantic partner back in my life.

The result of renewing my dental license has translated into hanging the past two years as a dental consultant for two 600-bed nursing home facilities. This work has given me a raison d'être, and the ability to practice in a stress-free environment that also provides an income.

Do you 'have to' retire?
The answer to that question is, of course, no you don’t have to retire. If you truly enjoy dentistry but do not want as much stress in your life, I highly recommend you rethink the decision to retire completely from dentistry. Besides, why should you give up something you truly enjoy?

Personally, I used to have very little respect for any physician or dentist who worked in a nursing home. In my narrow view, I felt these practitioners were incapable of making a good living in private practice so that is why they must be working in a nursing home (don't throw the tomatoes at me just please).

In this narrow view, those who worked in nursing homes were lumped into a heap along with instructors at dental schools.

I presumed these men and women also could not have a successful practice and likely worked at their practice only a day or two per week until they could build up referrals to do it full time (please, hold off on those tomatoes a little longer).

Maybe my narrow views are true for a few people, but now that I am looking at this picture from the other side of the fence, I can see how wrong I was to think the way I did.

By working as a dental consultant I have not given up on all the skills I acquired through a lifetime of private practice: surgery, prosthetics, diagnosing and relating to others.

Instead, in my new position I also to hear how staff would react in specific situations and to redirect that approach if it is inconsistent with practice protocol or policies. Scripting and role-playing empower the team to respond to patients cordially, yet effectively, in every conversation from the mundane to the most important.

Practice those scripts
The best scripts use words, phrases and questions that prompt patients to respond the way you want them to respond. Those who are able to use scripts most effectively understand the message they need to convey. They know the information and material thoroughly and are able to adapt the scripts so they come across naturally.

What’s more, those teams that use scripts to their full advantage practice, practice, practice and regularly engage in role-playing.

Role-playing is essential in helping staff with average communication skills raise their level of performance. In addition, it enables the team to determine how to best phrase questions and determine the most appropriate sequence for statements and questions.

For example, you would carefully script where you place questions involving insurance or statements regarding the financial policy so as not to send unintended messages to patients.

What’s more, role-playing enables the team to pay close attention to their tone and how their words come across to others.

Are they perceived as being warm and caring yet still assertive?
Do they come across as timid and easily flustered or manipulated?
Alternatively, might they come across as abrupt and cold?
Listening to responses and coaching each other on how to improve those responses ensures that team members are well prepared to handle routine patient communication as well as the occasional difficult exchange.

Moreover, it enables the dentist
California as a model for regulated medical waste disposal

By Burton J. Kunik, DDS, Sharps Compliance Corporation

California ranks first in the United States for the number of dental services provided. A survey released in 2009 by the UCLA Center for Health Policy Research showed that the state has more than 51,000 licensed dentists, or approximately 14 percent of the nationwide total. In addition to its size, the dental community in California has another distinction — compliance requirements with some of the most comprehensive state laws in the country relating to medical waste disposal. Regulatory policy in California is often a model for other states, and increasing nationwide concern over the environmental implications of medical waste disposal suggests that dental professionals should be familiar with California requirements and solutions.

California provisions
All dentists realize that their practices deal in materials and tools that must be properly managed for staff and patient safety, but too many do not understand the dental office specifics of regulated materials. Treatment byproducts such as used gloves, masks, gowns, patient bibs, lightly soiled gauze or cotton rolls and plastic barriers are actually not regulated medical waste. Treatment byproducts such as used gloves, masks, gowns, patient bibs, lightly soiled gauze or cotton rolls and plastic barriers are actually not regulated medical waste.

According to the Centers for Disease Control and Prevention, only 1 to 2 percent of dental office waste is actually regulated medical waste, with needles and other medical sharps composing the bulk of that material. Regulated medical waste is defined by the California Division of Occupational Safety & Health (Cal/OSHA) as:

- liquid or semi-liquid blood or other potentially infectious materials (OPIM), such as bloody saliva;
- contaminated items that would release blood or OPIM in a liquid or semi-liquid state if handled or compressed;
- items that are caked with dried blood or OPIM and are capable of releasing these materials during handling;
- pathological and microbiological waste containing blood or OPIM;
- contaminated sharps;
- waste regulated by the California Health and Safety Code that includes pharmaceuticals that are not hazardous.

Disposal issues
In California, as in other states, many dental offices pay for standard monthly or quarterly collection of regulated medical waste by medical waste pickup services. However, this is generally expensive because dental offices generate minimal medical waste, and it is disruptive when pickups are missed or the collection process interrupts office workflow. For a small office, this is just not cost-effective.

Effective option
Disposal by mail is an alternative disposal option that can save the dental money and free up staff for patient care, no monthly fees, no disruption when pickups are missed. Disposal by mail systems include a sharps container specially designed to be mailed through the U.S. Postal Service and a pre-paid return-by-mail package. All costs of the container, packaging, return postage, destruction and documentation are included in one purchase price.

Systems are ordered on an as-needed basis without required contracts. Once filled, they are simply handed to the postal carrier. Proof of destruction is available through an online manifest-tracking program. Various sizes of disposal by mail systems are available. Included are sharps containers can be placed on a counter or mounted and locked on the wall.

There are even disposal by mail options allowing dentists to use their own current sharps containers. Besides the cost savings of the disposal by mail, there are no calls for pickups, no interruptions during patient care, no monthly fees, no contracts, no keeping up with waste manifests because they are maintained online and no extra costs beyond the basic system components.

The requirements for adherence to the California Medical Waste Management Act waste segregation and storage limits are easily met with the disposal by mail systems, eliminating unnecessary pickups, often required by some medical waste disposal services.

Disposal by mail is also extremely safe and can reduce liability and the non-compliance often encountered by using other methods of medical waste management such as encapsulation (which must also disinfect the waste).

It is important to note that disposal by mail companies, like all other forms of regulated medical waste disposal, must be approved by the state.

Disposal by mail is an effective solution in any state, no matter what the regulatory requirements.

Contact information
Former dentist Burton J. Kunik is chairman and CEO of Sharps Compliance Corp., a provider of cost-effective disposal solutions for medical and pharmaceutical waste generated outside the hospital setting, www.sharpsinc.com. Kunik can be reached at (713) 452-0050 or bkunik@sharpsinc.com.
Many orofacial injuries during sports are preventable

By Eric Yabu, DDS

In 1998, Orlando Magic center Adonal Foyle took an elbow from Utah Jazz’s Quincy Lewis to teeth Nos. 8 and 9, causing the teeth to luxate back.

In 2001, Dallas Mavericks’ Dirk Nowitzki was elbowed by San Antonio Spurs’ Terry Porter and tooth No. 8 was knocked out.

In 2003, Mavericks’ guard Steve Nash was struck in the mouth by Los Angeles Lakers’ forward Karl Malone, chipping tooth No. 9.

Just last year, Indiana Pacer Danny Granger had teeth Nos. 8 and 9 knocked out in a game against the Boston Celtics — he wears a stay-plate now.

The list goes on and on, and this is only the NBA. We don’t have enough space to delineate all the dental injuries hockey players have endured.

The most common type of injury
Dental injuries are the most common type of orofacial injury sustained during participation in sports. According to the National Youth Sports Foundation for Safety, in the United States, an estimated 5 million teeth are knocked out each year during sports activities.

Also, as the NBA examples support, almost all of these dental injuries involve the maxillary central incisors. A 2001 study by Gabris et al. found that 85.87 percent of all dental injuries from sports involved tooth No. 8 and/or 9.

Mouthguards significantly decrease injury incidence
So why isn’t every athlete at risk wearing a mouthguard? An athlete is 60 times less likely to sustain a dental injury when wearing a mouthguard.

In 1984, the American Dental Association estimated that face-masks and mouthguards prevent more than 200,000 orofacial injuries annually.

The ADA recommends mouthguards for participants in the following sports: acrobatics, basketball, boxing, discus throwing, field hockey, football, gymnastics, handball, ice hockey, lacrosse, martial arts, racquetball, rugby, shot put, skateboarding, snowboarding, skiing, skydiving, soccer, squash, surfing, volleyball, water polo, weightlifting and wrestling.

While the skydiving recommendation is a little dubious (Is it really going to make a difference if the parachute doesn’t deploy?), it would stand to reason that most of these sports organizations should mandate mouthguard use to protect its participants.

However, in the U.S., mouthguard use is only required at some level in football, boxing, ice hockey, field hockey and lacrosse.

The NFL does not require mouthguard use and, as a result, sees not higher than 50 percent of its players protected with one.

Mouthguards are not only useful for protecting teeth from fractures, luxations or avulsions. They are also critical for protecting against soft tissue lacerations, damage to the periodontium, mandibular and...
maxillary fractures, TMJ injuries and concussions.

Room for debate
There is still some debate about the effectiveness of mouthguards in terms of reducing the incidence and severity of concussions. However, it stands to reason that if there is not adequate cushioning of the mandible, a blow to the jaw could cause the condyles to be violently pushed into the base of the skull and even into the brain cavity. A mouthguard could provide this cushioning as well as create a buffer space between the condyle and the fossa by translating the mandible forward due to the thickness of the guard. A study by Hickey et al., that was published in the Journal of the American Dental Association in 1967 used cadavers to measure the amount of force transmitted through the skull. Their measurements with and without mouthguards showed that the amount of intracranial pressure and bone deformation in the skulls reduced significantly with a mouthguard in place.

Three types of mouthguards
All mouthguards are not the same. Basically, there are three types of mouthguards.

Type I. The first are stock mouthguards. These are not fitted or customized to the teeth or alveolus in any way. They are simply taken out of the box and slipped into the mouth. They tend to be uncomfortable and hamper speech and breathing because they are bulky and teeth need to be clenched for retention. The only advantage is that they are inexpensive, available for $1 to $15 in sporting goods stores.

Type II. These mouthguards are the “boil and bite” variety. These represent about 90 to 95 percent of the mouthguard market. While newer versions of these can look and sound quite impressive — e.g., Shock Doctor, BrainPad — and can even come with a $1,500 guarantee for dental injuries suffered during wear, they are not particularly protective and tend to be even less comfortable. These mouthguards rely on the user boiling the appliance and then biting and molding it to create the fit. Quite often, the guards’ biting surfaces are thinned out from 70 to 100 percent, leaving them with minimal occlusal thickness or even perforations. As with the Type I mouthguards, their advantage is cost, selling for $1 to $40.

Type III. These mouthguards are the truly customized guards. They are formed by vacuum or pressure forming one or more sheets of ethylene vinyl acetate (EVA) over a dental cast of the athlete’s mouth, usually maxillary. They offer excellent retention and a high level of acceptance due to comfort. However, they are more expensive than store-bought guards, ranging from $100 to $1,500.

Vacuum formed vs. pressure formed. Type III mouthguards should be broken up into two sub-types: vacuum formed and pressure formed. The former are fabricated using a traditional vacuformer, which uses I atmosphere of vacuum suction to pull the EVA down over the model. It is difficult to laminate two or more layers with this technique and, because the pressure is minimal, deformation of the guards occurs over time due to the elastic memory of the EVA material. Pressure-formed mouthguards are the gold standard of mouthguards today. They are fabricated by using a positive-pressure thermo-forming machine that may exert up to 10 ATM of pressure.

It is difficult to laminate two or more layers with this technique and, because the pressure is minimal, deformation of the guards occurs over time due to the elastic memory of the EVA material. Pressure-formed mouthguards are the gold standard of mouthguards today. They are fabricated by using a positive-pressure thermo-forming machine that may exert up to 10 ATM of pressure.

There are three such machines on the market: Drufoform by Raintree Essix, Biostar by Great Lakes Orthodontics, and Erkopress by Gildewell Laboratories. A study by Hickey et al., that was published in the Journal of the American Dental Association in 1967 used cadavers to measure the amount of force transmitted through the skull. Their measurements with and without mouthguards showed that the amount of intracranial pressure and bone deformation in the skulls reduced significantly with a mouthguard in place.

Three types of mouthguards
All mouthguards are not the same. Basically, there are three types of mouthguards.

Type I. The first are stock mouthguards. These are not fitted or customized to the teeth or alveolus in any way. They are simply taken out of the box and slipped into the mouth.

Type II. These mouthguards are the “boil and bite” variety. These represent about 90 to 95 percent of the mouthguard market. While newer versions of these can look and sound quite impressive — e.g., Shock Doctor, BrainPad — and can even come with a $1,500 guarantee for dental injuries suffered during wear, they are not particularly protective and tend to be even less comfortable. These mouthguards rely on the user boiling the appliance and then biting and molding it to create the fit.

Quite often, the guards’ biting surfaces are thinned out from 70 to 100 percent, leaving them with minimal occlusal thickness or even perforations. As with the Type I mouthguards, their advantage is cost, selling for $1 to $40.

Type III. These mouthguards are the truly customized guards. They are formed by vacuum or pressure forming one or more sheets of ethylene vinyl acetate (EVA) over a dental cast of the athlete’s mouth, usually maxillary. They offer excellent retention and a high level of acceptance due to comfort. However, they are more expensive than store-bought guards, ranging from $100 to $1,500.

Vacuum formed vs. pressure formed. Type III mouthguards should be broken up into two sub-types: vacuum formed and pressure formed. The former are fabricated using a traditional vacuformer, which uses 1 atmosphere of vacuum suction to pull the EVA down over the model. It is difficult to laminate two or more layers with this technique and, because the pressure is minimal, deformation of the guards occurs over time due to the elastic memory of the EVA material. Pressure-formed mouthguards are the gold standard of mouthguards today. They are fabricated by using a positive-pressure thermo-forming machine that may exert up to 10 ATM of pressure.

There are three such machines on the market: Drufoform by Raintree Essix, Biostar by Great Lakes Orthodontics, and Erkopress by Gildewell Laboratories.
These allow for extremely precise adaptation and chemical fusion between multiple layers. The units generally run in the $3,000 range.

Mouthguards round out your service options

Because of the prevalence of sport injuries and the fact that athletes are participating at even younger ages, today’s dental office should be prepared to offer a Type III custom mouthguard to its patients.

While the cost of purchasing the equipment to fabricate these guards may be prohibitive, there are many laboratories — such as Glidewell, Great Lakes Orthodontics and Mahercor Laboratories — as well as manufacturers, such as Pure Power Mouthguards and Under Armour, that can help provide the service.

Dr. Eric Yabu is a general dentist in Oakland, Calif. His practice is the city of Oakland's first certified “green” dental office. He is an assistant clinical professor at the U.C. San Francisco School of Dentistry and a team dentist for the University of California at Berkeley Sports Medicine Program.

You may contact him at:
Advanced Technology Dentistry
4174 Park Boulevard
Oakland, Calif. 94602
(510) 550-7000
www.oaklandlaserdentist.com
SUCCESS IS EASY
Press Here

“I just got back from LVI and my world has changed. I can't possibly look at dentistry the same way again!”
– Dr. Balaji Srinivasan

“My LVI education has enabled me to not only survive, but to thrive.”
– Dr. James R. Harold

“There is nothing out there that even comes close to the LVI experience. The amount of enthusiasm I am bringing home with me is unbelievable. What an experience and a treat!”
– Dr. Robert S. Maupin

REGISTRATION IS JUST A CLICK AWAY!

www.lviglobal.com
888.584.3237
The International Academy for Dental-Facial Esthetics (IADFE) will meet once again at the Greater New York Dental Meeting, Monday, Nov. 30.

The academy is an honorary service organization with the mission to foster interdisciplinary education in the area of facial esthetics.

Fellowship in the IADFE is by invitation to those dentists, physicians and members of the cosmetics industry who have distinguished themselves in their respective professions.

International meetings of the IADFE are held at various locations around the world. This year the annual meeting will take place in conjunction with the Greater New York Dental Meeting.

The Fellowship Cap and Gown ceremony will be held at the Marriott Marquis at 6 p.m. Immediately following there will be a reception/dinner at the private Harmonie Club.

For information regarding the IADFE, contact Dr. David Hoexter, (212) 355-0004, DrDavidLH@aol.com or Dr. George Freedman at epdo@rogers.com.

Dental Tribune America has partnered with the organizers of the Greater New York Dental Meeting to offer four days of symposia in the areas of cosmetic dentistry, digital dentistry, endodontics and implantology. The meeting is scheduled for Nov. 29 to Dec. 2.

The newest addition to the program is Risk of Coronary Heart Disease in Association with Periodontitis and Perimplantitis, to be held Nov. 29 and 30, from 4:15 to 5:15 p.m. each day.

In a roundtable discussion, Dr. Hans Dieter John, Dr. Richard Meissner and D. R. Gieselmann will discuss new technologies to detect and reduce risk factors: from a MMP8 (matrix metalloproteinase 8) diagnostic to biofilm reduction for implants and anti-inflammatory therapy.

Recent meta analysis reported an association between periodontal disease (PD) and coronary heart disease (CHD) and show a significantly higher risk of 1.14 to 2.22 of developing CHD.

The new chairside detection of MMP8 allows clinicians to monitor periodontal disease status in a site-specific manner and increase patient compliance to treatment option and relevance to general health and CHD.

This session is presented by the Academy of Periintegration.

The symposia are free for registered Greater N.Y. Dental Meeting attendees, but pre-registration is recommended.

Also, due to limited seating, register early to ensure preferred seating.

For registration, please visit www.gnydm.com or send an e-mail to info@gnydm.com.

International attendees requiring visas should e-mail customer service@gnydm.com.

For more program details, please check the schedule at www.DTStudyClub.com.
Going to GNYDM? The Big Apple has lots to do

By Fred Michmershuizen, Online Editor

New York City is a place of constant change.

For those who are coming to town this year for the Greater New York Dental Meeting (GNYDM), to be held Nov. 27 to Dec. 2, the Big Apple has a number of new — or improved — attractions to keep things interesting after the show closes for the day.

The first thing you might notice upon walking around a bit is that cars have been banned from large portions of Times Square, Herald Square and many other high-traffic spots around town.

In place of all those honking vehicles are lots of potted plants, tons of chairs and abundant elbow room. That’s right — you can now stroll or sit leisurely in the middle of Manhattan and enjoy the sights around you or just people watch.

But there is much, much more that is new. Read on if you want some ideas to help make your trip to New York City a memorable one.

The High Line

If you would like to take in some truly breathtaking views of the city streets and the Hudson River, you absolutely must visit the High Line.

Even stuck-up New Yorkers will tell you it’s really cool. You’ll get a whole different perspective of the city. Bring your camera.

The High Line is an elevated rail platform for freight trains that was constructed in the 1930s. It runs above the streets along the west side of Manhattan between 10th and 11th Avenues.

For decades nobody knew about it. It sat abandoned and overgrown with weeds. Today, it is being transformed into an urban park.

Section I of the High Line, which runs from Gansevoort Street to 20th Street, was officially opened to the public in June. It features an integrated landscape that combines meandering concrete pathways, seating areas and lots and lots of plants. As you take your stroll, you’ll see a few older buildings in shocking states of disrepair.

Then, only a few steps later, you’ll walk by (or under) brand new office buildings and hotels that look like they belong in architectural magazines. You’ll also have a pigeon’s eye view of the happenings on the streets below.

The best way to experience the High Line is to enter via the stairs at Gansevoort and Washington streets and walk north to the access point at 20th Street just west of 10th Avenue.

Or, you can start at the northern end and walk south. There are also entries at 14th, 16th and 18th streets. The only elevator access currently open is at 18th Street.

For more information, call (212) 500-6055 or visit www.thehighline.org.

New and improved TKTS Booth

The TKTS Discount Booth, which sells discounted tickets to Broadway and off-Broadway productions, has been popular with locals and tourists alike for ages. The good news is that the booth has been completely renovated.

The lighted displays are much easier to read now and there are additional sales windows, making the line move much faster than it used to. There is even a lightning-quick “play only” window.

Available shows change daily or even several times each day, and there is no guarantee that tickets for any particular show will be available. But there are usually dozens of productions to choose from, so chances are good that you will be quite pleased.

The tickets, which are for day-of-performance showings only, are discounted to 50 percent plus a $4 per ticket service charge. They now take credit cards in addition to cash and travelers checks.

For more information, visit www.tickets Booth.org or call (877) 469-9849 or visit newyork.yankees.mlb.com.

The new Yankee Stadium

Up in the Bronx, the New York Yankees — who, as this issue went to press, were celebrating their 27th World Series victory — have a brand new, state-of-the-art stadium that opened this year.

To get there, hop any B, D or 4 subway train to the Bronx and get off at the Yankee Stadium stop. While you are there, you can also see the old Yankee Stadium, which has not been torn down yet.

If you are a baseball fan and are so inclined, you can take a tour of the new home of the legendary ball club.

The tour lasts about an hour and includes visits to the New York Yankees Museum, the dugout and also Monument Park (relocated from across the street), which is arguably the most historic place in all of sports.

It contains the monuments of five baseball icons — Babe Ruth, Lou Gehrig, Joe DiMaggio, Mickey Mantle and Miller Huggins — as well as a memorial to the victims of Sept. 11, 2001.

There are plaques that recognize the careers of 20 other pin-striped legends, including Yogi Berra, Reggie Jackson, Don Mattingly, Whitey Ford and Elston Howard, and three commemorative plaques marking visits made by three popes.

In addition to Jackie Robinson’s No. 42, which is retired throughout Major League Baseball, Monument Park also commemorates the retired uniform numbers of 16 players and managers who have made outstanding contributions to the Yankees’ illustrious history.

The cost for the tour is $20 per person. To buy tickets, call Ticketmaster at (877) 469-9849 or visit newyork.yankees.mlb.com.

Citi Field

If you are not a Yankees fan, don’t fret. The New York Mets also have a brand new stadium that opened this year — Citi Field, which was built adjacent to the old Shea Stadium in Flushing Meadows, Queens.

You might not be able to get inside, but it’s worth a look nonetheless. To get there, take the 7 subway train to Mets/Willets Point Station.

While you are in the neighborhood, you can also visit the adjacent Flushing Meadows Corona Park — site of the 1934/1935 New York World’s Fair and current home to the USTA Billie Jean King National Tennis Center.

Also nearby is the Queens Museum of Art, which houses the amazingly accurate panorama of the city of New York, a scale model of every building, bridge, park and street in all five boroughs of New York City.

(Yes, it’s been updated this year with the new Citi Field.)
LumiNRG light, mirror and instrument holder

The LumiNRG is an autoclavable, LED-illuminated mirror and instrument holder that provides a bright, focused and miniature long-life LED light that can reduce the need to constantly readjust the bulky overhead light.

It introduces a new level of bright white light inside the oral cavity and provides dental professionals with a new level of comfort and visibility.

The minimal size ensures that virtually no extra space will be taken up in the already limited space of the oral cavity, and is especially helpful when working on the remote molar teeth. The lightweight and ergonomic feel maximizes user comfort.

LumiNRG is designed to be used with the dentist’s own standard threaded or unthreaded mirrors. It is based on a new patent that allows the adjustment of the mirror to any angle or depth from the light.

The LumiNRG can also be used with many different tips and instruments, such as a scaler tip or a gutta-percha plunger. It can be used with any cone socket mirror provided it is a standard 5 mm threaded diameter.

The desired instrument’s angle can be adjusted for optimum light by rotating the mirror. If the mirror that is in the holder is rotated 180 degrees, it can be used as an illuminated cheek retractor providing intense direct light on the work area.

The LumiNRG’s illumination head can be placed directly into the autoclave, along with other dental instruments, after removing the battery pack.

There is no need to detach the mirror or other instrument before sterilization.

A second illumination head is included in the kit. It uses only one standard AAA battery for hundreds of treatments with a constant light intensity.

The minimal size is especially helpful when working on molars. Other colored LED heads are available, such as blue, for trans-illumination to detect cracks, fractures or crazing.

By purchasing an inexpensive extra blue LED head, the dentist can obtain a trans-illuminator that would normally cost many times the extra cost of a blue LED head.

LumiNRG is economically priced under $80, a fraction of the price of competing units, which offers the advantage of economically providing a unit for every operatory.

For additional information, call Dr. Jerome Farber, MedicNRG/USA, at (888) 429-0240 or visit medicnrg.com.

Pulpdent’s Embrace™ WetBond™ Pit & Fissure Sealant featured on TV show online at www.thedoctorstv.com/main/procedure_list/635.

The episode, “Top ‘C’ Words Everyone Hates,” included cavities as one of the “C” words.

In that segment, Dorfman explained the value of sealants in protecting teeth and then demonstrated by applying Embrace WetBond Pit and Fissure Sealant to his own daughter’s teeth in a dental operatory set up in the television studio.

Embrace WetBond is the only pit and fissure sealant that bonds to the moist tooth, making it easier and faster to apply and less technique sensitive.

Moist field placement facilitates the sealant procedure, especially when treating children, and ensures the best results. Published studies show unsurpassed results with Embrace.

Pulpdent manufactures high-quality products for the dental profession, including adhesives, composites, sealants, cements, etching gels, calcium hydroxide products, endodontic specialties and bonding accessories.

For more information call (800) 345-4342 or visit www.pulpdent.com.

Benco Dental Centerpoint Facility Opening 2010

Make choice the centerpoint of your practice.

Introducing North America’s largest, best-in-class dental showroom and training facility featuring 24 fully-equipped operatory suites, digital radiography 3-D suites as well as, the most comprehensive side-by-side selection in the Industry. Our new facility was designed with your success in mind.

Visit us to see why choice should be the centerpoint of your practice.

Benco Dental

We deliver success smile after smile.

1-800-GO-BENCO
Every year in the United States, 30,608 emergencies occur in dental offices, according to the American Dental Association. So that they can respond when one of them inevitably occurs in their office, dentists must have an appropriate emergency response plan and appropriate emergency response equipment to match.

Savalife’s Quick Response M100 emergency drug kit includes the pre-filled syringes, sprays and inhalants needed to quickly and effectively treat common patient emergencies, including those related to angina, asthma, insulin problems, allergic reactions, fainting, heart attacks and more.

As convenient as it is necessary, the kit saves patients’ lives while also saving dentists’ practices, as appropriate emergency response can reduce dentists’ exposure to risk and liability.

What’s more, because the kit is free when they sign up for Savalife’s Automatic Drug Refill Program, it allows dentists to invest their time and money where it belongs — with their patients.

For more information or to order, call (800) 933-5885 or visit www.savalife.com.

Boost success with sedation dentistry and team training

By Alex Harris

Taking your dental practice to a higher level requires a thorough examination of what your practice may be missing and what can be done better. For most dentists, it isn’t giving their office a new look, playing relaxing music or conducting more marketing. Attaining a high level of success requires taking the steps necessary to stand out from the rest.

More and more dentists are finding that step to be training in sedation dentistry. Through these learned skills, protocols and acquired certifications, dentists are able to meet the needs of the 90 million people in the United States who suffer from dental fear or anxiety.

In addition to the millions of healthy adult patients who can benefit from sedation dentistry, there are millions of others who have unique needs that necessitate specific training.

This type of training is available nationwide from top C.E. programs like DOCS Education — North America’s leading provider of sedation dentistry and dental emergency preparedness education.

The organization offers courses on oral sedation, IV sedation, medically complex and pediatric patients, advanced cardiac life support (ACLS), pediatric advanced life support (PALS) and much more.
The adaptability of methods and protocols based on a patient's unique characteristics benefits both patient and dentist. A strong understanding of needs, risks and behavior makes treatment easy and efficient for the dentist as well as safe and pain-free for the patient.

In a perfect world, a dentist receiving training in a particular area or method would be able to effectively implement his or her new skills immediately upon returning to the practice. However, anyone who has worked in the dental profession knows that a dentist is not just a "one-man-band."

A dentist’s entire team has a hand in ensuring the successful outcome of all procedures. Lack of knowledge or respect for team members to training sessions. Implementation for dentists who bring a 53 percent higher success rate in the dental profession knows that a dentist is not just a "one-man-band."

References
2. Figures based on DOCS Education sales and equipment records purchased using a pulse oximeter as an indication of sedation implementation.

Seiler unveils two new dental microscopes

The company has also more than doubled the size of its home office from 70,000 to 150,000 square feet

To say Seiler Instrument Corp.’s new dental microscopes have a long history with optics would be a bit of an understatement.

With over 64 years of history in dealing with the design and manufacturing of optical equipment, Seiler Instrument Corp. now provides equipment to the medical, dental, military, architectural, construction and planetarium markets.

Founded in St. Louis in 1945 with the knowledge and expertise as a master of fine optics from the Zeiss University School of Fine Optics in Germany, the Seiler Instrument Corp. began making and repairing small microscopes and survey equipment.

In 1950, the Seiler Microscope division was formed to distribute Zeiss (Jena) Surgical Microscopes in North America, making it one of the first surgical microscope providers in the United States.

Seiler has become a major provider of surgical and compound microscopes to the dental, ENT, ob/gyn and laboratory markets.

New home office

With all of Seiler’s history it is amazing that the word “new” could be used to describe Seiler, but in 2009 that has been one of the most popular terms around their new building.

Recently, Seiler has moved its home office from a 70,000-square-foot facility to a new 150,000-square-foot facility to better serve its customers.

New microscopes

In addition to the company’s new building, it has also released two new microscopes for the dental market, the Seiler iQ and the Evolution XR6.

We took a conventional approach to the redevelopment of these scopes. We directly asked the dentists what they wanted in their new equipment, how it could be used to describe Seiler, but in 2009 that has been one of the most popular terms around their new building.

Recently, Seiler has moved its home office from a 70,000-square-foot facility to a new 150,000-square-foot facility to better serve its customers.

Also, Seiler has released the new Seiler iQ that offers the same new light source, but comes in a smaller package with three steps of magnification and a new design.

Both models have five different mounting options: floor, wall, high wall, ceiling and table mounts.

To get more information on Seiler, visit www.seilerinst.com.

Seiler Instrument Corp.’s has relocated its corporate headquarters to this 150,000-square-foot facility in St. Louis.
ONLY $109

YES!

IPS e.max
Lithium Disilicate

NOW FROM Keller

- Cement or Bond
- CAD/CAM Accuracy
- Pressed Strength
- All-Ceramic Esthetics
- Only 4 Lab Working Days
- FREE SHIPPING when you bundle*
- Made in the USA
- Only $109

“e.max Lithium Disilicate is the most robust ceramic system tested to date”**

Log on to www.kellerlab.com to learn more

CALL FOR YOUR CASE PICK-UP TODAY!
1.800.325.3056   www.kellerlab.com

Keller Laboratories, Inc.  • 160 Larkin Williams Industrial Court  •  Fenton, Missouri 63026
Practical clinical considerations in endodontic retreatment

By Richard E. Mounce, DDS
& Gary Glassman, DDS

Non-surgical endodontic retreatment (NSER) of failed root canals is almost exclusively a specialist procedure due to the complexity of diagnosis, treatment planning and advanced techniques required for retreatment procedures.

As implants have become more predictable, the level of clinical success required with NSER in an attempt to retain the natural dentition has taken on new significance. This article was written to review and discuss several key conceptual strategies for retreatment of failed root canals to optimize the outcome of the procedure.

It will be taken for granted that the clinician appreciates the value of the surgical operating microscope (SOM) (Global Surgical, St. Louis, Mo.) as well as ultrasonics in retreatment procedures. While it is beyond the scope of this paper to elaborate at length on the use of the SOM, its use is associated with improved outcomes of NSER as well as endodontic surgery.

Conceptually, NSER can be broken down into several key steps:

1) Determination of restorability. It is the bias of the authors that the determination of restorability is a key component of NSER success. Treatment provided on teeth that are non-restorable is obviously contraindicated. If these teeth were extracted from the pool of candidates for either endodontic therapy or NSER, success rates for both treatments can only go up. Figures 1-5 show three different cases that were poorly treated, using inappropriate concepts and in which removal was indicated. Had the initial endodontic therapy been carried out correctly, the probabilities of clinical success would obviously be far greater and the option of implant therapy irrelevant.

In the context of NSER, rather than compound the existing failure, the clinician should carefully examine the case at hand and evaluate whether the tooth can be retreated and, if so, what the likely success rates will be. Alternatively, the teeth pictured in figures 4-6 have been carried out to a high standard and have a much better chance of long-term success. The difference between the two sets of outcomes is in large measure related to the different levels of preoperative risk assessment.

2) Preoperative diagnosis and assessment of risk factors. The determination of restorability is, as one aspect of its assessment, whether the tooth is vertically fractured and/or whether treatment will make vertical fracture likely. In addition, if the tooth has not had an overt iatrogenic event, the clinician should decide what the possibility is that the contemplated treatment will lead to one.

Near strip perforations through overzealous shaping can lead to overt strip perforations if the removal of existing obturation material is not performed passively and with the correct methods (heat removal first, mechanically second, solvents and patency files third).

To place highly tapered rotary nickel-titanium (NIT) files into large canals at high speed is predictive of mid-root strip perforation. Minimizing this risk will be addressed in detail below.

3) Access. If at all possible, the crown should be removed. Leaving crowns in place and making access risks leaving portals for coronal microleakage, unset restoratives, caries and fractures. It also minimizes access to both achieve the most favorable risk assessment and implement the least invasive therapy.

Fig. 1: Endodontic treatment carried out with significant iatrogenic events resulting and other clinical defects.

Endodontist releases book


“Dead Stuck”, boisterously describes how being an endodontist has provided the author unique opportunities and challenges in marital and parental relationships, how he once wore girl repellent, his addiction to world football, how he diverted flights with fire on the wing and the mortal danger he encountered while cave diving.

Part adventure-story collection, travelogue and semi-autobiographical personal memoir, Mounce says of “Dead Stuck”: “I wrote it to speak my truth on a number of subjects without hiding behind politically correct cliques and platitudes … my hope is that sharing the contents of ‘Dead Stuck’ will resonate with those who can see themselves in some part of its varied subject matter.”
Linden

= page 1B

cleaning and shaping.

The tools in Linden’s arsenal include the LightSpeed instrumentation, EndoVac irrigation and HotTip obturation systems available from D jurors Dental Smart Endodontics, as well as the Obtura 5 Max corded obtura-
tion system available from Obtura Spartan.

As Linden explains, canal anatomy is different in the coronal, middle and apical third. The three instru-
ment shapes in the LightSpeed system are custom designed to address these differences, enabling optimal and
efficient cleaning and shaping from orifice to apex. In addition, Linden says, the EndoVac allows for efficient
irrigation of the canal while the new HotTip gutta-percha obturation device offers warm vertical compaction cou-
pled with the freedom of a costless, lightweight and ergonomically designed.

Those who attend Linden’s work-
shops are able to try this equipment for themselves.

Linden most recently presented
hands-on workshops at Columbia University, and he is sched-
uled to present at various other dental schools in the coming weeks.

Book

= page 1B

Speaking of the book, Dr. Gary Glassman of Toronto, Can-
ada, writes: “I was completely enthralled and riveted to every word you wrote. The metaphors
were clear … so clear that it has inspired me to look closely at my life and to examine it more thor-
oughly and directly.”

Dr. John Weever of Dublin, Irel-
dan, discussed the book’s originality and candor: “…no one has attempt-
ted to address the issues you mention in your book, the life challenges per-
sonal and professional … You took them on headfirst … It’s a great read. I
laughed a lot.”

Mounce is an opinion leader in the
field of endodontics and is based in
Vancouver, Wash. This is Pacific
Sky’s first release.

For more information or to purchase the book, contact:
Pacific Sky Publishing
12903 SE Mill Plain #215

Vancouver, Wash. 98684
(360) 891-9111
PacificSkyPublishing.com
DeadStuck.com

Endo Tribune | November 2009

Publisher & Chairman
Tooristar E. Oonias
looma@dentalt-tribune.com

Vice President Global Sales
Peter Witterczak
p.witterczak@dentalt-tribune.com

Chief Operations Officer
Eric Seid
e.seid@dentalt-tribune.com

Group Editor & Designer
Robin Goodman
g.goodman@dentalt-tribune.com

Editor in Chief Endo Tribune
Frederic Barnett, DDS
Barnett@weinsein.edu

International Editor Endo Tribune
Prof. Dr. Arnaldo Castilhuets
Managing Editor/Designer
Implant & Endo Tribunes
Nurra Bendon
n.bendon@dentalt-tribune.com

Managing Editor/Designer
Ortho Tribune & Show Exhibits
Kristine Colker
k.colker@dentalt-tribune.com

Online Editor
Fred Michmershuijis
FMichmershuijis@dentalt-tribune.com

Product & Account Manager
Humberto Estrada
h.estrudd@dentalt-tribune.com

Marketing Manager
Anna Bhadury
a.bhadury@dentalt-tribune.com

Marketing & Sales Assistant
Lorrie Young
lyoung@dentalt-tribune.com

C.E. Manager
Julia Wehkamp
j.wehkamp@dentalt-tribune.com

Dental Tribune America, LLC
215 West 53rd Street, Suite 9001
New York, NY 10001
Tel: (212) 244-7181
Fax: (212) 244-7185

Published by Dental Tribune America
© 2009, Dental Tribune America, LLC.
All rights reserved.
Dental Tribune America makes every effort to report clinical information and manufacturer’s product news accurately, but cannot assume
responsibility for the validity of product claims, or for typographical errors. The publisher also
do not assume responsibility for product names or claims, or statements made in advertisers.
Opinions expressed by authors are their own and may not reflect those of Dental Tribune America.

Editorial Advisory Board
Frederic Barnett, DDS (Editor-in-Chief)
Roman Borzyk, DDS
L. Stephen Buchaner, DDS, FICD, FACD
Gary B. Cary, DDS
Prof. Dr. Arnaldo Castilhuets
Joseph S. Deigman, DDS, MS, PC
Umit Erbil, DDS
Fernanda Goldberg, DDS, PhD
Vladimir Gorokhovskiy, PhD
Fabio G.M. Gorini, DDS
James L. Gutmann, DDS, PhD (honorius causa), Cert Endo, FACD, FICD, FADH
William “Roy” Johnson, DDS
Kenneth Koch, DDS
Sergio Kutting, DDS
John T. McSpadden, DDS
Richard E. Mount, DDS, MS
John Nastain, DDS, MS
Ove A. Peters, PhD (med dent.), MS, FICD
David R. Rosenberg, DDS
Dr. Clifford J. Ruddle, DDS, FICD, FACD
William P. Saunders, PhD, BDS, FDS, RCS, Edin
Kenneth S. Sterva, DDS, MMSc
Aagarj Sugodawala, DDS
Yoshitsugu Terasaki, DDS
John H. West, DDS, MS

AD

DEAD STUCK
One man’s stories of adventure, parenting and marriage,
reflecting the hypothesis of political conclusion
by Richard Mounce, DDS

Richard Mounce, DDS It’s not commonly understood that dead people are capable of
performing, and frequently lose cribbage matches.

“Dead Stuck” gives the dead a fighting chance to
present their cases, from the stand point of the
living. If you are in a position to per-
form, this book is a great read and
valuable. Not just for the dead, but
for their families and friends.

by Richard Mounce, DDS

For more information or to purchase the book, contact:
Pacific Sky Publishing
12903 SE Mill Plain #215

Vancouver, Wash. 98684
(360) 891-9111
PacificSkyPublishing.com
DeadStuck.com

ENDO TRIBUNE
The World’s Endodonty Newspaper - U.S. Edition

ET Corrrections

Endo Tribune strives to maintain the utmost accu-
racy in its news and clini-
cal reports. If you find a factual error or con-
tent that requires clarifi-
cation, please report the
details to Managing Editor
Sierra Rendon at s.rendon@dentalt-tribune.com.
AMD gains certification for its Picasso laser

‘It’s a proud day for our young company’

By Fred Michmershuizen, Online Editor

With international certifications now in place for its Picasso diode laser, AMD LASERS is poised for continued growth in North America as well as expansion into the European market.

AMD LASERS, based in Indianapolis, has attained International Organization for Standardization (ISO) 13485:2003 certification of its medical device quality management system in North America, Canada and the European Union.

In addition, the quality management system demonstrates conformance to the Medical Device Directive 93/42/EEC, allowing the products to be CE marked, which makes them available to be sold in the European Economic Area.

“Achieving ISO 13485 certification further demonstrates our leadership and commitment to the highest standards of our industry,” said Alan Miller, president and CEO of AMD LASERS, in a news release announcing the certification. “We also have many potential customers in Europe eager to purchase the Picasso, so our ability to use the CE mark is another major step forward in our mission to provide advanced, affordable dental lasers around the world. It’s a proud day for our young company.”

ISO 13485:2003 is the internationally recognized standard for the development, production and servicing of medical products.

In order to obtain ISO 13485 certification, a company must demonstrate the ability to provide medical devices and related services that consistently meet customer and regulatory requirements applicable to medical devices and related services.

During the certification process, AMD LASERS partnered with TÜV Rheinland, an international service group that serves as an ISO registrar, auditing the safety and quality of new and existing products, systems and services.

“It has been a pleasure to work with TÜV Rheinland,” said Amy Szentes, compliance manager at AMD LASERS. “They are the gold standard in ISO registrars, and we feel this certification validates all of the hard work we have put into both product quality and compliance.”

AMD LASERS was founded in 2006 to provide comprehensive and affordable laser technology for dental professionals. More information about AMD LASERS is available. Call (866) 999-2635 or visit www.AMDLASERS.com.
evacuation of the obturation material as well as removal of objects of all types that may be lodged in the canal system (from posts to RNT file fragments, etc.). A compromised access will limit both the tactile and visual control of the clinician and, as a result, some teeth that could otherwise be retreated are compromised.

It is noteworthy that the vast majority of failed root canals show evidence of overt coronal microleakage once their crowns are accessed. This microleakage appears in the form of odor, moisture, unset restoratives and voids, among other visual clues. Assuring that the post-endodontic result will be sealed correctly is best accomplished through removal of the crown, retreatment procedures and the placement of a new coronal build up.

One of the authors (RM) uses a self-etching, self-adhesive composite cement for build-ups, Maxcem (Kerr, Orange, Calif) for its ease of use and durability.

4) Removal of posts and coronal obstructions of all types, including the build up. While a comprehensive discussion of post and obstruction removal is beyond the scope of this paper, it should be mentioned that the overriding principle in removal of all obstructions are to remove as little dentin as possible to minimize both perforation and the risk of vertical root fracture.

As a result, the greater the extent to which procedures can be performed that both cools the tooth to prevent overheating during ultrasonic vibration and conserves tooth structure, the greater the probability of clinical success. The Ruddle Post Kit® is invaluable in this regard if used correctly. Coincident and related to post removal involves choosing the correct ultrasonic tips.

5) Removal of canal contents. The coronal access must be ideal before either the orifice is managed or the clinician progresses beyond the orifice. Attempting to remove obturation material or shape the orifice without attaining straight-line access is contraindicated.

Removal of canal contents is passive, gentle and done in three waves (heat, mechanical and, finally, with solvents). The Elements Obturation Unit® (EOU) is an excellent source of heat to remove gutta-percha. The heat plugger of the EOU is used in the same motion as the System B downpack. Usually in one or two down pack motions per canal, approximately half of the gutta-percha can be removed with this motion alone. Removal of gutta-percha with the heat tips also creates a space into which the RNT instruments can be placed and remove shreds of gutta-percha that remain along the walls.

Both the removal of gutta-percha with heat as well as with RNT instruments is done dry. These two successive steps allow the vast majority of gutta-percha to be removed and, if performed correctly, minimize the amount of solvent and time that will be required to be placed in the presence of hand files to achieve patency.

At all costs the RNT files that are used to remove gutta-percha should be entered passively and as gently as possible, used with an upward brush stroke away from the furcation. Placing them apically with force into the mass of gutta-percha can easily lead to strip perforation, especially if the existing dentinal wall next to the furcation is relatively thin from the start due to previous overzealous shaping.

6) Assessment and repair of iatrogenic events, if possible. The two most common iatrogenic events encountered are canal transportations and separated instruments, commonly RNT files. The deeper the instrument fragments, the lesser the chance that they can be retrieved. This said, ideal access, crown removal, use of the SOM and creation of the ideal orifice size can all go far toward fragment visualization despite being at or slightly beyond a curvature in the apical third of a root.

In addition, the use of the thinnest ultrasonic tips possible that allow the clinician an optimal view of the fragment, used in a counterclockwise

Figs. 2-3: Endodontic treatment carried out with significant iatrogenic events resulting and other clinical defects.

Figs. 4-6: Endodontic treatment carried out within the standard of care.

Fig. 7a: Preoperative.

Fig. 7b: Postoperative.

Fig. 8a: Preoperative.

Fig. 8b: Postoperative.

Fig. 9a: Preoperative.

Fig. 9b: Postoperative.
motion to remove the dentin that binds the fragment, is optimal. RNT frag-
ments should not be dislodged (touched) by ultrasonic tips. Doing so
will cause them to shatter.

In addition to ultrasounds, it is worth-
y of the following: there are many

ments available that engage the frag-
ment with either frictional retention or
possible tube and glue options.
If they cannot be bypassed, instru-
ent fragments that are entirely be-
yond the apical curvature are gen-
erally left in place and obturation is
placed up to them. In the event of
clinical failure after leaving RNT frag-
ments, it may be required to follow
NSR with root resection and retroufling.

7) Achievement and maintenance of
apical patency: Once the canal is evac-
uated of gutta-percha, the clinician will
need to spend as much time as it takes
to either achieve apical patency or
determine that apical patency is unat-
tainable. Fortunately, in many clinical
failures, the apical third of a large
number of roots has not been touched
due to the accuracy of determination
of working length as well as an inade-
quately cleaning and shaping.

In any event, in the apical 3-4 mm of
a root with #6 K files and hand K
files, the clinician should place one
drop at a time of chloroform into the
canal until the hand K files just reach
the MC. Once the estimated working
length is reached, the electronic apex
locator can be used and the first deter-
mination of true working length can be
obtained.
A common clinical question
encountered revolves around when
and where to stop attempts at achiev-
ing patency. In essence, when is it time
to fill to the depth gained in the canal
in the absence of patency?
If repeated attempts to gain paten-
cy have failed using precured hand
K files of the appropriate length and
diameter, especially if the clinician is
sure that he or she has removed all of
the previous obturation materials, the
canal should be cleaned and shaped to
an optimal diameter despite the block-
age and then obturated. This recom-
mandation notwithstanding, an experi-
enced clinician can often gain patency
where an inexperienced one cannot.
This difference in skill level is usu-
ally related to the amount of pressure
used, the correct curvature of the hand
K file, the correct diameter of the hand
K file and adequate irrigation and clini-
cal experience.

8) Achievement of the optimal mas-
ter apical diameter. The achievement of
the correct apical diameter is cor-
related with enhanced cleanliness in
the endodontic literature. Such larger
apical diameters provide greater irrig-
ant flows as well as removal of necrotic
dentin up to the MC. It is a common
finding in failed endodontic cases that
both the apical diameter and master
apical taper are too small.

One way to determine the ideal
master apical diameter is gauging.
Alternatively, the clinician can simply
instrument the canal to the desired
master apical diameter keeping in
mind that non-vital teeth have higher
failure rates in large measure because
they are harder to cleanse relative to
vital teeth (where the emphasis is on
asepsis rather than disinfection of an
already infected canal).

9) Obturation. One benefit of creat-
ing larger apical diameters is the ease
of cone fit as well as obturation, be
that obturation with a master cone or
obturator. Given that one of the most
significant causes of clinical endodon-
tic failure is the loss or lack of coronal
seal, it makes intuitive sense to bond
the obturant. In both in vitro and in
vivo studies, RealSeal® in the master
cone and RealSeal One Bonded Obtu-
rator® form, has been shown to resist
the entry of bacteria in canals to a
statistically significant degree relative
to gutta-percha.

In addition to placing a coronal
seal in No. 10 below, this provides
an invaluable step in addressing one
of the weaknesses of gutta-percha, a
material that does not bond to dentin,
does not bond to sealers, and which is
entirely dependent on the placement of
a coronal seal for it to function clini-
cally. Bonding obturation is simple; the
clinician clears the smear layer with a
liquid EIJTA such as SmearClear and
subsequently rinses with distilled
water. After drying the canal, the Real-
Seal self-etching sealer is placed in the
canal and obturation takes place with
either the aforementioned RealSeal
master cones or RealSeal One Bonded
Obturator.

10) Placement of a coronal seal.
A number of clinical principles and
steps have been addressed that can
conceptually and clinically streamline
endodontic retreatment procedures.
Emphasis has been placed on opti-
mal visual and tactile control, removal
of crowns before retreatment, pas-
sive removal of previous obturation
materials and obstructions, repair
and revision of previous treatment,
achievement and maintenance of api-
cal patency and master apical diameter
optimization.
We welcome your feedback.

About the authors

Dr. Richard M. Mounce is the author of
the non-fiction book “Dead Stuck,” “one
man’s stories of adventure, parenting,
and marriage told without heaping plat-
titudes of political correctness,” by Pacific
lectures globally and is widely published.
He is in private practice in endodontics in
Vancouver, Wash.

Dr. Gary Glassman graduated from the
University of Toronto, Faculty of Dentistry
in 1984 and was awarded the James B.
Willmott Scholarship, the Mosby Schol-
arity and the George Hare Endodontic
Scholarship. A graduate of the Endodon-
tology Program at Temple University in
1987, he received the Louis I. Gross-
man Study Club Award for academic
and clinical proficiency in endodontics.
The author of numerous publications,
Glassman lectures globally on endodon-
tics and is on staff at the University of
Toronto, Faculty of Dentistry in the grad-
uate department of endodontics. Glass-
man is a fellow and endodontic exam-
iner for the Royal College of Dentists
of Canada, and the endodontic editor
for Oral Health dental journal. He main-
tains a private practice, Endodontic Spe-
cialists, in Toronto, Ontario, Canada. He
can be reached through his Web site at
www.rootsontals.ca.
Modern endodontics means safer, more effective and less expensive

By Rann Musikant, DDS

With all the new endodontic paraphernalia that is presently out, one can easily get confused in deciding what best meets your endodontic needs. Perhaps, one of the best ways to bring a logical approach to decision making is to have a set of criteria, goals that you wish to achieve, and then use those goals as a measuring stick to see how different tools and techniques hold up. That is more or less the approach we have tried to employ as we develop ways to most effectively accomplish our endodontic tasks.

I believe there are three goals that must all be met. The instruments used to shape the canals should not break — period. They should shape the canal adequately, a dimension that is wide enough to remove most of the pulp tissue as well as provide a space that is large enough so it can be effectively irrigated to remove chemically what was not removed mechanically.

Finally, they should not distort the canals in the act of shaping. The closer any system can come to achieving these three goals, the more effective it will be in producing successful results. Of course, we would also like to use systems that are inexpensive, negotiate through the canals with minimal resistance and are easy to use, but I would consider these only after the first three criteria are met.

To attain these three goals, different approaches have been advanced. Rotary NiTi has been proven to be most effective in producing non-distorted canal shaping in a simplified manner.

By that I mean, after glide path creation, the instruments are generally fed into the canal space and whether curved or not, the rotating NiTi instruments stay centered in the canal and produce a smooth continuous taper, a result advocates of this approach say is ideal. The drawbacks to rotary NiTi result from its shape memory, a property that directs the instrument to snap back to its original straight position (Fig 1).

1) In a curved canal it cannot snap back, but the shape memory characteristic causes the instrument to selectively work against the outer wall of a canal.

As long as the flexibility of the instrument remains high, the cutting force against the outside wall remains negligible and distortion is not an issue. However, as the shaping instruments increase in taper and tip size and the flexibility decreases, the potential to distort to the outside wall increases, aggravated further by canals of increasing curvature. From a practical point of view, the shape memory property often limits the shaping of curved canals with rotary NiTi to preparations not exceeding 25/06 and often no more than a 20/04.

Given the limitations of non-distorted shaped of curved canals with rotary NiTi, the goal of adequate canal shaping may not be met. The literature is pretty much in agreement with the need for apical preparations of not less than 50 with 55 being more preferable. Less than this and the canal space is not adequate to provide for effective irrigation with a greater potential to leave tissue behind. Since its introduction, separation has been an issue for rotary NiTi and it has affected its use in many ways. To prevent breakage, the following observations have been documented in the literature:

1) The creation of a glide path by other means is essential before the use of rotary NiTi.

2) As the curvature of a canal increases, so does the torsional stress and cyclic fatigue that the rotary NiTi instruments are subject to.

3) Increased torsional stress and cyclic fatigue lead to an increased incidence of breakage.

4) As the tip size and taper of the NiTi instruments increase, the higher the incidence of breakage when negotiating curved canals. Please note the complex interrelationship between instrument size and canal curvature.

5) As rotational speed increases the incidence of breakage increases.

6) Only single usage is recommended.

7) Abrupt curves are not amenable to rotary NiTi shaping.

8) Canals that bifurcate, merge, dilacerate and recurve are to be avoided too.

None of these limitations means that the instruments cannot be used, but they do deviate from the ideal of what we want from a shaping system.

Another approach is to use the traditional K-file, the instrument that most dentist who do rotary NiTi employ manually when creating the glide path. These instruments are typically used with a horizontal watch-winding stroke when removing debris when the occasional vertical pull stroke when removing the instrument to clean it off. K-files are designed with a tight series of fairly horizontally oriented flutes.

It is a simple rule of carpentry that in order for a blade to cut it must be at a right angle to the plane of motion. Anyone who has ever planed a piece of wood understands this principle. When we shape a canal wall, we are seeking the same planning action. Unlike an experienced carpenter, however, the horizontally oriented flutes along the shank of the K-file are poorly designed to plane the walls of the canal when the watch winding motion is employed. The most effective way they would remove dentin would be with a push-pull stroke.

However, a push-pull stroke impacts debris when the instrument is pushed apically and selectively removes dentin from the outer wall when used in the pull motion. The result of using an instrument designed for push-pull with a watch winding stroke is inefficiencies that result in increased resistance along length and debris buildup along the shank that in turn lead to loss of length and distorsion of the apical end of the canal preparation when the dentist attempts to regain that loss of length by using greater apical force. Even if the dentist is going to use rotary NiTi after glide path creation, the damage to the canal may have already occurred.

Another approach is the manual use of K-reamers. Given the watch-winding motion that is used, the K-reamer is a more rational choice. There are about half the number of flutes on a reamer compared to a K-file (Fig 2). Because the 16 mm of working length is the same for both, the flutes on a K-reamer are about twice as vertically oriented as the flutes on a K-file.

This is a crucial difference in design because the increased vertical orientation of the flutes of a K-reamer allows the blades of the reamer to plane the walls of the canal far more effectively when the horizontally oriented watch-winding motion is employed. As an added benefit, the outer canal walls are minimally distorted on the pull stroke because the vertical blades that work so well with a watch-winding motion are poor at cutting dentin when a vertical motion is applied.

![Fig 1: The drawbacks to rotary NiTi result from its shape memory, a property that directs the instrument to snap back to its original straight position.](image1)

![Fig 2: File](image2)

![Fig 3: Reamer with relieved side](image3)

![Fig 4: Before](image4)

![Fig 5: After](image5)
Added benefits include a more flexible instrument (due to the fewer twists needed to create the smaller number of flutes) and less engagement than a K-file simply because there is less contact along length. The insight into the benefits of a K-reamer versus a K-file give the dentist still another option when the action of the reamers are further enhanced by first applying a flat along the entire working length and then using these instruments not only manually, but in a 50-degree reciprocating handpiece.

A flat (Fig. 3) makes the instruments even more flexible, less engaging along length and increases the space available for debris that is being generated. These three factors together produce a superior tactile perception letting the dentist know exactly what the tip of the instrument is encountering at any given time.

Having the ability to distinguish between a tight canal and a solid wall is crucial in preventing canal distortions or outright perforations in the apical third of the canal.

The 50-degree reciprocating handpiece mimics the watch winding that is so appropriate for instruments of this design, but allows the action to occur between 5,000-4,000 cycles/minute rather than the 60 or so cycles that manual use would produce. The design of the instruments and the method of delivering the required motion give the dentist the ability to negotiate through a canal space within a matter of a few seconds and a few strokes.

The 50-degree reciprocating motion also virtually eliminates the torsional stress and cyclic fatigue that are the main factors in instrument breakage. Canal distortion is minimized by going past the constriction through a 25 relieved reamer, preventing the buildup of debris that is the cause of instrument deviation and canal transportation.

The rapid back and forth movement of the reciprocating handpiece produces a modified balanced force that keeps the instruments centered as long as patency is maintained. The goal of non-breakage, adequate canal enlargement and non-distortion are all met with a system that is inexpensive and relatively easy to master.

In summation, we see an interesting progression in the ability of the instruments to reach our goals.

If we take the K-file as the starting point, its limitations are obvious and those limitations are tied to the subsequent use of rotary NiTi because of NiTi’s need for the creation of a glide path before its usage. Rotary NiTi brings the benefits of shaping canals within narrow parameters without distortion in an effective and rapid way. However, when going beyond those parameters, it subjects the canal to increasing degrees of distortion while increasing its own chances of breaking.

These limitations lead to the need for further instrument development that produces non-distorted and adequate shaping so canals could be cleansed predictably in both the mesio-distal and bucco-lingual planes. The relieved instruments enhanced by their use in a 50-degree reciprocating handpiece do away with broken instruments, introducing a relatively simple technique while accomplishing all our original goals.

From the point of view of the original goals we want to attain, the combination of relieved K-reamers and the 50-degree reciprocating handpiece comes closer to achieving these goals than the other systems. The fact that they are about 80 percent less expensive on a per use basis is an added plus.

See these clinical examples (Figs. 4-7). To discuss this, and other dental topics further, please feel free to join me at www.endomail messageboard.com. 

---

**Endo Tribune | November 2009**

---

**About the author**

Barry Lee Muskant, DMD, is co-director of dental research and co-founder of Essential Dental Systems (EDS). The company’s roots stem from the desire for product improvement to items of focus in lectures and daily practice. His research and business partner is Allan S. Deutsch, DMD. Muskant and Deutsch have a combined 60-plus years of practice experience. Contact them at info@endos dental.com.
Just because the economy is unstable does not mean that your practice has to be.

LVI will steer you in the right direction!

Now is the time to take the driver’s seat and invest in yourself and your future.
Recession-proof your practice with an education from LVI.
Bring a new enthusiasm to yourself, your practice, your team, and your patients!
You can have the practice of your dreams, and we can show you how.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee, WI</td>
<td>November 13-14</td>
</tr>
<tr>
<td>Kelowna, BC</td>
<td>November 13-14</td>
</tr>
<tr>
<td>Saskatoon, BC</td>
<td>November 13-14</td>
</tr>
<tr>
<td>Greenville, SC</td>
<td>November 20-21</td>
</tr>
<tr>
<td>Shreveport, LA</td>
<td>February 19-20</td>
</tr>
<tr>
<td>Houston, TX</td>
<td>February 26-27</td>
</tr>
<tr>
<td>Richmond, VA</td>
<td>March 5-6</td>
</tr>
<tr>
<td>Portland, OR</td>
<td>March 5-6</td>
</tr>
<tr>
<td>Fort Myers, FL</td>
<td>March 19-20</td>
</tr>
<tr>
<td>Sarasota, FL</td>
<td>March 26-27</td>
</tr>
<tr>
<td>Austin, TX</td>
<td>April 2-3</td>
</tr>
<tr>
<td>Washington D.C.</td>
<td>April 30- May 1</td>
</tr>
<tr>
<td>Santa Cruz, CA</td>
<td>June 11-12</td>
</tr>
<tr>
<td>Williamsburg, VA</td>
<td>July 16-17</td>
</tr>
<tr>
<td>Long Beach, CA</td>
<td>September 17-18</td>
</tr>
<tr>
<td>Stockton, CA</td>
<td>October 22-23</td>
</tr>
<tr>
<td>Toronto, ON</td>
<td>November 12-13</td>
</tr>
</tbody>
</table>

LVI is bringing 11 CE credits TO YOU with a regional event in your area!

For Complete details visit www.LVIREgionalEvents.com, or call 888.584.3237
The functional esthetic zone: The prominent factor in developing a pleasing smile design

By Joseph J. Massad, DDS, Joseph Thornton, DDS, William Lobel, DMD, Richard June, DDS, Tony Daher, DDS, and Sam Strong, DDS

This article will detail the steps utilized to orthopedically reposition a patient’s existing diminished, acquired mandibular posture and fabricate two new prostheses within the confines of the functional esthetic zone and at the same occlusal vertical dimension. Due to the patient’s strong desire to have a dramatic change, both final prostheses were presented to her to select from.

Even though there may be differences on dentists’ views of esthetics, the patient generally influences much of the outcome. In 1999, Vanblacon1 cited a definition of esthetics in the Journal of Prosthetic Dentistry that is still germane today: “Esthetics qualifies beauty and attractiveness and elicits pleasure.” However, we must ask: “Who is the authority on esthetics?” (Fig. 1).

As long as we can agree that the key to esthetics lies in individual perception, the mystery is much easier to solve. The mouth is presented to the world via lips and teeth, and has long been a focus for varied opinions of what is the best appearance.

Individual perception is strongly tempered by environmental influences and contemporary societal mores and foci.2 We as dentists must also understand that the emotion of the patient plays a very real and important role in the perception of beauty.

Case presentation

A 44-year-old female presented for replacement of her existing 10-year old complete dentures and acquired Class 3 occlusal scheme. (Fig. 2). During the assessment, the patient revealed her desire to look natural, like a “real person.” She discussed her embarrassment in public as she felt inferior to her coworkers.

The patient’s evaluation included an assessment of her existing prosthesis as well as her oral function and occlusion.

Patient appeal ratings: The science behind Web sites that work

By Frith Maier, Sesame Communications

Cosmetic dentists are clinical perfectionists. To an extraordinary degree, you take personal pride in the smiles you restore and think of the patients wearing these smiles as walking advertisements for your work.

Until now, there has been a dearth of information regarding what consumers care about and how they respond to cosmetic dentists’ sites. No longer.

Earlier this year at the AACD Annual Session, Sesame Communications shared the results of a breakthrough market research study that investigated how patients choose a cosmetic dentist online.

In this study, participants from across the United States were recruited and screened by Resolution Research, an independent market research firm, to ensure that they were currently searching for a cosmetic dentist.

Participants were between the ages of 21 and 59, had a household income of at least $60,000 and intended to make an appointment within 60 days.

The facilitator and the participants were connected and recorded via telephone and the Internet in one-on-one interviews. Participants were asked to think out loud as they navigated the Web sites and provide honest feedback, either positive or negative. No consideration was given to the company that designed the sites.

At the end of each session, the prospective patients completed a survey about the likelihood of them making an appointment with the cosmetic dentist whose site they evaluated. Amazingly, 80 percent of the Web sites reviewed by prospective patients failed to persuade them to make an appointment.

After reviewing the results of this research, Dr. Mickey Bernstein commented, “This study reveals the mindset of today’s dental patients. It deserves a long, hard look!”

Following are some specific findings regarding patient preferences and what appeals to them in a dental practice Web site. Some of the discoveries may well surprise you.

Cosmetic dentistry patients, on the other hand, are more focused on treatment options. They consistently go straight to the procedures page of your Web site. They want to know what conditions are corrected by cosmetic dentistry.
Cosmetic dentistry online shoppers are quite different than shoppers looking for general dentistry or orthodontics.

Specific procedures, what the procedures involve, how long they take, and they want “before and after” photos.

Reality reigns. Patients want to see images of “regular people” just like them. They found sites that were overly glamorous, contained advertising images or photos of celebrities or models to be disingenuous.

Cosmetic dentistry shoppers are impatient. Anything that slows consumers down or forces them to think about where to find information is likely to send them on to another Web site. Introduction pages, flash sites with small page size, pop-up and auto-play music and video all led patients to click off.

Other factors that drove patients away were hard-to-use menus or navigation, pages with an overwhelming amount of text and “coming soon” signs.

Don’t try to “sell” them. Newsletter sign-ups that pop up, promotional coupons and too many “call now?” messages turned out to be a turn-off. Participants reported that these made them feel the doctor was desperate.

Information attracts. Patients are more likely to call for an appointment when your Web site makes it easy to find answers to their questions. They want to know about the clinician’s credentials and the team’s commitment to ongoing education.

Information about the modern technologies used in the practice impact their perception about how current you are on clinical skills. Finally, without going into specifics of fees, your Web site needs to make clear that you provide financial options.

From the findings of the Cosmetic Dentist Consumer Behavior Study emerged a Patient Appeal Rating™ that quantifies the effectiveness of cosmetic Web sites. This data-driven tool empowers you to create a custom Web site that uniquely differentiates your practice while ensuring that it will be high performance.

“Sesame’s research was eye-opening,” said Dr. Corky Willhite. “The findings were specifically related to the cosmetic patients I want to attract and they used this information in the design of my new Web site. The result greatly exceeded my expectations!”

With the tough economy and increasing competition, it’s important to be online and be in touch. A complete patient connection strategy needs to incorporate secure access for patients to their appointment, account and treatment information, reminders, feedback and survey mechanisms, search engine optimization and online collaboration as well as online marketing.

It all starts with your Web site: building it to attract new patients and making it work 24/7 to maintain their trust.

I encourage you to download a complimentary copy of the complete whitepaper reporting on the Cosmetic Dentist Consumer Behavior Study at www.cdpatientappealing.com/cosmetictribune.

While you’re there, you can request a free Patient Appeal Rating for your Web site to find out how your site ranks with prospective patients.

Frith Maier writes and lectures frequently on how dentists can best serve their patients in a 24/7 online world.

As founder and CEO of Sesame Communications, she has championed extensive market research studies on dental patient behavior to understand their communications preferences. Frith Maier, CEO Sesame Communications 15 South Grady Way, Ste. 420 Renton, WA 98057 Fax: (425) 450-0219 Toll-free: (877) 633-5193 www.sesamecommunications.com
The DTSC Symposia at the Greater New York Dental Meeting offer an inspiring schedule of continuing education lectures in various dental disciplines. Each scientific lecture will provide an invaluable opportunity to learn diverse aspects of dentistry and how to integrate a variety of treatment options into your practice.

We have developed a course schedule that is both diverse and engaging, and which also offers you the opportunity to earn C.E. credits. The symposia sessions are FREE for all Greater N. Y. Dental Meeting visitors, but pre-registration is recommended to ensure preferred seating.

**SUNDAY NOVEMBER 29**

10:00 - 11:00 am
**ONE-STEP ADHESION, ONE-STEP CEMENTATION**
Dr. George Freedman DDS

11:30 - 12:30 pm
**HIGH RESOLUTION CONE BEAM WITH PREXION 3D**
Dr. Dan McEwenn DDS

1:30 - 2:30 pm
**SIMPLIFYESTHETIC DENTISTRY**
Dr. Steven Weinberg DDS

3:00 - 4:00 pm
**THE BEAUTY OF S-BONDING**
Dr. Howard Glazer DDS

4:15 - 5:15 pm
**NEW DISCUSSION: RISK OF CORONARY HEART DISEASE IN ASSOCIATION WITH PERIODONTALITIS AND PERIMPLANTITIS**
Dr. Hans Dieter John, Dr. Richard Meissen and D.R. Gieselmann

**MONDAY NOVEMBER 30**

10:00 - 11:00 am
**E4D SKY: DENTISTRY’S DESTINATION**
Dr. Gary Severance DDS and Lee Culp CDT

11:30 - 12:30 pm
**KNOW YOUR PRODUCTS & TOOLS FOR TODAY’S HEALING DENTISTRY**
Dr. Fay Goldstep DDS

1:30 - 2:30 pm
**ORASERVE™ IN PRACTICE**
Dr. Steven Glassman DDS

3:00 - 4:00 pm
**THE ADVANTAGE OF SMALL FOV HIGH RESOLUTION CBCT IMAGING**
Dr. Dan McEwenn DDS

**TUESDAY DECEMBER 1**

10:00 - 11:00 am
**TECHNOLOGICAL RESOURCES AND BIOLOGICAL CONCEPTS IN MINIMALLY INVASIVE ENDODONTICS**
Dr. Renato Leonardo DDS

11:30 - 12:30 pm
**THE AFFORDABLE SOFT TISSUE DIODE LASERS**
Dr. George Freedman DDS

1:30 - 2:30 pm
**ESTHETICS USING COSMETIC PERIODONTAL SURGERY**
Dr. David Hoexter DMD

3:00 - 4:00 pm
**YOU’VE TAKEN IMPLANT TRAINING . . . WHAT DO YOU DO NEXT?**
Lynn Mortilla, RDH

**WEDNESDAY DECEMBER 2**

10:00 - 11:00 am
**ICON - INNOVATIVE CARIES TREATMENT WITHOUT DRILLING**
Dr. George Freedman DDS

11:30 - 12:30 pm
**IMMEDIATE TOOTH REPLACEMENT IN THE ESTHETIC ZONE**
Dr. Barry Levin DDS

1:30 - 2:30 pm
**MORE THAN JUST TEETH AND GUMS**
Dr. Ron Schefdore DDS

3:00 - 4:00 pm
**MY FIRST ESTHETIC IMPLANT CASE - WHY, HOW, & WHEN?**
Dr. Marius Steigmann DDS

**FREE FOR REGISTERED GNYDM ATTENDEES, BUT PRE-REGISTRATION IS RECOMMENDED.**
Register now for the GNYDM under www.gnydm.com and find full program details under www.DTStudyClub.com.
tissues, occlusal vertical dimension, tolerance index, bone height, tissue character, tissue mobility, facial asymmetry, muscle tenacity and vertical ratio of facial mask to alveolar ridges. Our findings revealed a flat smile line and gummy display compounded with extreme loss of occlusal vertical dimension, making her face appear to be many years older (Fig. 5).

The intra-oral tissue examination revealed a mandibular anterior or ephuis fissuratum, which necessitated surgical excision before initiating the fabrication of any prosthesis. Of particular concern was the vertical relationship of the median alveolar ridge crest to the upper lip at repose and when smiling.1 A distance between 8 to 10 millimeters at repose and 4 to 5 millimeters when smiling will generally provide the practitioner adequate space (called the esthetic zone) to set prosthetic teeth.

In addition, bulky maxillary anterior alveolar ridges may also provide inadequate space for optimal prosthetic tooth positioning and proper labial flange extension without causing protrusion of the upper lip. This measurement is recorded with the esthetic lip ruler (www.GDIT.us) (Fig. 4).

Alveoplasty is often performed to reduce ridge height and bulk to accommodate the fabrication of an esthetic prosthesis. However, for this patient, alveolar ridge reduction may have adversely affected denture stability. In extreme cases, the LeFort I osteotomy has become a standard and predictable surgical approach3, but it is not a financially attractive option, especially in this depressed economic time.

With the advent of a larger range of longer necked prosthetic tooth designs, the practitioner can generally achieve an acceptable result, as long as the patient is aware that there will be some gum show, but to a lesser extent than the patient’s existing prosthesis. Furthermore, the prosthesis may be slightly compromised due to the lessened strength of the bond between the prosthetic teeth and the denture base.

The lip ruler can be used to measure both the upper and lower vertical measurement of the functional esthetic space (zone). This ruler has proven to be an invaluable aid when determining the distance between the premaxillary or premandibular ridges to the lips at repose and smiling, giving the practitioner the ability to properly treat the patient’s lip measurement was recorded as a +5 millimeters and the smiling lip measured a -5 millimeters. This was an extreme case that required special efforts to accomplish a satisfactory outcome: a minimum of 10 to 14 millimeters of prosthetic tooth height (measured from the incisal edge to the cervical neck) would be required to disguise the excessive gingival display.

Accomplishing the desired smile line with reduced gum show would mandate both the thinning of the denture base and the scalloping of the lingual surfaces of the prosthetic teeth to be able to position the teeth as close to the ridge as possible. After proper healing of the epulis fissuratum’s surgical site was observed, the patient’s existing prosthesis was relined with a resilient polyethyl methacrylate material (Permessoft, Dentsply Prosthetics). This liner would allow the tissue to rebound and provide better adaptation during the fabrication time of the new prosthesis. The patient’s occlusal vertical rest position was taken utilizing the exhaustive technique, and repeated several times to verify accuracy.

It is our treatment protocol to deprogram the patient’s musculature from the existing acquired occlusion at the closed vertical posture. Therefore, an occlusal splint was fabricated allowing 2 millimeters of freeway space.3 The splint was fabricated by mounting a central bearing device to the existing denture prosthesis.

The central bearing device was originally introduced by Hesse in 1887.4 However, it lost favor in the general dental arena due to complexities in mounting of the device and overall difficulty of use. All previous devices were constructed of metals and would not readily adapt to any irregular or reduced vertical situation.

The newer disposable, adjustable devices can be utilized not only in the edentulous, but also in the fully dentate and combination patient (jaw relation recorder, www.GDIT.us). This new recorder was designed by the lead author to improve upon all previous deficiencies in the central bearing devices, allowing for practitioner versatility.

Mounting this device to the patient’s existing maxillary and mandibular prostheses allows the practitioner to adjust the vertical relationship to the desired occlusal vertical dimension (Fig. 5). The central bearing device provides equalization of occlusal pressure...
and increased denture base stability during the procedure.

Once the vertical relationship is set, ethyl methacrylate was mixed to a doughy consistency and placed on the mandibular posterior occlusal surfaces of the existing worn denture. The patient was then asked to close until the vertical pin occluded with the striking plate, and then slide her jaw forward, and then back, and then side to side, and then in all directions.

The patient continued these movements until final resin polymerization was obtained. The splint was then trimmed and polished. The patient wore the occlusal splint until the completion and delivery of the new prosthesis (Figs. 6a–c).

A maxillary wax rim was fabricated utilizing the dimensions from the previous lip ruler reading. With these measurements, the prosthetic technician can fabricate the record base to the proper height to minimize the dentist’s chair time. This patient's resting lip-to-ridge crest measurement was recorded to be +5 millimeters, and the wax rim was fabricated to duplicate this distance.

The esthetic rim was then placed in the patient's mouth and analyzed as to the support of the maxillary lip. Any required alterations were made at this time. The rim was then marked confirming the resting lip line. The patient was then asked to smile, and the smiling lip line was marked.

A midline position was also taken by standing directly in front of the patient and marking the center position while the patient was smiling. Once this was completed, a face bow record was made.

The completed esthetic blueprint provided the prosthetic technician with information on setting the length of the anterior teeth and the height of the cervical or apical portion of the neck of the tooth, allowing customization of the esthetic design (Fig. 7a).

The patient's functional mandibular neutral zone position was then recorded. An acrylic base plate was made and green stick compound adapted to this rim to fabricate the neutral zone base. The height of the neutral zone base was determined at the assessment appointment by utilizing the lower half of the lip ruler to measure the premandibular ridge crest to mandibular resting lip distance.

By using this measurement to form the base, the pre-fabricated base will reach the vertical height of the resting lower lip when placed in the mouth. The neutral zone base was heated in warm water until the compound softened, very much like a soft-boiled egg. Care was taken not to overheat the compound material to ensure the proper consistency.

This softened neutral zone base was then placed on to the patient's mandibular ridge and the patient was given the instruction to swallow while sipping warm water in order to stimulate the facial muscles to contract and expand.

While swallowing, the lips move inward while the tip of the tongue and the lateral border of the tongue move outward. At the same time, the external facial muscles and the buccinator muscles move inward.

Every patient has different muscle tenacity, even from the left to right side of the face. Some patients have weak and flaccid muscle tone, which will generally produce a wider base record, while patients with heavy muscle tone will record a narrow base (Fig. 7b).

This record was indexed on the model with a silicone material,
thus allowing the prosthesis to be made within the confines of the functional pressures of the lips, cheeks and tongue (Fig. 8).

This neutral zone procedure dated back to the mid-1900s when it was initially described by Sir Wilford Fish in the United Kingdom. It was later improved upon and Frault, Schiesser and Victor Bussian published a method in 1974. Studies have supported this physiological method of maintaining the actual tone of the muscles of facial expression and mastication. When recorded appropriately, patients have noted improved stability and retention of complete dentures, especially in those cases with severely resorbed mandibular alveolar ridges.

Both the esthetic blueprint record and neutral zone record combined with the face bow record were utilized in the final tooth setup. The final procedure was to record the patient’s centric relation position using the vertical relationship of the patient’s occlusal splint, which was made earlier. This occlusal splint was reevaluated on several occasions to determine the patient’s acceptance. It has been the lead author’s experience that most patients who are orthopedically repositioned from a severely closed vertical position will adapt without rebound. However, it is necessary for the practitioner to re-evaluate the patient on a weekly basis to verify the adaptation before final occlusal records are made.

Once the patient indicated that she was comfortable with the improved vertical dimension, this relationship was transferred with the use of base plates mounted with the jaw-recording device. The same central bearing device was placed on a set of maxillary and mandibular stabilized base plates made from the definitive impression.

The same method of adjusting the central bearing pin to the proper vertical spacing was done to match the accepted occlusal splint spacing. The patient’s protrusive, retrusive and eccentric movements were recorded. To allow reading of the record, the striking plate against which the pin rubs was coated with an inking solution. The practitioner should be able to view the more prominent movements by analyzing the tracing marks.

Generally, the patient will form an arrow. The tip of the apex is considered to be the physiologic centric relation, the side opposite the apex is considered the protrusive movement, and the left and right markings that go from the center of the apex outward to the left, and outward to the right, are considered the eccentric movements. This procedure in this patient appeared to be consistent and repeatable.

Many tracings will not initially show an optimal apex. This is a normal finding when a patient has not been deprogrammed from a closed vertical relationship and may be experiencing TMJ symptoms. After deprogramming with a splint, the tracing will usually display a more favorable marking.

In this particular case, we utilized the patient’s existing full occlusal vertical dimension from her occlusal splint because she reported that the spacing felt very comfortable after three or four days and no other areas of concern were noted. Knowing this, the same vertical dimension was transferred to the record bases and fixed into position at the apex with PVS bite registration material (Regisil, Dentsply Caulk).

Once this recording was transferred to the record bases, the practitioner had acquired all of the information that the prosthetic technician would require to position all the denture teeth in the desired relationships.

The case was then sent to the prosthetic technician with directions to set the teeth within the confines of the functional esthetic neutral zone space on the mandible and the esthetic space on the maxilla at the vertical dimension recorded.

The technician was instructed to set two different esthetic tooth sizes and moulds and send back two wax try-ins for patient review. In the first case, a tooth size was selected to be congruent with the patient’s face. However, the tooth had reduced incisal to cervical height, which we knew would give the patient some gum show, albeit less than in her existing prosthesis. A second setup utilized a larger mould to give the patient less gum show. Yet, it also gave the patient more prominent movement by analyzing the tracing marks.

Each set up was completed and placed into the patient’s mouth and measured to be within the occlusal vertical dimension with the same freeway space. Please note that in the prosthesis with the smaller mould, the patient displayed a very pleasing smile with a narrow buccal corridor. This tooth size matched the patient’s smile line; however, she did have more gingival show with a high smile or when she was laughing.

The set up with the larger tooth minimized the gum show, but displayed a wider buccal corridor. Both mandibular dentures were set to the same neutral zone index. The buccal-lingual positions of the posterior teeth were set identically, however, the mandibular anterior teeth were placed to the front of the neutral zone labial-lingually, but still within the desired space. The patient related that both mandibular dentures felt equally extremely stable. In each of the finished cases, when the patient produced an exaggerated laugh, gingival show was noted. However, in the set that was made with the larger size and mould, the gum show was minimized.

The patient was asked to test chewing different foods with each and determine any differences in efficiency. Additional food tests were performed to determine adverse food collection under or settling on the sides of the prosthesis. The patient reported that eating, food collection, speech, retention and stability were very acceptable, and it was very hard to say one was better than the other. The patient’s lip posture in both cases appeared to be significantly improved over her existing prosthesis.

At the end of the day, the patient was asked to choose which prosthesis would be best for her. Please note that the function and phonetics in both the first and second prostheses were evaluated and found to have no measurable differences.

Please compare the patient’s initial record with the final records.
terial prosthetic construction. In contact with me via my Web site in the field, I encourage you to stay better, he or she should be willing to provide feedback before completion of the final prosthesis. Each reader can choose his or her personal preference as to beauty (Figs. 9–11). This question was asked earlier, “Who is the authority of esthetics?” The authority of esthetics could be a mother or father, brother or sister, uncle or aunt, niece or nephew, grandparent. It could be the mother’s daughter, it could be the husband’s wife, it could be your worst enemy. The demarcation of esthetics lies in the eye of the beholder. We find that it is extremely important that we relate to our patient’s perspective of how we assess a patient, especially for those who have a compromised esthetic space, in order to set prosthetic teeth in such a way as to match a functional esthetic zone.

I ask you, the reader, which smile would you choose? Please e-mail me from my Web site at www.joemassad.com with your answers, and I will let you know which smile design the patient chose.

Conclusion

I hope that this article has given a perspective of how we assess a patient, especially for those who have a compromised esthetic space, in order to set prosthetic teeth in such a way as to match a functional esthetic zone.

This article also demonstrates that a patient with a severely closed occlusal vertical dimension can be orthopedically repositioned to a comfortable and repeatable vertical dimension.

The splint therapy will act to deprogram the patient’s musculature from the acquired, worn down occlusal vertical dimension and provide feedback before completion of the final prosthesis. If a patient is motivated to look better, he or she should be willing to wear a splint to allow the body to verify an appropriate stable vertical relation at a repeatable stable centric relation. To learn more about advances in the field, I encourage you to stay in contact with me via my Web site at www.JoeMassad.com or www.GDIT.us.

For other great information for you and your patients, I recommend what could you choose?

The authors would like to acknowledge the prosthetic artistry of Zarko Danilov, prosthetic technician, Carmichael, Calif.

References


About the authors

Joseph Massad, DDS
• Associate professor and professor, removable prosthodontics, Scottsdale Center for Dentistry, Scottsdale, Ariz.
• Private practice, Tulsa, Okla., www.joemassad.com

Joseph Thornton, DDS
• Clinical associate faculty, Massad Learning Center
• Private practice, Snellville, Ga.

William Lobel, DMD
• Clinical assistant professor, Department of Prosthodontics, University of Texas, San Antonio, Texas
• Private practice, Snellville, Ga.

Richard June, DDS
• Associate professor, restorative prosthodontics, University School of Dental Medicine, Boston, Mass.
• Private practice, Saugus, Mass.

Dr. Sam Strong, DDS
• Private practice, Little Rock, Ark., www.strongdds.com
You Have The
FREEDOM
TO BE SOMETHING BETTER
In the truest sense, freedom cannot be bestowed; it must be achieved.
— Franklin D. Roosevelt

July 22-24, 2010
The Westin Boston Waterfront

Come and learn from the best and brightest dentistry has to offer. Surround yourself with the passion of the profession. No meeting, no group can compete with the positive, sharing, motivating environment that is... The IACA.

Join the most progressive and inclusive organization in dentistry that's also lots of fun... for you, your family and your team.

Space is limited. Register early at www.theIACA.com or 1-866-NOW.IACA.
New teeth in HIPAA rules

By Patti DiGangi, RDH

Money and economic woes are foremost in the minds of most Americans and many dental professionals. Our schedules have an unprecedented number of holes. Patients are putting off care.

Our concentration is, and must be, centered on caring for our patients. We do this to the highest level we can while keeping our offices financially viable.

Why should we think about or care about the alphabet soup: HIPAA, ARRA, EHR, or those other abbreviations taking place outside the practice when we’re worrying about AR (account receivable)?

Someone in the practice should be in charge of worrying about them though. Discussions about electronic health records (EHR) being easier and less expensive have often been in the news during 2009. Vast amounts of electronic data come with many new opportunities for a new kind of theft and security breaches orchestrated from continents far away.

The heightened potential for identity theft and security breaches is creating an atmosphere of fear and concern. Uneasiness over the privacy and security of electronic health information fall into two general categories:

(1) concerns about inappropriate releases of information from individual organizations, and

(2) concerns about the systemic flows of information throughout the health care and related industries.

These concerns are real and appropriate.

HIPAA is about privacy and security. Many dental professionals only know HIPAA as that form patients had to sign a couple years ago. It is thought HIPAA rules apply more in the administrative part of dental practices than the treatment rooms.

After 15 years of HIPAA regulations, some professionals still using paper records assume their practice is HIPAA compliant.

Dentists are required to comply with HIPAA rules even if there is only indirect transmission or receipt of a patient’s protected health information.

For example, a dental office submits a paper insurance claim, and these paper claims go to a clearinghouse that converts the paper claim to an electronic claim for submission to an insurance carrier.

This sequence makes the dental practice a covered entity under the HIPAA rules because the updated privacy and security rules protect patients both in the new digital age and with traditional paper records.

In February, the American Recovery and Reinvestment Act (ARRA) of 2009, commonly known as the stimulus package, was signed into law, thus making the Health Information Technology for Economic and Clinical Health (HITECH) Act the law of the land.

The HITECH Act provides approximately $31.2 billion for health care infrastructure and adoption of electronic health records. Dentists who have small practices are probably not going to qualify for funding under ARRA unless at least 50 percent of patients are Medicaid beneficiaries.

A lesser-known part of the HIPAA Act affecting practitioners significantly expands the reach of the HIPAA and gives it more teeth. As of Sept. 25, 2009, requirements for prompt notification of patients when personal health data have been compromised, and which limits the commercial use of such information, went into effect.

The HITECH Act increases the civil monetary penalties for HIPAA noncompliance to as much as $50,000 per violation. HITECH authorizes state attorneys general to enforce HIPAA privacy and security requirements.

HITECH extends HIPAA from a reactive compliance requirement to something broader and more preventive. HIPAA has not been rigorously enforced in the past.

Time will tell how the new enforcement regime will work. Por-
traying a cavalier attitude with no story or a minimal story about why the practitioner didn’t comply with HIPAA rules will be seen in a very different light. It is likely professionals with these attitudes might be at significant risk.

It is likely professionals with these attitudes might be at significant risk.

The American Dental Association is offering a downloadable electronic book to help dental offices comply with the enhanced privacy and security breach rules (www.ada.org).

In January 2010, ADA will release a new Complete HIPAA Compliance Kit for dentists that will feature updated HIPAA privacy and security information and incorporate HITECH changes.

In addition, it will include a three-year update service assuring a resource that covers all pending changes.

The full impact of HIPAA/HITECH changes is uncertain and remains to be seen. Economic worries and short-term goals shouldn’t blind us into playing ostrich.

Times of uncertainty and complex challenges can lead to fear and feelings of helplessness, but are also times of powerful possibilities. 

**About the author**

Patti DiGangi is a vision-driven person finding strength and direction from her inner convictions. Like most true visionaries, she views obstacles as learning experiences that can be used for self-development. As a lifelong learner, her energetic, thought provoking and successful program development and mind-bending view of what can be shines a bright light for others to preview the future and find their place in it. She can be contacted through her Web site at www.pdigangi.com.
Dear Reader,

We have been discussing article writing and publishing in the last few editions. Maybe after reading these letters you have been motivated to put an article together.

If you have, you may want to consider turning your article into a presentation. If you have not written anything, maybe developing and presenting a course would be more to your liking. Presentations will be the topic for the upcoming editions.

Obviously, the first thing that needs to be done is to decide what to talk about. Remember, the reason for doing a presentation is to provide education to your listeners. Audiences do not look favorably upon courses that are full of information they have heard before.

Have you had experiences that are unique in your dental hygiene career that others could benefit from? Is there something you excel at that you could teach your colleagues?

If you have a topic that is not new, you need to decide how you are going to make it different from what hygienists have seen and heard previously.

After you have decided on a topic, you need to decide what format you will use for program development and presentation. The most popular way of doing this currently is using Microsoft's PowerPoint program.

If you decide to use PowerPoint and never have before, I would recommend taking a beginner course. Self-study courses are available online. Many community colleges or technical colleges offer courses as well. Or maybe you have a colleague who could share some tips with you?

As you develop the course, you might find it helpful to create an outline. Then, each number, letter or bullet point can become a single slide. Once the outline is prepared, you can begin to construct the presentation in PowerPoint.

Think about a topic and how you will develop it. Make your outline and look into a PowerPoint class, if you need one. I'll discuss what comes next in the upcoming issue of Hygiene Tribune.

Best Regards,

Angie Stone, RDH, BS
Editor in Chief

(Embrace, WetBond Pit & Fissure Sealant)

If you're one of the 1,000s of dental professionals who know EMBRACE™ WetBond Pit & Fissure Sealant is easier to apply because it bonds to moist tooth surfaces, provides a better seal and is long lasting, you're on top of your profession.

Now after six years of clinical use, EMBRACE Sealant sets a new standard of success -- intact margins, no leakage, no staining, caries-free.

Six-year followup photo photo courtesy of Joseph P. O’Donnell, DMD

One call can bring a smile to your face and your patients:

- Long lasting
- Easy to apply – only sealant that bonds in a moist field
- Margin-free seal
- Fast light cure
- Fluoride releasing

*Contact Pulpdent for study.

(Embrace, WetBond Pit & Fissure Sealant)
This interactive DVD is written, directed, and narrated by Dr. Stanley Malamed, dentistry’s leading expert in the management of medical emergencies.

“"You don’t get a chance to save a life you’ve lost. So get it right...the first time.”"