OF THE CALIFORNIA DENTAL ASSOCIATION

Journal

JUNE 2008

Transition Attorneys

Dental Practice Financing

Financial Due Diligence

Dental Practice MANAGEMENT

PART 1 *of* 2

Bette Robin, DDS, JD

OF THE CALIFORNIA DENTAL ASSOCIATION
Journal
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DEPARTMENTS

FEATURES

CDA JOURNAL, VOL 36, Nº06

Attention Kmart Shoppers

ALAN L. FELSENFELD, DDS

I don't shop at Kmart. It is not that I am prejudiced against the company. It is just that there is not a Kmart convenient to my home. I might shop there if I was purchasing a Black & Decker toaster oven, Mr. Coffee coffeemaker, Fisher-Price toys, or a Sony television since these products are the same whether purchased in a boutique shop, general supermarket, Costco, or Kmart. That is easy to understand.

What becomes troublesome is when we are unsure of the quality of the product as in clothing, raw foods, or other nonbrand items. It is difficult to believe that a suit of clothes purchased at stores like these are of the same quality as those purchased at upscale merchants as Neiman Marcus or Nordstrom.

Dental tourism is increasing in this country as patients leave the United States and go to foreign nations for dental treatment. Mexico, for example, is a popular tourism site especially for the southern border states. Other countries around the world have similar programs and packages. Tourism bureaus (Google "dental tourism" and stand back) have junkets that will allow a vacation in a desirable location and still leave time for dental work. The total cost of the two parts of the package together is frequently less than the dental work alone in the United States.

A recent newscast in my community on a local television station featured a dentist in Mexico who touted her lower fees for American dental tourists if they came to her practice. Her training was in a U.S. dental school and she claimed her practice was at the same level of care as her American colleagues. This included the latest techniques and materials, as well as sterilization standards. From the brief glimpse of her office in the news story, it was difficult to dispute.

Dental tourism is increasing in this country as patients leave the United States and go to foreign nations for dental treatment.

It is presumptuous to assume that all foreign-trained dentists are inferior to those trained in the United States or that care received in developing nations is, by definition, substandard by our criteria. However, accreditation of U.S. and Canadian dental schools, as flawed as the process may be, sets the bar at minimal levels of curriculum and clinical practice within the educational format. Continual evaluation of the students is the norm, not the exception. There are certainly excellent dental schools in all countries. The problem is that a patient has no assurance that care in a foreign country is by a graduate of a school that educates at the same level as our schools.

We could take a caveat emptor approach and suggest that those who seek dental care under unknown circumstances may suffer the consequences of less-than-ideal treatment. This is not acceptable. We have a responsibility to the people of California to promote good dental care, regardless of where it is obtained. A secondary and unintended consequence of dental tourism is the potential damage that could be done at a minimum to the dentition but, more significantly, to the patient. As a profession we become de facto providers of secondary or reparative procedures when patients have problems.

Organized dentistry has an obligation to the public it serves to educate them concerning good dental health practices and quality care. This includes cautioning them against seeking care in countries where the overall quality of dentistry at the educational level, as well as practice level, may not be regulated with the same stringency we enjoy. This is not a condemnation of all dental care across the world, rather a challenge to patients to ascertain that what they get is of reasonable quality, regardless of the price paid.

Kmart, Target, and other discount stores offer value to their customers. We must be cautious in selecting the goods and services we buy for the unintended consequences that could occur. Dentistry is a service and not a brand-name product. As such, quality control is at the local level and not in a factory setting. A blue-light special in health care conceivably could have devastating consequences to the ill informed. ■■■■

Address comments, letters, and questions to the editor at alan.felsenfeld@cda.org.

Dan Hubig

New Biological Clock Links Tooth Growth to Other Metabolic Processes

Timing, they say, is everything. And a recent study proves just that.

Timothy Bromage, MA, PhD, a dental professor at New York University, has found that a newly discovered biological clock, or biological rhythm, is based on the circadian rhythm that controls many metabolic functions such as respiration and heart rates to one's life span.

This clock is roughly a 24-hour cycle that plays a key role in shaping cell regeneration, the patterns of sleep and eating, as well as other biological processes in mammals.

Similar to the circadian rhythm, this biological clock starts in the hypothalamus, the part of the brain that is the control center for the autonomic nervous system. However, unlike the circadian rhythm, the clock is different in different organisms. The clock is longer for bigger

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TrioDent Launches New Sectional Matrix Retainer Ring for Class II Composite Restorations

V3, the new V-Ring from TrioDent, offers superior retention, enhanced adaptation, and wider indications for use. The ring is formed entirely from super elastic nickel titanium, meaning it will not fatigue. V3 also has a greater angle between the tines and the ring to allow even easier stacking. V3 still features the innovation that gave the original V-Ring its name: V-shaped tines. In addition, TrioDent has developed Narrow V3 which ensures optimal separation force on smaller teeth. To order, go to www.triodent.com or call 800-811-3949.

General Anesthesia During Dental Treatment Deemed Safe for Special Needs Population

A new study that assessed the safety of general anesthesia for dental treatment of special needs patients as it related to the American Society of Anesthesiology Physical Status classification, procedure, and other factors, found it to be safe. The study was published in the latest issue of *Anesthesia Progress*.

When needing dental treatment, patients with physical and mental limitations frequently pose challenges such as a lack of cooperation and physical disabilities to combative behavior. These factors can make conventional treatment under local anesthesia very difficult if not impossible at times. Dentists often resort to managing their special needs patients with general anesthesia as a way to avoid injury and excessive stress. Although comprehensive dental rehabilitation is usually described as a minimally invasive procedure, the study's researchers said that the special needs population has its own unique challenges, which may not necessarily correlate with the general agreed criteria for anesthetic risks.

To read the entire study, go to http://www.allenpress.com/pdf/io003-3006-54-4-170.pdf.

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Oral Health Tips for Overseas Trips

With the summer vacation season nearly here, are you or your patients planning an out-of-country trip to a resort or an exotic location? Better pack that toothbrush, toothpaste, and floss, the Georgia Dental Association suggested. An article in an issue of *GDA Action* provides good pointers to those embarking on journeys away from home.

Since finding a good dentist abroad might not be possible, the journal cites some basic precautions recommended by the American Dental Association:

- Get a checkup and cleaning if it has been a while since your last appointment.
- Ask your dentist if he or she has contacts with dental organizations in the host countries or can refer you to a dental clinic.
- Check with your dental insurance company to see if you are covered when you are out of the country and about claim procedures.
- When you arrive at your destination, check in with the U.S. embassy where you may be able to obtain information about local dental and medical services in the country.
- It's always a good idea to check in at the embassy if the country you are visiting is politically unstable or adjoining a country experiencing civil unrest. While embassies do not provide personal services, they can provide information about local health resources and welcome your registering with them.

A Safe Dental Traveler's Guide is available from the Organization for Safety and Asepsis Procedures, www.osap.org. Other helpful organizations are the International Association for Medical Assistance to Travelers, www.IAMAT.org; travelers to Europe can go to the American Dental Society of Europe, www.ADSE.co.uk, or FDI World Dental Federation, www.FDI-worldental.org.

Free Online Emergency Response Course Available to Dentists

The American Dental Association has announced the availability of a free online continuing education course for dentists to become more effective in recognizing and responding to disasters.

The online course, "Core Disaster Life Support," is available through a cooperative effort between the ADA and the American Medical Association. Dentists interested in learning the basic concepts of disaster management that allows them to better assist during a disaster, also can earn four hours of continuing dental education credits upon successful completion of the course. Enrollment information and course requirements are available online at http://www.ada.org/prof/prac/disaster/ecdls/index.asp.

The ADA has actively promoted the ability of dentists to participate in emergency response situations and, as a member of the National Disaster Life Support Education Consortium, it has participated with a national coalition of professional organizations, academic centers, medical centers, government partners, and corporations to provide program content in a variety of National Disaster Life Support courses.

Questions can be directed to the ADA's Council on Dental Practice at (800) 621-8099, ext. 2895, or sent to Pamela M. Porembski, DDS, via e-mail at porembskip@ada.org.

FDA Issues Alert on Denture Cleansers

On Feb. 14, the U.S. Food and Drug Administration issued a notification about the risk of allergic reactions in users of denture cleansers and the risks of misusing these products. The FDA reported it has received nearly 75 reports of adverse events, including at least one fatality related to the use of denture cleansers. These adverse events have occurred both when the product has been used properly as well as from improper use. The allergic reactions can occur soon after the patient begins using the product or after years of use.

According to the FDA, the literature and research suggest that the ingredient in denture cleansers responsible for these reactions is persulfate, a known allergen. Persulfates are used in most denture cleansers to help clean and bleach the dentures.

For more information and recommendations, go to the FDA's medical device Public Health Notifications at www.fda.gov/cdrh/safety.html.

The World's First Self-disinfecting Thermometer

The innovators of the Exergen TemporalScanner temporal artery thermometer have introduced the next generation in noninvasive temperature reading. The imbedded silver destroys bacteria (including E. coli), mold, mildew and fungi naturally and safely. A technology development based on the Exergen TAT-5000 Hospital Model, the home-model TAT-2000C new Silver Ion Exergen TemporalScanner is available nationwide with a manufacturer's suggested retail price of under $50. For more information, go to www.temporalscanner.com.

Diabetics, Meds, and Potential Harmful Interactions

Diabetics usually are instructed to eat right, maintain regular physical activity, and if necessary, take medication. What many may not know is that these medications that help control healthy insulin levels may lead to unexpected events at the dentist's office.

Diabetic patients especially need to communicate special needs to their dentists. This is due to harmful interactions that could occur because of the materials and medications used at dental appointments, according to a study published in *General Dentistry*, the Academy of General Dentistry's clinical, peer-reviewed journal.

More than 194 million people worldwide, according to the study, have diabetes, and health officials estimate this figure will double or triple in less than two decades. "It is imperative that diabetic patients inform their dentist of their needs in order to anticipate medication interactions and physical reactions to treatment," says Lee Shackelford, DDS, FAGD, a spokesperson for the AGD. "The doctor must know if the patient is taking insulin and has taken their daily dose of insulin in order to anticipate the length of the appointment."

It does not stop, however, with diabetic patients. Giving dentists as much information as possible about current medications is essential for everyone's oral health. "It is important that your dentist is aware of all of the medications that you are taking, including prescription drugs, over-the-counter medications, and herbal drugs as they may interact with agents that your dentist may use for your dental treatment," advised lead author of the study, James Little, DMD, MS.

"Talk with your dentist if you are concerned about how the medications you are taking could affect your oral health," Shackelford said. "Open communication is the best way to ensure that your dentist gives you the best treatment possible."

Steps Diabetic Patients Can Take to Ensure Optimal Dental Care:

- Find a dentist who is aware of the needs of diabetic patients.

- See the dentist on a regular basis and alert him or her of any changes in health status and medications.
- Inform the dentist of any sores, swellings, or areas of redness in the mouth, as well as any painful areas in the mouth.
- Eat a normal meal prior to the dental appointment, take all diabetic medications on schedule, bring a blood sugar monitoring device to the appointment, and inform the dentist if symptoms associated with low blood sugar are felt.

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Honors

Cindy Lyon, DDS, of Murphys, Calif., associate professor and acting chair of the department of dental practice at the University of the Pacific Arthur A. Dugoni School of Dentistry, was named a fellow of the 2008-2009 ADEA Leadership Institute and awarded the Omicron Kappa Upsilon Charles Craig Teaching Award.

Cindy Lyon, DDS

ADA: Let's Work Together to Help Medicaid Fulfill its Mission

The American Dental Association has called on all concerned public agencies and private parties to work together to help Medicaid fulfill its mission to provide dental care to vulnerable populations, particularly low-income children.

In a statement provided to the House Committee on Oversight and Government Reform Subcommittee on Domestic Policy, the ADA called on health professionals, policymakers, parents, and others to work to remove barriers that block access to oral health care services.

The death of Deamonte Driver, whose family had lost their Medicaid benefits, galvanized public and congressional attention to the problems associated with lack of access to oral health care. But a year later, public concern and congressional outrage have not yielded significant results.

"Fundamental changes to the Medicaid program are long overdue to ensure that low-income children have the same access to oral health care services that most Americans enjoy," said ADA President Mark Feldman, DDS. "It is time to help Medicaid meet its obligation to help vulnerable groups get necessary services."

While remaining committed to much more sweeping changes, the ADA, for the purposes of this hearing, urged the passage of two critical pieces of legislation.

The "Essential Oral Health Care Act" (HR 2472), sponsored by Reps. Albert Wynn (D-Md.) and Mike Simpson (R-Idaho) would draw more private practicing dentists into Medicaid and the State Children's Health Insurance Program by significantly increasing federal matching funds for states to improve their plans. Second, Rep. Elijah Cummings' (D-Md.) "Deamonte's Law" (HR 2371), addresses dental workforce needs by providing grants to dental schools and qualified hospitals to increase the pursuit of pediatric dentistry.

Study Shows Bad Teeth May Pose Heart Disease Risk in Younger Men

Researchers at Boston University have been able to show conclusively that periodontal disease is a risk factor for coronary heart disease in men less than 60 years-old — separate of established cardiovascular risk factors — according to a study released in *Circulation*, a publication of the American Heart Association.

"This is the first study to find a significant association between chronic periodontitis and the risk of coronary heart disease, even after adjusting for important confounding factors," says Thomas Dietrich, MD, DMD, MPH, associate professor in the Department of Health Policy and Health Services Research at Boston University Goldman School of Dental Medicine and one of the study's authors.

Taking into account factors such as body mass index, age, smoking, cholesterol, alcohol consumption, and blood pressure in 1,203 males in the Veterans Administration Normative Aging and Dental Longitudinal Studies, the men were given comprehensive dental and medical examinations every three years for up to 35 years. The research was supported by the U.S. Department of Veterans Affairs.

The full text of the study, "Age-dependent Associations Between Chronic Periodontitis/Edentulism and Risk of Coronary Heart Disease," is available online at http://circ.ahajournals.org/cgi/reprint/117/13/1668.

UPCOMING MEETINGS

2008	
July 16-20	56th Annual Meeting and Exhibits, Academy of General Dentistry, www.agd2008orlando.org.
Sept. 12-14	CDA Fall Scientific Session, San Francisco, 800-CDA-SMILE (232-7645), cda.org.
Sept. 24-27	FDI Annual World Dental Congress, Stockholm, congress@fdiworldental.org.
Oct. 16-19	American Dental Association 149th Annual Session, San Antonio, Texas, ada.org.
Oct. 25-29	American Public Health Association Oral Health Section's annual meeting and exposition, San Diego, www.apha.org/meetings.
2009	
May 14-17	CDA Spring Scientific Session, Anaheim, 800-CDA-SMILE (232-7645), cda.org.
Sept. 11-13	CDA Fall Scientific Session, San Francisco, 800-CDA-SMILE (232-7645), cda.org.
Oct. 1-4	American Dental Association 150th Annual Session, Honolulu, Hawaii, ada.org.

To have an event included on this list of nonprofit association continuing education meetings, please send the information to Upcoming Meetings, CDA Journal, 1201 K St., 16th Floor, Sacramento, CA 95814 or fax the information to 916-554-5962.

THE WRITE STUFF *The Pierre Fauchard Academy Southern California Section recently gave its Pierre Fauchard Honor Award to Robert E. Horseman, DDS, to recognize his 30 years of "legendary literary work" in the* Journal of the California Dental Association. *Jack F. Conley, DDS, CDA editor emeritus, was the essayist.*

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mammals, shorter for smaller animals. This means humans have an eight-day interval, it's six for chimps, and one for rats.

Bromage, an adjunct professor of basic science and craniofacial biology and of biomaterials and biomimetics at NYU's College of Dentistry, made the discovery while examining the incremental growth lines in tooth enamel. Additionally, he saw a related pattern of incremental growth in skeletal bone tissue, the first time incremental rhythm has ever been seen in bone.

"The same biological rhythm that controls incremental tooth and bone growth also affects bone and body size, and many metabolic processes, including heart and respiration rates. In fact, the rhythm affects an organism's overall pace of life, and its life span," said Bromage, reporting his findings during the recent 37th annual meeting of the American Association for Dental Research.

"So, a rat that grows teeth and bone in one-eighth the time of a human also lives faster and dies younger," he said.

Humans, Bromage said, have by far the most variation in these long-term incremental growth rhythms, with some humans clocking as few as five days, others as many as 10. Relatedly, humans have the most variability in body size among mammals.

In a previously published interview, Bromage said, that depending on your perspective, rats do live as long as humans. "For instance, a rat can expect the same number of heartbeats in their lifetime as you and me.

"In broad strokes, larger bodies are produced by slowing down growth and developing for longer," he said. "Life span has to be longer if a species has a later age at sexual maturity. Otherwise too many individuals will die before they can replace themselves."

Future research will assess whether there is a link between slower growth rhythms and growth disorders, he said.

Since the autonomic nervous system controls human behavior, future research will also assess whether growth rhythms can be linked to variations in human behavior.

Bromage directs the mineralized tissue preparation and imaging technology development laboratory of NYU's College of Dentistry's department of biomaterials and biomimetics.

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Grant to Fund Advanced Training to Manage Rare Dental Emergencies

The ADA Foundation is taking a proactive step to help ensure patient safety advances are in step with tomorrow's dental science through a $100,000 grant to the American Dental Society of Anesthesiology Research Foundation, Inc.

The grant will fund development of curriculum materials and advanced training to help dentists better prevent, recognize, and treat exceedingly rare complications and emergencies that may arise in a dental setting from sedation and anesthesia.

The training will be a combination of electronic-mediated written materials and a laboratory practice component based on the latest scientific knowledge and techniques on the use of sedation and anesthesia, giving special emphasis to airway management and emergencies.

"At a time when dentists are increasing their use of sedation and anesthesia in the dental office," said ADA Foundation President Arthur Dugoni, DDS, MS, "there is a critical need for an advanced course that focuses on emergency management. As dentistry's premier philanthropic and charitable organization, the ADA Foundation is taking this opportunity to meet that need, and to fulfill its mission of educating dentists and promoting public and oral health."

The grantee also will carry out pilot testing of the proposed course. The ADA Foundation will then partner with the American Dental Association to make the course widely available sometime next year.

ADA member dentists can call (312) 440-2694.

Statement on Risk Assessment Released

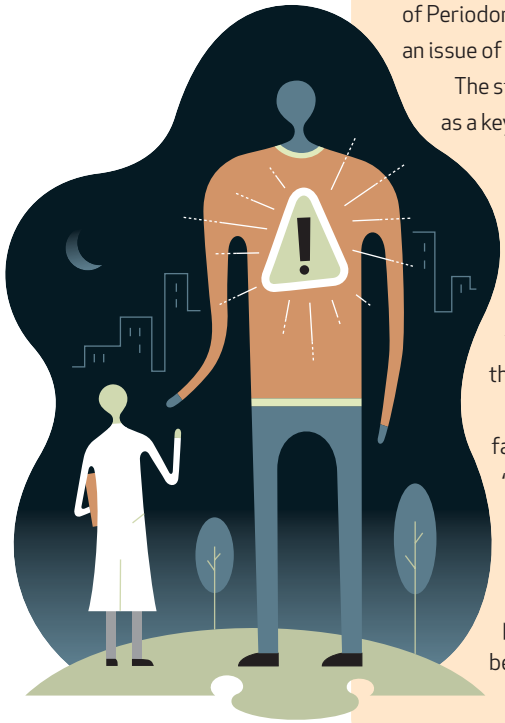
In its ongoing effort to treat and prevent periodontal diseases, the American Academy of Periodontology recently issued a statement on risk assessment, which was published in an issue of the *Journal of Periodontology*.

The statement is intended to encourage dental professionals to use risk assessment as a key component of all comprehensive dental and periodontal evaluations.

Studies have shown that the development, presentation, and the progression of periodontal disease can be influenced in many ways. Risk factors range from poor oral hygiene to smoking, as well as the presence of other diseases such as heart disease, gender, number of missing teeth, and age.

In assessing the patient's risk factors, the dental professional is better able to predict the likelihood that the patient will develop periodontal disease and therefore assist in early identification or prevention of the disease.

"It is advantageous for a dental professional to evaluate a patient's various risk factors for periodontal disease," said Susan Karabin, DDS, president of the AAP. "Considering risk factors as part of the treatment planning process allows for proactive management of the patient's oral health, and can potentially reduce the need for more complex periodontal procedures in the future. The AAP statement hopes to compel more dental professionals to take a full inventory of their patients' health, especially any applicable risk factors, when determining the best course of treatment."



Matt Mullin

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Questionable Behavior in the Dental Office

BY JAIME WELCHER

Once a quarter, the *Journal* features a TDIC risk management case study, which provides analysis and practical advice on a variety of issues related to liability risks.

Authored by TDIC risk management analysts, each article presents a case overview and real-life outcome, and reviews learning points and tips that everyone can apply to their practice.

Dentist-Employee Relationship Brings Harassment Allegations

An office manager alleges sexual harassment, hostile work environment, unlawful retaliation, and intentional infliction of emotional distress.

Dr. Brown hired Ms. Turner, a 24-year-old dental assistant, as his office manager/patient coordinator in December 2004. Her duties included managing patient contracts, handling accounts payable, and scheduling and participating in patient consultations.

On her first day, Dr. Brown took Ms. Turner to lunch to welcome her. During lunch, he inquired whether she was married or had children. She told him that she was not married or dating anyone, nor did she have any children. A few days later, Dr. Brown asked Ms. Turner to join him for dinner at a restaurant not far from the office. She agreed. After dinner, he invited her to his house for a nightcap. She agreed, but followed him in her car. She spent the night. They had dinner again one month later. Again, the evening ended at Dr. Brown's house.

Over the next two months, Ms. Turner learned the responsibilities of the new position and established friendships with co-workers. In her third month of employment, Dr. Brown arranged for him and Ms. Turner to attend a dental conference in Chicago. Because he did not make hotel reservations in advance, the hotel only had adjoining rooms available when they checked in. Ms. Turner told him she felt the adjoining rooms were not professional and placed her in an awkward position. However, since there were no alternatives available, she said, "It would be fine." They attended the conference and returned to the office the following Monday.

After the conference, Ms. Turner visited Dr. Brown's house on three more occasions — to take his puppy to the groomer; to go with Dr. Brown to shop for a doggie door; and finally, to have dinner with Dr. Brown and his mother.

Shortly thereafter, Ms. Turner shared with her co-workers that she started

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dating someone new. She mentioned how excited she was about this relationship and hoped it would develop into something serious. Dr. Brown overheard the conversation and wished her well. However, within a month's time he:

- Verbally reprimanded Ms. Turner for having lunch with her co-workers. He said she disregarded the office policy that stated, "There must be at least one staff person at the front desk at all times on days patients are in the office. Lunches needed to be staggered. On nonpatient days, staff may lunch together."
- Gave her a written warning for giggling during an initial patient consultation. He told her the patient was already self-conscious and having a staff person laugh at his predicament was offensive.
- Gave her a written warning for wearing street clothes and not the required uniform as the office policy dictated. He wrote that staff had complained since her first day of employment and patients complained that her outfits were too provocative. During the discussion, Ms. Turner adamantly refused to wear a uniform. She didn't believe an office manager should wear a uniform.

Two weeks later, Ms. Turner asked Dr. Brown if she could leave work early to have her car serviced. Because the schedule was full, Dr. Brown asked her to do it the next morning. Ms. Turner yelled at him in the operatory with two staff members witnessing the scene. She walked out of the office and did not return to work the next day.

Two days later, a co-worker called her to see when she would be returning to work. Ms. Turner said she had found another job and would not be returning.

Three weeks later, Ms. Turner filed a complaint alleging sexual harassment, hostile work environment, unlawful retaliation, and intentional infliction of emotional distress. She was seeking compensation for special damages, emotional distress, punitive damages, and attorney fees. Since Dr. Brown's practice is to have all employees sign an arbitration agreement in the employee manual, the case went to arbitration.

The arbitrator found both sides diametrically opposed in their version of the facts, even down to the smallest details.

During Arbitration

Binding arbitration occurs when both the plaintiff and defendant agree to abide by the arbitrator's final decision. The arbitrator is usually a retired judge or attorney, and both the plaintiff and defendant must agree on the arbitrator. If dentists have Employment Practices Liability coverage, TDIC will represent them. The plaintiff typically retains an attorney. Each side provides the arbitrator with their view of the events.

The arbitrator considered whether:

- Ms. Turner suffered quid pro quo sexual harassment at the hands of her employer, Dr. Brown;
- Dr. Brown subjected Ms. Turner to a hostile work environment in retaliation for her rejection of his sexual advances; and
- Dr. Brown committed intentional infliction of emotional distress against Ms. Turner.

The arbitrator found both sides diametrically opposed in their version of the facts, even down to the smallest details. The case turned entirely on the credibility of Dr. Brown and Ms. Turner.

HER SIDE OF THE STORY ...

Ms. Turner asserted she engaged in nonconsensual sex with Dr. Brown on at least two occasions. He engaged in unwelcome touching and sexually charged comments in the workplace. She also claimed Dr. Brown created an intolerably hostile work environment because of her eventual rejection of his sexual advances.

Ms. Turner claimed that within days of beginning her employment, Dr. Brown invited her out for a drink on the pretext of discussing business with her. He arranged for them to be seated in a booth at the back of the restaurant. The booth was outfitted with curtains that he pulled across for privacy. Dr. Brown then began to fondle and kiss Ms. Turner. She said she "froze." As they were leaving, Dr. Brown asked her to go with him to his house. She claimed she agreed because she felt helpless.

A similar incident occurred when they went to dinner and returned to Dr. Brown's house for the night. After that, Ms. Turner claimed Dr. Brown repeatedly made sexually suggestive remarks to her and inappropriately touched her at the office. She asserted that she did not willingly participate in the relationship. She claimed that because he was her employer and she needed her job, she had to cooperate with him.

During the dental conference in Chicago, Ms. Turner stated Dr. Brown asked to come into her room several times. She denied his advances each time. After returning from the conference, Ms. Turner claimed Dr. Brown embarked on an escalating course of retaliation by criticizing her work, her manner of dress, and her interaction with patients. She characterized Dr. Brown's treatment of her as displays of temper, yelling, and picking on her

to the point where she did not feel like she could do anything right. Finally, he "wrote her up" for seemingly trivial things. She believed it all stemmed from her denial of his advances during the Chicago trip and of his learning she was dating. On the final day of Ms. Turner's employment, she asked Dr. Brown if she could leave early. When he began yelling, she left because she "could not take the abuse any longer."

Ms. Turner's attorney produced former employees to attest to Dr. Brown's demeanor toward younger females in his employ. Three former staff reported that his offensive behavior led them to quit. Ms. Turner sought help from a psychologist who testified she was psychologically troubled due to past family issues. She diagnosed Ms. Turner as suffering from severe post-traumatic stress disorder resulting from her encounters with Dr. Brown. The psychologist claimed Dr. Brown's behavior severely exacerbated whatever pre-existing condition Ms. Turner may have had.

HIS SIDE OF THE STORY ...

Dr. Brown admitted to inviting Ms. Turner to lunch during her first week of employment. He denied taking her to dinner, sitting in a private booth, touching or kissing her, and inviting her back to his house. He denied making sexually suggestive comments or touching her in the office. He said she was the one who came onto him by flirting and giving him flattering attention. He said they both agreed to the hotel situation in Chicago. He denied making sexual advances to her while there. He denied his attitude toward her changed after the trip and stated that the "write-ups" were for good reasons. He said that she abandoned her job when she walked out the day he told her she could not leave early to attend to her car.

Dr. Brown may have had an easier time creating doubt in the minds of 12 jurors rather than having to convince one person of his innocence.

Dr. Brown's attorney produced current employees who attested that Ms. Turner was sexually aggressive toward Dr. Brown and often disrespectful to both him and patients.

Findings and Conclusions

The arbitrator determined Ms. Turner suffered quid pro quo sexual harassment. He observed Ms. Turner's demeanor during the interview and concluded that she did not have the guile to make the story up. He concluded that she was telling the truth about her intimate relations with Dr. Brown and opined that she did so unwillingly, fearing she would lose her job if she resisted.

The arbitrator found Dr. Brown's denials of an intimate relationship with Ms. Turner unconvincing. He also found Dr. Brown retaliated against Ms. Turner by criticizing her failure to follow office policy, her attire, and her interaction with patients. These incidences began and escalated upon their return from the Chicago conference, and after Dr. Brown learned she was dating someone else. He discredited Dr. Brown's testimony that Ms. Turner was fine with sharing adjoining rooms during that conference, and that he made no sexual advances.

The arbitrator concluded Ms. Turner presented a prima facie case for an award of punitive damages, i.e., the conduct described in the record was malicious and oppressive. He found Dr. Brown took unconscionable sexual advantage of a vulnerable young woman in his employ and when she rejected his sexual overtures, he embarked on a harassment campaign to make her workplace environment so intolerable that she would ultimately quit.

The arbitrator awarded past and future economic damages equaling $25,000 and emotional distress damages equaling $55,000. Since Ms. Turner was the prevailing party, she was also entitled to an award of attorney fees. Dr. Brown also bore the costs of the arbitrator, court reporter, production of the transcripts, and administrative fees totaling $15,000. Dr. Brown exhausted his $30,000 Employment Practices Liability policy limit during the arbitration process and was responsible for paying the remaining $65,000.

Lessons Learned

What lessons can be learned from reviewing this case?

ARBITRATION AGREEMENTS

Arbitration is the referral of a dispute to a third-party instead of a court or jury for either binding or nonbinding decision. By signing an arbitration agreement, the employer and the employee give up their rights to have their case heard in front of a jury and agree to accept alternative dispute resolution. Consult with an attorney before drafting or establishing an arbitration agreement for your office.

By signing the arbitration agreement Dr. Brown had in his employee manual, both parties agreed to abide by the arbitrator's decision. While it is difficult to predict how a person will think, Dr. Brown may have had an easier time creating doubt in the minds of 12 jurors rather than having to convince one person of his innocence.

Allowing yourself or other staff to partake in questionable behavior may bring hostile work environment charges along with sexual harassment charges.

EMPLOYMENT PRACTICES LIABILITY INSURANCE

Dr. Brown had Employment Practices Liability insurance through TDIC, which pays for defense costs, settlements, and civil damages one might incur and be legally obligated to pay as a result of an actual or alleged wrongful employment act claimed by an employee or applicant for employment. While the policy covered some defense costs, the results of his actions cost more than the policy could bear. He reached his policy limit prior to the three-day arbitration. Dr. Brown understood that all charges occurring after the limits were exhausted were his responsibility.

It is important to conduct an annual review of your policy limits. As his practice grew, Dr. Brown failed to review his limits. What was adequate coverage for a two-person office was not sufficient when Dr. Brown increased his staff to six full-time employees. Contact your TDIC service manager to review your policy limits annually.

DENTIST/STAFF RELATIONSHIPS

TDIC does not recommend engaging in intimate relationships with employees. The likelihood of the staff person alleging sexual harassment and a hostile work environment is high. In today's climate, arbitrators, judges, juries, and even the law seem to lean toward believing the employee.

Even the most innocent gestures or comments can become suspect. Telling an off-color joke will likely offend someone. A simple hug after receiving good news can be misinterpreted. Suddenly, your office has become a hostile work environment or a staff person may allege sexual harassment charges against you. It is best to refrain from any sort of touching. Respect others personal space. If a staff person shares good news, offer congratulations and then get his or her permission to make an announcement at the next staff meeting. Refrain from telling off-color jokes and stop your staff and patients from telling them. Allowing yourself or other staff to partake in questionable behavior may bring hostile work environment charges along with sexual harassment charges.

Employers should immediately address, investigate, and correct any inappropriate behavior, even just between staff personnel. You, as the owner/employer, will be held responsible for failing to address such issues, even though you are not an active participant. Regardless of intent, inappropriate behavior can likely lead to professional embarrassment, time spent away from your practice, and loss of revenue in trying to defend your actions.

Just because you and your staff get along and share jokes now, it will not prevent a staff person from becoming upset down the road — even over something unrelated — and suing you alleging inappropriate behavior and/or harassment.

OFFICE ENVIRONMENT

To prove a hostile work environment, Ms. Turner had to show that:

- She was subjected to verbal or physical conduct (comments or advances) of a racial or sexual nature,
- The conduct was unwelcome, and
- The conduct was so severe or pervasive that it altered the conditions of her employment.

Keep in mind that hostile work environment claims are not just related to race and sexual harassment. They can be based on any of the grounds for harassment and discrimination, including race, religion, creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, gender, age, or sexual orientation.

Employers must lead by example. Dr. Brown set the tone by being sexually suggestive in his office with Ms. Turner and other past employees. Additionally, sexual harassment can occur through the actions of nonemployees who frequent the office, including patients, vendors, and other visitors. Employees may also use incidents of harassment directed at other employees to prove their hostile environment claims. As an employer, you are obligated to investigate, address, and put an end to such behavior. Taking corrective action against the offending party and documenting the process from start (initial investigation) to finish (corrective action) may provide you with an affirmative defense in a harassment lawsuit. Remember to keep the process confidential and respect the privacy rights of all involved.

Jaime Davenport is a risk management analyst with TDIC.

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Successfully Transitioning Your Practice

BETTE ROBIN, DDS, JD

GUEST EDITOR

Bette Robin, DDS, JD, earned her dental degree from Loma Linda University and her law degree from Southwestern University School of Law. She also holds a certificate in mediation/arbitration from Pepperdine School of Law.

There are multiple ways to achieve a successful practice transition, and a good transition means different things to different people. For example, some dentists prefer never to walk back in their practice after money changes hands, while others want to work with their purchaser for several years and slowly phase themselves out. The articles in this month and next month's *Journal* will provide insight and advice from experienced professionals who can help one achieve his or her personal goals in the transition process.

It is important to be informed in regard to the process of transitioning a practice because, for many dentists, their dental practice comprises all or a substantial part of their retirement income. Even if this is not the case, there are issues like chart retention and storage, and a dentist cannot just "shut the door." The transition of a dental practice involves and affects many people including the buyer, seller, staff, and patients, which makes the process very personal and important to everyone involved.

This month and next month, the *Journal* will feature helpful information and advice regarding practice transitions. Many well-known attorneys in the dental transition field will address some of the issues that frequently arise in sales and transitions. For example, experts like accountants, lenders, and brokers will share useful tips and advice that will help clarify and simplify the process of transitioning a practice to a new owner.

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Buyer and Seller Beware: Why You Need a Transition Attorney for Your Dental Practice Transition

ROBERT W. OLSON, JR., JD

ABSTRACT Buyers *and* sellers of dental practices have much to lose by not hiring an attorney who specializes in dental practice transitions for the sale. Such an attorney can (1) protect the dentist with language that should be (but isn't) in the contract; (2) help address any organizational, regulatory and tax issues that arise; and (3) provide far more thorough services than could nonspecializing attorneys, practice brokers, or colleagues. Otherwise, let the buyer and seller beware.

AUTHOR

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Everyone has heard the expression "Let the buyer beware!" It warns the buyer to be on guard against a possibly unscrupulous seller. However, in the context of practice transitions this admonition should not be so limited. The buyer and seller both need to be wary, and not just of each other.

That "standard contract" provided by the broker or a helpful colleague is by no means exactly the right contract for this specific practice transition. It contains land mines, accidental or intentional, that only an attorney who specializes in dental practice transitions in the transaction (henceforth a "transition attorney") can identify, and, if not corrected, can place the buyer and seller in serious financial and professional danger. This article contains real-life examples of contracts reviewed by the author, discussion of the potential problems lurking in those contracts, and how those problems can be averted.

It would also be remiss not to emphasize that dentists place themselves in a dangerous position if they choose to represent themselves in their own practice transitions. Dentists certainly are intelligent, well-trained, and capable individuals. Many have gained extensive experience in running a dental practice, dealt with some of the pitfalls of practice management, and even gone through one or more practice transitions in the past. They have read many contracts in their day and generally know what the words in the contract mean. The dentist may even want to use the contract used in

their prior practice transition. However, it is dangerous for dentists, smart as they may be, to take it upon themselves to complete their practice transition without assistance from a transition attorney.

The danger isn't so much a lack of general familiarity and capability in understanding the actual terms of the contract, but rather what terms are *not* in the contract. Desirable protections for the buyer and/or the seller have probably been omitted, whether by accident or intention.

Also, the specific dentist's situation may call for entirely different contractual approaches than provided in the contract; one size does not fit all. Laws and practical considerations also change over time, and the contractual language in use two years ago may now be seen as inappropriate or even dangerous today.

Finally, specialized legal experience is necessary to identify issues that are not directly related to the contract itself: Leasing, tax, and organizational issues arise in almost every practice transition.

Example No. 1

Retreatment Issues. The seller's main goals when selling a practice are getting paid in full and being left alone to enjoy retirement. This generally requires that the dentists agree, in advance, how to handle the many postsale issues that can arise between the parties. If the dentists do not have agreement on these issues before the sale is completed, it can push the two into a costly and completely unnecessary lawsuit.

One of these issues is that of retreatment of failed or defective dentistry. It is highly unlikely that even an experienced business transactional attorney will identify this issue at all. And although the dentist client can raise the issue, the attorney will not have the necessary experience with dental practice transitions to come up with any practical solutions.

To say the issue will be resolved "as mutually agreed" only puts off the day of reckoning. That prospective dispute can be, and should be, dealt with at the time the contract is drafted, and not left for that future time when the buyer and seller no longer can "mutually agree."

This is where the transition attorney would be of tremendous value. The following approach (in italics provided by a transition attorney), though by no means complete, provides an example of how some parts of this issue could be resolved:

TO SAY THE ISSUE will be resolved "as mutually agreed" only puts off the day of reckoning.

"For one year after the closing, if buyer reasonably believes the patient should not be fully charged for nonemergency retreatment relating to services provided by seller during the one year prior to the date of retreatment, buyer will first notify seller of the need for retreatment. Seller then may notify buyer within three days if the seller's chooses to complete the retreatment personally. If the patient then consents to seller conducting the retreatment, the parties will mutually schedule a time for the retreatment, and seller will pay buyer only the hard costs incurred for the retreatment, within 10 days of retreatment. If seller does not conduct the retreatment and agrees to buyer conducting the retreatment, or if the retreatment is an emergency, buyer will conduct the retreatment and bill seller for ___% of buyer's usual customary and reasonable fee for the retreatment."

Example No. 2

Warranty and Representations Issues. The buyer's main goal when buying a practice is receiving the full value paid for the practice. Usually this requires two things. Firstly, the seller must promise not to compete with or otherwise dissipate the value of the practice after the transition. Secondly, the seller must make promises concerning the operation and condition of the practice. It is this second requirement that will be addressed.

An experienced business transactional attorney could point out a number of important seller warranties and representations that the buyer may not notice are missing from the contract. For example, what if the seller knows that there are liens against the practice's equipment or that the air-conditioning unit is broken? Representations to reveal these and other typical business deficiencies could be added by the attorney.

However, what if the seller has been notified of a pending Medi-Cal audit and the buyer plans to continue taking Medi-Cal patients? What if the practice's annual income has been so bloated with insurance overbillings that the practice should have earned only 80 percent the amount it did? Either of these situations would seriously impact the value of the practice, and it is crucial to get seller representations denying these problems in the practice:

"There are no violations, investigations, audits, proceedings or claims pending or threatened against seller. Seller does not reasonably believe that any such potential violation, investigation, audit, proceeding or claim may exist, will commence or be threatened in the near future."

"Seller has not billed any practice patients, insurers, or governmental agencies for goods or services for which seller is not entitled to compensation, nor has waived any

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co-payments or deductibles as required by insurance."

Only a transition attorney will have the experience necessary to protect the buyer from these and many other otherwise hidden problems.

Example No. 3

Employee Issues. Employee issues raise serious risks for both buyers and sellers. What happens to the practice's employees and dental associates when a practice is sold? The assumption may be that those people will continue with the practice, under the same or slightly different terms as before. Unless it has been addressed explicitly in the contract, the typical dentist will not realize how important it is to have a clean break between presale and postsale employment.

In this case, an employment law attorney, or an experienced business transactional attorney, would be of great help to the seller. The attorney would point out the need to have the employees terminated formally, preferably in writing, and that all compensation (including accrued vacation pay) must be paid immediately upon that termination (California Labor Code '201). Then, and only then, are employees to be rehired, if at all, and on whatever terms the buyer and those employees may agree.

Had the seller not consulted with such an attorney, serious labor law violations would have been committed. If an employee is not paid all their accrued wages (including vacation pay) at termination, the employee could file a claim to receive one full day worth of wages (including unused vacation pay) for every day final payment was late, up to a maximum of 30 working days (California Labor Code '203). This means that for each $25 per hour employee that isn't paid its full accrued vacation time, the seller could be held liable for $6,000 per employee.

The buyer doesn't escape the danger here either. The risk is that employees may believe the buyer has taken on all of the seller's responsibilities, both past and future. This can lead to many problems. One such problem is that employees may misunderstand they are entitled to paid vacation for time accrued prior to the sale — even if the seller paid them for their unused vacation time upon termination. However, much larger risks await a buyer when employees are not properly terminated and rehired.

EMPLOYEES MAY BELIEVE the buyer has taken on all of the seller's responsibilities, both past and future. This can lead to many problems.

For example, California law provides that an employer who doesn't allow its full-time employees the full paid away-from-the-desk 10-minute breaks (two per day) and half-hour meal period must pay a penalty of one hour of normal wages per violation, going back a full three years (Murphy vs. Kenneth Cole Productions, Inc. (2007) 40 Cal.4th 1094; California Labor Code '226.7; Industrial Wage Commission Order #4-2001, §11 and §12; and California Code of Civil Procedure '338).

Certainly, the seller should be liable for any such presale claim. However, if the employee was never formally terminated, the buyer could be considered to have taken on "successor liability" to the seller's violations, especially if the seller cannot be located. The above penalties could total as much as $56,000 per $25 per hour employee. Even if the "successor liability" claim is a thin one, that will not prevent the buyer from spending tens of thousands of dollars to fight this kind of frivolous claim.

Review by an employment law attorney, or an experienced business transactional attorney, would reveal that the contract needs a "termination of employees" provision, and both buyer and seller would have been protected against this risk. However, this attorney, not specializing in practice transitions, may not see some potentially greater risks.

Certain employees of a dental practice are of far greater importance to the future success of the practice than is the typical business employee. For example, the receptionist is the main point of contact between that practice and its patients. She makes those telephone calls to remind patients of their appointments, greets them when they arrive, schedules their next appointments, and says goodbye as they leave. A genuine relationship can develop between that receptionist and the patients, and it is unwise to discount its value to the practice. Similar value may also reside in the continued employment of the office manager, hygienists, and contract dentists.

This is not to say that a buyer should always rehire the entire staff, but it is unwise to ignore that potential value. Unfortunately, even an experienced business transactional attorney is unlikely to recognize this value, and the significant harm that can occur if one or more of these employees leave prematurely. Therefore, a transition attorney will include representations by the seller concerning the status of those employees, as well as other representations designed to improve the receptiveness of the employees to the impending practice transition.

Compare now the absence of any employee language in a contract to

those provided by an employment law attorney or experienced business transactional attorney (regular text), and further to the additional language provided by a transition attorney (italicized). The differences are alarming:

"All practice employees will be terminated by seller in writing as of the closing, and seller will be responsible for payment of all employee compensation, accrued vacation and other benefits, payroll taxes, and other employee costs up to the closing. *Seller has not in anticipation of the sale of the practice raised, nor will prior to the closing raise, any salary of any employee prior to the closing other than regularly scheduled raises, nor will seller promise any employee that their compensation or benefits will be raised or maintained.* Buyer is not required to rehire any practice employee after the closing. *Seller cannot guarantee that any employee will accept employment after the closing, but seller subjectively believes that all employees intend to continue their employment at the practice. Furthermore, seller will not solicit or hire any preclosing practice employee within one year after the closing."*

Example No. 4

"Standard Form" Contracts. Frequently, the parties have access to some version of a practice sale agreement. The source may be a document someone used in a prior transition, or the seller's broker will provide a "standard form" contract. It may even be stated that a transition attorney has already reviewed and approved the contract. In this case, a buyer or seller could quite reasonably ask "if this is a standard form contract, reviewed by a transition attorney, why is any further review necessary?"

The answer is simple: Review is necessary because there is no such thing as a standard form contract and the contract was not reviewed by your transition attorney. When a buyer or seller receives that contract, it is important to consider the precise *circumstances* and *motivations* surrounding the drafting of that contract.

For example, the dentist who uses a contract drafted by its transition attorney when that dentist first bought the practice has a contract focused on protecting the buyer. Now that the dentist is the seller, the plethora of buyer-oriented language and provisions, and the lack of seller-oriented language and provisions, makes the contract inadequate, even dangerous, to use again.

Another example of why review is necessary comes up where the form contract suggests a specific approach to handling incomplete dental treatment:

"Seller will identify the amount of time needed to complete treatment on the patients described at Exhibit E, and the parties will mutually schedule a time for seller to complete that work in progress at the premises. Seller will pay buyer only the hard costs incurred (such as lab fees, supply expense, and chairside costs) within 10 days of treatment."

While this approach works well in many circumstances, it is inappropriate if the seller will be unavailable after the sale. Consider what happens with a patient who is scheduled to have their

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treatment completed one month after the practice is sold. The patient prepaid for the entire treatment two months ago. The seller is now retired in North Carolina. The patient wants the buyer to complete the work at no further charge.

Does the buyer have to complete treatment on this patient? Does the seller have to pay the buyer to finish the work, and if so how much? What does the buyer do if the seller's prior work was defective? Completely new language is needed. Unfortunately, no alternate approaches were provided in the "standard form" contract, and the parties are likely to be at a loss as to how to resolve it. Frequently the parties ignore the problem, which in turn creates a postsale dispute.

Without a transition attorney to suggest alternative approaches to the problems "standard form" contracts create, hidden issues will be missed and the parties may ultimately be forced into a dispute that should have been resolved in the contract.

Example No. 5

Outside Issues. Both buyers and sellers need to be wary of the many pitfalls awaiting them in a practice transition, particularly since focusing on the terms of the contract can cause the parties to miss numerous ancillary issues that only the transition attorney can identify and discuss. These are generally known as the ORATS! issues (since this or a similar exclamation is used later if the issues are ignored now): Organization, Regulation, Accounting, Tax, and Securities.

Organization. It matters greatly whether the buyer and/or seller are incorporated, and whether those corporations are or should be S corporations. The answers dictate entire discussions about limited liability, accounting needs, tax issues, and the proposed timing of incorporation or dissolution as it relates to the closing date of the practice transition.

Regulation. The legality and registration of corporate names and fictitious business names are prime sources of confusion, delay, and risk. Proposed interests held by nondentists in a dental practice are extremely dangerous and need to be thoroughly discussed.

Accounting. If a buyer does not have a CPA before going into a transaction, a transition attorney will have a list of dental specialist CPAs to review tax returns and bank accounts, discuss the possible benefits of a corporation, and to review the proposed purchase price allocation. A transition attorney will also remind sellers to have their CPA review the purchase price allocation and to determine the closing date of the practice transition and/or the timing of their corporate dissolution.

Tax. There are significant interrelated tax consequences relating to the parties' tax status (S corporation, C corporation, or sole proprietor), the allocation of the purchase price, and the closing date of the practice transition. Occasionally one party is using a tax-deferred 1031 exchange (26 U. S. Code '1031), or had a recent practice transition that reverses the usual logic of purchase price allocation. Payroll tax clearance must also be addressed since the buyer could be required to pay any unpaid taxes as "successor" to the seller up to the amount of the purchase price (California Unemployment Insurance Code '1731). This last issue is frequently ignored by even the most experienced lenders and brokers.

Securities. This issue only comes up rarely, when stock in a dental corporation is being sold or outside investors are involved. However, when the issue does arise it is extremely serious. Securities law violations are not just disciplinary or financial problems; they can land a person in jail. Discussing the practice transition with a transition attorney is absolutely essential in this situation.

Conclusion

It is often said that if nothing ever went wrong, there would be no need to put any agreement in writing. Unfortunately, things do go wrong. People misinterpret or forget what others say, or in some cases are deliberately dishonest. Landlords are frequently unhelpful. The Internal Revenue Service and the Dental Board of California are real dangers. Without qualified legal help, dentists leave their professional and financial futures at risk in an area fraught with pitfalls. Please don't be one of them. Get recommendations, ask pertinent questions, and call one of the many transition attorneys available in California before venturing into any practice transition. ■■■■

TO REQUEST A PRINTED COPY OF THIS ARTICLE, PLEASE CONTACT Robert W. Olson, Jr., JD, 831 State St., Santa Barbara, Calif., 93101.

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Dental Practice Financing — Understanding the Options

JERAMIE EIMERS

ABSTRACT This article provides insights into the process of financing a dental practice. It provides information on the different options, points out key considerations and potential pitfalls that can lead to a less-than-ideal experience.

Astute buyers know, or quickly learn, that there is more to a well-structured financing package than simply the interest rate. Thorough preparation, lender selection, and offer analysis are the critical components of a smooth buying experience and well-structured loan.

AUTHOR

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Purchasing a practice requires — at minimum — knowledge in law, accounting, human resources, banking, and business. Dentists are experts in dentistry. Successful practice owners surround themselves with experts who can serve them well — accountants and attorneys who focus on dental practices; dental brokers who can help find, evaluate, and assist with the purchase; business associates who know human resources; real estate and practice management; and lenders who have expertise in practice finance.

Buyers can avoid many problems or surprises by asking the right questions at the right time and fully understanding the nature of the business relationships forged during a practice purchase.

Preparation

BUILDING A TEAM

Outlined below are some of the main team members and considerations that should be addressed when preparing for practice ownership:

- *Dental practice brokers/transition specialists* — assist buyers and sellers through the sale process. In addition to listing and selling practices, brokers will perform practice valuations and assist with the purchase/sale agreement. Since there is not a source to consolidate listings, buyers normally need to find practices by working with multiple brokers. Word of mouth, trade journals, Web sites, and dental suppliers also are sources to find a practice that is a good overall fit for the buyer.
- *Dental consultants* — also assist buyers with the purchase. Dental consul-

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tants who represent the seller and/or buyer can assist with the due diligence analysis of collection ratios, scheduling, fee structures, chart reviews, and computer analysis to ensure the practice details are accurately represented. If due diligence discovers a previously undisclosed issue, buyers often times have new negotiating power to reduce the price or may even decide not to move forward with the purchase. Through their analysis, dental consultants can often recommend changes that the new buyer can implement to increase profitability and grow their business.

■ *Dental-focused lawyers* — review the purchase/sale agreement to ensure all language is included to protect both the buyer and seller in the transition. They also review the lease and any other agreements required for closing the transaction.

■ *Dental-focused CPAs* — analyze, assess tax impacts, and make recommendations on the buyer's financial options from a tax perspective. They are responsible for the overall financial analysis and tax planning for the practice and will complete the payroll and tax returns for the new buyer.

■ *Lenders* — finance the purchase. Once a location has been identified and an offer has been made, the lender evaluates both buyer and seller information to make the final lending decision. Not all lenders offer the same financing terms and conditions, so it is important to evaluate lenders and offers prior to securing financing.

★ *Buyer due diligence:* Often times, one or more parties to a sale will offer to make a referral and be subsequently compensated for the referral. Buyers should not only perform their own due diligence on each member of their team, but since there are no disclosure requirements, should directly ask how/if they are being compensated for the referral.

ADDITIONAL PREPARATION AND QUESTIONS TO CONSIDER

■ *Prequalify:* Lenders can prequalify the buyer to help streamline a buyer's search. This helps to avoid spending time on purchases that will not be approved.

■ *Lease/purchase details:* The No. 1 reason transactions fall apart is the inability to secure space. Land purchases and lease negotiations are normally done simultaneously with the practice purchase. In the case of a lease, problems can arise if a landlord wants to increase the rent or is not willing to assign the lease

THE NO. 1 REASON
transactions fall apart is the inability to secure space.

or write a new lease for the new owner. If the space cannot be secured, the practice purchase cannot be completed. For that reason, it is wise for the buyer to ask if the landlord is aware of the sale and is open to new terms. If lease terms can be negotiated on the front side, buyers and sellers avoid undue costs and will not spend time on a deal that might fall through.

■ *Risk tolerance:* Similar to making investments, risk tolerance comes into play when making financing decisions as well. The buyer's feelings toward factors such as interest rate variability will help drive a loan structure best suited to the buyer.

■ *Cash flow comfort:* Will the cash flow of the practice and the buyer's level of cash flow comfort support higher payments for a shorter term, or would lower payments for a longer term be a better fit?

■ *Accounts receivable:* Should the accounts receivable be included in the sale? If not, the buyer may benefit from including some working capital into the financing. In most cases, buyers do not purchase accounts receivable. A/R is work the previous owner performed, is taxable as income, and may not even be collected. Working capital, on the other hand, is available Day One, is not taxable, but will be assessed interest. In most cases, the buying dentist collects A/R on behalf of the seller, and may or may not be reimbursed for time spent to do so.

Choosing a Lender

Buyers have two main options when looking for practice financing. They can use a lender who specializes in dental practice financing or they can go to a commercial lender at their local financial institution. A third option, using a seller's note, may be considered for all or part of the financing package.

■ *Using a specialist in dental practice financing:* This type of lender will have a deep understanding of practice finance and will use the assets of the dental practice for collateral. Due to their experience, they can more easily identify strengths and weaknesses in a potential practice, and will usually be able to render quicker decisions and close the loan faster than a standard commercial loan. They typically are able to finance 100 percent of the purchase price, plus working capital needs that may arise.

■ *Obtaining a commercial loan through a financial institution:* A commercial loan financed through a local bank will use the overall practice as collateral. In addition, loans of this nature usually require money down and alternative collateral such as a personal residence or other bank assets.

■ *Financing with a seller's note:* A seller's note can be used in conjunction with one of the other methods of financing to provide further security or eliminate some risk. Instances where a seller's note can be of benefit include when the buyer feels that

a practice is overpriced but still wants to purchase the practice. In this case, the seller carries a note, subordinated to the bank, for a percentage of the financing. In another example, due diligence might bring a piece of information to light that causes the buyer to have reservations about the purchase. In this case, the seller can carry a note to guarantee what they are representing. Since the buyer has no leverage after the fact, this is a way to minimize the buyer's risk.

Offer Analysis

As previously mentioned, there are many factors to consider when obtaining financing, and what works for one buyer might not be the best approach for another. Buyers need to educate themselves on the process, know what questions to ask, and also know what is important to them and their unique situation. It is prudent to interview lenders and receive turnaround times, standards, and finance quotes in writing before submitting a credit application to each available lender. This minimizes the number of credit inquiries that will be reflected on the buyer's credit bureau. (See **TABLE 1** for typical credit requirements.) By receiving proof of verbal commitments, proposals in writing, and amortization schedules, buyers can submit their application to one lender versus multiple lenders and thus streamline the process.

INTEREST RATE

Interest rate is usually the first, and sometimes the only, question the buyer asks when selecting a lender. In most cases, interest rates are fixed and are not based off of the prime rate, but occasionally, a commercial lender will offer a variable interest rate and tie it to prime. Interest rates are usually tied to long-term treasury bills, swap rates that are set by the Federal Reserve or other cost-of-funds indexes set by the lender. These indexes provide a baseline of where the lender sets interest rates from.

TABLE 1

Practice Acquisition Credit Requirements

The following checklist will assist buyers and sellers in compiling the credit information required to begin the review process.

Buyer Requirements:

- Completed credit application with personal financial statement
- Federal tax returns for the past three years. If currently practicing as an associate, average monthly production numbers and most recent pay stub may be required
- Curriculum vitae or resume

Seller Requirements

- Federal tax returns for the past three years
- Most recent year-to-date income statement and balance sheet for the practice
- Practice summary including personnel roster and tenure, hours of operation, number of active patients, current fee schedule, accounts receivable aging report, and practice specialization
- Cash flow statement if provided by the transition specialist/practice broker

WHAT IS IMPORTANT TO UNDERSTAND?

■ *Quoted rates can be misleading.* Lenders often do not quote the true annual percentage rate (APR) when quoting rates. When comparing rates, payment timing is a key differentiating factor. For example, if a lender asks for a payment in advance with the loan documents, they may or may not include that payment with the amortization when calculating the interest rate. Payment due on Day One vs. Day 30 changes the true APR. If the lender quotes 8.0 percent on a $500,000 loan with no fees or costs and the payment due date is 30 days after loan closing your payment would be $7,793.11. Now, if that lender asks for one payment due upfront with the loan documents instead of billing your first payment 30 days after closing and charges you the same payment ($7,793.11) your true interest rate is 8.21 percent, not 8.0 percent as quoted. (See **TABLE 2** to review advance payments or without advance payments example.) Unlike consumer loans, it is not a requirement to disclose the true APR with fees included. Most lenders do not include the origination fees, documentation fees or closing costs in the rate calculation, but it's important to understand what impact this has for evaluation purposes. These fees and costs can range from $350 up to 3 percent of the loan amount.

■ *How interest is compounded.* Most of the time, interest is compounded monthly. In some cases the lender may use the exact days that could adjust the true APR.

■ *How the loan is being amortized.* Make sure the amortization matches how payments are collected. If the first payment is due 15 days postclosing instead of 30 days, make sure the amortization schedule reflects the earlier due date.

★ *Buyer due diligence:* Always ask for an amortization schedule. When comparing offers, compare true APR, monthly payment, and total out-of-pocket expenses to fully understand the true cost of the loan.

TERM

Standard loan terms of seven to 15 years are the most common, but if the transaction is small and cash flow is strong, a shorter term can be offered. Some lenders only offer a buyer one-term choice in their financing proposal, while others lay out multiple-term options, and allow the buyer to choose the term length

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TABLE 2

Interest Rate Comparisons With No Advance Payment or With an Advance Payment

Compound Period Monthly, Nominal Rate: 8.00%

	EVENT	DATE	AMOUNT	NUMBER	PERIOD	END DATE
1	Loan	4/11/2008	500,000.00	1		
2	Payment	5/11/2008	7,793.11	84	Monthly	4/11/2015

Compound Period Monthly, Nominal Rate: 8.214%

	EVENT	DATE	AMOUNT	NUMBER	PERIOD	END DATE
1	Loan	4/11/2008	500,000.00	1		
2	Payment	4/11/2008	7,793.11	1		
3	Payment	5/11/2008	7,793.11	83	Monthly	3/11/2015

that is best suited to their needs. Before deciding on a term length, make sure to discuss the options with an accountant who can help evaluate the accounting and tax implications. While short terms generally have lower interest rates, there may be other factors to consider including depreciation and whether the interest rate write-off or increased cash flow would be beneficial to have for a longer time.

PAYMENT TYPES AND TERMS

While interest rate and term length are important, understanding the payment types and payment terms are crucial when making a decision. Often overlooked, payment and prepayment penalties can have a huge effect on the overall cost of loan.

Types of payments:

■ *Equal payments* — when a standard amortization is used, the buyer makes equal payments over the term of the loan.

■ *Step plans* — buyers make lower or no payments for an initial period of time. This payment approach can be used by buyers wanting to finance less working capital, need time to build up income, or can be used by a new owner wanting to have a cushion while they settle into all aspects of practice ownership. Interest-only payments will help to ensure the loan does not become negatively amortized, but it is a good rule of thumb when using step plans to make sure payments are structured to get back to the principal balance by Year One of the loan.

■ *Balloon payments* — buyers have a very low rate for typically seven years, at which point the loan "balloons" and needs to be refinanced at the current rate. Not only does this type of payment bring interest rate risk into the equation, it also requires the buyer to take the time to refinance the loan, bringing into question whether they would be better served spending that time with patients rather than requalifying for financing.

Payment terms

Payment terms are a huge differentiating factor between lenders and are crucial to understand. Poor terms can cost a buyer thousands of dollars over the course of a loan.

■ *Principal reduction:* Understand how soon extra payments can be made to reduce principal without a penalty. Some lenders offer this option starting at Day One while others may not allow principal reduction payments until after Year One or beyond. The ability to apply additional payments to principal without incurring a penalty can shorten the term and overall interest costs for the buyer (FIGURE 1).

■ *Early payoff:* Similar to principal reduction, early payoffs often times carry a penalty and vary greatly between lend-

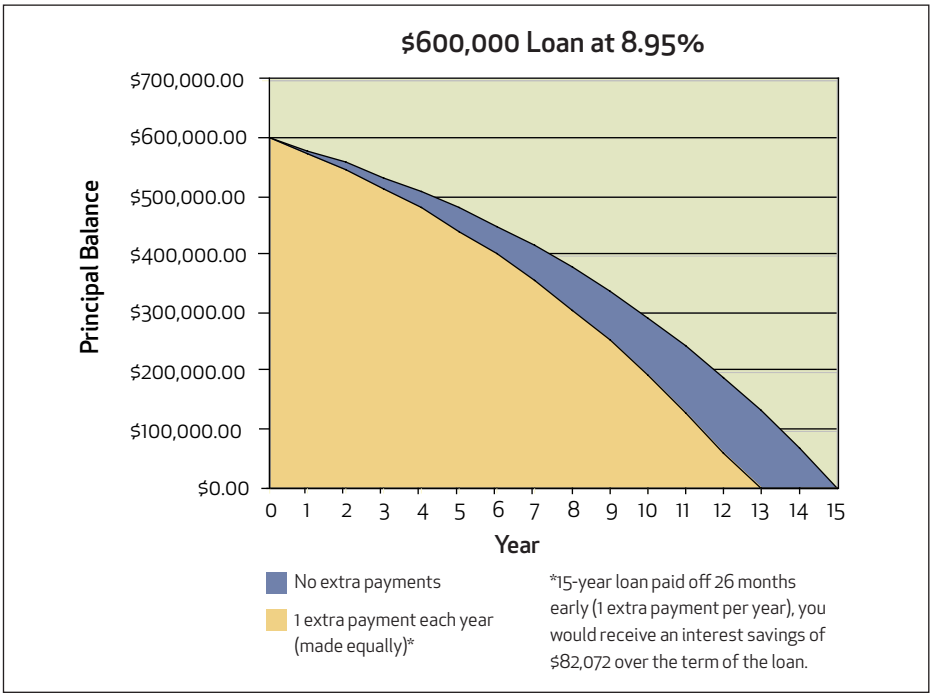

FIGURE 1. Impact of additional principal payments on term length and interest costs.

ers. Terms include no penalties starting Day One, no penalties after a certain number of years, or the ability to payoff the remaining principal plus a small fee.

★ *Buyer due diligence:* When comparing lenders, specifically ask what the prepayment penalty is and how it is calculated. It is prudent to request the answer in writing along with an example that covers at minimum, one-, two- and five-year scenarios. In certain cases, a loan could cost $200,000 more than it would with more advantageous payment terms. When evaluating options, the question to ask is "Would the practice be worth paying another $200,000 in the market?" Most times, the answer to that question is no.

COLLATERAL

The collateral that will be taken to secure the loan will also vary based on the lender. Generally speaking, specialized dental practice lenders will have a thorough understanding of the business, and will take the practice as collateral by establishing a first lien against the practice assets. If financing through a traditional commercial lender, they most likely will use the practice assets and will require additional collateral such as the buyer's home, bank accounts, and other assets.

Some lenders may require assignment of the buyer's life and disability insurance policies to protect themselves in the event of the dentist's death or disability. This generally depends on the lender and the transaction size. It is always good to think ahead and have a plan if either of these scenarios would occur.

SERVICE

Often times, buyers don't take into consideration the level of service they will get from their lender — both during the actual purchase as well as throughout the term of the loan. One of the main differentiating factors between lenders is how well they know the dental practice finance business. If the lender is well versed in this area, they will be able to ask the right questions to ensure all of the alternatives are considered before finalizing the financing.

In addition, they most likely can help align the buyer with knowledgeable team members who can focus on the business, help protect the practice, and allow the dentist to focus on dentistry. Working with a lender who understands the business also helps speed up the turnaround time from application to closing, and most likely will be able to provide a level of customer service superior to a more generalized financer.

Conclusion

Buying a dental practice can be very exciting. It can also be overwhelming. That is why it is so important not only to be educated on the process but to be surrounded by a team of experts. A lender who has the expertise, stability, and commitment to help weigh the alternatives and analyze each unique situation will help to ensure a suitable practice for the buyer now and in the future. ■■■■

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Financial Due Diligence in Purchasing a Dental Practice

ARTHUR S. WIEDERMAN, CPA, CFP

ABSTRACT Purchasing a dental practice can be a minefield. The office you are looking at could be the most beautiful office with all of the newest technology. But if it is not profitable, it will be a nightmare. This article will help navigate what the dentist and his or her CPA should be looking at when reviewing the books and records, based on the author's experience of reviewing more than 400 dental practices on behalf of buyers.

AUTHOR

Arthur S. Wiederman, CPA, CFP, is president of Wiederman & Associates in Tustin, Calif.

You've found the perfect dental practice. Five fully equipped treatment rooms, digital X-ray, and a networked intraoral camera system. The office is on a main street in the town you grew up in and where you now live, so many of the people who watched you grow up will probably become your patients. Sounds great but you have some work ahead of you.

In this article, the author covers the due diligence one needs to do to review the books and records. This could be the greatest-looking practice on the face of the earth, but if you are not making the money needed to pay bills, it might not work.

As a dental CPA who has evaluated hundreds of dental practice books and records for potential buyers, the author will focus on three areas:

- Review of management information,
- Bank deposit analysis, and
- Cash flow and profitability.

Management Information

Before beginning this area, the author would like to emphasize that it is critical one hire a qualified dental management consultant to assist in reviewing the systems in the office such as recall, scheduling, financial arrangements, etc.

From the author's perspective, it is important to assess (independent of the consultant) at what type of practice the dental CPA is looking.

The dental CPA wants to know whether this is a fee-for-service practice, includes PPOs, HMOs, and/or capitation programs. For example, if the practice does $1,000,000 of dentistry that includes $300,000 from an HMO plan, it is

important to determine the actual amount of production for the $300,000 the dentist is receiving using their UCR fee schedule. For example, it is important to know if the $300,000 really represented $550,000 of dentistry using your usual fee schedule. That would mean that if one bought the practice, one would be paying overhead on $250,000 of dentistry that you would not be receiving payment on ($550,000 of production using your fee schedule less the $300,000 the dentist will actually receive). That has to be taken into consideration in doing a valuation of the practice and determining the true net profit of the practice.

The dental CPA also wants to see the mix of procedures. What percent of the practice is operative, restorative, and hygiene? Many sellers do not, for example, perform endodontic procedures. If the seller does this, this could be an immediate boost to the practice. Also, one needs to see if one is capable of keeping the production at the level the seller has reached. Ask the seller how long he or she takes to prep a crown or bridge, and how long they spend on a new patient exam.

The dental CPA would like to review the fee schedule. Many times fees are lower than customary in the area. Even if this is the case, the author strongly urges the dentist to wait at least a year until settled into the practice before raising fees.

Bank Deposits

To verify the deposits of the practice, the author performs the following functions:

- Reviews the practice computer report for collections;
- Compares that to the monthly bank statements (here the dentist needs to take out transfers between accounts and any personal deposits made to the practice);
- If possible the dentist should get a copy of the general ledger prepared either by the practice CPA or by the client, usually in Quicken or QuickBooks and review the collections in this program; and
- Finally, compares the first three to the tax return.

This gives the dentist four independent sources to compare deposits. It is not unusual to find in all cases that there will be differences. This is generally due to the timing of deposits. For example, the practice might be closed the week between Christmas and New Year's Day. The collections could show up on the computer reports, but because the office is likely on vacation, these deposits might not be made until January. The author feels that if all these numbers are within 2 percent of each other, he is confident that the collections are correctly represented. Any major discrepancies should be investigated.

IF THE DENTIST'S spouse and/or children are on the payroll, the dentist needs to ask if they are working in the office or not.

Cash Flow and Profitability

The final step in the due diligence process is to review the financial statements, tax, and payroll returns.

The author starts with the net profit from the tax return or profit and loss statement. Then the true net profit of the practice is calculated by adding back items that are deductible for tax purposes but are not necessary to run a dental practice, such as owner's insurances (health, disability, and life), auto expense, travel, meals and entertainment, pension and profit-sharing contribution. If the seller is incorporated, the seller's salary is added back in.

If the dentist's spouse and/or children are on the payroll, the dentist needs to ask if they are working in the office or not. For example, if the dentist's wife is on the payroll and earning $40,000 a year, and she is a full-time employee in the office, one cannot add her salary back to the profit as her position will need to be filled.

If she is the only front office employee, one must request that she stay for a reasonable transition period, usually three to six months.

The author also recommends asking the seller if there are any items written off through the practice that are more personal in nature. This is a very sensitive area so one must have discussions with the seller and his or her CPA regarding this.

The author also likes to look at key percentages, which gives an indication about the practice:

- Are staff salaries (not including hygiene) at or above the average of 18 percent to 20 percent of revenues? This could mean, for example, if the percent is low, that the dentist's wife is working full-time without drawing a salary (recommended in many instances to save payroll taxes). If the percentage is too high, is the practice overstaffed or underproducing?
- Lab expenses should run 8-10 percent unless there is a CEREC machine, which cuts that to 2-4 percent. If the lab expense is low, this indicates more operative procedures are being done so the seller might be conservative in diagnosis. If this is the case, and the dentist is more aggressive in diagnosis, one must be careful not to intimidate new patients right out of the gate.
- Dental supplies should run 5-6 percent; rent 5 percent. Also, one should look at what type of marketing is done. A mature practice should be getting most

of its referrals from internal marketing. If no internal marketing program is in place, this is an area which, for very little cost, one can grow the practice.

Lastly, the author has a rule as an adviser for a buyer: the 75 percent rule. This rule states that 75 percent of any major life decision: getting married, buying a house, or buying a business is in one's gut. If, when one sees and reviews the practice, everything feels really good, and the numbers look good, buy the practice. On the other hand, if it does not feel like the right location, production mix, or that it isn't right for any reason, do not purchase it.

Happy practice hunting. ■■■■

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Endodontic Therapy or Single Tooth Implant? A Systematic Review

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ABSTRACT Should a tooth with pulpal involvement be saved through endodontic therapy, or extracted and replaced with a single tooth implant? Within the limitations of the existing literature, this systematic review of treatment outcomes found that initial endodontic treatment had a high long-term survival rate, equivalent to replacement of a missing tooth with an implant-supported restoration. Single tooth implants should be considered as the first treatment option for patients requiring extraction and tooth replacement.

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For decades, a primary goal of dentistry has been the preservation of natural dentition. Previously, all efforts would have been made to save teeth, even those severely compromised by caries, pulpal and periodontal diseases. The palpable benefits of dental implants have caused a paradigm shift in treatment planning. The risks and benefits of saving compromised teeth may be outweighed by those associated with extraction and replacement. Clinicians and their patients are sometimes confronted with difficult choices. For example, should a tooth be saved through endodontic therapy or should it be extracted with a single implant? According to the principles of evidence-based practice, as defined by the American Dental Association, such treatment decisions should be based in part on the information from clinical investigations that have evaluated the biological, psychosocial and/or economic outcomes, as well as beneficial or harmful effects of these treatments.[1]

Acquiring complete, unbiased information to help dentists and their patients make such choices requires a systematic review of the literature related to the outcomes of the alternative procedures. A systematic review is a synopsis of the existing evidence on a specific topic and it differs from a narrative literature review.[2] Systematic reviews provide a means for practitioners to keep up with the numerous articles published annually in every health care field. A systematic review concentrates on a very specific, clinically relevant question. In contrast, a narrative literature review covers various aspects of a clinical or nonclinical subject. A systematic review provides an unbiased synopsis of the existing evidence for the specific question.[2]

Clearly, a systematic review that presents synopses of the outcomes of endodontic care and its alternative treatments for a tooth with pulpal pathosis would aid clini-

cians in their evidence-based decision-making. The current lack of such information is reflected in the inclusion of this subject in the ADA Foundation's Request for Proposals related to Systematic Reviews to Support Evidence-based Dentistry and Dental Research. This article, which was supported by the ADA Foundation's RFP, describes a systematic review of the outcomes of endodontic therapy and single tooth implant.

A complete description of a systematic review regarding the outcomes, beneficial and harmful effects of endodontic care, extraction and implant placement, fixed partial denture and extraction without implant placement has recently been published elsewhere in the literature.[3] The purpose of this paper is to summarize the clinically relevant findings of the prior much longer publication with respect to the comparison of the outcomes of endodontic therapy and single tooth implants.

Methods

The development of a systematic review encompasses eight critical steps: 1) formulating review questions in PICO format; 2) defining inclusion and exclusion criteria; 3) locating studies; 4) selecting studies; 5) assessing quality of studies; 6) extracting data and forming an evidence table; 7) analyzing data; and 8) interpreting the evidence.[4]

FORMULATING THE REVIEW QUESTIONS

A well-formulated clinical question that provides the basis of a systematic review identifies four crucial population, intervention, comparison, and outcome (PICO) elements.[5]

Based on this concept, one of the questions in the ADA Foundation's RFP was restated in the PICO format as follows: "In patients with periodontally sound teeth who have pulpal and/or periradicular pathosis, does initial root canal therapy, compared to extraction and replacement of the missing tooth with an implant result in better (more beneficial) or worse (more harmful) biological, clinical, psychosocial and/or economic outcomes?"

INCLUSION AND EXCLUSION CRITERIA

All comparative or noncomparative, prospective or retrospective English language articles describing clinical, biological, psychosocial, and/or economic outcomes, as well as beneficial or harmful effects of endodontic therapy and single tooth implant treatment were included. The population was limited to adults with a permanent tooth receiving initial nonsurgical endodontic therapy, or extraction with, or single-unit threaded-cylinder implant (regardless of surface type).

TWO SPECIALISTS and two residents (one each from each discipline) independently screened the titles and abstracts of all articles identified in the electronic and hand searches.

Studies were eligible for inclusion if they reported at least 25 cases with a minimum two-year follow-up (endodontics - from obturation time; implant - from placement); with treatment units described as being single individual, implant-supported restorations, and/or endodontically treated teeth (not individual roots). Studies were excluded if they failed to meet any of the above inclusion criteria, if they did not define criteria for success/survival outcomes, if they reported on treatments no longer used in practice, or if the patients were described as having moderate or severe periodontal disease.

SEARCH STRATEGY AND PERFORMING THE SEARCH (LOCATING STUDIES)

Searches identified articles in MEDLINE, EMBASE, and the Cochrane database from the inception of the database through December 2006 when possible. Before the search was performed, 10 core articles were designated that, if identified in the search, would validate its accuracy.[3] Those journals identified as containing the top 80 percent of the relevant articles were hand searched for the most recent two years. Hand searching included consideration of references in the identified articles as well as references in relevant textbooks. A second search was performed for each of the two disciplines to retrieve results on psychosocial outcomes. Due to limitations of the available literature regarding economic outcomes the searches pertaining to this aspect were limited to hand searches, citation mining, and expert recommendations.

SELECTING STUDIES

Two specialists and two residents (one each from each discipline) independently screened the titles and abstracts of all articles identified in the electronic and hand searches. Included articles were photocopied and reviewed by the members of the teams independently in the second stage of the process. In case of disagreement at either step, consensus was reached based on a predetermined protocol for resolving disagreements between reviewers.[4] An external review committee, consisting of four experts, two from each discipline, reviewed the final list and made sure that key studies related to these subjects were not missed.

ASSESSING QUALITY OF STUDIES

A 31-item data abstraction form was developed that included basic information regarding the study design and outcomes. From items related to the study design,

an overall study quality rating score was developed with each article receiving a quality score with a maximum possible 17 points.[6,7]

EXTRACTION OF DATA AND FORMING A TABLE OF EVIDENCE

The members of each team independently extracted data and formed a table of evidence from articles that met the inclusion and exclusion criteria. The external review committee reviewed and approved the final evidence tables. Their task was to make sure the search did not miss any key study, that included studies met the inclusion criteria, and that the elements of the studies critical to an assessment of quality in each discipline were abstracted. Outcomes were reported by the included studies in a variety of formats, including crude and cumulative estimates of success, failure, and survival. Success was defined by varying criteria both within and across treatment options. Reviewers calculated appropriate rates when the data were available. In some instances where it was impossible to determine if a reported rate was crude or cumulative, it was treated as though it was cumulative. Crude survival rates are simply computed as 100 percent minus the percentage not surviving; whereas, cumulative survival is the proportion of cases surviving up to the respective time interval, this probability is computed by multiplying out the probabilities of survival across all previous intervals. This distinction becomes important in situations where failure rates differ over time.

DATA ANALYSIS

Clinical outcomes were grouped into three follow-up intervals: two to four years; four to six years; and more than six years. Individual studies were displayed in a Forest Plot with Wilson Score 95 percent confidence intervals.[8,9] Meta-analyses created pooled point estimates of success and survival using two approaches, the DerSimonian-Laird random pooling method and simple weighting. Because of the variability of the information in the articles addressing psychosocial and economic outcomes, these outcomes could only be described in narrative review format.

TABLE 1

Pooled (Simply Combining) and Weighted (Factoring in Sample Sizes) Survival and Success Rates of Dental Implants and Endodontic Therapy at Two to Four, Four to Six, and More Than Six Years

2-4 year	Success	Survival
Dental implant (pooled)	98 (95-99)	95 (93-97)
Dental implant (weighted)	99 (96-100)	96 (94-97)
Endodontic therapy (pooled)	90 (88-92)	94
Endodontic therapy (weighted)	89 (88-91)	-
4-6 year	**Success**	**Survival**
Dental implant (pooled)	97 (96-98)	97 (95-98)
Dental implant (weighted)	98 (97-99)	97 (95-98)
Endodontic therapy (pooled)	93 (87-97)	94 (92-96)
Endodontic therapy (weighted)	94 (92-96)	94 (91-96)
6+ year	**Success**	**Survival**
Dental implant (pooled)	95 (93-96)	97 (95-99)
Dental implant (weighted)	95 (93-97)	97 (96-98)
Endodontic therapy (pooled)	84 (82-87)	92 (84-97)
Endodontic therapy (weighted)	84 (81-87)	97 (97-97)

Results

QUANTITY AND QUALITY OF THE EVIDENCE

The preliminary electronic and manual searches identified 5,346 endodontic and 4,361 dental implant studies. After title and abstract screening, full articles for 347 endodontic studies and 327 dental implant studies were retrieved. Following full-text review, 24 endodontic, and 46 implant studies were included.[10-79] A total of 26 studies regarding psychosocial effects of the treatment options were identified.[30,36,41,52,63,66,70-72,80-95] Only three articles addressing economic outcomes of treatment options were found.[41,87,93]

Lower quality case series analyses dominated the included articles. Most studies were of less than six years duration. The mean (±sd) quality rating scores of included papers was 10(±2) for endodontic studies and 7(±2) for papers describing implant studies.

BIOLOGICAL OUTCOMES

The authors' searches did not locate any comparative or noncomparative articles regarding the biological outcomes and/or biological beneficial and harmful effects of initial nonsurgical endodontic care compared to extraction and placement of implant.

CLINICAL OUTCOMES

Calculated means for short, medium, and long-term success rates for dental implants were 3-11 percent higher than those for endodontic treatments (**TABLE 1, FIGURES 1 AND 2**). Short, medium, or long-term pooled survival rates of

dental implants were somewhat higher (0-5 percent) than those of endodontic treatments (**TABLE 1, FIGURES 2, AND 4**). Weighted long-term survival was essentially the same (97 percent) for implant and endodontic treatments (**TABLE 1**).

A majority of the implant papers provided survival rates. In contrast, a majority of the endodontic studies provided success rates. Pooled and weighted success and survival rates for each follow-up period, with their associated 95 percent confidence intervals are shown in **TABLE 1**. The Forest Plots at four- to six-year success and survival depict these results in graphic form, and reflect the substantial variability among and within the included studies (**FIGURES 1-4**).

PSYCHOSOCIAL OUTCOMES

The psychosocial effects of treatments studied in this systematic review were different for the two treatments. Pretreatment apprehension and post-treatment discomfort were commonly addressed in the endodontic literature.[8,1,85,87,88,91,92,94,95] Chewing performance and esthetics were commonly reported in the implant literature.[36,41,63,66,70-72,80,83,84,89,90,93]

Women had more pretreatment endodontic treatment anxiety than men, but this difference decreased with patient age.[88] Pain during endodontic care was usually less than anticipated and did not differ by gender.[94] Overwhelming reduction in pain followed endodontic care. A small minority of patients reported lingering problems after endodontic therapy, the majority of which were pain related.[85-87] Pain associated with dental implants has not been analyzed to the same extent as in the endodontic literature.[52,89] A majority of patients reported no pain following placement of dental implants. Those who experienced pain or unpleasantness rated it as being mild to moderate. Comfort during chewing was almost universal following implant restoration.[66,70,86]

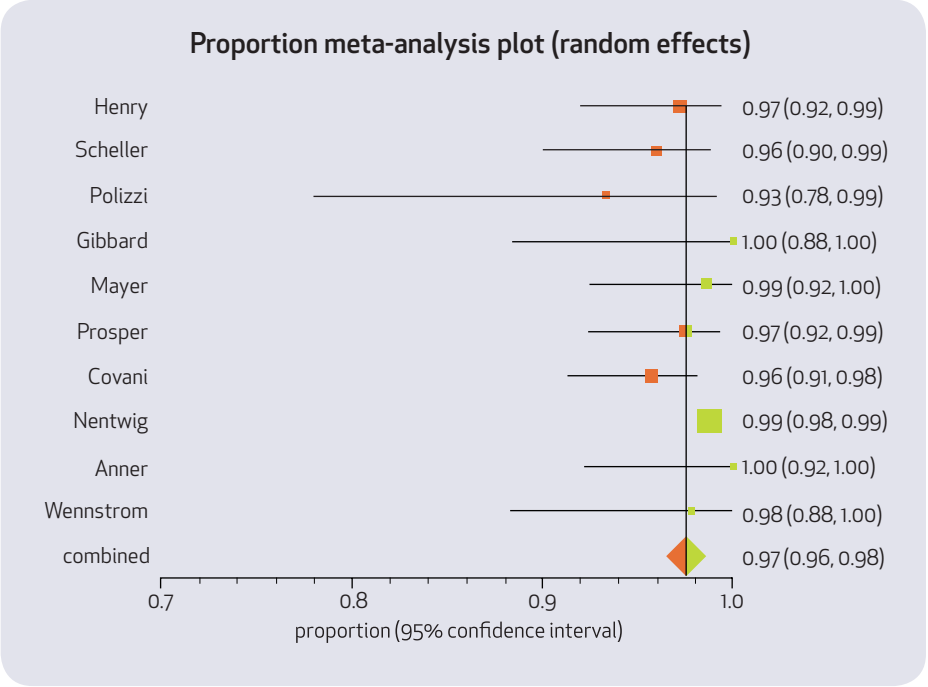

FIGURE 1. Forest Plot of implant success at four to six years. Forest Plots display the strength of the quantitative evidence included in meta-analyses. They represent the amount of variation between different studies and estimate the pooled results of the studies. The overall effect of the evidence is indicated by the central vertical line. The center of each square represents the point estimate provided by an individual study. The horizontal lines represent the confidence intervals of the associated data. The lower diamond represents the pooled point estimate.

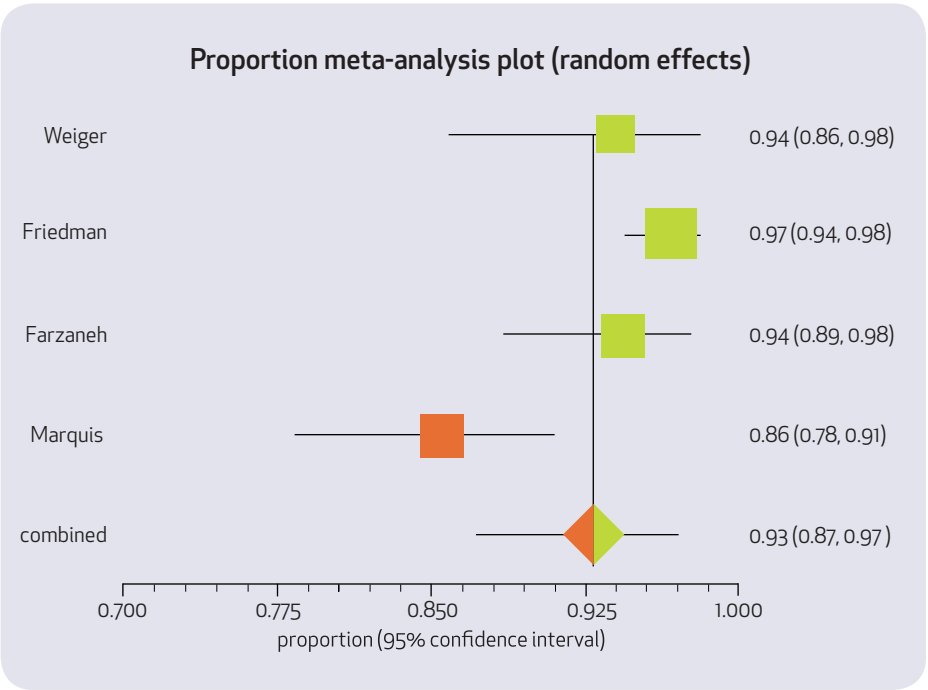

FIGURE 2. Forest Plot of endodontic success at four to six years.

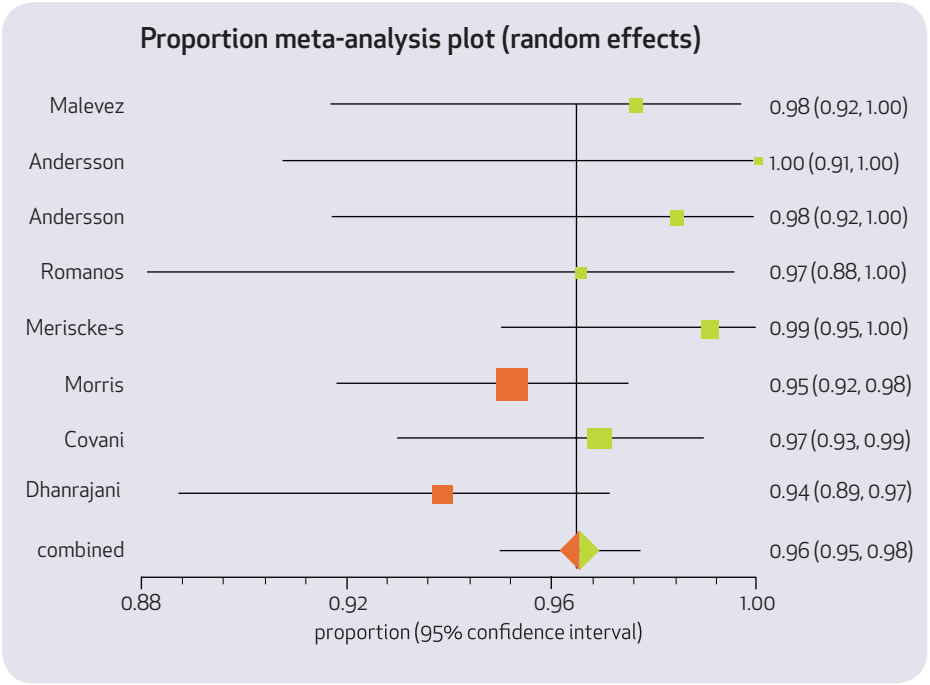

FIGURE 3. Forest Plot of implant survival at four to six years.

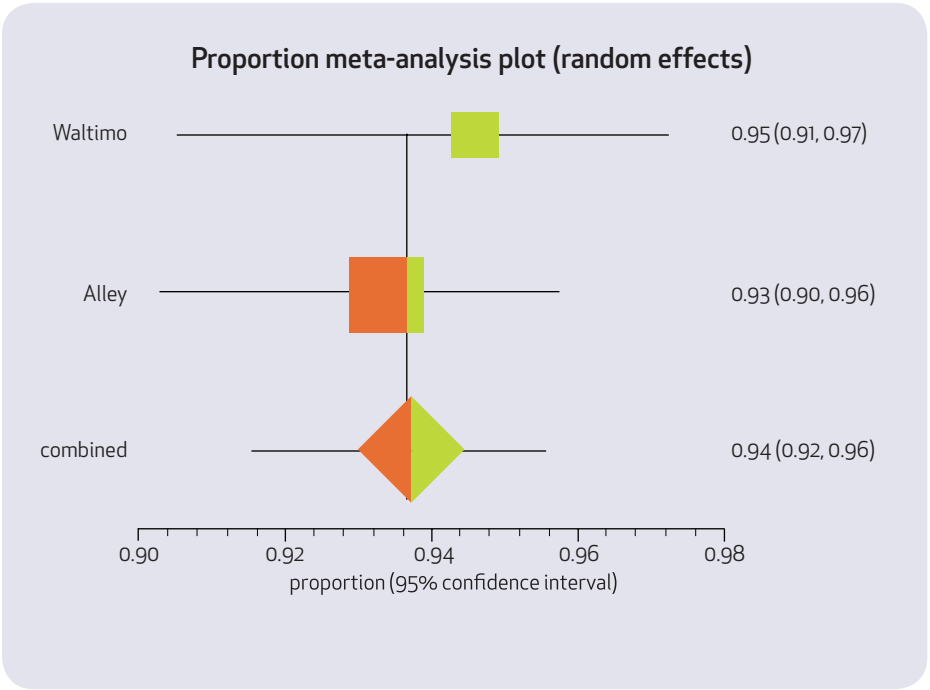

FIGURE 4. Forest Plot of endodontic survival at four to six years.

Esthetic outcomes were often examined in the dental implant literature. Very high levels of patient satisfaction were reported in the implant literature.[36,41,63,66,70-72,80,83,84,89,93] Patient perceptions of implant complications were rarely reported; the vast majority of patients felt the number of complications were acceptable.[86] However, endodontic studies did not separately address complications. An endodontic study found that more than 90 percent of subjects would choose to have another endodontic treatment.[87] Cost, distantly followed by pain, were the most important factors for those who would not have another endodontic treatment.[87] Eighty-eight percent of implant patients would chose the same treatment again, and 94 percent of patients who have had implants would recommend it to others.[41,56,70,93] Reasons for tooth loss in these implant satisfaction studies included trauma, periodontal disease, and endodontic complications following trauma. The times from extraction to implant placement varied from six months to 14 years.[41,56] Some of these studies described overall subject satisfaction ratings for both implant and endodontic treatments were above 90 percent.[41,85]

ECONOMIC OUTCOMES

The authors' search found three papers that assessed economic outcomes of the endodontic and implant treatments.[41,87,93] Cost was the largest determining factor for those patients who chose not to undergo another endodontic treatment.[87] Approximately 90 percent of patients felt the cost of implant treatment was justified or that the cost benefit was positive.[41,93] It is not known whether patients who opted not to have endodontic treatment due to cost would opt for more expensive implant treatment, nor whether patients who opted not to have implant treatment due to cost would opt for endodontic treatment.

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Discussion

Based on collected data from this systematic review, it appears that both pooled (simply combining) and weighted (factoring in sample sizes) success rates consistently were higher for implant therapy than for endodontic treatment. Long-term survival was essentially the same for endodontic and dental implant treatment. The authors' findings are in general agreement with previously published and more narrowly focused systematic reviews on the outcomes of dental implants and endodontic success and survival rates, as well as another recent systematic review comparing the outcomes of dental implants and endodontically treated teeth.[96-101] The authors found only one paper that directly compared the implant and endodontic therapy clinical outcomes.[30]

Based on this paper, which had a retrospective case control design and without random assignment, the authors concluded that restored endodontically treated teeth and single implant-supported restorations had similar survival rates. They also reported that the implant group showed longer time to function and a substantially higher incidence of postoperative complications requiring subsequent treatment intervention. Because this retrospective study did not have detailed information regarding the type of implants used, the authors had to exclude it from the implant evidence table.

Although the data related to outcomes in the authors' systematic review and in those of other reviews represents the best evidence available, the results from these systematic reviews must be used with caution during treatment planning. The principal reasons for this caution are the lower quality of much of the evidence and the heterogeneity of the results. The quality score reflects the extent to which a study was open to one or more threats to the internal validity, and the low scores suggest there were opportunities for results to have been influenced by bias. The major sources for heterogeneity in the studies examined here were differences in definitions of success or failure and in the manner in which treatment complications were incorporated into these outcomes and in the type of operators.

Definitions of success, failure, and their variations in endodontic studies often combine comprehensive clinical, radiographic, and patient symptoms. Endodontic studies measure success in terms of healing an existing disease and failure as the occurrence of new disease. Success criteria used in implant studies varied significantly. Various authors have used biological, clinical, and radiographic criteria for evaluation of dental implants.[102-108]

THE AUTHORS concluded that restored endodontically treated teeth and single implant-supported restorations had similar survival rates.

Because the criteria for success varied extensively between the two disciplines as well as among studies of a given treatment, using the more fundamental outcome of survival may present a more straightforward basis for comparison of treatments.[30,96,109,110] Most endodontic studies (88 percent) used a combination of radiographic, clinical, and questionnaire evaluations for determining survival. The majority of implant studies (77 percent) utilized a combination of radiographic and clinical assessments.

Complications can affect both the practitioner's and the patient's assessment of the success of the treatment, and thus should be considered in reports evaluating these treatments. However, the evaluation of complications was not included in this review because of inconsistencies in the reporting of complications between studies both within a treatment modality and between the treatments evaluated. For instance, the reporting of complications other than implant loss has been limited and inconsistently reported in dental implant studies. Additionally, with implants, multiple clinical studies that simultaneously evaluated all or most of the complications that have occurred with dental implants and the associated crowns were not available.[111] Most endodontic studies assigned complications to failure categories.

Grading complications and placing them into categories such as major and minor interventions may be a reasonable way to uniformly address different types of complications among different disciplines in a clinically relevant manner.[30] For example, the lack of osseointegration for implants or nonrepairable root perforations in endodontic treatment should be considered major complications. Loosening of screws in dental implants or presence of small voids in the coronal portion of obturated root canals should be considered minor and correctable complications. However, variations in reporting between the studies or a lack of reported complications prevented such a process from being appropriately implemented.

General practitioners provided most endodontic treatments (63 percent of studies), while specialists overwhelmingly provided implant treatments (87 percent of studies). While it is unclear whether these different distributions contributed to the heterogeneity within a discipline, they do make comparisons between the treatments and generaliza-

tion to dental practice more problematic.

The data collected by the American Dental Association through its Services Rendered Survey estimate the fees (regardless of its provider) for an extraction, implant, abutment, and crown to be approximately $2,850.[3] The same survey estimates the fees for the costs of an anterior endodontic therapy provided by a general dentist with a composite resin restoration, and a molar endodontic therapy provided by an endodontist followed by an amalgam build up and a high noble metal-ceramic crown to be around $743 and $1,765, respectively.[3] The authors' systematic review of the existing literature demonstrated absence of studies specifically designed to assess the cost-benefit of the saving a tooth through endodontic therapy and extraction and placement of single tooth implants.

In addition to the outcome of treatments, the tangible and intangible benefits of retaining teeth should be considered during treatment planning. The benefits of successful treatment of a tooth with pulpal and/or periapical disease include conservation of the remaining crown and root structure, preservation of alveolar bone and accompanying papillae, preservation of the pressure perception and lack of movement of the surrounding teeth. The harmful effects of saving teeth through endodontic care include reduced water content of the afflicted tooth, increased chances for root fracture, and development of future decay.

The main benefits of tooth extraction are pain relief and removal of diseased tissues that may cause local or systemic diseases. The harmful effects of extraction without replacement include bone resorption, shifting of the adjacent teeth, and reduced aesthetics and chewing ability.[112-117] The benefits and harms of retaining teeth should be carefully weighed against extraction and placement of dental implants, fixed partial dentures, or extraction without tooth replacement.

This systematic review of the literature along with others demonstrate the absence of any information describing truly long-term outcomes, benefits or harms of dental implants compared to endodontically treated teeth. Within the confines of the authors' inclusion criteria, no single tooth implant study has reported outcomes longer than 13 years, while at least one endodontic study followed outcomes for 27 years.

Conclusions

Based on available evidence, it appears that initial endodontic treatment has high long-term survival rate for periodontally sound teeth that have pulpal and/or periapical pathosis. Equivalent long-term survival rates have been also reported for extraction and replacement of the missing tooth with an implant-supported restoration. Presence of many shortcomings in the available literature means that definitive treatment decisions cannot be only based on the available evidence alone. However, within the limitations noted, this systematic review offers evidence that single tooth implant should be incorporated in discussions as first alternative treatment options for patients who require extraction and replacement of a missing tooth. ■■■■

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The Wonder Years

Old people tend to prattle on endlessly about these things, particularly the quality of their music.

Robert E. Horseman, DDS

ILLUSTRATION BY CHARLIE O. HAYWARD

I hear babies cry, I watch them grow.
They'll learn much more than I'll ever know
And I think to myself
What a wonderful world!
— Louis Armstrong
What a Wonderful World

A wonderful world indeed! A recent revision of the official Seven Wonders of the World regretfully failed to include what I consider one of the major wonders of any era, i.e., Old People.

Having been an old person myself for more than 25 years, I feel obliged to point out that, in spite of impaired body parts and integument the texture of Egyptian papyrus, most of us retain an enduring sense of wonder. Like Andy Rooney, who wonders about everything, we have no idea of how anything actually works but marvel that it even exists.

It didn't when we were young, you know: no plastic, no television, no air conditioning, no automatic transmissions, or can openers. We had ising glass that seemed to be made out of sheets of mica. Nobody ever went to an ER, and we had Vicks VapoRub. Families enjoyed U.S.-made Philcos or Atwater-Kents featuring the latest in superhetrodyne technology — whatever that was — and could receive four or five stations if coupled to a good outdoor antenna. Kids with an ounce of wonder in their adolescent systems made "crystal sets" in a cigar box with a couple feet of scrounged copper wire and a "cat whisker" touching delicately to a chunk of galena.

If you were lucky enough to have a car, a stick shift with forward, reverse, and neutral worked well with a manual choke, spark, and throttle. Most kids could make a sort of preadolescent Harley out of old roller skate wheels nailed to a 2-by-4. An apple crate with two attached sticks substituting for "ape hangers" completed the ensemble. This was hot stuff, particularly if an old license plate was nailed to the front of the crate.

Old people tend to prattle on end-

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DR. BOB, CONTINUED FROM 466

lessly about these things, particularly the quality of their music. Annoying as the anecdotal 10-mile barefoot walk to school in the snow can be, or recounting pushing a manual lawnmower for 25-cents to pay for an Abazaba and a Saturday afternoon at the movies, it was a wondrous time.

My grandparents were excluded from the technology loop with the discovery of electricity. It was an inexplicable mystery to them, but a never-ending source of wonder eventually involving my parents with the introduction of television, touch-tone phones, and automatic waffle irons. My mother, fascinated by it all, would lament, "I don't understand any of this!" My father didn't either. He and I used to wonder how pictures and sound could travel through the air by the thousands and not run into other pictures doing the same thing. How could energy course along wires to everybody's house in the neighborhood and we could never see it, yet get a bill for it? Somebody knew; wondering about it kept us humble.

As the late, great G.K. Chesterton pointed out, "The world will never starve for want of wonders; but only for want of wonder. There is evidence the younger generation has lost some of the exciting ability to wonder. My granddaughter at age 4, when asked if she understood how any particular thing came to be, answered confidently, "keyboard." A keyboard, of course, the instrument by which miracles can be accomplished. No need to peer behind the green curtain to see what wizardry lurks there. The computer generation— sit at your computer, fingers dancing over the standard QWERTY lay-out and lo!— the wonders appear!

All the CDs you ever coveted fit into a device no larger than a stick of Juicy Fruit. Plug it into your Bluetooth, slide it into your Blu-ray. It's that simple. But how does it work? Who cares, don't waste time wondering about it or trying to understand it. It just is, always was. Use it and move on.

What a shame! Wondering is always half the fun. Everyone should be made to take a course in astronomy where not a single question can be answered with key-board. And that's why I like Old People. With the luxury of time, they wonder without guilt or frustration, and they know who Louis Armstrong was. ■■■■