GNYDM REVIEW

# DENTAL TRIBUNE

The World's Dental Newspaper · U.S. Edition

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**AACD event registration open**
Washington, D.C., is the site of annual scientific session, May 2–5, 2012. ▶ *page 10A*

**NSK boosts U.S./Canada profile**
NSK Dental makes major investments in North American market. ▶ *page 12A*

IMPLANT TRIBUNE
The World's Implant Newspaper · U.S. Edition

**Implant pioneers gather in N.Y.**
Implantologists look back on their history during Greater New York Dental Meeting. ▶ *page 1B*

# Dental professionals on front line in fight against diabetes

*An interview with Maria Emanuel Ryan, DDS, PhD*

By Robert Selleck, Managing Editor

An as-yet unstoppable increase in the number of people with diabetes or prediabetes in the United States and across the globe makes it not so much a question of if but when more dental professionals will need to become highly skilled in treating such patients. There are 26 million people with diabetes in the U.S., and 95 percent of them have a form of periodontal disease, compared with 50 percent of the general population. Of those 26 million, more than 7 million are unaware of their diabetes.

Just as significant, 79 million people are estimated to have prediabetes, with as many as half unaware of it.

A growing body of research suggests that the association between oral health and diabetes is bidirectional, placing dental professionals in the position of not just being able to help patients with diabetes control the illness, but perhaps being able to help those with prediabetes avoid full onset.

Recognizing this link between oral health and diabetes, Colgate Total® is donating $100,000 and joining forces with the American Diabetes Association's campaign to "Stop Diabetes" by encouraging people to learn more about oral health care and "Raise Their Hand to Stop Diabetes."

*Dr. Maria Emanuel Ryan is the associate dean for strategic planning and external affairs and a professor of oral biology and pathology at the School of Dental Medicine, Stony Brook University, Stony Brook, N.Y. (Photo/Provided by Colgate Total)*

Central to the campaign's focus are educating people on the importance of dental visits — as well as helping dental professionals, who are seeing growing numbers of patients with diabetes. Colgate's involvement also stems from its interest in promoting the use of antibacterial toothpastes such as Colgate Total to support gum health.

Also helping with the effort is Maria Emanuel Ryan, DDS, PhD, a periodontist and professor of oral biology and pathology at Stony Brook University, Stony Brook, N.Y. A globally known expert on the link between oral health and diabetes, Ryan recently spoke with Dental Tribune.

***What size of a patient base are we talking about in terms of the need***

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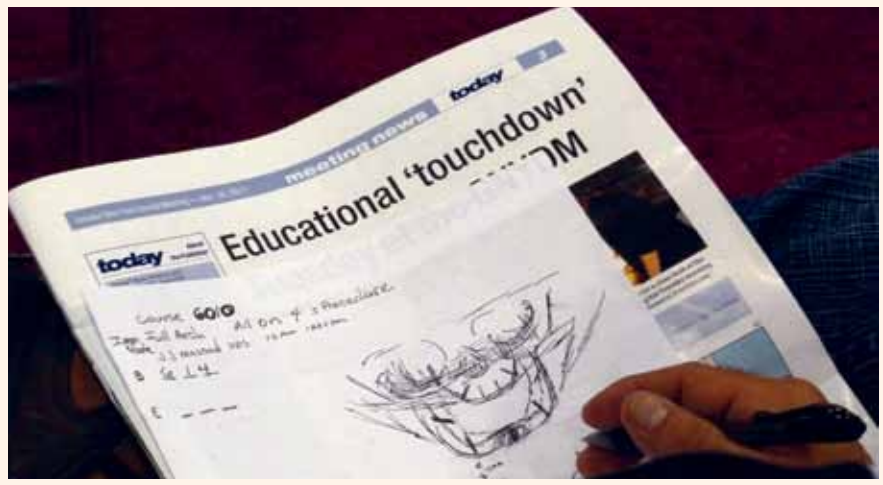
## GNYDM: New York City does it right, again




*An attendee of the Live Dentistry Arena takes detailed notes during the morning session, Wednesday, Nov. 30, the final day of the 2011 Greater New York Dental Meeting. (Photo/Robert Selleck, Managing Editor)*

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# Survey: Hispanics face oral health care barriers

The majority of Hispanics in the U.S. believe more information about good oral health habits, access to affordable oral health care, and more Hispanic and Spanish-speaking dentists and dental hygienists in their communities would help them "a lot" in achieving better oral health.

The findings — from a national survey led by the Hispanic Dental Association (HDA) and sponsored by Procter & Gamble (P&G) brands Crest® and Oral-B® — were presented Nov. 3 at the opening ceremony of the HDA Annual Meeting in San Diego.

The survey examined U.S. Hispanics' perceptions and attitudes about oral health care, barriers toward achieving good oral health and the role of influencers in passing along oral health habits. The survey, "Hispanics Open Up About Oral Health Care," is part of an initiative by the HDA, Crest and Oral-B to raise the profile of the

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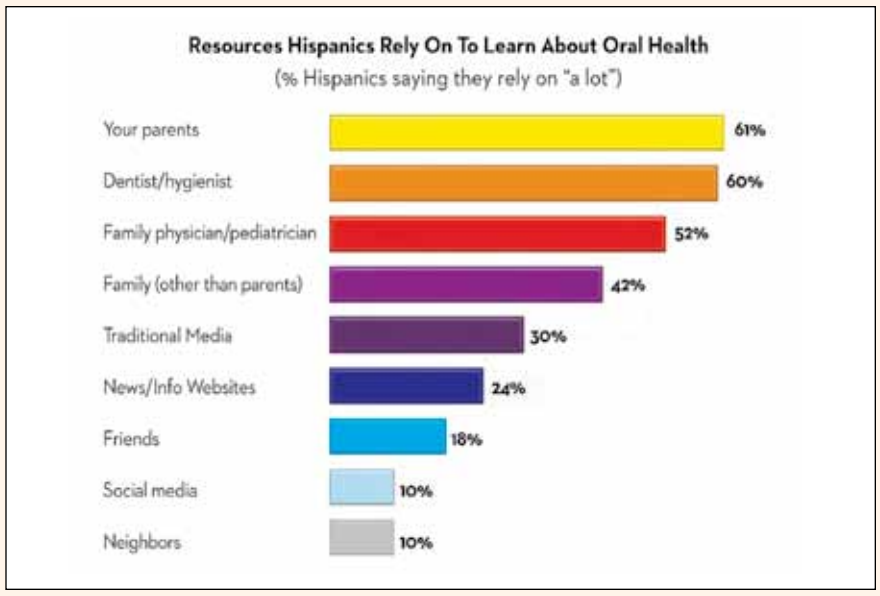


*Aside from their dentist, Hispanics rely mostly on their parents and physician for oral health education and information. A recent survey showed a need for more Spanish-speaking dental care providers. (Chart/Provided by Hispanic Dental Association and Procter & Gamble)*

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state of oral health among Hispanics, the fastest-growing minority group in the country, representing 16 percent of the total U.S. population.[1] The survey was conducted among 1,000 Hispanic adults and 1,000 adults from the general population, age 18 and older, who live in the continental U.S.

"As we can see from the survey findings, there is still a need within the Hispanic community for more Spanish-speaking dental heath professionals," said Sarita Arteaga, DMD, MAGD, and spokesperson for the HDA. "Further, with oral health literacy a concern for this population and family serving as key influencers, it is imperative that we improve the communication between these professionals and patients to ensure that the right teachings are being passed along to future generations."

### Top barriers to better oral health

The survey found that knowledge gaps (oral health literacy), high cost (access to affordable care and insurance) and language/culture differences (Hispanic/Spanish-speaking dental health professionals) are barriers to many Hispanics in achieving good oral health. Specifically, the results found:

• When asked if cavities will go away on their own if you brush regularly, almost one-third of Hispanics (30 percent) responded that they believe this statement is true or did not know the answer, when in fact the statement is false. About half or more

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# In California: Botox, dermal filler procedures now treated no differently than getting a filling

California dentists can now perform Botox and dermal filler procedures for dental esthetic and dental therapeutic uses. Dr. Louis Malcmacher, President of the American Academy of Facial Esthetics (AAFE), was asked to present to the California Dental Board in August of this year on the use of Botox and dermal fillers in dentistry.

The board took the matter up at the November meeting where it heard other perspectives as well and considered comments received in a public session from groups such as the California Medical Association, California Dental Association and California Academy of General Dentistry.

"The bottom line is that Botox and dermal fillers are allowed within the scope of dental practice for use by general dentists for dental esthetic and dental therapeutic uses with appropriate training," Malcmacher said. "Now Botox and dermal fillers in California by dentists is just like any other area of dentistry and will be treated as such. No special statement is necessary from the board allowing Botox and dermal fillers because they are like any other dental procedure, as long as they are being used for dental esthetic and dental therapeutic uses, which is what we teach in our courses and relates to 99 percent of these procedures done in the oral and maxillofacial areas."

California now joins the majority of states that allow dentists to do Botox and dermal filler procedures for dental esthetic and dental therapeutics.

The AAFE is a Dental Board of California registered provider for continuing education and has this same status in many states where it offers its full two-day live patient hands-on Botox/Dysport and dermal filler training for dentistry.

### About the AAFE

The American Academy of Facial Esthetics is a professional and multidisciplinary membership organization whose primary mission is teaching the best non-surgical and non-invasive facial esthetic techniques, such as Botox and dermal filler training courses for physicians, dentists and health care professionals around the world.

The AAFE has trained nearly 6,000 dental professionals in these techniques through more than 50 live patient hands-on mentored one-on-one training programs every year throughout North America. DT

*(Source: American Academy of Facial Esthetics)*

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Hispanics also incorrectly answered true/false statements or were uncertain about the importance of brushing versus flossing, whether bleeding is normal during brushing and if mouthwash provides oral health benefits beyond just freshening breath.

• Close to half (45 percent) of Hispanics lack dental insurance and nearly one in five (18 percent) have not visited the dentist at all in the past two years, compared to 12 percent of the general population.

• Approximately six in 10 Hispanics feel that a higher representation of Spanish-speaking and Hispanic dentists/hygienists in their community would help them "a lot" in achieving and maintaining better oral health.

Other survey findings include:

• While most Hispanics, as well as the general population, rated their overall oral health as excellent or good, Hispanics experience more oral health problems.

• 65 percent of Hispanics said they experienced at least one oral health issue in the past year versus 53 percent of the general population. For more than one-third of Hispanics (36 percent), oral health problems experienced in the past year were severe enough to impact their daily activities, compared with 22 percent of the general population.

• Among Hispanic parents, many of these same knowledge gaps exist, as does the desire for more oral health information. Yet, eight in 10 Hispanic parents (82 percent) consider themselves an excellent or a good source for teaching their children about oral health habits.

• Aside from their dentist, Hispanics rely mostly on their parents and physician for oral health education and information.

"Crest and Oral-B are thrilled to partner with the HDA on this initiative to help shed light on oral health care practices among Hispanics in the U.S. and identify existing challenges," said Ivan Lugo, DMD, MBA and P&G spokesperson. "This survey uncovered key gaps that can help provide the oral health care community with a concrete starting point from which to turn awareness into action."

The HDA, Crest and Oral-B are committed to working together to improve the state of oral health among the growing U.S. Hispanic population. As a first step following the survey, the HDA, Crest and Oral-B have collaborated on an informational brochure highlighting key facts and debunking top misperceptions about oral care that will be placed in dental offices and other public areas nationwide.

For more information about the survey, please visit *www.hdassoc.org*, *www.dentalcare.com* and *www.crestcomplete.com/study*.

## Survey methodology

GfK Roper Public Affairs & Corporate Communications conducted the survey from July 28 to Aug. 24. GfK Roper surveyed 1,000 Hispanic adults and 1,000 adults from the general population aged 18 and older who live in the continental U.S. Survey results were balanced to ensure that the age, gender, education and region of the participants reflected the Hispanic population and overall population in the U.S. Results of any sample are subject to sampling variation. The chances are 95 in 100 that a survey result does not vary by more than plus or minus three percentage points from the result if interviews had been conducted with all persons in the universe represented by the sample. In other words, the margin of error is +/-3 percentage points at the 95 percent confidence level.

## About the HDA

The Hispanic Dental Association is a national, non-profit organization composed of oral health professionals and students dedicated to promoting and improving the oral health of the Hispanic community and providing advocacy for Hispanic oral health professionals across the United States. The association works with a wide spectrum of individuals and organizations to communicate to dental professionals, students and the public.

## About Procter & Gamble

P&G touches and improves the lives of about 4.4 billion people around the world with its portfolio of trusted, quality brands. With operations in about 80 countries, P&G brands are available in more than 180 countries. Visit *www.pg.com* for news and information about P&G and its brands.

## About Crest

A trusted leader in oral health, Crest was the first oral care brand to secure the American Dental Association Seal of Acceptance for a clinically proven fluoride toothpaste. Since first introducing fluoride toothpaste 54 years ago, it is estimated that Crest has helped prevent more than half a billion cavities in the U.S. Headquartered in Cincinnati, Crest is owned and distributed by Procter & Gamble.

## About Oral-B

Oral-B is a worldwide leader in the $5 billion brushing market. Part of Procter & Gamble, the brand includes manual and power tooth brushes, oral irrigators and interdental products such as dental floss. According to Oral-B, its tooth brushes are used by more dentists globally than any other brand. DT

*(Sources: Hispanic Dental Association and Procter & Gamble)*

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***for achieving greater awareness?***
Some of the talks I have given have been at the Centers for Disease Control and Prevention. They have an interest in this area because to them diabetes is an epidemic. Each year we have 1.9 million new cases diagnosed in people 20 years of age and older. If the population of people with diabetes keeps growing at this rate, in the very near future it will be about one in three, which is a very significant number.

***What can dental professionals do to help identify patients who have diabetes or prediabetes but have not been diagnosed?***
Certainly we can screen for diabetes. And this is being recommended by the CDC. One way is by risk assessment: knowing a patient's family history, looking at obesity as a risk factor, looking to determine if the patient is in one of the populations where risk factors may be higher [African Americans, Pacific Islanders, Native Americans, Latinos and Hispanics]; asking about gestational diabetes. Most patients with diabetes are type 2 patients, who tend to be older than 45 years of age.

Risk factors such as hypertension and dyslipidemia are also important to consider. Of course, there are the classic signs and symptoms: thirst, frequent urination, infections, numbness in extremities, leg cramps, vision problems.

Unfortunately, with type 2 diabetes, there are many people who are unaware they have it. That's why the CDC is looking to oral health care professionals for help. If a person has any of the risk factors, signs or symptoms, dental professionals can refer to the physician for additional screening, or obtain a random blood glucose level or even a fasting blood glucose level and then refer appropriate patients to the physician for diagnosis.

***What do dentists need to be aware of with their patients who have diabetes or prediabetes?***
If patients are poorly controlled, then you may need to be very cautious in what procedures you might be doing because the patients' wound healing may be affected. You need to know if they have any other long-term complications of diabetes. You need to work closely with the patients' physician and other health care professionals.

Many patients with diabetes, especially those who have a physician working very hard to tightly control their diabetes and whose blood glucose levels tend to run low, may have a higher risk for hypoglycemic events. Ask patients if that is common for them, because the more hypoglycemic events patients have had, the more likely they are to have more — and the more likely they are to develop hypoglycemia unawareness. That's when they don't get any of the classic signs: getting dizzy, feeling like they are going to pass out or getting confused. Some patients don't get those signs and symptoms; they can just suddenly become unconscious or have seizures.

*Monitoring of blood glucose levels is critical as a guide to dental therapy for people with diabetes. (Photo/Provided by CDC, Amanda Mills)*

***What can the dental professional do to confirm whether or not patients with diabetes have their blood sugar in good control prior to treatment?***
You can actively take the blood glucose level by doing either a random screening for blood glucose or even a fasting for blood glucose. If the level is greater than 126, the patient can be referred to a physician for further work.

Another way to screen is the hemoglobin A1C test, a long-term marker of control that lets you know how well-controlled someone with diabetes has been over the past two to three months. It used to be that only a centralized laboratory could do this, but now there are point-of-care tests.

The only way you can help predict a hypoglycemic event in your patient is to check blood glucose levels. Patients on insulin are at the highest risk of having a hypoglycemic event at the time of peak activity of the insulin that has been administered, which is not when you want to be treating them. You also need to know what oral medications they may be taking because some may have a higher risk than others of causing hypoglycemia.

***Research indicates that serious periodontal disease may affect blood glucose control and contribute to the progression of diabetes. Why is this?***
In fact, the impact of periodontal disease may even be evident before someone develops diabetes. Recent research suggests that patients who have untreated periodontal disease, when followed for over 20 years, may be twice as likely to develop diabetes. Periodontitis is driven by infection and inflammation; and infection and inflammation can drive insulin resistance. Insulin resistance can lead to development of diabetes and prevent good control of diabetes.

By reducing infection and inflammation, you may actually prevent development of diabetes, and certainly you can make it easier to control diabetes. Some recent papers have suggested that if you don't treat the periodontal disease, not only is it more difficult to control diabetes, but people with diabetes are then at higher risk for long-term complications such as cardiovascular disease and kidney disease, thereby increasing risk for mortality.

***Are people with diabetes and prediabetes at risk for other dental problems?***
If patients are not well controlled, they also tend to get more cavities or caries. They have a higher risk of developing oral yeast infections such as candidiasis. They may have enlarged parotid glands, which can lead to dry mouth. And because of the yeast infections in a dry mouth, they could report burning mouth or dry tongue. Dry mouth due to salivary gland dysfunction will drive periodontal disease and caries formation. Poorly controlled patients are also at greater risk for abscess formation.

Gingival crevicular fluid is a serum transudate, so if your blood sugar levels are high, you have more glucose coming out of those pockets around the teeth. Your mouth has more glucose in it, so your teeth are bathing in glucose, increasing the risk for developing cavities.

Working to improve home care with their patients is of great help, because such patients need to keep levels of bacteria as low as possible in the mouth. They can use antibacterial toothpaste or rinses. One of the toothpastes that's very effective at reducing the levels of bacteria for 12 hours is Colgate Total. I recommend that to a lot of my patients with diabetes.

And, of course, we need to provide adequate care in the office. The treatment of infection and inflammation, providing periodontal therapy whether it's surgical or nonsurgical, absolutely needs to be provided and should never be considered an optional or elective procedure.

***Are insurance organizations responding to the growing evidence of the connection between oral health and diabetes?***
Some dental insurance companies are reimbursing dentists for screening, not only for diabetes but also for hypertension by checking blood pressure and for obesity by determining body mass index. Some dental insurance companies are beginning to create expanded plans that begin to better address the oral health care needs of patients with diabetes. This may help with access. Some patients — especially those without dental insurance — complain that if they go to the podiatrist, it's covered by their medical insurance, but if they're going to the dentist, it isn't covered by medical in most cases. This may be changing.

***Are there dental professionals specializing in the treatment of people with diabetes? If so, how does one develop such a specialty?***
When your comfort level goes up, you will see more and more of these patients [by referral]. Patients say, "You know, Dr. Ryan asks me questions that other dentists never asked me about my diabetes. And she seems to base her treatment plan around the answer to those questions." If you're comfortable talking

# Dental Trade Alliance Foundation awards 2011 grants

Since 2002, the Dental Trade Alliance Foundation (DTAF) has granted more than $780,000 to 40 major research projects designed to increase access to oral health care in America. The 2011 grant recipients listed here are making a difference that will be felt for generations.

### American Academy of Pediatrics (AAP), $25,000

Dental caries is the most common chronic disease of early childhood, and many young children are not able to access a dentist for early preventive oral health care. To address this gap, the AAP has worked to educate pediatricians and other health professionals about the importance of oral health and how to incorporate oral health services (oral screening, anticipatory guidance, risk assessment, referral to a dental home and fluoride varnish) into their practices.

The AAP, with funding from the American Dental Association Foundation, has built a network of 53 trained Chapter Oral Health Advocates (COHAs). A COHA is a pediatrician representing an AAP state chapter who has been trained in oral health and incorporating oral health services into the medical home. Through funding from the DTAF, the AAP will provide training grants and oral health kits to COHAs to support their efforts to train practices about oral health services.

### The Children's Dental Health Project (CDHP), $25,000

The CDHP was instrumental in crafting and ensuring the inclusion of 18 significant oral health provisions in the recently passed health reform legislation, the Patient Protection and Affordable Care Act (ACA).

Among changes the ACA will bring is increased access to dental services as millions more children will receive dental coverage in the coming years from both public and private coverage.

State policymakers and regulators play a significant role in the implementation of these oral health improvements, including their integration with existing public programs. However, federal regulatory guidance is necessary for states to move forward.

More than a decade of experience by CDHP provides a base for this historic opportunity to work with Congress and state advocates to advance access to care through ACA, but the effort is in jeopardy due to federal and state budgets.

DTAF funds will help CDHP educate regulators about the need to expand access to dental care and implement cost effective strategies to improve oral health.

### Metropolitan State University, $25,000

Metropolitan State University has initiated a program to increase dental care in Minnesota by preparing Advanced Dental Therapists (ADTs) to provide community-based care for underserved populations.

Based upon Minnesota statute 150A.01, individuals prepared for this unique scope of practice focus on treating and preventing dental disease in settings not reached by existing dental care teams, such as nursing homes, homeless shelters and schools.

To prepare ADTs for this role and provide clinical experience in diverse communities, Metropolitan State University is building an educational dental clinic that simultaneously prepares this new workforce and provides care to the diverse community.

Metropolitan secured the necessary funds to build and equip the clinic. DTAF funds will be used to introduce the dental therapy role to the community, build awareness about clinic services and develop patient educational resources in multiple languages.

### Oral Health America (OHA), $25,000

The OHA Wisdom Tooth Project (WTP) seeks to improve the oral health of vulnerable older adults through five strategies, including development of a web portal for use by decision-makers in older adults' oral health care.

The portal will provide national and regional content and information. DTAF funds will be used for web portal research, specifically, to investigate the opportunities and resources available in one community that the portal could promote and link to. These findings will enable OHA to create a model for other regionally-focused portions of the future WTP site. This effort builds on OHA's strategic planning for WTP in 2010, and in-depth stakeholder research under way at the national level.

Dr. Ruth Goldblatt, in Connecticut, has agreed to serve as consultant by hosting a series of conversations with colleagues, advocates, caregivers and others statewide who are actively addressing barriers to care for geriatric patients. OHA's proposed outcome: A framework for community engagement and a vision for the long-term sustainability of a web portal with meaningful regional content.

### University of Maryland, College Park, $12,500

In this pre-pilot project, which DTAF funds will help, the University of Maryland, College Park, is partnering with educators and school nurses in the city of Seat Pleasant, Md., to educate at least 20 teens about their oral health and that of their child.

The emphasis of the project is the importance of the mother's oral health during pregnancy; how and where to get dental care; how to maintain oral health during and after pregnancy; fluoride regimes appropriate for them and their infants; how to prevent transmission of caries-causing bacteria to their infants; and how to promote good oral health in their children.

Key health messages are reinforced through monthly meetings and weekly communications (text messages/e-mail/regular mail). Participants will be followed until the infant is two years of age.

### University of Pittsburgh, Division of General Academic Pediatrics, $12,500

With early detection of the risk factors for caries and effective counseling on oral hygiene and dental care, many cases of early childhood caries can be prevented.

Because children typically receive most medical care from primary care providers, this study, which DTAF will help fund, explores the role of pediatricians in assessing caries risk factors in children and examines potential interventions to promote improved oral hygiene. Goals are:

1) Determine if pediatricians can accurately identify visible plaque on the teeth of young children, as the American Academy of Pediatric Dentistry (AAPD) recommends in assessing a child's caries-risk.

2) Employ a longitudinal approach in evaluating the effectiveness of plaque disclosure to change oral hygiene practices and examination of young children at risk for early childhood caries.

The outcomes of this study could lead to an enhanced use of primary care providers in evaluating children at risk for early childhood caries and, ultimately, in prevention of the disease.

Congratulations to all of DTAF's grant recipients and thanks to all of the foundation's donors who make these grants possible. DT

*(Source: Dental Trade Alliance Foundation)*

to physicians about this, you begin to get more referrals from physicians who are treating and educating these patients. I often speak on panels with other health care providers at local meetings organized by the American Diabetes Association, initiators of the Stop Diabetes campaign. And because the folks from Colgate recognized the importance of oral health in this, they have supported this campaign, which I think is very important.

When I speak as part of a diabetes-education health care team, patients are already aware of what the podiatrist has to say, of what the ophthalmologist may be saying about their eyes and the cardiologist about cardiovascular disease. But when I start talking about the dental considerations, so many of them say to me, "I have never heard this before. No one's ever discussed this with me." It's important for all of us in the profession to share this knowledge not only with our patients but also with each other.

***Are there established, approved protocols for dental professionals to follow when treating patients who have diabetes or prediabetes?***

No, but maybe we will be going in that direction. There has been a substantial effort by the American Dental Association to improve on continuing education in this area. There are efforts throughout the profession to improve on the transfer of knowledge from the published research to the practicing clinician.

In the future there may be programs where people may become certified to manage higher-risk patients, such as people with diabetes or cardiovascular disease. There has been great interest by all members of the profession. Not just dentists, but hygienists and dental assistants are interested in how to better manage these patients. You're beginning to see practices develop protocols that are tailored to the provision of care to people with diabetes. DT

### About the interviewee

Maria Emanuel Ryan, DDS, PhD, is a tenured full professor in the Department of Oral Biology and Pathology at the Stony Brook University School of Dental Medicine and a member of the medical staff at University Hospital at Stony Brook University Medical Center. She has published more than 75 scholarly works and speaks frequently on emerging therapeutics, connections between oral and systemic health and the need for early detection of periodontal disease and oral cancer.

# Understand legal issues when using CBCT scans

By Stuart J. Oberman, Esq.

As cone-beam computed tomography (CBCT) becomes more prevalent in the dental field, various legal issues are coming to light. When CBCT scans are justified, they can provide the dentist with an enhanced diagnostic tool that offers significant patient benefits when compared to older imaging technologies. However, there are several key concerns that dentists should keep in mind when using CBCT technology.

## Dentists' standard of care

Medical professionals who are liable for non-diagnosis of any abnormality on the CBCT scan include the dentist who orders the CBCT scan and likely any other professional who uses the CBCT for diagnosis or treatment planning. Dentists must possess the requisite standard of care when diagnosing and treating patients. This standard is normally stated as the level of knowledge, skill and care of a reasonable dentist. To meet this standard when using CBCT, dentists should use CBCT's full capabilities to obtain maximum diagnostic accuracy. The standard of care must be met whether or not the dentist received specialized training on CBCT imaging because dentists are required to stay current in the areas in which they actively practice by enrolling in continuing education courses. There is even argument that dentists who use CBCT should be held to the higher standard of a board-certified oral and maxillofacial radiologist.

For dental implant placement patients, cross-sectional imaging, which can include CBCT scans, is recommended for all implants before they are placed. However, there is some argument as to whether a CBCT scan itself, as opposed to a CT, is required for every implant placement. And, a dentist may not have access to a CBCT for various reasons. Thus, reasonable dentists may differ in their opinion regarding the necessity of CBCT scan for implant placements, which makes the standard of care in implant placement situations more difficult to define. A CBCT scan, however, should be used in all cases where the general rule of a 2 mm safety zone between the maximum implant drill depth and the superior border of the inferior alveolar nerve canal cannot be accurately determined with only 2-D imaging.

Dentists are also legally and ethically obligated to do no harm to their patients. Improper diagnosis after using a CBCT does not align with this standard because delay of diagnosis leads to delay of treatment. This is not in the best interest of the patient because it can lead to an inferior prognosis. Also, not every patient requires a CBCT scan; therefore, it is the dentist's responsibility to determine whether a CBCT scan is necessary by using reasonable, careful judgment in light of the patient's medical and dental history and thorough examination. The dentist should do a cost-benefit analysis before requesting a CBCT scan. When doing so, the dentist should consider whether the likely benefit to the patient exceeds the ionizing radiation risk and the financial cost.

## Dentists' scope of legal responsibility to diagnose

When using CBCT, as with other diagnostic tools, the dentist's responsibility is not limited to the area of interest being diagnosed or treated. The treating dentist is legally responsible for diagnosing any disease that falls within the scope of the dentist's license, which is normally broad in scope, encompassing all diseases and lesions of the jaw and related structures. As for a dentist's responsibility for diagnosing a disease that falls outside the scope of the dentist's license, the answer is not clear. Thus, it is always a good idea to be cautious and assume the responsibility to recognize any abnormality that appears anywhere on the CBCT scan. If a dentist is unsure of the scan results, he or she should consult with specialists in the field or refer the patient to a specialist.

Whether a dentist practicing under a medical license is legally responsible to recognize a lesion that appears on the CBCT scan but is not in the orofacial complex is another question up for debate. It is more likely than not that his/her responsibility would stretch to these situations because treating these structures falls within the scope of his/her medical license. Thus, dentists with medical licenses should review the entire CBCT scan, not just the intended area of diagnosis, for any abnormalities and refer the patient to a specialist if any are noted.

Keep in mind that a misdiagnosis could still occur even if the CBCT scan is referred to a radiologist specialist for interpretation. In this case, the radiologist would be primarily responsible for the misdiagnosis, which greatly reduces the possible liability of the dentist who referred the scan due to the dentist's reliance on the radiologist's specialized expertise. However, this is not to say that the referring dentist would be free of any responsibility in this situation. So, again, it is always better to err on the side of caution when reviewing a CBCT scan, even if that scan will be referred to a radiologist specialist for further review.

A dentist is also responsible for identifying the exact location of vital structures within the CBCT scan for use in diagnosis and treatment planning. Because a dental lab technician is not legally allowed to diagnose, a dentist must take further action to identify the anatomical course of the IANC on a CBCT scan if a lab provides a tracing or images with the outline of the IANC. The dentist's responsibility is to either confirm or reconfigure the drawn IANC image. To assist with this task, the dentist should ask the lab to provide an estimate of the IANC course as drawn and also the same image absent the lab's drawing.

## Required action after an abnormality is diagnosed

Once the dentist recognizes there is an abnormality on the scan, whether or not it is in the diagnostic area for which the scan was taken, the dentist is legally required to take further action. If the dentist is able, he or she should diagnose the dental disease or lesion. If the dentist can only identify an abnormality but cannot diagnose the exact cause, he or she should either consult with a specialist or refer the patient to a specialist in order to obtain a final, accurate diagnosis.

If the dentist refers the patient to a specialist for a suspicious abnormality seen on a CBCT scan and the patient refuses the referral, the dentist is normally required to inform the patient of the consequences of his/her refusal. In some circumstances, if the patient is not able to afford the proper diagnosis, it may be a good idea for the dentist to pay the specialist's consultation fee in order to avoid all liability. In addition, it is a wise idea to chart the patient's refusal of the referral and to have the patient sign an informed refusal form. Once the patient refuses a referral for proper diagnosis, the dentist may and should refuse to treat the patient. However, there would be an exception if the dentist is in the midst of treatment and discontinuing treatment would cause abandonment of the dentist/patient relationship.

## Solutions to avoid liability

Due to the high standard of care legally required, a dentist should refrain from using CBCT scans unless and until he or she has received the proper training. Without training, a dentist simply cannot meet the requisite legal standard of care due to the lack of adequate learning and skill that the standard necessitates. Also, once charged with dental negligence, the dentist can prove that he or she made a reasonable judgment error in diagnosing or reading the CBCT scan. However, the dentist will not be able to invoke this defense if he or she failed to stay current with the CBCT technology or obtain proper training, in the form of educational classes, and readings and hands-on experience. It is even a good idea to obtain a certificate of training completion, which could later be used to show a jury that the dentist obtained the requisite competence to use the CBCT technology and to read a CBCT scan.

It is also a wise decision to use the smallest field of view of a CBCT available that includes all areas of diagnostic interest. By doing so, fewer anatomical structures will be shown on the CBCT scan, which will minimize the dentist's legal responsibility to detect abnormalities in structures outside the area of interest. Also, if another type of scan will produce the same diagnostic result, the CBCT should not be the first choice but should be considered along with 2-D imaging. However, if a CBCT scan would reveal complications that would be difficult to accurately detect on a 2-D image, it should be immediately taken into consideration.

Finally, keep in mind that using a CBCT scan solely for screening purposes should be avoided because unnecessary use and overuse can create conflicts of interest between the dentist and the patient. As such, the patient should also be informed of every available option for diagnosis and the pros and cons of each of those options. DT

### About the author

Stuart J. Oberman, Esq., has extensive experience in representing dentists during dental partnership agreements, partnership buy-ins, dental MSOs, commercial leasing, entity formation (professional corporations, limited liability companies), real estate transactions, employment law, dental board defense, estate planning, and other business transactions that a dentist will face during his or her career.

For questions or comments regarding this article, visit *www.gadentalattorney.com.*

# Life-changing surgery boosts selfless patient's quality of life

*Life-saving treatment includes complete maxillary and mandibular dentures*

By Lisa Marie Samaha, DDS

## The patient

Michael Boyd, a 55-year-old male, lived a life of many challenges. By age 52, Michael had a diabetic medical emergency and upon recovery was relieved of his job. At that point his diabetes had already caused him to lose one foot and a portion of his other foot.

Getting around was a challenge, but it didn't stop him from helping others. While assisting an elderly woman in getting her social security check cashed during an ice storm, Michael fell and injured his leg, further complicating his health. Additionally, Michael struggles with high blood pressure, lupus erythematosus, failinghip replacements, arthritic knees and a variety of other medical challenges.

In spite of his own disabilities, Michael makes a point of visiting patients at the Veterans Affairs Hospital, almost daily. Although not a veteran, he wants to show his appreciation to our soldiers, and word has it that he never fails to succeed in bringing them comfort and laughter each time he visits. He knows that many of them have no other visitors except him, a thought he can't bear.

Michael also extends a daily helping hand to his elderly and/or disabled neighbors by cooking for them or taking them on errands to fill their prescriptions, purchase groceries or go to the bank. Sometimes he just spends quality time visiting with them. Every day, a visit to his mom is first on his list.

## His disease

Although always interested in bringing a smile to others, Michael remained self-conscious about his own smile. He was frequently in pain, and relied on over-the-counter medications for his severely decayed teeth and aggressive periodontal disease. His oral disease was most certainly complicating his systemic disease, especially as it related to his diabetes, joint issues and propensity to heart attack or stroke. Sadly, none of his physicians had established a concern over the severity of his dental disease. It was his sister who encouraged him to come see us. She had learned of the life-enhancing care we provide by reading stories about how we had helped others with similar health complications.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

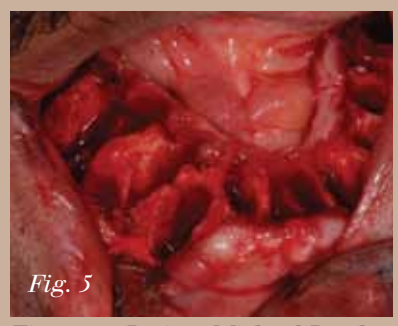


Fig. 5

Fig. 6

*Figs. 1–4: Patient Michael Boyd on the day of the surgery. Fig 5: All teeth, including root tips, were removed, sockets thoroughly debrided and granulation tissue excised. Biopsies, laser ablation, bone grafting and guided tissue regeneration were performed. Fig. 6: One week later the patient received complete maxillary and mandibular dentures. (Photos/Provided by Dr. Lisa Marie Samaha)*

The diagnosis of severe, generalized periodontal disease with spontaneous purulence and bleeding combined with severely carions and abscessed teeth, left us no option but to remove all of Michael's teeth in short order. He accepted treatment and we scheduled him within days for his full-mouth surgery.

## The treatment

We performed the surgery, uneventfully, with only local anesthesia. Michael remained relaxed, comfortable and enjoyably conversational during the entire experience. All teeth, including root tips, were removed, sockets thoroughly debrided and granulation tissue excised. Biopsies, laser ablation, bone grafting and guided tissue regeneration were performed. We placed Michael on antibiotics and a targeted, periodontal nutritional regimen immediately.

## Postoperative

Throughout his healing period, Michael was comfortable and healed uneventfully, needing only one 800-mg dose of Motrin for pain on the day of treatment. When Michael returned for suture removal one week later, we saw a much healthier man in every way. In spite of his diabetic history, he healed remarkably well.

We delivered his complete maxillary and mandibular dentures and he received them with tears in his eyes — and a big, bright smile on his face.

He said they felt just like he had had them all his life. Remarkably, the first words out of his mouth were spoken as though they had been his all along! Michael looked and felt exceptionally well.

## Summary

This life-saving makeover provided Michael with a healthier and happier life with fewer complications from his diabetes and other systemic health challenges.

Not surprisingly, his mom was the first one he wanted to share his new smile with the day he received his dentures. As soon as that visit was over, Michael returned to spend time and spread some cheer with the soldiers at the VA and then, escort his neighbors on their errands.

His new smile was met with disbelief by all! DT


### About the author

Lisa Marie Samaha, DDS, FAGD, graduated from the Medical College of Virginia School of Dentistry, Virginia Commonwealth University, and has been in the private practice of general dentistry in Newport News since 1982.

Samaha is the founder and director of the Perio Arts Institute, which is nationally recognized for teaching and research. The institute's mission is sharing diagnostic and treatment protocols for the betterment of oral/systemic health. She can be reached at *samahadds@pwdentalarts.com*.

# Education, innovation, fun at big dental show

By Robert Selleck, Managing Editor

North America's biggest dental meeting lived up to its reputation for innovation and broad scope, Nov. 27–30 in New York City, with high attendance and a diverse, nonstop offering of programs and activities.

The Greater New York Dental Meeting featured challenging, live dental procedures; a massive, international exhibitor hall; hands-on learning opportunities; and limitless networking against the backdrop of one of the world's most dynamic and entertaining metropolitan areas.

Attendees were able to choose from more than 300 full- and half-day seminars, essays and hands-on workshops in general dentistry, orthodontics, endodontics, cosmetic dentistry, pediatric dentistry and implant dentistry.

The meeting's education hall offered attendees sessions in the Live Dentistry Arena and ADA CERP-accredited C.E. credits available at the Dental Tribune Study Club (DTSC) Symposia. DT

*Enjoying a test drive of the Oral-B Cross Action Pro Health on Nov. 29 are New York City dental hygienists Irene Arbuiso, from left, Harvinder Pawar and Janice Brown. Answering their questions in the Crest Oral-B booth at the Greater New York Dental Meeting was Ohannes Megerdichia. (Photos/Robert Selleck, Managing Editor)*

*At the Dental Tribune Awards ceremony on Nov. 28 are SHOFU GmbH Managing Director Wolfgang Van Hall, from left, Latin American Dental Federation President Dr. Adolfo Rodríguez, Dental Tribune International Publisher Torsten Oemus and AMD LASERS President Alan Miller.*

*Hooman Zarrinkelk, DDS, in the Livce Dentistry Arena on the morning of Nov. 30 presents 'Immediate Full Arch Prosthetic Rehabilitation Utilizing the All-on-4 Concept: Live Suregery and Prosthetic Treatment' with equipment and supplies courtesy of Nobel BioCare and the GNYDM.*

*A-Dec representative Ron Buonocore goes over the A-Dec 500 dental chair system with Jerry Rosenfeld, DDS, of Avon, Conn.*

*Kenneth Zoll displays Zoll-Dental's Z-Soft.*

*New York City in its holiday finest.*

# Esthetics dentistry annual meeting attracts international participants

By David L Hoexter, DMD, FACD, FICD
Editor in Chief

"The sunshine of your smile" lyrics from Stevie Wonder aptly describe the 35th annual meeting of the American Society of Dental Aesthetics (ASDA). The group met in Amelia Beach, Fla., Oct. 19–22, celebrating its 35th anniversary with an array of talented and informative participants and presenters from Canada, China, England, France, Korea, Japan, the Philippians and the United States.

The exhibitor booths were informative, and time was put aside in the overall schedule to ensure exposure of the booths, making the meeting both insightful and profitable.

Speaker presentations were wide ranging, covering a broad spectrum, yet they were highly detailed as well.

The ASDA continued to stress practicality with breakout, hands-on reinforcement sessions.

Practice management lecturer Lisa Philp gave a timely presentation on understanding the personalities of today's patients. George Freedman, DDS, presented an analysis of dental products and their uses. Howard Glazer, DDS, delved into the honesty of current dental product advertisements, while Dan Ward, DDS, Paul Belvedere, DDS, and Marvin Fier, DDS, showed successful dental techniques made practical. I presented on the use of cosmetic periodontal surgery to improve health, color and root recession coverage to enahnce the background of the smile, thus enhancing the overall smile.

Irwin Smigel, DDS, presented the ASDA's fellowships and honors in one of the meeting's many festivities. There was truly much to celebrate on the ASDA's 35th anniversary.

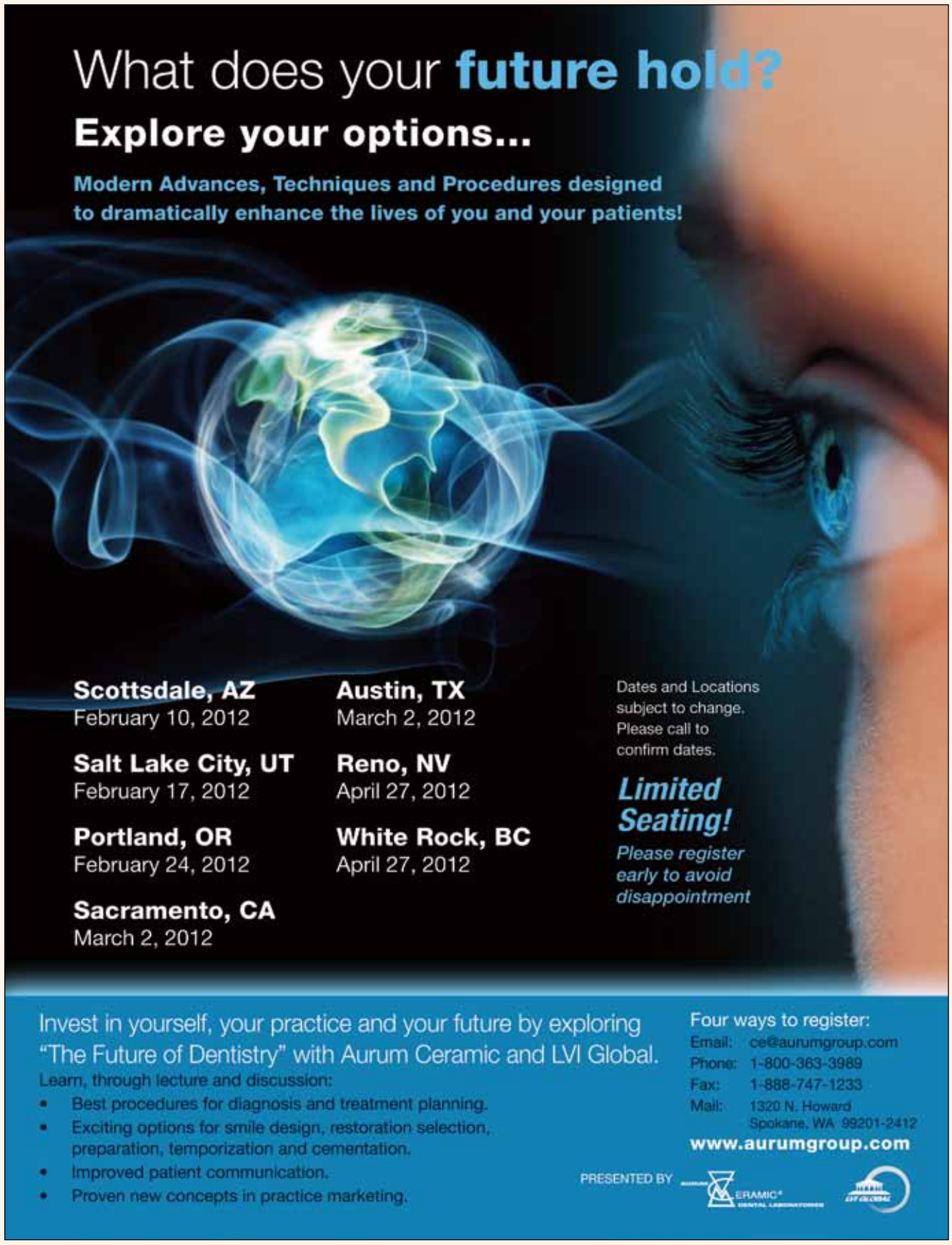
*Among the presenters at the ASDA meeting: Drs. Paul Belvedere, from left, Irwin Smigel and David L. Hoexter. In photo on right: Drs. George Freedman, from left, Fay Goldstep and Howard Glazer. Canada, China, England, France, Korea, Japan, the Philippians and the United States were represented at the meeting. (Photos/Provided by Dr. David Hoexter)*

## About the ASDA

Formed in 1976, the ASDA was the first dental society dedicated to dental esthetics. Irwin Smigel, DDS, the founding father of the ASDA, is considered the grandfather of esthetic dentistry.

Initially the society had three founding fathers: Stan Bierman, Len Linkow and Smigel. However, Smigel forged the path for acceptance of cosmetics in the dental field, leading to the development and enhancement of new materials and products to achieve esthetics, durability and functionality in the oral cavity. He is truly the "Super Smile" of esthetic dentistry.

The American Society for Dental Aesthetics is dedicated to the advancement of esthetics in all phases of dental practice. To accomplish such goals, membership is limited to qualifying dentists who are nominated by members of the society.

A requirement for continued membership is attendance of at least one meeting every other year. DT

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