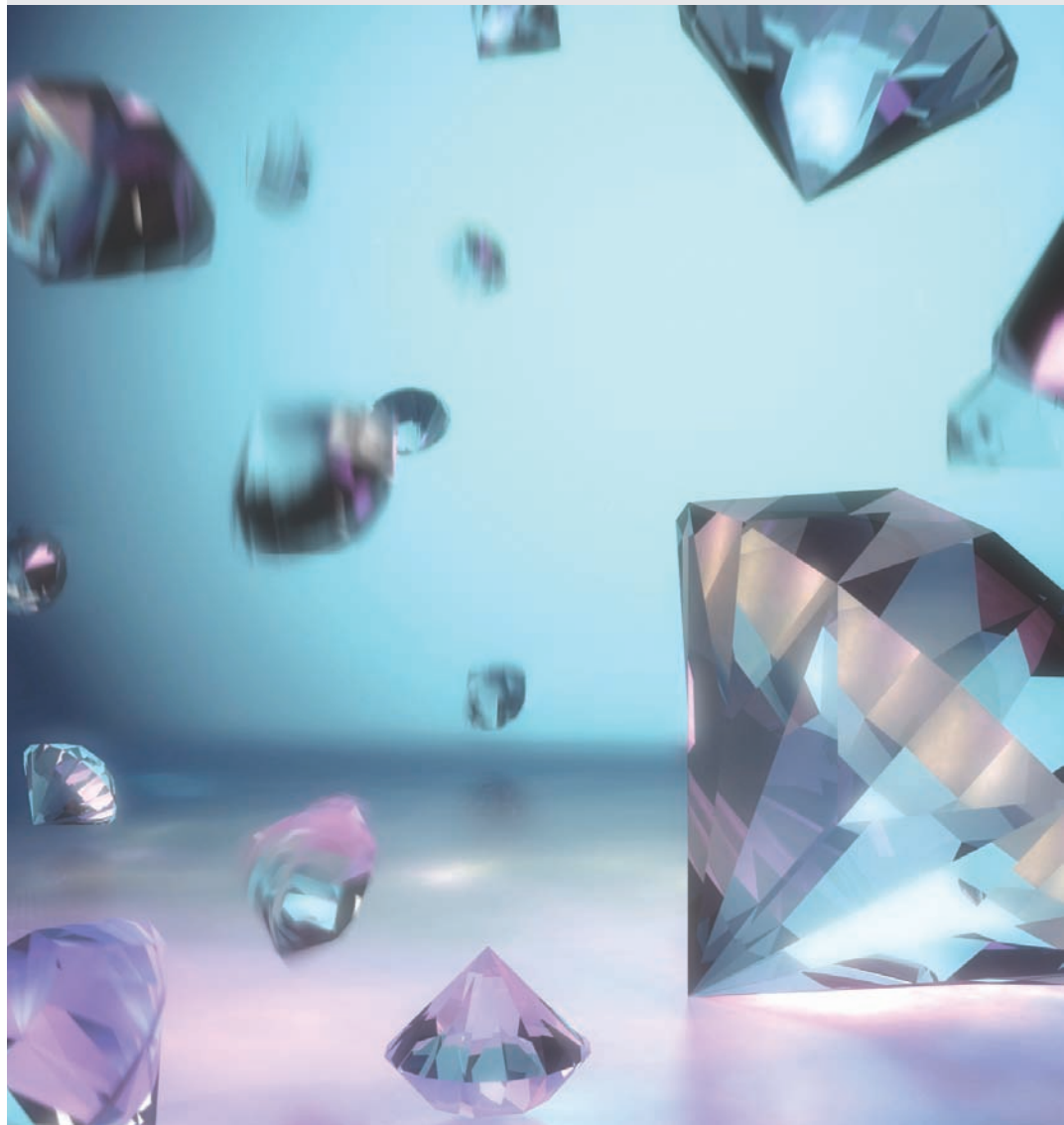




Journal *of the* American College *of* Dentists

DENTAL
SPECIALTIES

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The *Journal of the American College of Dentists* shall identify and place before the Fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. All readers should be challenged by the *Journal* to remain informed, inquire actively, and participate in the formulation of public policy and personal leadership to advance the purposes and objectives of the College. The *Journal* is not a political vehicle and does not intentionally promote specific views at the expense of others. The views and opinions expressed herein do not necessarily represent those of the American College of Dentists or its Fellows.

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- A. To urge the extension and improvement of measures for the control and prevention of oral disorders;
- B. To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all, and to urge broad preparation for such a career at all educational levels;
- C. To encourage graduate studies and continuing educational efforts by dentists and auxiliaries;
- D. To encourage, stimulate, and promote research;
- E. To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;
- F. To encourage the free exchange of ideas and experiences in the interest of better service to the patient;
- G. To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public;
- H. To make visible to professional persons the extent of their responsibilities to the community as well as to the field of health service and to urge the acceptance of them;
- I. To encourage individuals to further these objectives, and to recognize meritorious achievements and the potential for contributions to dental science, art, education, literature, human relations, or other areas which contribute to human welfare—by conferring Fellowship in the College on those persons properly selected for such honor.

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Cover Photograph: Dental specialties represent the many facets of a common profession.

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FROM THE EDITOR

WINDMILLS IN EAST ANGLIA

The message of the windmills is that material progress changes institutions and values. The physical things we want come in social and ethical packaging, and new “things” entail new “meaning.”

The part of England above London that bulges out toward the North Sea is called East Anglia. It is where the Vikings and then the Danes marauded. It is where English and American planes were launched to destroy German industry and prepare for the invasion of Europe in World War II. The county of Cambridgeshire has a famous university and its attendant high-tech industries, air museums, American cemeteries, and windmills. This editorial is about the windmills and what they can tell us about dental ethics.

Until the 1600s, most of northern Cambridgeshire was a vast bog. The fens are largely gone today, but they were a network of flood plains, tidal rivers, and pools of standing water with fanciful names. The patchwork of land is many feet deep in peat—fibrous, spongelike matter composed of decayed reeds. Peat fires could burn like forest fires for days when dry summer winds prevailed. The main river is the Great Ouse (pronounced “ooze”). In the nineteenth century, fen ague, a form of malaria, and the widespread use of opium to treat it, killed a larger proportion of the population than did the coal blight of the industrial midlands.

Little remains of the fens today, but the way this part of England became its “agricultural bread basket” is a case

study with lessons for American political history and moral philosophy. In the seventeenth century, the Stuart kings and Cromwell, who grew up in the area, promoted draining the fens. Social welfare was the consequence of this initiative and not the motivating factor. But the project was not as easy as it appeared—requiring over 200 years and creating rivers that flow backwards and lowering the level of the land as much as 20 feet. Some of Cambridge is lower than the polders of Holland, and some of the windmills that were used as pumps can still be seen.

The message of the windmills is that material progress changes institutions and values. The physical things we want come in social and ethical packaging, and new “things” entail new “meaning.” The shadow of the windmills of East Anglia is long and profound.

Most of the fens were common land, used by locals who gathered reeds for thatched roofs on cottages and fished for eel. Think of the American plains two hundred years ago and think of how many people were supported on land that nobody owned. The crown did not own the land in Cambridgeshire, but it granted rights patent to the Duke of Bedford and other cronies. Nobility undertook to improve the common lands to more profitable use in exchange for their private ownership of vast tracts of this land.

Such developers were called “undertakers”: they were types of the first entrepreneurs. (Those who invested money in exchange for shares of the

wealth to be created without actually undertaking the work were called “adventurers.”) The precedent was set by Pope Julius II in about 1500 when he divided the new world, which he did not own, between the Spanish and the Portuguese at a meridian 370 leagues west of the Cape Verde Islands (which is why Portuguese is spoken in Brazil). British North America was developed in the same fashion, with large land grants to William Penn, the Hudson’s Bay Company, and Catholics in Maryland. Virginia and Bermuda were joint stock companies. This system is in use today in the United States with Indian gaming, livestock grazing on forestry land, and off-shore oil drilling.

The economic benefit to the crown (the largest land owner in England to this day) and to the undertakers and adventurers is obvious. The descendents of Bedford still own huge tracts of land, including much of the City of London. East Anglia has become one of the most productive agricultural areas in England.

Significant economic and social displacement followed in the wake of these improvements. The common folk of East Anglia lost their traditional sources of livelihood. Poverty forced local populations into dependence on first the local aristocracy and then the government. Redistribution of common resources created a dependent class in need of help from those who benefited

from the privatization. It made charity possible—and necessary.

Immigration blunted the social unrest caused by economic displacement. The Pilgrims who settled the new world were drawn predominantly from Cambridgeshire. Later enclosure laws to increase pasturage for sheep to support the woolen industry and restrictions on importing beef from Ireland to England fueled mass immigrations for several centuries. The major city on The Wash in East Anglia into which the fens used to drain is called Boston, and Fenway Park where the Red Sox play takes its name from the small bogs that used to drain into the new world Boston harbor.

Surely the windmills that presided over the economic and social displacements attendant on converting use of common resources into private ones of greater value are far away and are now silent. But are they?

Innovations in dental therapy based on research in NIDCR-supported dental schools are in the public domain thanks to the federal Bayh–Dole Act of 1980. Industry patents these and sells them to dentists who pass on their costs to patients. “Public health” carries a vague association of oral health care that is not of the same quality as that in fee-for-service practices. Access is an issue that has both political and economic standing, but is being framed primarily in terms of quality of procedures. State dental schools use tax dollars from all citizens and student loans are supported

The slipperiest dentists enjoy some of the general reputation that the entire profession has worked so hard to develop.

by federal tax dollars; but graduates tend to concentrating in the suburbs to treat the affluent. The slipperiest dentists enjoy some of the general reputation that the entire profession has worked so hard to develop.

The use of common goods for private purposes and the obligation to contribute to the common good are ethical issues that are all but impossible to deal with in our traditional conception of ethics as a matter of private conscience.



AMERICAN ASSOCIATION of ENDODONTISTS

Louis E. Rossman, DMD, FACD

ABSTRACT

Endodontics was recognized as a specialty in the mid-1960s, following decades of developing a body of scientific knowledge and proven techniques for managing the etiology, diagnosis, prevention, and treatment of diseases and injuries of the pulp and associated periradicular conditions. There are now 7000 members of the American Association of Endodontists, about a quarter of whom are board certified. The American Association of Endodontists has identified and is at work addressing the following strategic issues: (a) recruitment and retention of endodontics educators; (b) development and dissemination of educational material to both specialists and general dentists; (c) enhanced biological foundations of therapy, including regenerative endodontics; and (d) advances in technology such as digital radiology, new delivery instrumentation, implants, and enhanced visualization through microscopes. The American Association of Endodontists is working to strengthen relationships with general dentists through education and associate membership, and it is promoting its members' participation in professional and community projects through its Step-Up! program.

The importance of preserving natural teeth has been recognized since the dawn of time. The earliest civilizations recognized the loss of a tooth as a wrong. In ancient Mesopotamia, Hammurabi (1792-1750 BC), ruler of the Babylonian empire, codified these punishments:

- Law 200: If someone knocks out the tooth of an equal, his own tooth is knocked out.
- Law 201: If someone knocks out the tooth of an inferior, he is fined a third of a minah of silver.

Both the Old Testament of the Judeo-Christian tradition and the Koran of Islam demanded a "tooth for a tooth."

Not only was the loss of teeth seen as an obvious wrong, the preservation of teeth has been an obvious human value. Many of the earliest writers on dentistry urged doing everything possible to preserve one's own teeth. Francis Bacon (1561-1626) was the last person who could truly say, "I have taken all knowledge to be my province." That meant the great English essayist had something perceptive to say about teeth, too. In his *History*—published posthumously in 1651—Bacon pinpointed the primary consideration for teeth: "The preserving of them."

When Pierre Fauchard practiced dentistry in the eighteenth century, cauterization was the only effective means of destroying the dental pulp. This was often the first step in what was as close

as eighteenth-century dentistry could come to a root canal. If the dental roots were in good condition, Fauchard left them in place after the cauterization. Then he would attach an artificial crown by binding it to the adjacent teeth with thread or attaching it with screws to the roots.

Root canal therapy was being taught in American dental schools at the turn of the past century. By the 1930s, a group of dentists was meeting regularly at the Chicago Dental Society Midwinter Meeting to hear Drs. Louis Grossman, Ralph Sommer, and others present clinics on root canal therapy.

Endodontics Today

Today's definition of endodontics is the branch of dentistry that is concerned with the morphology, physiology and pathology of the human dental pulp and periradicular tissues. Its study and practice encompass the basic clinical sciences, including biology of the normal pulp and the etiology, diagnosis, prevention, and treatment of diseases and injuries of the pulp and associated periradicular conditions.

The American Association of Endodontists (AAE) was founded in 1943, 20 years before endodontics was recognized as a specialty in the United States. The AAE now has more than 7,000 members, of whom almost 5,000



Dr. Rossman is President, American Association of Endodontists. The association's Web address is www.aae.org.

are in active practice limited to endodontics in the United States. Endodontists complete a residency of at least two years after dental school and approximately 23% of eligible AAE members go on to become board-certified by the American Board of Endodontics (ABE). Most endodontists are in private practice, usually in solo practice or small groups in urban areas.

The American Association of Endodontics Foundation (AAEF), launched in 1966 and reinvigorated in 1994, annually gives out \$500,000-\$1,000,000 in research and education grants, including endodontic education fellowships; research grants to residents, faculty, and researchers; support for residents and faculty to attend continuing education meetings; and various types of support to endodontic programs. The foundation enjoys an outstanding level of support among endodontists, with more than 65% of AAE members contributing at least \$2,000, supplemented by millions of dollars in contributions from our corporate partners.

The ABE has been the designated certifying board for the specialty since 1956. To become board-certified by the ABE requires:

- Successful completion of a written examination, now offered to residents who are nearing completion of their training program
- Submission of 15 specific cases that demonstrate a broad spectrum of diagnostic, treatment, and evaluative procedures

- Passing an oral examination
- Maintenance of 25 hours of approved continuing education every ten years

RELATIONS WITH GENERAL DENTISTS

Endodontists perform approximately 25% of the endodontic procedures in the United States, and enjoy a great working relationship with general dentists who perform almost all of the other 75% of endodontic treatments. The AAE is proud to have any dentist become a member of the AAE and receive access to the same education and information provided to endodontists.

Because of the close referral relationship between endodontists and other dentists, the AAE has many cooperative ventures with general dentists at the national and local levels. We have sponsored speakers at the American Dental Association Annual Session and exhibited at the ADA, American Dental Education Association, American Student Dental Association, and other major regional dental meetings for many years. The AAE and ADA have collaborated on patient education and general practitioner education initiatives for many years. The AAE has recently embarked on similar activities with the Academy of General Dentistry. We are also becoming more involved in political action, as led by the ADA and the American Dental Political Action Committee.

The AAE was established by general dentists whose primary interest was endodontics. The association maintains active membership for dentists who are educationally qualified as endodontists

Recent major advances in stem cell research have heightened awareness about the potential that these and other regenerative techniques hold for endodontics and dentistry.

and welcomes general dentists and others to become associate members. Approximately 350 general practitioners in the United States are already members of the AAE. All of the association's educational materials are available to all dentists.

ISSUES OF CONCERN

The AAE uses a knowledge-based governance approach to examine strategic issues, which emphasizes the gathering of relevant information, environmental scanning, and a structured consideration of the pros and cons of all possible solutions before making decisions. This strategic approach allows the Board of Directors and special committees of subject matter experts to work together on making the best choices for our future. AAE has identified the strategic challenges that are described below.

What is best for the patient? The answer must surely include specialists communicating with other specialists and general dentists, a mutual respect and confidence, and the satisfaction of team decision-making and patient care.

RECRUITMENT AND RETENTION OF ENDODONTIC EDUCATORS

As in all of dentistry, there has been real concern in endodontics for some time about the difficulty in recruiting and retaining endodontic educators. This has been especially true as the income disparity between educators and private practitioners increased significantly in recent years. Considerable data suggest that economic factors such as income potential, indebtedness, demographics, psychology, and supply and demand have an impact on both recruitment and retention.

Providing competitive compensation is increasingly difficult for educational institutions. Endodontic programs must compete with other dental school priorities for limited funds. An article in the *Journal of Dental Education* states that, in 2004-2005, salary and budget limitations were the most frequently reported factors influencing the ability to fill vacant faculty positions. Of the institutions responding, 43% reported a hiring freeze, with 29% of the funded positions being placed on hold.

In a 2005 AAE survey, endodontists who left education indicated that the most significant factors were school politics and income. Lack of adequate co-faculty and auxiliaries to share the workload may also be factors. In addition, 91% of respondents believed that an attractive salary and benefits would be incentives to recruit and retain faculty.

The AAE created a new membership category for educators in 2003 that provides reduced dues and registration fees and other recognition from the AAE and the AAEF. In order to encourage

more practitioners to consider education as a career, the foundation instituted a Post Graduate Fellowship Award. The grant provides \$100,000 to a practicing endodontist who agrees to teach full-time for five years. Members are eligible up to the tenth anniversary of their graduation from an endodontic program.

The AAE also offers courses at the ADA Annual Session specifically targeting practitioners interested in becoming educators as well as those currently in academics. The AAE Education Network program provides endodontic program and predoctoral directors with a searchable database of practitioners who are willing to volunteer at their local dental schools and advanced education programs. The AAE continually engages in discussions with the other dental specialties to collaborate on new initiatives to address faculty shortages.

EDUCATION

Education has always been one of the AAE's highest priorities. Like most individual member professional associations, the primary purpose for the creation of the AAE was to provide continuing education to members after the completion of their formal training. The AAE is active in offering education about endodontics to members, dental students, general dentists, the public, and other audiences. We welcome the opportunity to collaborate with other organizations in these efforts.

For members, the AAE offers the traditional array of educational opportunities: Annual Session, Fall Conference, *Journal of Endodontics*, and numerous other meetings and publications. Among the newest member services offered by the AAE is the provision of comprehensive online endodontic CE, with ADA CERP credit, available to endodontists and other dentists.

The AAE offers assistance in education about endodontics in dental schools, in partnership with organized

dentistry and in conjunction with industry partners. Almost since our inception, the AAE has offered an award of free membership to the student at each dental school who receives the highest grades in the endodontics courses.

We are proud that general dentists view the AAE as a credible source of information about endodontics, and we are expanding our efforts in this arena. In response to the high demand for quality endodontic speakers at national dental meetings and in an effort to enhance the relationship between general dentists, endodontists, and other specialists, the AAE recently launched a Recommended Speakers List of endodontists who are available to speak to dental audiences about endodontics. This valuable resource for dental meetings across the country will facilitate education and provide the perspective of an endodontic specialist on case selection, diagnosis, and treatment planning.

The AAE worked with a major dental product supplier on a comprehensive DVD series that endodontists can use to provide high-quality education to general dentists at the local level.

In 2007, the AAE co-sponsored an extremely successful Pulp Biology Conference with the American Academy of Pediatric Dentistry, and we plan to co-sponsor a trauma conference with AAPD in a few years. We are actively exploring similar arrangements with other dental organizations.

The AAE is committed to raising the level of understanding of the value of endodontic treatment among the public and the dental profession. The ENDODONTICS: Colleagues for Excellence program, which addresses clinical topics in endodontics, began 15 years ago to provide an opportunity to enhance partnerships between endodontists and colleagues on the dental team, and also to promote the highest quality

treatment to all dental patients. Today, the program has grown to include:

- Newsletter mailings twice a year to AAE members, nearly 130,000 active ADA member dentists, and bulk distribution to senior predoctoral students at all U.S. dental schools
- Speaker kits for members to use in presentations to other dentists
- A comprehensive online archive at www.aae.org/colleagues
- Bonus online materials, including an “Ask the Author” discussion board for each issue

In our public awareness campaign, the AAE strives to deliver the message that endodontists and general dentists are partners in delivering quality care.

BIOLOGICAL UNDERSTANDING

Endodontics has changed dramatically since its founding as a specialty. We understand the biologic bases of pain and disease as never before. Research into microbiology, bone, pharmacology, biochemistry, inflammation, and all the other related fields of science is moving at an unprecedented pace. Today, endodontics is not only performed at a higher level, but the disease process and its cure are understood. Endodontic results last for the patient's lifetime.

Preserving the natural tooth has long been the specialty's focus, but saving the pulp may soon become a more viable option than ever before. Procedures such as vital pulp therapy and guided tissue and bone regeneration are the precursors to exciting new developments. Recent major advances in stem cell research have heightened awareness about the potential that these and other

regenerative techniques hold for endodontics and dentistry. Regenerative endodontics is defined as biologically based procedures designed to predictably replace damaged, diseased, or missing structures, including dentin and root structures, as well as cells of the pulp-dentin complex, with live viable tissues, preferably of the same origin, that restore the normal physiologic functions of the pulp-dentin complex.

We believe that the incorporation of regeneration of vital tissues will help fulfill the true definition of endodontics and make the specialty better understood and appreciated. The AAE has established a committee to help foster and advance activities in this area. The committee has developed an online database of case information collected from AAE members who are performing these procedures.

“Clinicians in the United States and internationally are performing successful revascularization cases,” says Committee Chair Dr. Alan S. Law, “but there are many questions to be answered about which procedures and medications are most effective and why they work. The database is a first step toward accumulating a body of evidence. We already know that diseased tissue can be replaced by stem cells. It is important to find out how to create the best environment to promote their growth and differentiation. The committee's current focus is on regenerating the pulp-dentin complex in order to allow continued root development. However, there are many forms of regeneration that could build on or replace this procedure, such as using scaffolds or matrices on which stem cells have already been placed.” To support researchers and clinicians, the committee is also developing ethical guidelines for research and practice.

TECHNOLOGICAL CHANGES

Endodontics was the first specialty to adopt digital technology. Not only does digital radiography reduce radiation to the patient, but digital apex measurement devices have become so accurate that additional radiation is reduced further. Besides the surgical operating microscope, ultrasonic instrumentation has made the periapical procedure, removal of obstacles from the root canal, and cleaning of some previously inaccessible areas possible. Instruments are being manufactured out of new materials and introduced with handpieces along with hand-driven techniques. Materials have changed the biologic approach to seal with success previously impossible and condemned areas. We are on the verge of following the footsteps of research to develop even better sealed root canals. The future is extremely bright and predictable and our confidence to save the natural dentition of our patients is very high.

For many years, implants have been part of the educational standards in graduate endodontic training programs. In 2005, the specialty proposed, and the Commission on Dental Accreditation agreed, to increase the implant training requirements of endodontic residents from knowledge to understanding and add a skill level requirement. At a minimum, endodontists are trained sufficiently to be part of the treatment planning and decision making regarding when extraction and implantation are appropriate versus endodontic treatment to save a natural tooth.

Enhanced visualization technologies provide the ability to better see and clean canals, thus elevating the quality of care. In 2005, the specialty proposed, and the Commission on Dental Accreditation agreed, to raise the level of knowledge on magnification techniques required in graduate endodontic training programs from understanding to in-depth understanding and increased the level of skill from competency to proficiency. These levels represent the highest requirement in the accreditation standards and call for a significant increase of education in the advanced programs. The higher magnification and light provided by the dental operating microscope give enhanced visualization to endodontic treatment and make it the most effective magnification technique most often used by endodontists.

STEP UP!

The American Association of Endodontists encourages endodontists to serve the public in their professional and personal lives. We promote giving back to the community that has allowed us to practice this great profession. By facilitating and recognizing community service in a variety of ways, the AAE Step Up! program is a catalyst in involving endodontists in leadership and community service. The AAE celebrates all members (military, researchers, educators, residents, and clinicians) who generously give of themselves to save teeth in the U.S. and around the world, donating countless hours in schools, clinics, and programs such as Donated Dental Services, Give Kids a Smile, and Mission of Mercy.

FUTURE DIRECTIONS FOR DENTISTRY

In today's world, a front tooth that is knocked out is valued by a patient at \$1 million, which is a bit more than the third of a minah of silver of Hammurabi's time. Our culture calls on us to be the guardians of our patients' health.

Dental specialties are enhanced by a multidisciplinary approach to patient care. What is best for the patient? The answer must surely include specialists communicating with other specialists and general dentists, a mutual respect and confidence, and the satisfaction of team decision-making and patient care. What is best for the patient remains uppermost in our minds, not what is easiest or most profitable for us as healthcare providers. We as endodontists want to be part of treatment planning decisions, in partnership with other members of the team, to preserve the natural dentition when that is in the best interest of the patient.

New technologies offer tantalizing glimpses of a better world, where today's challenges have been replaced with new dilemmas. How will we cope? We need to continue to emphasize team treatment planning, informed decision making, and ethics in patient care.

The specialty of endodontics is pleased to be a part of this special issue of the *Journal of the American College of Dentists*. We believe that our profession advances when we all share our views, engage in thoughtful dialogue, and remain mindful of ethical considerations in all that we do. ■

DENTISTRY'S OLDEST SPECIALTY

ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

Raymond George, Sr., DMD, FACD

ABSTRACT

The American Association of Orthodontists (AAO) has 15,500 members worldwide and is the oldest and largest of the recognized dental specialties. A strategic planning process has identified six key challenges, and this article describes the progress that is being made in the areas of (a) consumer education, (b) volunteer leadership development, (c) recruitment and retention of orthodontic educators, (d) relationships with ADA and other healthcare organizations, (e) the AAO's role in international orthodontics, and (f) advocacy. The AAO is working for freedom of choice in dental healthcare providers; fee-for-service dental care; orthodontic insurance coverage as a benefit of employment, with direct reimbursement as the preferred plan; self-referred access to specialists; private and public funding that promote quality orthodontic care; and the retention of tax deductibility of dental healthcare benefits, including orthodontic care.

The American Association of Orthodontists (AAO) is a vibrant, member-driven organization. It is dentistry's first specialty, established in 1900 by visionary Dr. Edward H. Angle, in St. Louis, Missouri, where it is still headquartered. Now with a membership of 15,500 orthodontists in the U.S., Canada, and abroad, it is also dentistry's largest specialty organization. Approximately 95% of educationally eligible orthodontists in the U.S. are AAO members. The AAO is dedicated to ethically advancing the art and science of orthodontics and dentofacial orthopedics; it encourages and sponsors research; and it strives for and maintains the highest standards of excellence in orthodontic education and practice. The AAO and its members aim to make significant contributions to improving the health of the public.

Service to members is the AAO's utmost concern, for it is through this service that members can focus on patient care. Members' needs have grown and evolved along with the specialty. Because the AAO is driven by its members, it is the members who identify areas of concern. Although we are appreciative of AAO staff members' valuable contributions, their experiences simply are not the same as those of orthodontists.

Diverse challenges and opportunities lay ahead in orthodontics' second century. The AAO is actively working to ensure that AAO members maintain their ability to serve patients in ways that best suit patients, free from encumbrances as

changes in health care loom. The AAO leadership recognized that the old ways of conducting business, which performed well enough in the twentieth century, are no longer adequate to serve AAO members or the specialty in the twenty-first century.

The AAO has embraced anticipatory leadership so that it can act and react professionally and efficiently. This was done by creating a vision of the ideal future and presenting it to others for their reaction; listening to members' feedback to adapt goals; building a collaborative group of leaders; defining AAO's mission, key actions, and strategies needed to close the gap between AAO's ideal future and today; continually mentoring and growing a critical mass of volunteer leaders to keep the organization moving forward; and focusing on solutions rather than focusing on problems. These efforts help to assure a bright future for AAO members and the patients they will serve.

Six Critical Issues

The AAO maintains a Strategic Plan, a "living document" updated annually, which gives the organization its



Dr. George is President, American Association of Orthodontists. The association's Web site is www.braces.org.

As they become better educated, consumers are empowered to make an informed decision should the time come for orthodontic treatment for their children or themselves.

framework. The plan includes strategic goals, strategies for implementation and, importantly, critical issues, which are defined as issues that will impact the organization in the next three to five years.

Six critical issues have been identified through member surveys, leadership conferences, and strategic planning sessions. They are: consumer education, volunteer leadership development, recruitment and retention of orthodontic educators, the AAO's relationships with the American Dental Association and other related healthcare organizations, the AAO's role in international orthodontics, and advocating for the specialty. Attention to these critical issues is the current focus of the AAO's leadership.

CONSUMER EDUCATION

The AAO supports orthodontic treatment by AAO members as being in the best interests of patients and AAO members. Educated consumers make ideal patients.

Consumers are bombarded by media messages. Direct-to-consumer advertisers proclaim their products or services as "best." Reality TV shows tout the "quick fix" approach to a beautiful smile, which might be deemed a viable option by an uninformed lay person. When it comes to orthodontic treatment or a procedure to give the appearance of straight teeth, consumers may have inadequate information on which to base a decision on improvement of their dental function and form. The AAO recommends that they consult an AAO member for an orthodontic evaluation.

Consumer research was commissioned to learn how the AAO might educate consumers and alleviate their confusion and potential misinformation. The research identified and quantified the target audience and discovered they

were largely unaware of orthodontists' specialty education. This social science research became the basis of the AAO's multifaceted Consumer Awareness Campaign, which was launched in October 2006. The campaign includes paid advertising through TV, magazines, and the Internet, and it is supported by coordinated, complimentary media relations efforts.

The campaign stresses the value of consulting AAO-member orthodontists and the lifetime value of orthodontic treatment. Campaign messages encourage consumers to visit the AAO's public Web site, www.braces.org, where they can learn more about orthodontic care and find AAO member orthodontists near them. As they become better educated, consumers are empowered to make an informed decision should the time come for orthodontic treatment for their children or themselves.

Media relations efforts are also an important part of the campaign. In addition to traditional press releases on topics of interest to consumers, AAO leaders have also met with editors and producers of national print and electronic media outlets. These efforts have laid the groundwork to establish the AAO as the "go to" expert resource on orthodontics and have yielded story placements in prestigious media outlets.

The Consumer Awareness Campaign measures success through visits to www.braces.org. First-time visitors to the site have more than tripled when compared to pre-campaign traffic. About one in seven visitors use the online "Find an Orthodontist" service.

An initial commitment to this program of two years was extended for three more years by the AAO House of Delegates. The campaign is supported by a member assessment.

Individual members and groups of members are encouraged to promote themselves locally as AAO members to "close the loop" with consumers. They

may use the advertising and media relations materials created for the campaign. Materials include a TV commercial, radio commercials, print ads, Internet ads, and a variety of press releases. Members are responsible for the cost of space or air time and any fees for customization of the materials.

VOLUNTEER LEADERSHIP DEVELOPMENT

The AAO is a member-driven organization. Its lifeblood is volunteer leaders. Recruiting and retaining these leaders at all levels is imperative for a viable, relevant AAO. Opportunities abound for volunteers representing all categories of membership, from residency through retirement. Volunteers may give as much, or as little, time as they can spare at the component (state or province), constituent (regional), and AAO levels. Technology permits virtual volunteering as well as traditional service.

The AAO recently conducted an extensive, association-wide survey to understand how to recruit and retain members as volunteer leaders. Members unanimously said, "They would start volunteering if they knew the volunteer opportunity was meaningful or made a difference in people's lives." They revealed that the best way to involve them is through personal invitations extended by association leaders.

The AAO has traditionally sponsored leadership conferences for its volunteers, helping them to hone skills as they advance the association's work. As the specialty grows and changes, so does the leadership conference. The next conference will build on past successes while promoting the AAO's anticipatory style of leadership. A new format is designed to attract motivated volunteers.

Leadership is a necessity on a variety of levels. The AAO's executive director, Chris Vranas, penned an insightful handbook for AAO members entitled "Leadership in Action: Make a Difference in Your Practice, Your Specialty." It discusses trends, poses thought-provoking questions, and highlights AAO resources that can be beneficial in one's orthodontic practice. It enlightens readers about the generations that comprise the AAO: from the "Silent Generation" (born 1925 through 1942) through the "Millennial Generation" (born 1982 and later) because "people in each generation need to know something of the life experiences, outlooks, and motivations of each of the other generations around them." Synergy can be created among the generations and is beneficial whether leading an orthodontic practice or a professional association.

The handbook also acquaints readers with the AAO's structure and governance. It takes the opportunity to recruit readers as volunteers. The leadership handbook was distributed in hard copy to all members and is available on the AAO member Web site.

RECRUITMENT AND RETENTION OF ORTHODONTIC EDUCATORS

If volunteers are the life force of the AAO, educators are the life force of the specialty. Orthodontics, like dentistry as a whole, faces a critical shortage of educators. The AAO recognized that the specialty cannot rely on outside groups or agencies to solve the problem, so it set about finding long-term, sustainable solutions. The Task Force on Recruitment and Retention of Orthodontic Faculty was established in 2006. It works with the AAO Council on Orthodontic Education and the AAO Foundation to assure the future of the specialty through an adequate pool of quality orthodontic educators.

Early recruitment efforts have netted a commitment of 60 years of teaching with an additional 40 years projected. Fellowships and monetary awards help those who desire academic careers to realize their dreams. Teaching skills are being sharpened through AAO-sponsored fellowships in the Academy of Academic Leadership. Fellows pay back their fellowship with one year of teaching.

A significant resource is offered to residents and current faculty on the AAO's Web site: a thoroughly researched white paper on grants and fellowships. A new, online clearinghouse of faculty positions was launched in 2008. It is a resource for graduates who desire an academic position and programs that have faculty positions to fill. A simple idea, perhaps, but one not executed previously, and one that takes advantage of today's technology. Yet another recruitment effort will target dental students. A presentation will inform them of the positive aspects of an academic career, sowing seeds at an opportune time. Important information will be gathered through annual entry and exit surveys of orthodontic faculty. Data will help identify factors that drive decisions to launch or conclude a teaching career.

Retention of orthodontic faculty, an equally important endeavor, is currently under investigation. Of specific concern is support for mid-level and senior faculty. The Task Force on Recruitment and Retention of Orthodontic Faculty is studying the current faculty practice models and intends to develop a white paper on options to augment faculty salaries and benefits.

The AAO has invested more than \$4 million in creating sustainable, long-term solutions to the shortage of orthodontic educators. Sister organizations are invited to monitor the AAO's continued efforts in recruitment and retention of educators, a universal concern for the dental profession.

RELATIONSHIPS WITH ADA AND OTHER HEALTHCARE ORGANIZATIONS

The AAO is in active dialogue with the ADA and all of the dental specialty organizations, working together on common issues and seeking ways to come together to enhance quality care for our patients. These relationships are moving in a positive direction, which benefits dentists and patients.

One tangible outcome was the February 2009 combined meeting of the AAO and the American Academy of Periodontology, "Two Specialties, One Goal." Another is working in conjunction with other dental specialties to develop a set of codes to interface with electronic claims submissions.

AAO leaders regularly meet with counterparts at the ADA and other dental and healthcare organizations. Meetings provide a forum to share information or discuss issues of mutual concern. What affects one group will likely affect others. The AAO recognizes the importance of working from within the system to affect positive change. Many AAO members are active on ADA councils and the ADA House of Delegates, as well as in state dental associations.

AAO'S ROLE IN INTERNATIONAL ORTHODONTICS

The AAO has experienced positive effects from globalization. Its role on the stage of the international orthodontic community continues to grow. Presently, approximately 18% of AAO member dentists reside outside of North America. International members will contribute to the AAO's continued growth.

The AAO reaches out to international orthodontists and societies. For example, in 2008 the AAO was represented at the Asian-Pacific Orthodontic Congress in Bangkok and at the European Orthodontic Society meeting in Portugal. The AAO was present at numerous orthodontic society meetings in individual countries in 2008, including Egypt, Lebanon, and Greece. The AAO looks forward to the 2010 meeting of the World Federation of Orthodontists (WFO) in Sydney as well as the 2015 WFO meeting in London.

Associations like the AAO will play pivotal roles in harmonizing global orthodontic standards. The AAO will strive to have a voice in the accreditation of international orthodontic programs, should the Commission on Dental Accreditation choose to consider accreditation of such postdoctoral programs.

ADVOCACY

One of the association's most important functions is advocating for the specialty, AAO members, and patients at the federal level. The AAO retains a firm in Washington, DC, to monitor potential legislation and regulatory activity that could affect the way AAO members practice, as well as issues pertaining to access to quality orthodontic and dental care. Health care, HIPAA, ergonomics, and small business regulations are among the issues closely monitored by the AAO. Formal groups and individual members contribute to advocacy.

An annual Washington, DC, conference on governmental affairs, sponsored by the AAO Council on Government Affairs (COGA) has evolved to reflect the AAO's anticipatory leadership style. The 2009 conference has a new name, a new format, and a sharper focus on making the AAO's voice heard. The Professional Advocacy Conference will walk attendees through the legislative process and, with instruction from members of Congress, teach them how to properly conduct meetings with legislators. Attendees will immediately put their new skills in action and lobby their legislators on Capitol Hill. Attendees will include members of COGA, the AAO Political Action Committee (AAOPAC) Board, the AAO Board of Trustees, and individual volunteer members who are enthusiastic about advocating for the orthodontic specialty.

COGA members take an active role in meeting with legislators throughout the year. They are often called upon to testify before congressional committees or subcommittees. COGA is creating teams of experts who will make themselves available to testify at a moment's notice.

Another important component of the AAO's ongoing efforts is the Key Contact Program, made up of AAO members who volunteer to be the main point of contact with their federal legislators. Volunteers are encouraged to develop relationships with their senators and representatives so that they can make their views known when pending legislation could affect members' practices and their ability to deliver the highest quality of care to patients. The AAO provides guidance to these volunteers on talking points, protocol, and the legislative process in general. The online Legislative Action Center permits members of the Key Contact Program, as well as AAO members in general, to

quickly correspond with their representatives and senators.

The AAOPAC supports candidates, regardless of party affiliations, whose views are consistent with the goals of the AAO. Advocacy goes beyond merely writing a check. AAOPAC representatives meet with legislators to express opinions on what can help AAO members provide affordable, high-quality care to patients.

The AAO's lobbying firm helped prioritize the AAOPAC's finite funds and advised the most appropriate candidates to support in the 2008 elections. The vast majority of AAOPAC-supported candidates won their races. The AAO is poised to develop deeper bipartisan relationships and will continue to have a voice in legislative affairs due to efforts of the AAOPAC.

The AAO has taken positions on access to care. Recognizing that access can be limited by geographical distribution of orthodontic practices, the AAO actively supports and encourages members to volunteer in underpopulated regions and provide orthodontic services. State licensing requirements that determine freedom of movement for healthcare professionals can be a detriment to orthodontists seeking to practice in underserved regions of the country. Therefore, the AAO favors exploration of reciprocal state licensing or licensing by credentials.

AAO members collectively provide more than \$62 million in pro bono services to patients in need, according to a recent survey. The AAO has endorsed, and is a major supporter of the Virginia Brown Community Orthodontic Program, also known as Smiles Change Lives. Local chapters match volunteer orthodontists with children whose families cannot afford orthodontic treatment.

It is the AAO's position that public funding for those who lack financial resources should be directed toward primary oral health care, which is critical to an individual's health and well being.

With respect to orthodontic care and government resources, the AAO believes that financial support should be directed to those patients who exhibit the greatest need, such as young people with debilitating malocclusions, cleft palates, and other craniofacial deformities.

The AAO believes that decisions about where to focus resources are best left to individual states. Being closer to the situation, states are in a better position to understand the unique needs and circumstances of the underserved within their borders. To help guide state regulators and insurers, the AAO developed a position paper on the issue of maximum insurance benefits for orthodontics.

Advocacy in its many forms will continue to occupy much of the AAO's attention and resources.

A BRIGHT FUTURE

The AAO is optimistic about its future and that of sister organizations. Attention to oral health is gaining its rightful place in U.S. healthcare consciousness. The AAO supports and will continue to work toward making quality orthodontic care available to those it will benefit. In the United States, AAO support will include, but not be limited to: the freedom of choice in dental healthcare providers; fee-for-service dental care; orthodontic insurance coverage as a benefit of employment, with direct reimbursement as the preferred plan; self-referred access to specialists; private and public funding that promote quality orthodontic care; and the retention of tax deductibility of dental healthcare benefits, including orthodontic care.

Collective efforts of all affected individual practitioners and their respective associations will ensure good dental health for patients in the years ahead. ■

The AAO has invested more than \$4 million in creating sustainable, long-term solutions to the shortage of orthodontic educators.

ORAL AND MAXILLOFACIAL PATHOLOGY

QUALITY DIAGNOSTICS FOR THE PRESENT AND THE FUTURE

Valerie A. Murrah, DMD, MS, FACD

ABSTRACT

The American Academy of Oral and Maxillofacial Pathology (AAOMP) has 619 members and 276 fellows. Oral and maxillofacial pathologists are uniquely qualified by training to combine expertise in histo-pathologic diagnosis, clinical diagnosis, and treatment. The majority of oral and maxillofacial pathologists are academicians, and optimal education of students of all types is a major focus of the specialty. Oral pathology is an important bridging specialty between dentistry and medicine, and strong links exist between it and pathology, otolaryngology, and dermatology, among others. Patient education is also important to the specialty, and information to assist patients is a critical part of the AAOMP Web site. In research and patient care, the main focus has been on oral cancer, and the specialty continues to emphasize that dentistry not lose sight of its role in combating malignancy. The organization has worked most recently to increase liaisons among both medical and dental sister organizations to improve the healthcare climate for all.

Oral and maxillofacial pathology is that specialty of dentistry that focuses on the diagnosis of lesions of the oral and maxillofacial regions. The practice of oral and maxillofacial pathologists includes diagnosis and treatment of patients with soft tissue and osseous lesions, diagnosis of tissue specimens, and research concerning diseases that affect the oral cavity.

The oral and maxillofacial pathologist (OMFP) undergoes a three-year period of training in the specialty following dental school. This training includes a significant period of time in a hospital setting, studying anatomic pathology (surgical pathology and autopsy) of the entire body and aspects of laboratory medicine, including hematopathology, microbiology, and clinical chemistry.

Following a residency or graduate program that is accredited by the Commission on Dental Accreditation, a candidate is eligible to sit for the board certification examination. This is a two-day examination administered by the American Board of Oral and Maxillofacial Pathology (ABOMP) that covers all aspects of the applicant's training. Upon successful completion of the examination, the candidate is awarded diplomate status. The board's goal is to serve the public by credentialing only those OMFPs that display expert knowledge of the field. Currently, there are 249 active diplomates of the ABOMP. The ABOMP is diligent in maintaining the rigor of the examination process and is currently developing a recertification process to meet the credentialing needs

of hospitals and third-party payers. In addition, all diplomates must meet specific continuing education requirements for renewal of their registration, annually.

The professional specialty organization for the OMFP is the American Academy of Oral & Maxillofacial Pathology (AAOMP), with offices in Wheaton, Illinois. There are currently 619 members of the AAOMP and 276 fellows. A fellow is a member who has passed a specially designed examination, usually in the last year of his or her training program. This examination frequently serves to provide preparation for the more challenging board certification examination to be taken later.

The AAOMP sponsors an annual meeting for the purpose of providing continuing education, opportunities to network and socialize, and as a forum to address important issues relevant to the profession. Its Web site, www.aaomp.org, addresses issues of relevance to members of the specialty, other healthcare organizations, and the public. On this Web site, the public are able to access information about a number of common oral diseases and professionals are able to contact diagnostic laboratories in specific locations. Information about the annual



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meeting and links to related organizations are also resources available on the site. The Executive Council of the AAOMP is the governing body for the organization, and its members are listed as well.

Oral and maxillofacial pathology is a bridge specialty in that it incorporates both medical and dental training, including substantial interaction with physician pathologists throughout the years of training and subsequently in academic and private practice. In addition to contact with physician pathologists, the oral and maxillofacial pathologist frequently has significant contact with otolaryngologists concerning the diagnosis and management of patients with head and neck malignancy and premalignancy and with dermatologists concerning the diagnosis and management of vesiculo-ulcerative disorders, among others. Due to the spectrum of autoimmune conditions that may affect the oral, head, and neck regions, OMFPs may also interact frequently with clinical immunologists.

The specialty of oral and maxillofacial pathology is mobilizing to address changes in health care by increasing the number and strength of liaisons with sister organizations in both dentistry and medicine. The AAOMP is formally affiliated with the American Board of Pathology, sharing headquarters in Tampa, Florida with our physician counterpart. In addition, the AAOMP is an active participant in the Intersociety Pathology Council, an information society for all pathology organizations

in the United States and Canada. The AAOMP has recently established a liaison with the College of American Pathologists, the physician pathology organization with the strongest political lobbying ability in the U.S.

In dentistry, the AAOMP has begun more active participation with collaborating organizations that seek to promote common interests of the component groups, including the Organized Dentistry Coalition and the organization of Dental Specialty Groups. We have also worked to meet with the major officers of the American Dental Association on an annual basis to raise consciousness regarding issues of concern to our specialty and to promote solidarity with our parent organization. Through these liaisons, we hope to more effectively address issues of access to care, appropriate reimbursement, the changing landscape of education and changes in technology that will affect the way we practice. Our academy has also recently established an ad hoc Committee on Outreach and Community Service to more directly focus on the needs of the underserved.

EDUCATION AND WORK SETTINGS

The majority of OMFPs are academicians, and optimal education of both undergraduate and graduate dental students is a major goal of our specialty. It is imperative that all dentists become

Oral and maxillofacial pathology is a bridge specialty in that it incorporates both medical and dental training, including substantial interaction with physician pathologists throughout the years of training and subsequently in academic and private practice.

well-educated concerning malignancies that may develop in the oral and maxillofacial regions because the dental profession may thereby enhance patient longevity and quality of life. In addition, the OMFP provides substantive education to all dentists regarding systemic conditions that may arise in the oral cavity, including the use of appropriate diagnostic modalities, as well as appropriate management and referral practices. Education in oral and maxillofacial pathology frequently comprises 60-90 didactic course hours in the undergraduate dental curriculum and many advanced education programs also require, at minimum, a core course in oral and maxillofacial pathology. Clinical education is an additional important component of the curriculum, encompassing diagnosis and management of lesions of specific patients.

In dental academics, as well as in as in clinical and laboratory practice, OMFPs have special liaisons with our sister diagnostic specialty, oral and maxillofacial radiology, and all of the surgical specialties, including oral and maxillofacial surgery, endodontics, and periodontology. In fact, it was the periodontists who worked to establish the specialty of oral and maxillofacial pathology. Clinical education of other members of the dental team, particularly dental hygienists, is also a major emphasis of academic OMFPs, as these members of the dental team are

frequently in a position to be the first to detect clinical abnormalities.

Currently, OMFPs are working with other specialties to write "foundation knowledge" guidelines for the undergraduate DDS student through the American Dental Education Association (ADEA). In the area of education, OMFPs are also adamant that as the concept of the mid-level healthcare provider continues to be defined, attention is given to requiring substantive training in oral and maxillofacial pathology in the respective educational programs mandated to obtain credentialing.

Millions of people in the U.S. are affected by soft tissue and osseous disorders of the oral and maxillofacial regions. Common lesions seen in patients referred to OMFPs include lichen planus, candidiasis, herpes simplex, aphthous ulcers, dysplasia, and oral malignancies, with squamous cell carcinoma representing the most common malignancy encountered. Every hour, approximately four people are diagnosed with oral cancer. One in four will die of it.

People are now living longer with HIV and cancers of varying types, more people are receiving organ and tissue transplants, and more people are living with diabetes mellitus, all of which involve elements of immunosuppression. With the rise in the number of people living in immunocompromised states, OMFPs are encountering increasing numbers of lymphomas. Early in the course of the disease, lymphomas may present in extranodal locations in the oral, head, and neck regions. OMFPs, therefore, interact on a continuing basis with oncologists and participate regularly on tumor boards of hospitals, in order to participate in a team approach to the management of oral, head, and neck malignancies.

Laboratory practice is a major pursuit of many OMFPs. In this setting, oral pathologists perform the microscopic

interpretation of biopsies from the oral and maxillofacial area submitted by dentists, dental specialists, and physicians. OMFPs are uniquely trained to diagnose biopsy specimens removed from the jawbones, oral soft tissues, and perioral skin, since they are the only pathologists who have the comprehensive and highly specialized training in both dentistry and pathology that facilitates their understanding of the particular characteristics of oral and maxillofacial disease. For example, an awareness of the embryological processes of odontogenesis is essential for the accurate diagnosis of odontogenic tumors of the jawbones, while knowledge of the embryologic development of the maxillofacial processes is essential for proper diagnosis of fissural cysts.

In addition, there are many inflammatory conditions unique to the oral cavity that are secondary to dental infection and the presence of dental appliances. A number of these benign reactive conditions can be mistaken for malignant processes by pathologists who do not have specific training in maxillofacial disease. Due to the unique expertise of the OMFP in histopathologic interpretation of the maxillofacial regions, a major goal of our specialty is to urge all surgical specialists in dentistry to use our laboratory services. The laboratories of OMFPs are certified by CLIA (Clinical Laboratory Improvement Amendments) inspectors, similar to all medical laboratories, and operate according to identical rigorous federal and state guidelines.

EDUCATION AND RESEARCH

OMFPs are great believers in quality public education as a means of aiding in the fight against oral disease. We are, therefore, active in community oral

cancer awareness programs, oral cancer screening programs, and tobacco cessation education programs. Many OMFPs have actively served the American Cancer Society for years in its ongoing quest to combat malignancy. In the arena of professional continuing education, OMFPs are active in programs for dental study clubs and at the major dental meetings across the country, as well as internationally. As our population continues to age, we hope to draw attention to the special needs of the geriatric population and to work to ensure that those needs are met in a timely way. Educational programs, for both seniors and for staff of long-term care facilities, are matters that merit particular focus for OMFPs, both now and in the future.

In the research arena, OMFPs study a variety of questions, including those involving the molecular and genetic basis of disease, clinical diagnosis and management of specific diseases in patients, and educational issues, such as the appropriate components of a thorough head and neck examination in the dental office. A particular area of emphasis in the past few years has been that of highlighting the problems with performing surgical procedures in the mouth on those patients who have been taking bisphosphonates. A research group from our academy addressed the issue with our physician colleagues in a review article published in the *Annals of Internal Medicine* in May 2006. Another area of active research and publication has been the evaluation of new oral cancer screening and early detection techniques.

Oral cancer research, on both basic science and clinical levels, as well as translational research between these two realms, has been a special area of interest for OMFPs over the years. The field of salivary diagnostics is also

gaining increasing attention in oral pathology circles. Working to emphasize the need for more research funding through the National Institute of Dental and Craniofacial Research has been a critical area that has been addressed by OMFPs working through the American and International Associations for Dental Research. We are delighted to see that there is some promise in this area in the recent stimulus package from the federal government. In recent years, a number of OMFPs have served the profession by membership on the Council of Scientific Affairs of the American Dental Association.

In summary, our clinical practitioners, researchers, educators, and microscopic diagnosticians collaborate with other dental and medical professionals to advance oral health care. OMFPs possess the unique training to:

- Efficiently address both diagnosis and treatment of oral disease
- Rapidly and reliably establish the critical connection between oral disease and systemic disease
- Combine expertise in histopathologic diagnosis, clinical diagnosis, and treatment

We seek to work together with other specialties of both dentistry and medicine to establish a more compassionate, user-friendly healthcare system that delivers a high degree of excellence to all patients in an ethical manner with a high level of confidentiality. ■

It is imperative that all dentists become well-educated concerning malignancies that may develop in the oral and maxillofacial regions because the dental profession may thereby enhance patient longevity and quality of life.

THE AMERICAN ACADEMY OF PEDIATRIC DENTISTRY AND THE SPECIALTY OF PEDIATRIC DENTISTRY

Beverly A. Largent, DDS, FACD

ABSTRACT

Founded in 1947, the American Academy of Pediatric Dentistry (AAPD) is a not-for-profit membership association representing the specialty of pediatric dentistry. The AAPD's 7,500 members are primary oral health care providers who offer comprehensive specialty treatment for millions of infants, children, adolescents, and individuals with special healthcare needs. The AAPD also represents general dentists who treat a significant number of children in their practices. As advocates for children's oral health, the AAPD develops and promotes evidence-based policies and guidelines, fosters research, contributes to scholarly work concerning pediatric oral health, and educates healthcare providers, policymakers, and the public on ways to improve children's oral health. The academy's philanthropic arm, Healthy Smiles, Healthy Children: The Foundation of the AAPD, advances the AAPD mission through the support and promotion of education, research, service, and policy development.

Founded in 1947, the American Academy of Pediatric Dentistry (AAPD) is a 7,500-member association representing the specialty of pediatric dentistry. Pediatric dentists are primary care providers who offer comprehensive specialty treatments for infants, children, adolescents, and patients with special healthcare needs. The AAPD also represents general dentists who treat a significant number of children in their practices. As the recognized authority on pediatric oral health care, the AAPD develops and promotes evidence-based oral health policies and clinical guidelines, advocates for children's oral health care before legislatures and government agencies, educates parents, guardians, and other caregivers about children's oral health care; and provides continuing professional education for pediatric dentists and general dentists who treat children.

The specialty was previously called "pedodontics," but was officially changed to "pediatric dentistry" in 1985.

The AAPD offers a variety of services to its members including:

- Learning opportunities at seven to eight continuing education courses each year in addition to the annual session, including an Annual Symposium on a major clinical issue in pediatric dentistry such as trauma, special needs children, prevention, sedation, pulp therapy, or early childhood caries
- Subscriptions to two scholarly journals, *Pediatric Dentistry* and the *Journal of Dentistry for*

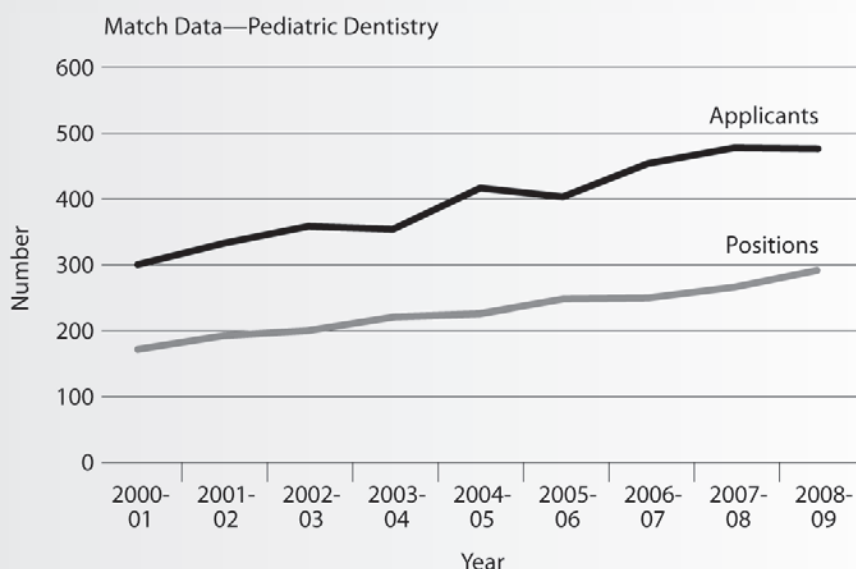
Children—the latter is available exclusively online and both are available online in a full text searchable format

- Subscription to the bi-monthly magazine *Pediatric Dentistry Today*
- Participation in the AAPD's development of oral health policies and clinical guidelines for pediatric dentistry that are continuously reviewed, updated, and expanded for consistency with current scientific evidence
- Endorsed insurance programs for professional liability, business operations, life, auto, and disability
- Technical assistance on dental and medical insurance and coding matters, including the publication *AAPD Coding and Insurance Manual 2009-2010*
- A "Find a Pediatric Dentist" function on the AAPD Web site to assist parents and guardians, plus both a print and an online directory for members
- Educational brochures for patients and their families and caregivers
- A Web-based clinical photo library for presentations, patient education, and research
- Endorsed credit card processing program for members' practices



Dr. Largent is the President of the American Academy of Pediatric Dentistry; the academy's Web site is at www.aapd.org

RIISING TREND IN APPLICANTS AND NUMBER OF POSITIONS IN ADVANCED TRAINING IN PEDIATRIC DENTISTRY.



- Endorsed medical transportation program for dentists who have been injured while traveling and who wish to be treated in their hometown facility (many pediatric dentists take time each year to travel to and provide oral health care to children in developing nations)
- Endorsed program for placement of print and web Yellow Pages® advertisements

Healthy Smiles, Healthy Children, The Foundation of the American Academy of Pediatric Dentistry (HSHC), was established in 1987 as the AAPD's affiliated charitable foundation to support and promote education, research, service, and policy development that advance the oral health of infants and children through adolescence, including those with special healthcare needs. HSHC's endowment is used to assist predoctoral students and postdoctoral residents in pediatric dentistry and support research projects and fund meaningful education programs that benefit both the profession and the public.

TRAINING, WORK SETTING, AND LEADERSHIP

In 2006, there were 5,513 professionally active pediatric dentists, including private practice pediatric dentists (4,807), educators, administrators, researchers, armed forces dentists, interns, and residents.

There were 316 first-year pediatric dentistry residency positions available in the United States for the 2006-07 academic year. This represents a 75% increase in first-year pediatric dentistry

residency positions since 1997. In terms of the number of positions available, among dental specialties pediatric dentistry now ranks second only to orthodontics. There were 78 pediatric dentistry residency programs for the 2008-09 academic year. According to MATCH data, pediatric dentistry programs are among the most competitive dental specialty programs. Pediatric dentists must spend two to three additional years in residency training after dental school.

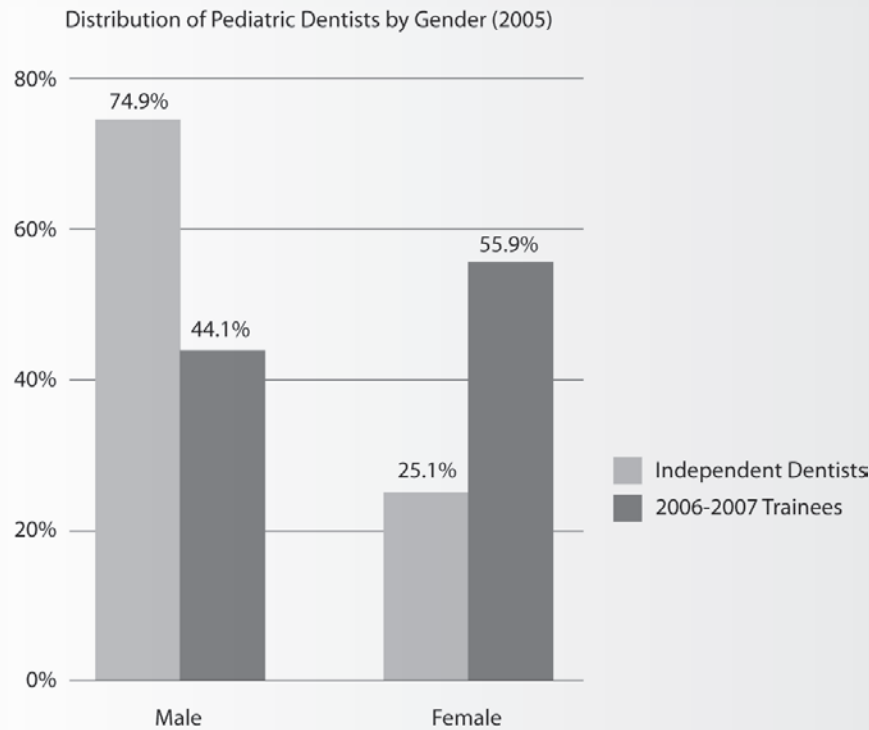
Pediatric dentistry has always attracted women at a higher rate than general dentistry or other dental specialties. Interestingly, the first dentist who is documented as having a dental practice limited to children was M. Evangeline Jordan around 1917. By the late 1990s, 28% of AAPD's membership was female. At present, 44% of all AAPD members and 55% of all pediatric dental residents are female. In fact, the majority of trainees in pediatric dentistry residency programs for each of the past ten years have been women.

Also, in May 2008, the AAPD welcomed me, a private practitioner in Paducah, Kentucky, as its first female president.

Pediatric dentists primarily work in a private practice setting, with a trend towards a greater percentage of incorporated practices and group practices as compared to general dentists.

One significant investment made by HSHC has been in the area of leadership development. For years, key leaders within the AAPD and HSHC discussed the urgency of nurturing and supporting leadership within the ranks of the AAPD's membership. Leadership, with its many different connotations, embodies the skills and vision necessary for effective representation on AAPD and HSHC governance bodies, involvement in organized dentistry, and contributing to personal development. The AAPD Leadership Institute was the innovation of AAPD past president and current HSHC Trustee Dr. David K. Curtis and has become part of AAPD's and HSHC's vision for the future.

Self-SELECTION OF FEMALE DENTISTS INTO PEDIATRIC DENTISTRY



Pediatric dentistry has always attracted women at a higher rate than general dentistry or other dental specialties.

HSHC partnered in this endeavor with the Kellogg School of Management at Northwestern University and Ultradent Products, Inc. The Kellogg School of Management is an institution that embodies an outstanding academic reputation, world-renowned faculty, and a host of innovative programs with extensive experience in customizing programs for various groups, including numerous non-profit organizations. Ultradent Products, Inc. endowed the AAPD Leadership Institute through a \$1 million gift to HSHC.

The AAPD Leadership Institute trains AAPD members with the necessary skills to shape their philosophical and operational approaches to maximizing leadership potential and performance. The first cohort of AAPD members and corporate representatives, Leadership Institute I, met at Kellogg in December from 2004-06. The second cohort of 37 individuals, currently comprising Leadership Institute II, is meeting from 2007-2009.

As just one exciting recent example of this outreach, in 2007 the AAPD partnered with the National Council of Juvenile and Family Court Judges to address the lack of dental care that foster children receive when in the care of the state. AAPD leaders have made presentations to judges at several conferences addressing the importance of oral health, its effect on children development, and oral health issues commonly seen in child abuse and neglect cases.

THE NEED FOR CARE

Each day, pediatric dentists see thousands of children suffering from serious tooth decay that has a direct impact on their ability to eat, learn, sleep, and live. The February 2007 death of 12-year-old Maryland child Diamonte Driver from an untreated tooth infection drew greater attention from federal and state policymakers to children's oral health access and problems in the Medicaid system. The AAPD's efforts to reform Medicaid dental programs are described below. Underlying the AAPD's effort is not only the tragedy of this one child but also the national data indicating that dental caries is not a cured or vanishing disease—especially among children of low-income families. The 2000 U.S. Surgeon General's report on oral health in America highlighted that dental disease is the leading childhood disease—five times more common than asthma and 20 times more common than diabetes. A 2007 report by the Centers for Disease Control and Prevention reveals that the rate of preschoolers with cavities has spiked to an alarming 28%, which translates into more than one in every four children between the ages of two and five. A September 2008 report by the U.S. Government Accounting Office indicates that relatively few children covered by Medicaid receive recommended

dental services and that inadequate reimbursement is the most significant reason why dentists do not participate in Medicaid.

These challenges have led the AAPD to greater collaboration with the American Academy of Pediatrics (AAP). For example, these organizations developed joint clinical guidelines on sedation in 2006. The AAP devoted a one-day session at their 2008 annual meeting to oral health. Pediatric dentists can become affiliate members of AAP, and many are quite active in the AAP's Section on Pediatric Dentistry and Oral Health. Interestingly, in recent years physicians have felt the pinch of inadequate reimbursement in both Medicaid and Medicare, so they better understand the frustrations that many dentists have had for years with the Medicaid program.

ACCESS TO CARE

Major AAPD initiatives are focused on access to care. AAPD public policy advocacy and media initiatives have an overall aim of improving access to children's oral health care. A few critical areas are summarized below.

REFORM OF MEDICAID DENTAL PROGRAMS

Pediatric dentists continue to serve a considerable percentage of children who are insured by Medicaid. The AAPD advocates that states should set market-based payment rates and pursue administrative reforms such as the programs in Michigan (Healthy Kids Dental), Alabama, and Tennessee identified in the ADA's 2004 Access White Paper. Through the AAPD's Child Advocate, Dr. James J. Crall, the AAPD continuously monitors state Medicaid dental program performance and publicizes reforms that work. Dr. Crall testified twice before Congress in 2008, at the request of the Domestic Policy Subcommittee of the House Oversight Committee. At the Subcommittee's September 23, 2008, Oversight Hearing on Reforms to Pediatric Dental Care in Medicaid, Dr. Crall stated: "Access

to dental services for children covered by Medicaid is a significant, chronic problem." The AAPD also maintains a Pediatric Dental Medicaid and SCHIP Advisory Committee that works with the Centers for Medicare and Medicaid Services and state dental Medicaid managers to promote effective changes in the program.

PEDIATRIC DENTAL WORKFORCE

In the mid 1990s, the AAPD identified the shortage of pediatric dentists as a major barrier to access to children's oral health care and subsequently worked to add pediatric dentistry to the federal health professions training Title VII program. Seed money provided via this program has led to the dramatic increase in residency positions described above.

DENTAL HOME/AGE ONE VISIT

The AAPD believes that each child needs to see a dentist by the child's first birthday and establish a dental home, something many children lack—especially those in the Medicaid and SCHIP programs. A dental home signifies that children's oral health care is delivered by dentists to children through an ongoing relationship that is comprehensive, continuously accessible, coordinated, and family oriented.

A section of the AAPD Web site is devoted to this effort (see www.aapd.org/dentalhome). The Wisconsin Dental Association and the AAPD have jointly produced an educational DVD instructing general dentists on performing an infant oral health exam and anticipatory guidance; this will be disseminated to all state dental associations in 2009.

HSBC is also in the third year of a grant with the Maternal and Child Health Bureau of the Health Resources and Services Administration for "Improving Perinatal Oral Health." This grant aims to expand availability of prenatal oral health care, expand

availability of infant oral health care, and raise public awareness regarding dental care for pregnant women and newborn babies. As part of this project, a "New Parent Kit" was distributed for pilot testing and evaluation at the University of Washington, University of Tennessee, Ohio State University, and Columbia University.

HEAD START DENTAL HOME INITIATIVE

The most significant current project related to the dental home/age one visit initiative is the AAPD's five-year, \$10 million contract with the Office of Head Start to connect over a million Head Start children nationwide with dental homes. The AAPD will create a network of pediatric and general dentists that will provide dental homes for children enrolled in the Head Start and Early Head Start programs. This project was officially kicked off at a national press conference in February 2008 at the Edward C. Mazique Parent & Child Center (a Head Start Center) in Washington, DC. Although the initiative will not directly fund dental services, teams of dentists and Head Start personnel will be trained in optimal oral healthcare practices and ways to develop partnerships within their communities. The AAPD will provide education and training to dentists and their staffs to help overcome challenges that many Head Start families face in trying to obtain dental care for their children. Head Start personnel will provide many essential "case management" functions and work closely with dental practices. As the opening speaker at the press conference, Congressman Elijah E. Cummings (D-MD) delivered a personal message about his own experience with tooth decay—how he and many others as children learned to live with toothaches.

A dental home signifies that children's oral health care is delivered by dentists to children through an ongoing relationship that is comprehensive, continuously accessible, coordinated and family-oriented.

He called the Head Start Dental Home Initiative an opportunity to help to make a difference in the lives of children and offer a place for families to turn to in moments in need.

Additional educational resources for this project will be supported via HSHC, which recently received a \$600,000 educational grant from Johnson & Johnson Healthcare products, a long-standing supporter of Head Start.

Each state has a pediatric dentist team leader and leadership and mentorship committees to carry out this initiative. For more information on the Head Start Dental Home Initiative, including contacts in each state, see www.aapd.org/headstart.

RELATIONS WITH EDUCATION AND GENERAL DENTISTS

HSHC has placed special emphasis on developing the future cadre of pediatric dental faculty members. In 2007, pediatric dentist Dr. Jerome B. Miller of Oklahoma City donated \$1 million to

establish a donor-advised Pediatric Dental Education and Leadership Fund. In honor of Dr. Miller, a "For the Kids Award" is sponsored by Procter & Gamble/Crest/Oral-B to annually recognize an up-and-coming clinician, researcher, or academician in pediatric dentistry for his or her efforts directed to children's oral health and welfare.

The AAPD and HSHC (through the Pediatric Dental Education and Leadership Fund noted above) have also, for the second year in a row, jointly funded five scholarships for the Master Clinician Program. This program is designed to help experienced clinicians make a mid-career change from private practice to full- or part-time teaching in dental schools or residency programs. Selected candidates will attend the Academy for Academic Leadership's Institute for Teaching and Learning in the Health Professions Program and will have the opportunity to attend the AAPD's Comprehensive Review of Pediatric Dentistry course in the location of their choice. See www.aapd.org/hottopics/news.asp?news_id=887 for more details.

On the advocacy front, thanks to the leadership of AAPD's Congressional Liaison and Jackson, Mississippi, pediatric dentist Dr. Heber Simmons, Jr., on July 17, 2008, Congresswoman Hilda L. Solis (D-CA) introduced H.R. 6551. This legislation would expand authority under the current Title VII pediatric and general dentistry program to allow grantees to offer faculty loan repayment contracts of up to \$250,000 in aggregate over five years.

The AAPD maintains an active media relations campaign to respond to and recommend stories of importance, and to better educate and inform the public, concerning children's oral health care. The AAPD annually trains a cadre of media spokespersons. Pediatric dentists are frequently quoted in major media (TV, newspapers, magazines, and online

publications), especially publications devoted to children's health. See "Pediatric Dentistry in the News" on the AAPD Web site, www.aapd.org/media/pediatricdentistry.asp.

As the only age-defined dental specialty that provides a range of both primary care and specialty services, pediatric dentists have a natural liaison and common interest with general dentists. The AAPD works very closely with both the American Dental Association and the Academy of General Dentistry on a variety of matters including advocacy, continuing education, dental insurance and coding, and clinical practice policies and guidelines. For example, in the spring of 2009, the AAPD and AGD are for the second time offering a continuing education course on pediatric dentistry for general dentists.

General dentists may join the AAPD as affiliate members. Much synergy resulted from the 2003 merger of the American Society of Dentistry for Children into the AAPD. One outcome was that the AAPD established an affiliate trustee position, with voting rights, on the AAPD's Board of Trustees.

The AAPD and the specialty of pediatric dentistry look forward to addressing the challenges and carrying out the initiatives described above. For more information on the AAPD see www.aapd.org. For more information on HSHC, see www.aapd.org/foundation/default.asp. For information about the board certification process in pediatric dentistry, see the Web site of the American Board of Pediatric Dentistry, <http://www.abpd.org>. ■

PERIODONTOLOGY IN THE AGE OF INFLAMMATION

A CHANGING LANDSCAPE

David Cochran, DDS, PhD, FACD

ABSTRACT

It has been known for some time that relationships exist between periodontal disease and other medical conditions such as cardiovascular disease, diabetes, kidney disease, and rheumatoid arthritis. Recent research is demonstrating that periodontal disease is the result of host inflammatory reaction to bacterial infection. This conceptual paradigm shift has led to renewed need to educate patients about the importance of oral health and to collaborations with medical colleagues through consensus conferences where the results of emerging research are translated into practice guidelines.

The American Academy of Periodontology (AAP) estimates that three out of four Americans suffer from some form of periodontal disease, ranging from mild gingivitis to severe periodontitis. The dental community has long been aware that oral health may be connected to overall health, and that periodontal disease has been associated with other diseases including cardiovascular disease, diabetes, kidney disease, and rheumatoid arthritis. Recent research has helped to further the understanding of the specific biological mechanisms that tie periodontal disease to these other disease states, and lately, the concept of inflammation has been the focus of a growing body of evidence supporting the relationship between periodontal disease and other chronic diseases.

This emphasis on inflammation is changing the landscape of periodontics, and most periodontists consider this a paradigm shift for the specialty. The change in focus has led periodontists to think differently about how to comprehensively treat their patients and to strive to be an integral part of the overall treatment planning process. Periodontists are experts in controlling oral inflammation and therefore welcome a partnership with their dental colleagues to care for their patients more effectively and, ultimately, impact their patients' overall health positively.

BUILDING THE ROAD TO INFLAMMATION

For years dental professionals believed that periodontal disease was the result of a bacterial infection caused by the accumulation of plaque between the teeth and gum tissue. While plaque accumulation still plays a role in the development and progression of gum disease, research now suggests that the more severe symptoms of gum recession around the teeth and bone loss may actually be caused by the inflammatory response to the bacterial infection rather than the bacteria themselves.

When a tooth experiences long-term bacterial accumulation, the body will attempt to ward off the infection and prevent potential further damage through the development of an immune response. However, when bacterial plaque excessively collects in periodontal pockets, the host reacts in an effort to protect itself, but it is unable to contain the infection. Instead, it sends a message to the body, which reacts in the form of an inflammatory response, such as swollen and bleeding gum tissue. Over time, untreated inflammation can cause the gum tissue to pull away from the tooth, resulting in the destruction of the host tissue, such as connective tissue and bone.



Dr. Cochran is President of the American Academy of Periodontology. The academy's Web site can be found at www.perio.org.

Periodontists are specialists in diagnosing and treating periodontal disease. As such, they are dentistry's experts in how to best recognize and treat inflammation around the teeth, and when necessary, to remedy, repair, and rebuild the consequences of inflammation. This also means understanding and distinguishing the host's physiological response from its pathological condition. We know inflammation affects all aspects of periodontal disease treatment, and this understanding is important when considering such treatment options as the placement or repair of implants, tissue regeneration, and prevention of further disease.

Periodontology has participated in scientific research that has advanced treatment options available in dentistry. Regenerative materials and procedures have become more sophisticated, now allowing periodontists to regenerate tissue, re-grow bone, and more effectively place implants so that a patient can have and enjoy teeth or their replacements for a lifetime without negatively impacting their oral health. Periodontology is continually at the forefront of science and is supported by the American Academy of Periodontology. The academy is working to help change the landscape of our specialty in an effort to constantly improve how we achieve and maintain the health of our patients.

SUPPORTING THE SCIENCE: SUPPORTING OUR MEMBERS

Supporting our members' ongoing commitment to being the experts in the treatment of oral inflammation, understanding, and communicating about inflammation has become a strategic focus for the academy. In that spirit, the academy has undertaken a number of activities to shift the paradigm of

periodontal treatment from what was once a focus on bacterial infection to one that now focuses on the consequences of that infection: inflammation.

In January 2008, in an effort to better understand how oral inflammation as a result of periodontal disease can affect systemic health, the AAP, in partnership with Colgate, hosted a workshop on inflammation titled "Inflammation and Periodontal Diseases: A Reappraisal." The workshop brought together experts from around the world and across both the scientific and academic and the medical and dental disciplines to address periodontal inflammation, systemic inflammation and other chronic disease states, and the role of inflammation in these chronic diseases. Approximately 50 guests from relevant communities were invited to participate in the workshop.

Workshop participants discussed a wide variety of topics, including the treatment of inflammation, the biologic mechanisms of the inflammatory response, innate and acquired immune responses, and the implications of periodontal inflammation in other disease states such as diabetes and cardiovascular disease. The workshop discussions emphasized the importance of controlling inflammation in the body while acknowledging the importance of maintaining a balance between physiologic and pathological inflammatory responses. The proceedings of this workshop were published in a special supplement to the August 2008 *Journal of Periodontology*. This supplement was an important step in educating not only periodontists, but also other dental professionals and members of the medical community, about how inflammation in the mouth can negatively affect overall health. This supplement is available at www.joponline.org.

The workshop was deemed an overwhelming success by participants, and the published supplement is one of the most frequently viewed areas of the

Journal of Periodontology's Web site. This landmark event marked the beginning of the periodontists' journey to better understand the precise mechanisms of oral inflammation and the implications for treatment. Now the periodontal community faces the challenge of effectively managing inflammation to maximize the patient's overall health and well-being. Furthermore, the supplement provides a body of work that educates other dental and medical colleagues on the relationship and significance of the periodontal-systemic connection.

BRIDGING THE GAP BETWEEN MEDICINE AND DENTISTRY

As a result of the favorable outcomes of the workshop on inflammation and the special supplement to the *Journal of Periodontology*, promoting the inflammation message to pertinent audiences has become a central priority for the AAP. Working with both our dental and medical colleagues, the AAP is steadfast in its efforts to partner with other healthcare professionals in order to better understand oral and systemic inflammation to develop clinical recommendations for the treatment of our patients experiencing an inflammatory response elsewhere in the body.

In January 2009, the academy was contacted by the associate editor of the *American Journal of Cardiology*, a peer-reviewed journal with a circulation of over 30,000 readers consisting of cardiologists and other healthcare professionals interested in the science of cardiovascular health. The *AJC* editor had read the *Journal of Periodontology* supplement on inflammation and was astonished at the similarities between periodontal disease and cardiovascular disease and the role inflammation plays in the progression of both diseases. He was encouraged by the large body of research that exists suggesting a link

between cardiovascular disease and periodontal disease and by the fact that inflammation most likely plays a central part in this link.

Recognizing the public health importance of the topic and the unique position periodontists and cardiologists play in treating and managing inflammation, the *AJC* invited the AAP to collaborate on the development of clinical recommendations that would guide these professionals when treating periodontal disease and cardiovascular disease. Prominent periodontal researchers were invited to Boston in early January 2009 to meet with the top minds in cardiovascular disease and cardiovascular inflammation. This small group of experts analyzed the epidemiological evidence and peer-reviewed literature which supported the relationship between periodontal disease and cardiovascular disease and their inflammatory basis. Over the course of a day the group developed specific clinical recommendations to improve patient care. These recommendations will be published early in the second quarter of 2009, and we anticipate the clinical implications to be significant. For example, one clinical recommendation might encourage the periodontal community to screen for risk of cardiovascular disease in the periodontal office, or to ask questions about family history of a previous myocardial infarction, or to ask for a patient's Body Mass Index (BMI). Similarly, it may be recommended that cardiologists look in a patient's mouth for signs of inflammation and recommend a comprehensive periodontal evaluation which identifies inflammation and, as such, periodontal disease. These recommendations will be published in a consensus paper based on these discussions and is slated for simultaneous

publication in upcoming issues of both the *Journal of Periodontology* and the *American Journal of Cardiology*.

While periodontists recognize the strategic importance of our opportunity to work with the cardiology community, we also believe that this opportunity came about because of our strategic focus on inflammation and because of our efforts to shift the treatment paradigm for the treatment of periodontal disease away from an emphasis on bacterial plaque to an emphasis on inflammation and the inflammatory response.

The academy is currently in the process of planning future collaborations with other medical groups on other relevant topics such as diabetes mellitus. We believe that treating the inflammation that leads to periodontal disease is important not only for the oral health of our patients, but for the overall health and well-being. By partnering with other medical and dental groups, we believe that periodontists can get the message out about the importance of periodontal health and the treatment of disease in our patients by working to educate other dental and medical practitioners and specialties.

LOOKING TO OUR ORAL HEALTH PARTNERS

Periodontists understand that comprehensive oral health relies on strong partnerships among the various dental specialties and with general dentists. And, since periodontal inflammation can affect oral health as a whole, it is critical that the entire dental community be aware of the best diagnostic tools and treatment modalities and who to collaborate with in severe or difficult cases. To that end, the academy began to educate other dental specialties about the practical implications of periodontal inflammation on oral health by co-hosting a joint conference between the AAP and the American Association of

Research now suggests that the more severe symptoms of gum recession around the teeth and bone loss may actually be caused by the inflammatory response to the bacterial infection rather than the bacteria itself.

Periodontists can now regenerate tissue, re-grow bone, and more effectively place implants so that a patient can have and enjoy teeth or their replacements for a lifetime without negatively impacting their oral health.

Orthodontists. Held in February 2009, this specialty conference, titled “Two Specialties, One Goal,” aimed to bring our two specialties together to better understand the unique issues facing each dental group. At the conference, AAP presenters provided information on the implications of the new focus on inflammation for the entire dental community and how controlling periodontal inflammation can benefit patients undergoing all forms of dental treatment.

The academy looks forward to future opportunities to work with other dental professionals to further the understanding and awareness of the role of inflammation in the progression of systemic disease, and how preventing inflammation in the oral cavity has holistic health implications.

REACHING OUT TO THE PATIENT

Periodontists and the AAP have also made efforts to promote the inflammation message to consumers to increase public awareness of the periodontic-systemic link, and the importance of working with the appropriate dental professionals to maintain optimal overall health. Despite the increased amount of research and ongoing media coverage of the link between periodontal and systemic health, a recent survey conducted by the AAP showed that consumer awareness of periodontal disease is not as widespread as we would like it to be. In fact, the survey indicated that few consumers believe that periodontal disease is a health concern, despite being aware of the potential impact on overall health. Ideally, everyone should understand the importance of periodontal health as it relates to other chronic diseases and that comprehensive dental care, one that includes comprehensive evaluation and treatment for periodontal disease, can be an effective and direct way to achieve not only optimal oral care, but also improved overall systemic health.

THE LANDSCAPE AHEAD

As future research emerges, inflammation and its role in the progression of chronic disease will most likely continue to impact not only the specialty of periodontology, but the entire dental and medical community as well. As the experts in treating periodontal inflammation, periodontists will remain committed to learning how to effectively treat periodontal disease so as to reduce the inflammatory burden in the body; and as the organization representing periodontists, the American Academy of Periodontology will continue to promote what we learn to our colleagues and our patients.

More research is needed to better understand the precise biologic mechanisms behind inflammation’s role in the periodontic-systemic connection, and it is our hope that the dental and medical communities maintain collaborative relationships and open dialogue so as to develop specific clinical guidelines to help manage inflammation in our patients and prevent the onset of further disease. The AAP will work to develop complementary activities that will educate consumers about the importance of periodontal health and how that relates to optimal overall health.

In this changing landscape, periodontists remain the experts in the treatment of inflammation. As more is learned about this important concept and its profound effect on the body as a whole, the AAP’s dedication to advancing the science and to sharing our knowledge about the science in order to increase awareness will continue. It is our desire that periodontists be your preferred partner in achieving our patients’ optimal periodontal health, and subsequently, optimal systemic health.

PROSTHODONTICS AND THE AMERICAN COLLEGE of PROSTHODONTISTS

A SPECIALTY'S CONTRIBUTION TO IMPROVING ORAL HEALTH CARE

Lyndon F. Cooper DDS, PhD

ABSTRACT

Prosthodontics is the specialty responsible for restoration of individual teeth and replacement of missing teeth and supporting structures, where education and experience have been focused on esthetics, comfort, and function. The American College of Prosthodontists (ACP) has made commitments to strengthen the quality and scope of both undergraduate and postgraduate educational programs and to support prosthodontics educators. The ACP is especially involved in monitoring and evaluating emerging trends in diagnostic, product, and delivery technologies because of the rapid pace of such innovations and because these developments have significant potential for changing the way both general dentists and prosthodontists deliver prosthodontic care—the single largest segment of dental treatment.

Specialty care in dentistry benefits the health care of the U.S. population. Nine ADA recognized specialties strengthen dental care widely distributed through the excellent practice of general dentistry. Prudent attention to diverse dental needs of the public includes the referral for evaluation or treatment to these trained dental specialists.

Prosthodontics is the specialty responsible for restoration of individual teeth and replacement of missing teeth and supporting structures where education and experience has been focused on esthetics, comfort, and function—the principal characteristics desired by patients. To support the needs of general dentists and specialists, a prosthodontist possesses a strong appreciation for other disciplines and develops strong skills in diagnosis and treatment planning. This capacity to identify factors that can limit success in dental care and produce complications allows prosthodontists to plan and complete both routine and complex intraoral procedures. The specialty serves the general dental community through dental school education and continuing education following dental school. Dentistry and the public benefit from the clinical innovations and research inherent in the specialty of prosthodontics.

TRAINING

The prosthodontist typically completes a postgraduate educational program of 33 to 36 months that is accredited by the

Commission on Dental Accreditation (CODA). Competence in fixed and removable prosthodontics, dental implants, esthetics, and occlusion is reached as part of mandated standards for education and the clinical experience inherent in the patient treatments provided during an advanced education program. The American College of Prosthodontists (ACP), working together with educators in U.S. dental schools, continually evaluates the standards for specialty education in Prosthodontics and Maxillofacial Prosthetics. Outstanding educational and practice opportunities in prosthodontics are available throughout the United States.

One outcome measure of the educational opportunities offered to aspiring prosthodontists is the number of applicants to programs and the number of successful graduates. Prosthodontics has experienced a 23% increase in applications for graduate positions from 2003–2006. Outreach efforts by the ACP implemented over the last several years have increased undergraduate dental student interest in pursuing advanced education in prosthodontics. Key to this success has been an intro-



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MATTERS OF CURRENT INTEREST TO ORGANIZED PROSTHODONTICS

<i>Challenge</i>	<i>Feature</i>	<i>Organized specialty response</i>
Discipline versus specialty	a. 50% of general practice comes from prosthodontic services	1. Diagnosis-based referral (prosthodontic diagnostic index as a guide to treatment complexity) 2. Develop leadership in education
Changing expectations	a. Prosthesis quality b. Esthetics c. Dental implants	1. Embrace the dental laboratory professional (membership category) 2. Evidence-based education focused on esthetics 3. Changing educational standards to include surgical experience 4. Leading dental implant education at undergraduate level
Changing demographics	a. Increased elderly b. Increased partial edentulism c. Retreatment of the restored dentition	1. More needs to be done 2. Recognize need 3. Reinforce prevention strategies 4. Contribute to international efforts
Access to care	a. Socioeconomic diversity	1. Develop educational standards for general dentists 2. Improve prosthodontic education for the graduating dentist 3. Open discussion regarding alternative models of care delivery
Technology	a. Diagnostics b. Manufacture c. Communication	1. Increase surveillance and awareness of advancing technologies 2. Continued development of prosthodontists through leaders 3. Early evaluation and acceptance by prosthodontists 4. Adoption of technology using evidence 5. Education

spective look into the dental education offered in prosthodontics. In our landmark “Just the Facts” report, the opinions of dental students regarding the specialty and prosthodontic education were recorded. This frank appraisal has been instrumental in encouraging the participation of educators at American College of Prosthodontics Education Foundation-sponsored national symposia to enhance the value and quality of prosthodontic education at all levels. In reframing the strategic plan of the ACP in 2006, leaders representing the specialty reaffirmed this goal of continued growth.

An active task force enables greater outreach and encourages specialty training by enhancing familiarity with all aspects of the profession. The prosthodontic community has been proactive in promoting the specialty, encouraging participation, and enhancing the quality of undergraduate and postgraduate educational programs. One result of the ACP’s continual introspection and appraisal of prosthodontic education (its scope, practice, and quality) has been the growth of the specialty through increased numbers of highly qualified applicants and increased numbers of improved educational programs.

RESOURCES FOR DENTISTRY

The intent of expanding the specialty is to better serve dentistry. Toward this

end, the ACP has strived to develop a cohesive and interactive community. Central to this has been investment in the Web site, www.prosthodontics.org. Today, patients or their referring dentists can locate a prosthodontist, prosthodontists can share information concerning their profession, and prosthodontic students can obtain educational information. Additional efforts to encourage membership interactions include the grassroots effort to encourage involvement in governance. The ACP has recently succeeded in changing its governance to include direct regional representation on its Board of Directors. This representation is reinforced by section activities throughout the United States and internationally. In the past few years, a

new Web site has been launched and new functionalities are being added on a regular basis. The ACP continues to refine its member services and benefits and seeks to engage every member through diverse communication, meeting, and service opportunities.

The prosthodontic community has multiple voices that offer representation to communities of interest. The ACP, in seeking to offer a strong and visible platform for representation of the prosthodontic discipline, has invested in invigorating the Prosthodontic Forum, a coalition of representation of most organizations dealing with prosthodontic matters (restorative dentistry, fixed prosthodontics, dental implants, and occlusion). The ACP facilitates an annual meeting of forum leaders who represent over 25,000 dentists with interest in prosthodontics. These efforts contribute to integrating prosthodontic issues more directly in the wider community (both local and national) of dentistry. The forum may better serve in integrating the voice of the specialty within the broader context of the discipline of prosthodontics.

Enhancing prosthodontic education for the practicing community is a second major goal of the ACP leadership. The goal is being met through activities that include enhancement of the *Journal of Prosthodontics*, offering improved continuing education opportunities, elevating the quality of education at the Annual Session, and encouraging specialty board certification. While prosthodontists represent a minority of dentists who provide restorative dental services to the public, prosthodontics and prosthodontists represent a large portion of the undergraduate dental education curriculum and represent a

significant percentage of the clinical faculty in dental schools. This responsibility is taken most seriously by the ACP, and many ACP resources are directed to affirming quality education in prosthodontics. The ACP organizational success has resulted in travel fellowship support of faculty to attend education symposia. Typically, 50 to 60 prosthodontist educators, representing most of the U.S. dental schools, meet to consider current challenges and opportunities in predoctoral and postdoctoral education.

This year the ACP also will introduce Prosthopedia, an open-source educational resource containing a wealth of information and educational materials concerning prosthodontic topics. This electronic educational database will be enhanced with animations, videos, and complete lectures to provide opportunities for widespread dissemination of the highest level of educational content.

Our growing prosthodontic community is poised to address rapid changes in the delivery of prosthodontic care. Several changes are eminent and primary among them are the change in demographics of the U.S. population and the emergence of new technologies involving restorative dentistry. Digital dental technologies are rapidly entering daily dental practice. Recent advances in imaging technology (e.g., cone beam computed tomography and direct oral scanning of teeth) provide new clinical information that aids in treatment planning and decision making. New manufacturing methods (e.g., stereolithography and CAD-CAM) offer alternatives to producing restorations and markedly change work flow patterns in the operator and dental laboratory. These technological advances represent challenges in both the education of dental students and in the clinical patterns of current dentists and the patients they treat.

The prosthodontic community has been proactive in promoting the specialty, encouraging participation, and enhancing the quality of undergraduate and postgraduate educational programs.

THE PROSTHODONTIC FORUM MEMBERSHIP

<i>Organization</i>	<i>Membership</i>
Academy of Osseointegration	5,500
Academy of Prosthodontics	130
American Academy of Cosmetic Dentistry	780
American Academy of Esthetic Dentistry	130
American Academy of Fixed Prosthodontics	600
American Academy of Implant Dentistry	3,500
American Academy of Maxillofacial Prosthetics	277
American College of Prosthodontists	3,080
American Equilibration Society	950
American Prosthodontic Society	481
Greater New York Academy of Prosthodontics	207
The International Academy of Gnathology—American Section	150
National Association of Dental Laboratories	1,400
National Board for Certification in Dental Laboratory Technology	7,000
Northeastern Gnathological Society	159
Pacific Coast Society for Prosthodontics	135
Southeastern Academy of Prosthodontics	230

The purpose of the Prosthodontic Forum is to provide a unified voice in the representation of the discipline of prosthodontics. The forum offers a means of exchanging ideas, incentives, and information between organizations.

RESPONDING TO NEW TECHNOLOGY

A third goal of the ACP has been to promote the early adoption of valuable new science and technology. Dissemination of these concepts has been strongly supported by Web-based communication and publication, and most directly through participation. In 2007 and 2008, the American College of Prosthodontics Education Foundation, in collaboration with the University of North Carolina, sponsored prosthodontic educator conferences concerning digital technology and research in prosthodontics. Future dental care will depend on the technologies that are presently emerging.

Examples range across caries detection, cancer diagnosis, and three dimensional imaging, to new esthetic dental materials to continued improvement in dental implant treatment strategies.

Today, prosthodontists are emerging as early adopters and evaluators of new technologies, and ACP programs promote the cautiously optimistic adoption of clinical innovation. Careful evaluation and proper deployment of any clinical therapy is dependent on meeting the rigorous standards historically linked to the prosthodontist and today guided by the principles of data-driven dental practice.

At the present time, additional challenges face the ACP, its members, and the population it serves. The goals set for the specialty under topics of growth, education, and science and technology serve as important guideposts in this current stormy economic environment. Providing clear value as a community of interest and as a strong advocate for patient care in an era of diminishing resources requires a strong specialty organization. Offering true leadership to ACP members, the patients we serve, and our industrial partners is enabled by the knowledge based governance embraced by the ACP. Continued success requires communication to and from our membership. The ACP is a dynamic, empowered, and knowledgeable organization representing the specialty of prosthodontics. Serving the clinicians, educators, and students who constitute the membership, the ACP will enable improved oral health care in America. ■

DENTAL Public Health

THE “BIG PICTURE” SPECIALTY

Scott L. Tomar, DMD, DrPH and
A. Isabel Garcia, DDS, MPH

ABSTRACT

The specialty of dental public health is focused on improving oral health in the aggregate. Its principal tools include assessment, policy development, and assurance of effective outcomes. Although there are fewer than 200 active diplomates of the American Board of Dental Public Health, the effect of this specialty is large because of its impact on the interpretation of oral health issues and its influence on allocation of funding resources. Diplomates in dental public health work primarily in the federal government and academic settings, performing administrative, research, and teaching functions. In the current debate over the level, effectiveness, and distribution of health resources, dental public health can be expected to play an increasing role in helping to set the agenda.

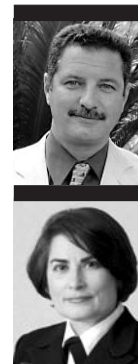
The official definition of dental public health, adopted by the American Dental Association in 1976, is “The science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts. It is that form of dental practice which serves the community as a patient rather than the individual. It is concerned with the dental health education of the public, with applied dental research, and with the administration of group dental care programs, as well as the prevention and control of dental diseases on a community basis.”

That definition, however, does not fully capture the scope of dental public health practice. Among other activities, dental public health practitioners are involved in monitoring disease levels and risk factors in populations (surveillance), epidemiological and health service research, policy development, and advocacy. Although the primary focus of dental public health is the well-being of populations, ultimately both the community and individuals benefit from effective dental public health programs and interventions. The specialty might be more accurately defined as the application of the full spectrum of the principles, science, and methods of public health to promote oral health and to prevent and control oral diseases and conditions for individuals, communities, and populations.

The Institute of Medicine, in its landmark 1988 report *The Future of Public Health*, defined public health as “what

we, as a society, do collectively to assure the conditions in which people can be healthy.” As former U.S. Surgeon General C. Everett Koop once stated, “Health care is vital to all of us some of the time, but public health is vital to all of us all of the time.” Although services such as “safety net” dental clinics for communities that lack other access to direct health care often fall within the scope of public health agencies, public health is much broader than that. Public health uses organized, interdisciplinary efforts to address the physical, mental, and environmental health concerns of communities and populations. A large part of the mission of public health is achieved through the application of health promotion and disease-prevention technologies and interventions.

The Institute of Medicine identified three core functions that were to be conducted by public health agencies: assessment, policy development, and assurance. Assessment involves monitoring of the health of communities and populations at risk to identify health



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problems and priorities. It includes activities such as public health surveillance, collecting and interpreting data, case finding, and evaluating outcomes of programs and policies. Policy development is the process by which society makes decisions about problems, chooses goals and strategies to reach them, and allocates resources. Formulation of public policies usually occurs through collaboration among community, private sector, and government leaders. Assurance involves making certain that all populations have access to appropriate and cost-effective services to reach agreed-upon public health goals. In addition to treatment services for individuals, assurance activities include health promotion and disease-prevention services. These core public health functions have been incorporated as the framework for the Guidelines for State and Territorial Oral Health Programs Association of State and Territorial Dental Directors, available at www.astdd.org/docs/astddguidelines.pdf.

The American Board of Dental Public Health was incorporated in July 1950 and several months later, dental public health was formally recognized by the American Dental Association as a dental specialty. The American Board of Dental Public Health was officially designated by the ADA House of Delegates as the national examining and certifying body for the specialty in 1951 and was recertified in 1986 and 2001.

The sponsoring organization for the specialty of dental public health is the American Association of Public Health Dentistry (AAPHD), founded in 1937. AAPHD is unique among the sponsoring organizations for the recognized dental

specialties in that its membership is open to all persons professionally involved in dental public health, including non-dentists. The diverse membership of AAPHD is a major strength of the sponsoring organization and reflects the nature of public health practice: success in addressing the complexity of public health problems requires a multidisciplinary and interdisciplinary approach.

Although the number of board-certified public health dentists has never been large, the specialty's strength is not in its numbers and its impact on the nation's oral health far exceeds its physical size. Dental public health, like public health in general, helps improve the health of populations by considering the "big picture." That requires a broad understanding of all issues in dentistry, integrative efforts for science translation, and widespread dissemination of interventions that are effective, efficient, and sustainable. To accomplish those activities, dental public health works within partnerships and coalitions to leverage resources, develops and applies the best available evidence for community-based interventions, and assesses whether the policy and programmatic interventions have the desired effects on the community's needs.

NUMBERS, TRAINING, AND PRACTICE SETTINGS

As of September 24, 2008, there were 159 active diplomates of the American Board of Dental Public Health (ABDPH). Although modest in size, that is the largest number of living active diplomates in the history of the specialty.

The most recent data on practice settings and other characteristics are from a 2001 survey of diplomats that included 125 (89%) of the 141 active diplomates at that time (Tomar, 2006). In 2001, the two most common employment settings for active diplomates were

the federal government (28.7%) and schools of dentistry (28.7%). Five diplomates were employed by county or local governments and 14 worked for state governments. Based on the 93 active board-certified dentists who responded to questions about current professional activities, diplomates reportedly spent a mean of 39% of their time on administrative duties, followed by research (25%) and teaching (16%).

Eligibility to be examined by the American Board of Dental Public Health requires graduation from a school of dentistry accredited by the Commission on Dental Accreditation or from a Canadian dental school with accreditation recognized by the commission. Graduates of schools from other countries must possess equivalent educational background, as determined by the board. In addition, board eligibility requires professional experience and advanced education in public health, including successful completion of at least two years of advanced educational preparation for the practice of dental public health and two or more years of full-time experience in the practice of dental public health sciences, which may include administration, teaching, research, or clinical practice related to dental public health. The requirement of two years of advanced preparation can be satisfied by one of three paths: (a) masters-level or doctoral-level graduate degree in an area related to the practice of dental public health, followed by a residency in dental public health accredited by the Commission on Dental Accreditation; (b) two academic years of study in a program accredited by the Commission on Dental Accreditation that leads to a masters-level or doctoral-level graduate degree in an area related to the practice of dental public health; or (c) satisfactory completion of two or more years of advanced education in an area related to the practice of dental public health from an institution outside

the United States, followed by the satisfactory completion of a residency program in dental public health accredited by the Commission on Dental Accreditation. The advanced education program's content must include the five core public health areas: biostatistics, epidemiology, healthcare policy and management, environmental health, and behavioral sciences. Applicants must satisfactorily complete one graduate level academic course in each of the five core areas of public health.

Dental public health residency programs are approved by the Commission on Dental Accreditation. They must be at least 12 months, full-time in duration or the equivalent in part-time residency, up to 24 months. The applicant's experience generally includes planned instruction, observation, and active participation in a comprehensive, organized public health program that includes training on all aspects of dental public health.

CHANGES AND CHALLENGES FACING THE SPECIALTY

One challenge that dental public health has long faced is a lack of understanding of the specialty among the public and among its colleagues in dentistry. All too frequently, "public health dentistry" is defined, even within the profession, as the provision of general dental care to the poor, usually provided in a clinic owned by a health department or community health center. Yes, those settings frequently serve as safety net providers for personal dental services in areas where the private practice of dentistry either does not exist or chooses not to participate in publicly funded programs. However important that role may be, it describes just one of the three core

public health functions of dental public health. The sponsoring organization for the specialty is developing a speakers' bureau and other initiatives to help educate current and future dental practitioners on dental public health and its unique role in protecting the health of the public.

Other challenges to the specialty stems from the lack of awareness of the skill set that a credentialed specialist brings to a position and the absence of incentives in most settings to attain board certification. Predoctoral dental education and most specialty residencies appropriately focus on clinical competence, yet the public health skills required to effectively address the oral health needs of populations are not learned in those educational settings. Unfortunately, almost no states, counties, or cities specifically seek board-certified public health dentists to fill positions as dental directors for their jurisdictions. Dentists who occupy those positions, including those who have completed some or all of the educational requirements for board eligibility, have few tangible incentives to seek board certification. It is not surprising that most board-certified specialists in dental public health work in the federal government or academia, because these settings provide professional and financial incentives for achieving diplomate status. AAPHD and ABDPH continue to explore avenues to increase the demand and incentives for achieving board certification in dental public health.

Dental public health continues to face challenges in more fully integrating with organized dentistry and with the other recognized specialties. Because dental public health is practiced primarily outside of the private practice model, it remains a minority voice within the dental profession. The relationship becomes strained at times when policies

AAPHD is unique among the sponsoring organizations for the recognized dental specialties in that its membership is open to all persons professionally involved in dental public health, including non-dentists

Because dental public health is practiced primarily outside of the private practice model, it remains a minority voice within the dental profession.

advocated by the specialty are perceived by private practitioners as threatening their business. However, there are some signs that dental public health is gaining greater recognition and appreciation within the profession. For example, The American Dental Association's Council on Access, Prevention and Institutional Relations recently formed a Public Health Advisory Committee comprised primarily of board-certified public health dentists to solicit input from the specialty on matters within its realm of expertise.

Perhaps the greatest challenge that dental public health faces is the continued high prevalence of oral diseases and conditions. Although the United States has seen dramatic improvements in dental caries rates during the past several decades—largely due to public health interventions such as community water fluoridation, the subsequent development of fluoride toothpastes, and the promotion and provision of dental sealants—the disease remains the most common chronic disease in this country. Dental public health clearly has much more work to do in bringing together its partners, developing and evaluating preventive technologies and approaches, and disseminating effective interventions throughout the population.

Opportunities

In many ways, this is a pivotal moment for dental public health. The oral health needs of underserved Americans are prominent in the national agenda. A number of legislative efforts to improve oral health are pending or underway. Unique public-private collaborations

have sprouted throughout the country, and there is increased interest and engagement in oral health among various philanthropic organizations. The health care priorities of President Obama and his administration emphasize tackling “the root causes of health disparities by addressing differences in access to health coverage and promoting prevention and public health.” To a greater extent now than at any other time in recent history, a more effective public health approach is a top priority on the national agenda. Dental public health specialists have a unique role to play in helping to ensure that this agenda is realized for oral health.

The interest in making fundamental changes to the way health care is delivered and financed in the United States is driven in response to two increasingly unacceptable and unsustainable trends. First, this country spends more per capita and as a proportion of its gross domestic product on health care than any other country in the world, yet our health outcomes are far from the top. Second, a large and potentially growing proportion of our nation's population lacks even basic coverage for health care and is essentially excluded from the healthcare system. This situation is ethically unjustifiable and compromises the ability of this country's industries to compete in the global marketplace, impacts students' performance and workers' productivity, and inefficiently uses our nation's resources. We will not be able to improve the health status of the nation only through a treatment-focused approach, and the private practice model alone is not likely to reach many geographically and culturally disenfranchised communities. Health promotion and disease prevention are essential components in reducing health care expenditures, improving the nation's

health status, and eliminating health disparities. Dental public health is the only dental specialty with the training and perspective to assess, plan, and evaluate those types of initiatives.

The primary focus of state boards of dentistry is on the delivery of high quality care by licensing dentists and dental hygienists. State boards of dentistry are not involved with broader population questions, such as the health and safety of persons who fall outside of the realm of clinical dental and dental hygiene practice. Dental public health specialists can provide that broader perspective. Although dental public health specialists are absent from virtually all state boards of dentistry, that situation will likely change as state legislatures continue to feel the pressure to address the needs of all of their constituents. For example, legislation was introduced in Florida in 2008 that would have required the state board of dentistry to include public health dentists among its members. It is just a matter of time before this type of representation becomes a common expectation.

Dental public health has been a recognized dental specialty for nearly 60 years. Board-certified public health dentists have been at the forefront throughout those years in promoting and practicing a public health approach to improving the oral health status of America. Not surprisingly, diplomates of the American Board of Dental Public Health have been among the leaders of major national initiatives to promote optimal oral health such as Healthy People Oral Health Objectives for the Nation (2000), the first report of the U.S. Surgeon General on oral health, also published in 2000, and the subsequent

National Call to Action to Promote Oral Health of (2003). The specialty is poised to work with the executive and legislative branches of the federal government to help move toward an oral healthcare system that emphasizes health promotion, disease prevention, and universal access to personal oral health care, as well as better integration with the overall healthcare system. The need for specialists with expertise in dentistry and public health will continue to grow at all levels of government and other entities responsible for the health of populations. ■

REFERENCES

- Institute of Medicine (1988). *The future of public health*. Washington, DC: National Academy Press.
- Tomar, S. L. (2006). An assessment of the dental public health infrastructure in the United States. *Journal of Public Health Dentistry*, 66(1), 5-16.
- U.S. Department of Health and Human Services (2000). *Health people 2010, with understanding and improving health and objectives for improving health* (2nd Ed). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services (2000). *Oral health in America: A report of the Surgeon General*. Rockville, MD: National Institute of Dental and Craniofacial Research, National Institutes of Health.
- U.S. Department of Health and Human Services (2003). *A national call to action to promote oral health: A public-private partnership under the leadership of the Office of the Surgeon General*. NIH Publication No. 03-5303. Rockville, MD: National Institute of Dental and Craniofacial Research, National Institutes of Health.

Public health uses organized, interdisciplinary efforts to address the physical, mental, and environmental health concerns of communities and populations. A large part of the mission of public health is achieved through the application of health promotion and disease-prevention technologies and interventions.

ORAL AND MAXILLOFACIAL SURGERY

DEFINING OUR PRESENT; SHAPING OUR FUTURE

R. Lynn White, DDS

ABSTRACT

The American Association of Oral and Maxillofacial Surgeons (AAOMS) has 6,800 practicing members and 1,000 resident members and is dedicated to the highest standards of diagnosis and surgical and adjunctive treatment of diseases, injuries, and defects involving both the functional and esthetic aspects of the hard and soft tissues of the oral and maxillofacial region. AAOMS has developed guidelines for these surgical procedures in its Parameters of Care and continues to collect current research as the foundation for practice standards in areas such as extraction of third molars and management of bisphosphonate therapy. An ongoing activity is providing anesthesia training for certification of the entire office team. Current research in nanostructures, molecular therapy, and tissue engineering hold the promise for substantial innovations in oral health care.

Seldom in the 91-year history of our specialty has there been a better time to practice oral and maxillofacial surgery. Defined by the American Dental Association as the dental specialty that “includes the diagnosis, surgical, and adjunctive treatment of diseases, injuries, and defects involving both the functional and esthetic aspects of the hard and soft tissues of the oral and maxillofacial region,” the scope of oral and maxillofacial surgery practice has evolved to include surgery of the entire face and maxillo-craniofacial complex.

The roots of the specialty run deep and may be traced back to the Civil War, when William A. Carrington, the medical director for the Confederacy, observed that dentists “plugged, cleaned, and extracted teeth,” in addition to “adjusting fractures of the jaw and operating on the mouth.” Dentists such as Thomas Gunning and J. B. Bean made revolutionary advancements in the treatment of facial fractures for the Union and Confederacy respectively.

The first American textbook devoted to oral surgery, *A System of Oral Surgery*, was published in the late nineteenth century, and by the early twentieth century, oral and maxillofacial surgeons were gaining recognition for pioneering cleft palate and other facial reconstruction surgery. Their innovations continued through the 1920s, when oral and maxillofacial surgeons developed the procedures that served as the foundation for many of the reconstructive and cosmetic surgery procedures performed today. In addition, many current trauma

techniques were first developed by oral and maxillofacial surgeons in combat hospitals during World War II, Korea, Vietnam, the first Gulf War, and our current Middle East conflict. Visit the battlefield hospitals of Afghanistan and Iraq today and you will find oral and maxillofacial surgeons repairing the faces and saving the lives of the men and women of our armed forces who have experienced traumatic head and facial injuries. So valued are their contributions that the American College of Surgeons’ guidelines for optimal care require that Level I trauma centers, those that treat the most serious and complex facial trauma patients, include oral and maxillofacial surgery services for treatment of maxillofacial injuries.

The same lifesaving procedures employed so successfully in the emergency room are also applied with similar effect in the oral and maxillofacial surgery office and outpatient surgical care center, as oral and maxillofacial surgeons provide essential procedures and surgeries that treat oral cancer and obstructive sleep apnea, repair such abnormalities as cleft lip and palate, reshape the structure of a jaw through orthognathic surgery, rejuvenate a patient’s facial features with elective facial cosmetic surgery, and improve the



Dr. White is President of the American Association of Oral and Maxillofacial Surgeons. The association’s Web address is www.aaoms.org.

daily lives of their patients through such procedures as third-molar surgery and dental implant placement. All these procedures are performed under local, conscious sedation, deep sedation, or general anesthesia, depending on the needs of the patient.

THE STRUCTURE OF AAOMS

The AAOMS membership is composed of approximately 6,800 active fellows, members, and candidates for membership, as well as more than 1,000 OMS residents. The association supports oral and maxillofacial surgery residents and encourages their involvement in the specialty by automatically granting them membership in the resident organization of AAOMS. ROAAOMS is funded to meet during the AAOMS annual meeting to discuss issues that concern them and to communicate directly with the AAOMS Board of Trustees. ROAAOMS members were also instrumental in creating the popular *OMS Reference Guide*, a compendium of essential information on basic patient care for OMS residents.

To qualify for AAOMS membership, oral and maxillofacial surgeons must have satisfactorily completed oral and maxillofacial training in a recognized training program and hold membership in a state or regional OMS society. More than 400 fellows and members currently serve on an AAOMS standing committee, special committee, or task force. Committees and task forces work throughout the year to address the practice-related issues, continuing education programs, advocacy, research, and public education matters that are defining the present and shaping the future of the specialty.

As the contemporary scope of oral and maxillofacial surgery practice has evolved, so too have the specialty's resident training programs. Currently, there are 100 recognized OMS hospital-based training programs in the United States.

While the four-year training program remains the minimum required length of OMS training, nearly 45% of residents opt for an integrated medical education with a residency of six or more years, thus completing their training with a dual DDS/MD degree. Single and dual degreed OMSs meet the same standards for OMS training based on the Commission on Dental Accreditation standards, and therefore are qualified to perform similar procedures upon completion of their residencies.

Almost 85% of oral and maxillofacial surgeons pursue certification from the American Board of Oral and Maxillofacial Surgery (ABOMS). Those who successfully complete the ABOMS oral and written examinations and other requirements receive diplomate status for ten years, after which they must recertify every ten years. ABOMS diplomates are eligible for fellowship status in the American Association of Oral and Maxillofacial Surgeons, the professional association that represents oral and maxillofacial surgeons in the United States.

Parameters of Care: Clinical Practice Guidelines for Oral and Maxillofacial Surgery, prepared by AAOMS' Special Committee on OMS Parameters of Care (ParCare), is the accepted guide to patient management strategies, including the guidelines, criteria, and standards that form the basis for accepted clinical practice. AAOMS ParCare 07 contains 11 clinical sections that define most of the work oral and maxillofacial surgeons perform:

- Patient assessment
- Anesthesia in outpatient facilities
- Dentoalveolar surgery
- Dental and craniomaxillofacial implant surgery
- Surgical correction of maxillofacial skeletal deformity
- Cleft and craniofacial surgery
- Trauma surgery
- Temporomandibular joint surgery

- Diagnosis and management of pathological conditions
- Reconstructive surgery
- Cosmetic maxillofacial surgery

Central to each of these activities is the ability of oral and maxillofacial surgeons to administer and manage anesthesia in settings that include the OMS office. Oral and maxillofacial surgeons are uniquely trained to provide anesthesia in the outpatient setting. During residency, OMSs rotate through hospital anesthesia services and function at the level of anesthesiology residents. OMS residents continue their anesthesia training throughout their residency. As a condition of membership in their state OMS society, oral and maxillofacial surgeons must undergo an on-site office anesthesia evaluation and a reevaluation every five years

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thereafter. Oral and maxillofacial surgeons who do not meet their state society's requirements are ineligible for membership in AAOMS.

AAOMS provides continuing education programs at the association's annual meetings and other educational events that address the anesthesia education needs of the entire OMS anesthesia team, including oral and maxillofacial surgeons and their anesthesia assistants. Three years ago, the association introduced the Anesthesia Update for the OMS, a day-and-a-half program held just prior to the start of the AAOMS annual meeting. During the annual meeting itself, registrants may attend simulated hands-on workshops in which a high-fidelity simulation is programmed to exhibit various emergency situations that may occur while a patient is undergoing perioperative anesthetic management. Also available are Advanced Cardiac Life Support and Pediatric Advanced Life Support certification courses.

Anesthesia assistants are also a primary focus of AAOMS' continuing education programming. Assistant programs include the Anesthesia Assistants Review Course, Advanced Protocols for Medical Emergencies in the Oral and Maxillofacial Surgery Office, and the new Dental Anesthesia Assistant National Certification Examination. The DAANCE is available to all dental anesthesia assistants that work for a dentist and hold a valid and required anesthesia permit.

In addition to a full complement of anesthesia-related continuing education, AAOMS, which is accredited by the Accreditation Council for Continuing

Medical Education and is also an ADA Continuing Education Recognized Provider, delivers continuing education that addresses every aspect of oral and maxillofacial surgery practice. Hands-on and didactic programs are offered at the association's annual meeting, the acclaimed Dental Implant Conference held each year in Chicago, and at a variety of shorter programs on coding and billing, practice management, and OMS assistant issues. AAOMS also provides its members with distance learning programs through its Web site at www.aaoms.org.

RESEARCH AND ADVOCACY FOR THE FUTURE

As we look to the future, it is clear that research, technology, and a burgeoning healthcare industry are keeping pace with the growth of the oral and maxillofacial surgery specialty. Research, such as the landmark, ten-year third-molar clinical trials conducted under the auspices of the AAOMS and the OMS Foundation, has illuminated the links between oral and systemic health. The third-molar clinical trials, for example, have shown that the bacteria that cause periodontal disease and thrive around even asymptomatic third molars, can travel through the bloodstream and contribute to systemic infections that may cause heart disease, diabetes, kidney disease, and other chronic health problems. Research further suggests that infections at the gum line surrounding the hard-to-reach wisdom teeth may be associated with preterm birth and low-birth weight infants. Additional support for these findings came from the AAOMS "White Paper on Third Molar Data," prepared by the board-appointed Task Force on Third Molar Data in 2007. Comprised of a distinguished group of oral and maxillofacial surgeons, the task force conducted an extensive literature review to develop a comprehensive and definitive report on selective clinical aspects related to the

removal of third molars. That same year, AAOMS developed a patient-specific educational supplement based on the third-molar clinical trials, which accompanied the September 28, 2007, issue of *USA Today*.

In 2003, oral and maxillofacial surgeons were the first clinicians to recognize and report an increased number of patients presenting symptoms of osteonecrosis of the jaw (BRONJ), a condition involving nonhealing exposed bone in the maxillofacial region. Further investigation revealed that many of these patients had been treated with intravenous and, to a lesser extent, oral bisphosphonates. In 2006, the American Association of Oral and Maxillofacial Surgeons appointed the Task Force on Bisphosphonate-Related Osteonecrosis of the Jaws to review the existing literature and prepare a white paper that synthesized the findings for the dental and medical communities. The report was warmly received, and AAOMS further disseminated it to members of the American Dental Association as a special AAOMS "Surgical Update." The following May, AAOMS, in cooperation with the ADA, conducted a 90-minute Webinar to acquaint dental and medical practitioners with the symptoms and characteristics of BRONJ; the risk factors for the disease among patients undergoing bisphosphonate treatment for osteoporosis; treatment options for BRONJ; and possible steps to prevent the development of this disease. More than 2,400 registrants participated in the Webinar during its initial presentation and throughout its later availability online.

As new information and findings about BRONJ became available, the AAOMS Board of Trustees understood the importance of keeping our healthcare colleagues informed of recent developments. In 2008, the Task Force on BRONJ was reconstituted and charged

with revising the original white paper to include the latest research. The revised "White Paper on Bisphosphonate Related Osteonecrosis of the Jaw" was published in January 2009 and will be included in a special supplement on BRONJ to the *Journal of Oral and Maxillofacial Surgery*. The supplement will accompany the April 2009 issue of *JOMS*.

AAOMS is a staunch supporter of the specialty's faculty and research fellows. The third AAOMS biennial Research Summit and the second Young Investigators Day program, which will be held in 2009, further spotlight the work of OMS researchers in the critical areas of tissue engineering, wound healing, minimally invasive surgery, and pain management, while fostering collaborative discussions amongst participants. The summit will provide a unique forum for young OMS researchers to collaborate, share their findings, and learn how to obtain funding support for their projects. Their work with nanostructures, molecular therapy, and tissue engineering has the potential to dramatically alter the scope of specialty practice and the way in which oral and maxillofacial surgeons treat their patients.

Since 2002, the AAOMS and the OMS Foundation have supported the Faculty Educator Development Awards as a means of encouraging promising young oral and maxillofacial surgeons to choose a career in academia within the specialty and young faculty members who have been on faculty for up to five years to continue a career in academia within the specialty. Recipients of the award are given \$30,000 annually for three years, and the institution for which they work is given a one-time presenta-

tion of \$10,000 to use in a mentoring and support of the FEDA recipient. To date, the FEDAs have been presented to 29 young oral and maxillofacial surgery faculty members. Moreover, we have been privileged to welcome support for the awards from industry partners who also see the benefits of encouraging these young academicians and researchers.

Technological developments are also helping to redefine the future of oral and maxillofacial surgery. In recent years we have seen improvements in imaging and testing equipment, surgical devices, and materials that were undreamed of a mere 20 years ago. These contributions to improved surgical techniques and procedures are redefining the way oral and maxillofacial surgery is practiced. Dental implants, for example, can be treatment planned in a more exact manner, and the implant itself has been redesigned to accept a temporary prosthesis at the time the implant is placed. Obstructive sleep apnea is another condition that has benefited from technological innovation. Oral appliances, custom crafted for the patient, have been shown to be beneficial for those cases where the patient is unable to accept the traditional C-PAP therapy. In situations where neither C-PAP nor oral appliances are helpful, oral and maxillofacial surgeons are able to provide surgical treatment, the gold standard for OSA.

Looking forward, it appears likely that health care will be a priority for the 111th Congress which convened for its first session in January 2009. AAOMS is working with its membership to educate state and federal legislators about OMS, the role of oral and maxillofacial surgeons, and the clinical care and cost benefits of OMS office-based surgery. In April 2009, AAOMS's ninth annual Day on the Hill program will bring more

than 100 oral and maxillofacial surgeons to Washington, DC, where they will meet and discuss specialty-related issues with their members of Congress.

As we prepare to meet tomorrow's challenges, the AAOMS is careful not to lose sight of what is important today. Guided by our strategic plan, the association will continue to provide its membership with programs and services that support the specialty's scope of practice, professional, and practice educational needs; dialogue with OMS and other healthcare organizations; and cooperate with third-party payers, state and federal legislators, and other groups who share AAOMS's dedication to oral and maxillofacial surgeons and the patients they serve. ■

Those who successfully complete the ABOMS oral and written examinations and other requirements receive diplomate status for ten years, after which they must recertify every ten years.

AMERICAN ACADEMY of ORAL AND MAXILLOFACIAL RADIOLOGY

Laurie C. Carter, DDS, PhD

ABSTRACT

Oral and maxillofacial radiology is the specialty concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders, and conditions of the oral and maxillofacial region. Of all the recognized specialties, it is one of two devoted almost entirely to diagnosis rather than therapeutic intervention. There are five programs in the United States and Canada offering certificates of proficiency, masters, or PhD levels of training, and all are oversubscribed with applicants. Recent significant developments in technology, especially cone beam computer tomography, have created important new services for patients at the same time increasing the need for better training and clinical guidelines.

The American Academy of Oral and Maxillofacial Radiology (AAOMR) is the professional organization sponsoring the specialty of oral and maxillofacial radiology (OMR) in the United States. In 1945, a section on Dental Roentgenology was approved by the American Dental Association. As the organization grew and evolved, it was renamed, becoming in 1988 the AAOMR. The discipline achieved specialty recognition within dentistry in 1999.

ORGANIZATIONAL STRUCTURE

The Executive Council of the academy consists of the president, immediate past-president, president-elect, treasurer, and councilors for academy affairs, communications, educational affairs, and public policy and scientific affairs, and the executive director. Much of the work of the academy is accomplished within standing and ad hoc committees, and these committees are organized and operated under the auspices of each of the four councilors.

OMR is the specialty of dentistry and discipline of radiology concerned with the production and interpretation of images and data produced by all modalities of radiant energy that are used for the diagnosis and management of diseases, disorders, and conditions of the oral and maxillofacial region. Oral and maxillofacial radiologists assist the profession by providing consultation services in the interpretation of radio-

graphs and advanced imaging studies of the oral and maxillofacial structures. Oral and maxillofacial radiologists also provide the dentist with assistance in the areas of radiation safety, radiation protection, risk management, radiographic quality assurance practices, and digital imaging consultation for systems, technique, or troubleshooting errors. The field of OMR requires frequent interaction with medical radiologists and, as such, familiarity with the broad scope of radiology is important. AAOMR provides a speaker's bureau to assist groups in identifying individuals to provide continuing education courses on specified topics. Oral and maxillofacial radiologists regularly are featured speakers at all major dental meetings and national and international imaging congresses, as well as at local study clubs and at state levels. Oral and maxillofacial radiologists have also had visible roles on many ADA councils and working groups and as liaisons with standards and regulatory groups.

TRAINING PROGRAMS

There are currently five U.S. and one Canadian accredited advanced educational programs in OMR. They are sponsored by the University of Connecticut, the University of Iowa,



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University of Missouri, Kansas City, the University of North Carolina, the University of Texas Health Science Center at San Antonio, and the University of Toronto. Programs range in length from two to five years, depending on whether the candidate is seeking the Certificate of Proficiency in Oral and Maxillofacial Radiology as a stand-alone option or whether he or she also seeks to obtain a master's or PhD degree. All programs prepare students for academic or private practice careers in OMR and qualify the graduate to sit for the American Board of Oral and Maxillofacial Radiology (ABOMR) and Toronto program graduates are also eligible to sit for the Fellowship of the Royal College of Dentists of Canada examination.

Advanced education programs in OMR include training in radiation physics, radiation biology and protection, basic biological sciences, and imaging sciences and technology. In addition, extensive and intensive training is provided in diagnostic interpretation of conventional and digital images, medical and cone beam computed tomography (CBCT), medical modeling to support implant placement, magnetic resonance imaging (MRI), nuclear medicine, ultrasonography and other advanced imaging modalities, and dictation and writing of radiology reports. To have a meaningful period of education in medical radiology, programs must provide at least three months of training in an active, hospital-based radiology department.

The ABOMR was established by AAOMR in 1979 and is administered by a Board of Directors who are diplomates elected by the active diplomates of ABOMR. The objectives of the board are to:

- Elevate the standards of OMR
- Advance optimum patient health care
- Promote and improve the quality of education and knowledge in OMR among all members of the health sciences
- Establish eligibility criteria of candidates for examination
- Establish procedures for the examination of candidates
- Certify those who meet the requirements for membership

Eligibility requirements to challenge the ABOMR exam include graduation from a dental school accredited by Commission on Dental Accreditation or other appropriate accrediting agency and evidence of satisfactory completion of an OMR advanced education program accredited by the CODA or the Commission on Dental Accreditation of Canada.

The comprehensive examination consists of written tests in radiation biology and protection, imaging physics and technique, and radiographic interpretation, as well as an oral examination in radiographic interpretation. The written portion of the radiographic interpretation section consists of 16 cases that require written reports inclusive of responses to specific queries. The

OMR has witnessed an explosive growth of knowledge and development of new technology which is unparalleled in dentistry.

There exists a misconception on the part of some clinicians that there is no responsibility for diagnosing radiologic findings beyond those designated for a particular task (i.e., implant treatment planning), an assumption that is erroneous.

oral exam is conducted individually in the company of the five directors of the board. This consists of four cases that the candidate may preview for one hour before the oral exam. Selected images are projected during the exam.

NEW TECHNOLOGIES

OMR has witnessed an explosive growth of knowledge and development of new technology which is unparalleled in dentistry. The diagnosis of disease is the cornerstone of dental practice, and recent advances in the imaging sciences have enabled dentists to provide increasingly valuable services to their patients with a minimum of radiation exposure thanks to the development of modalities that were unknown only a generation ago. The OMR is highly knowledgeable in all aspects of radiology and has a solid grasp of the pathobiology of diseases that manifest in the head and neck area. Oral and maxillofacial radiologists review and edit peer-reviewed scientific articles that are published in *Oral Surgery*, *Oral Medicine*, *Oral Pathology*, *Oral Radiology* and *Endodontology*. AAOMR also holds an annual scientific session for the exchange of new knowledge.

AAOMR embraces the introduction of cone beam computer tomography (CBCT) as a major advance in the imag-

ing armamentarium available to the dental profession. The Executive Council of AAOMR recently published an executive opinion addressing the principles of application of CBCT as it relates to acquisition and interpretation of maxillofacial imaging in dental practice. This can be found in a 2008 issue of *Oral Surgery*, *Oral Medicine*, *Oral Pathology*, *Oral Radiology and Endodontology*. The Executive Council holds that practitioners should choose imaging procedures based on consideration of selection criteria, dose optimization, technical proficiency, and assessed diagnostic or treatment needs. The guidelines specifically address four critical areas: use of CBCT, practitioner responsibilities, documentation and radiation safety, and quality assurance.

Because it involves the use of ionizing radiation, CBCT should be performed only by an appropriately licensed practitioner or supervised certified operator. This modality should be performed only for valid diagnostic purposes and with the minimum exposure necessary for adequate image quality. Dentists using CBCT should be held to the same standards as board-certified oral and maxillofacial radiologists, just as dentists excising lesions are held to the same standards as oral and maxillofacial surgeons. The practitioner is responsible for the interpretation of the entire acquired image volume. It is imperative that all image data be systematically reviewed for disease. The field of view will vary depending on the system used, positioning, and collimation and can include

intracranial structures, base of the skull, paranasal sinuses, cervical spine, neck, and airway spaces. Qualified oral and maxillofacial radiologists may be able to assist diagnostically when practitioners are unwilling or unable to accept the responsibility for reviewing the entire exposed volume of tissue. There exists a misconception on the part of some clinicians that there is no responsibility for diagnosing radiologic findings beyond those designated for a particular task (i.e., implant treatment planning), an assumption that is erroneous. In the same way that a pathology report must accompany a biopsy, an imaging report must accompany a CBCT scan.

The clinician must confirm the legal authority for technical performance of CBCT in his or her jurisdiction. In some states, CBCT is considered to be use of a medical device, and qualified dental auxiliaries who can perform dental imaging procedures may not be qualified to perform CBCT.

Documentary evidence should be provided to demonstrate the guidance need for the CBCT exam. To facilitate image retrieval, the dataset should be stored in compliance with local regulations and be exportable in a format compatible with the International Standards Organization (ISO)-referenced Digital Imaging and Communications in Medicine (DICOM) Standard. Facilities operating CBCT should have specific

policies and procedures for dose optimization to minimize radiation risk to the patient, personnel, and the public while ensuring that adequate diagnostic information is obtained. The quality control program should include documentation of the performance of calibration tests, a log of the results of equipment performance monitoring, facility dosimetry results, and a legible chart of patient- and task-specific technique exposure parameters.

The AAOMR Executive Committee encourages the use of CBCT technology within the practice of dentistry where this will result in improved health care for the patient. CBCT has taken the dental world by storm and has changed the arena of dental imaging forever. No doubt, this will draw an increasing number of dentists to explore a career in OMR. Already, all OMR program directors have reported a clear increase in the number of applicants to their programs. The programs are full to capacity and plans are being developed to establish additional programs.

Traditionally, a career in OMR meant an academic career and involved the didactic and clinical education of dental, dental hygiene, and graduate or postgraduate students. Research and the provision of specialized radiographic services for referral patients and interpretation consults are also mainstays of an academic dental OMR career. Some OMRs have careers based in academic medical centers or hospitals where they have access to advanced imaging modal-

ities and participate in case conferences with neuroradiologists and teach medical students and radiology residents.

The advent of CBCT has stimulated a new career avenue for oral and maxillofacial radiologists: private practice in imaging centers. There will always be a need for oral and maxillofacial radiologists in dental schools and the shortage of academic oral and maxillofacial radiologists parallels the increasing shortage of dental faculty members in general. However, the imaging center option will surely prompt great interest in the specialty for those more interested in that venue of practice. In either case, a career as an oral and maxillofacial radiologist is an enriching and professionally fulfilling one. Ask your local oral and maxillofacial radiologist today what makes these such exciting times for dentistry's newest specialty! ■

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ETHICAL ADVERTISING IN DENTISTRY

Joseph P. Graskemper, DDS, JD

ABSTRACT

Advertising in dentistry has steadily increased since the 1970s to become a leading choice of many dentists to promote their practices. The manner in which advertising progresses within the profession affects all dentists and how patients perceive dentistry as a profession. This paper presents ethical concepts that should be followed when dentists are pursuing practice promotion through advertising. It also raises questions that, hopefully, will increase attention and discussion on dental advertising. The paper concludes that ethical advertising is easily achieved by promoting patient education while not placing the dentist's self-interests ahead of the patient's. With this approach, dentistry may continue to be one of the most trusted professions.

Organized dentistry, for most of its existence, has frowned upon advertising by dentists. However, from the time of Dr. Edgar "Painless" Parker in the early 1900s—and even earlier—until the late 1970s, professionals have nonetheless advertised. It was then that the Federal Trade Commission (FTC) interpreted the professional organizations' bans on advertising as unfairly restricting competition. In May 1999 the Supreme Court, in *California Dental Association v. Federal Trade Commission* upheld FTC's jurisdiction over non-profit organizations and defined certain limits of advertising for dentists. Specifically, the Supreme Court

found that price advertising is allowable, provided that it is exact, accurate, and easily verifiable (California Dental Association, 1999).

Does advertising pay? "Painless" Parker, even in his day, ended his career with approximately 30 west coast dental offices, employing 70 dentists, and grossing \$3 million per year (Giangreggo, 2005). But the question for this paper is whether advertising is ethical or even professional.

Two events in the relatively recent past should be mentioned in the context of this article. In the late 1980s, the California Dental Association (CDA) ran an advertising campaign with the slogan, "We're the Dentists Who Set the Standards." At that time there was a "busyness" problem among member dentists with the economy in a bad recession. The CDA attempted to increase both patient awareness and the number of patient visits to member dentists by advertising the image of CDA member dentists as those who set the standard of dental practice. This campaign was cut very short when the Dental Board of California threatened a lawsuit based on claims of superiority.



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More recently, the American Dental Association joined with Intelligent Dental Marketing to develop advertisements that state, for example, “Trust experience,” “Elite Cosmetic Dentistry,” “Guaranteed deep whitening,” and “Lifetime porcelain guarantee.” (See the ADA’s Intelligent Dental Marketing Web site at www.adaidm.com/general/pasamples.)

In spite of the ADA’s current joining with this firm to promote advertising by its individual dentist members, there are many who still hold that advertising by a professional is unethical.

The next section will show that although advertising by professionals may take a variety of forms, not all types of advertising fall within the concept of ethical advertising.

Types of Advertising

For the purposes of this article, discussion will be directed to three types of advertising that apply to and have been used in dentistry: Comparable, Competitive, and Informational advertising.

Comparable advertising is the use of comparisons between the advertiser and others in the same market. In dentistry, these are usually seen as statements of quality or superiority. These types of ads are generally inconsistent with many state codes of ethics and the ADA’s Principles of Ethics and Code of Professional Conduct. They can easily be misinterpreted by the public and are therefore generally considered false or misleading. An example of the “comparable” type is an ad that states that Dr. X

is the “only dentist recognized as a Master.” These ads include statements of superiority, or actually compare one dentist to others. They are uncommon in dental advertising due to their being very blatant. It should be noted that some claim that advertising one’s achievements (fellowships and memberships in various associations, societies, and groups) is informational and not a statement of superiority. As will be addressed later, such advertisements must not mislead the patient; and therefore should be used with caution. Advertisements regarding superiority are comparative and not informational, since they promote the impression that the dentist is superior to or better than other dentists.

Competitive advertising typically involves the use of a discounted price or coupon, the offering of more services for the same price, or the offering of the same product or service for less cost than others in the same market. In dentistry, this type of advertising is usually seen in the offering of discount coupons, heavily discounted fees, or free services such as a “\$1 dental cleaning” or “free bleaching for new patients only.” These types of ads are generally not viewed as a credit to dentistry and are not acceptable as professionally ethical ads. Competitive advertising may also include offering “spa” services in the dental office at no extra charge. Competitive ads are generally allowed but only after

If the information is “false or misleading,” the patient’s autonomy has been infringed by the professional who has placed his or her interests first and possibly taken advantage of the patient’s vulnerability.

How much should a dentist influence a patient in making a treatment choice that requires more treatment than the patient previously was interested in or felt any need of?

receiving great scrutiny and guidelines by each state, so be sure to check with your state.

Informational advertising is the most common type used in dentistry. It is the use of information that only pertains to the advertiser and does not refer to any other service provider. Normally, this type of advertisement either informs the selected market of who the advertiser is, the advertiser's location, and the services available from the advertiser, or it communicates general information regarding the services to educate the target audience. These types of ads generally comply with the various state codes and the ADA Code of Professional Conduct.

There is also the issue of ads that are in bad taste, which may be found in all types of advertising. One must not confuse bad taste or bad art design with an ad being ethical or not. Many dental advertisements can be seen that are not a credit to the profession due to poor ad design. Some of these ads may well be within the guidelines of state dental practice acts but convey a non-professional merchant quality to dental services. Such ads are questionably ethical because they damage the professionalism of dentistry and insult the social contract that dentistry enjoys by being a profession.

PROFESSIONALISM AND OUR SOCIAL CONTRACT

Even with organized dentistry condoning advertising to a limited degree, does advertising push dentistry to a less professional status? A profession has been defined as "a collective of expert service providers who have jointly and publicly committed to always give priority to the existential needs and interests of the

public they serve above their own and who in turn are trusted by the public to do so" (Welie, 2004a). Many call this trust with the public a "social contract."

Being professional should not therefore allow a practitioner to capitalize on a patient's vulnerability in an attempt to maximize his or her own interests. Welie cautions, "When professionals publicly compete with one another, each advertising himself or herself as a better service provider than his or her peers, patients may infer that not all professionals are trustworthy or at least that not all of them are equally trustworthy" (Welie, 2004b). This is a slippery slope that advertising in dentistry may take if dentists, individually, do not act professionally and ethically to maintain the high road by developing advertisements that give credit to the profession and keep the patient's well-being in the forefront.

Patients place trust in their dentists with the understanding that their welfare is of utmost importance to the dentists as dentists provide opinions that guide patients to an informed decision regarding their treatment. If dentists advertise that they can provide services better than their peers, patients will question which dentist is better or more competent, when all dentists should have an acceptable level of competence through licensure. Of course, some dentists are more gifted or talented than others. However, the suggestion of superiority by any given dentist challenges the trust that the public has placed in the professions. A weakened public trust may damage the profession's social contract, and with it comes the concern that dentists may have their own self-interests as their priority rather than the public's needs and interests. In other words, the patient may see it as, "You can't trust them all," and "Who is better than whom."

THE ADA CODE

The ADA's Principles of Ethics and Code of Professional Conduct clearly makes reference to advertising by its members. Section 5F on advertising states, "Although any dentist may advertise, no dentist shall advertise or solicit patients in any form of communication in a manner that is false or misleading in any material respect." It also gives an advisory opinion that provides examples of "false or misleading" advertising. Section 5F.2 states: "Statements shall be avoided which would: (a) contain a material misrepresentation of fact, (b) omit a fact necessary to make the statement considered as a whole not materially misleading, (c) be intended or be likely to create an unjustified expectation about results the dentist can achieve, and (d) contain material, objective representation, whether express or implied, that the advertised services are superior in quality to those of other dentists, if that representation is not subject to reasonable substantiation."

There are three ethical principles that apply to self-promoting or advertising: patient autonomy, beneficence, and veracity. Patient autonomy refers to the patient's right to self-determination and confidentiality. Patients have the sole right to make decisions regarding their health care. The information given in an advertisement affects that decision-making process. If the information is "false or misleading," the patient's autonomy has been infringed by the professional who has placed his or her interests first and possibly taken advantage of the patient's vulnerability. It must be pointed out that dentists, having specialized knowledge, may easily misguide a patient with limited oral health literacy or capacity to fully understand a proposed treatment that is being

promoted or advertised. The dentist is then taking advantage of a trusting but unknowing public. This undermines the social contract that contributes to the professionalism of dentistry. This can be seen in the advertisements and office pamphlets that state, for example, "Only dentist recognized as a master," "Graduate of (Best Smile Institute), the world leader in smile makeovers," "Elite cosmetic dentistry," or "World Class Care" (Gandolf & Hirsch, 2007). These are often promoted and disguised as benefit-driven statements, but are actually statements of superiority. Such statements raise the question of benefit to whom? How much should a dentist influence a patient in making a treatment choice that requires more treatment than the patient previously was interested in or felt any need of? Should we actually be selling dental procedures or appliances, or should we be educating the patient regarding his or her dental health and well-being? This is definitely a very gray area in which the dentist making or promoting the benefit driven statements must keep the patient's well-being above all. The patient must not be viewed only as a potential cosmetic oral reconstruction customer.

Beneficence is the duty to promote the patient's well-being. Advertising may be promoting the dentist's self-interest rather than the well-being of the patient, depending on the type of advertisement. Does the advertisement intend to increase the patient's dental awareness and promote the patient's well-being and dental health, or is the intent only to increase the dentist's income? An ethical, professional dentist will promote the patient's dental health and well-being rather than sell procedures that merely inflate the income. Of course, dentists who place advertisements with a clear view to enhancing their income will argue that such advertisements are also benefiting patients. While true, there always is a point where the balance tips

toward misrepresentation. Regulatory agencies tend to determine such questions of balance in conflicting content by applying the standard of "what would a reasonable reader conclude" rather than what did the dentist placing the advertisement have in mind.

Advertisements that contain both self-promoting and patient benefit messages can be seen where a dentist suggests that he or she is better or more educated than the competition. This approach is also evident in advertisements for smile makeovers with unnecessary expensive veneers, "esthetic upgrades," or removal of sound amalgam restorations for systemic health reasons that have not been based on evidence. The ethical principle of nonmaleficence (do no harm) may also be applied to such a situation. Gordon Christensen has brought attention to this problem, stating that overtreatment of esthetic dentistry without a total (honest) informed consent, when the sole purpose is the dentist's financial gain is clearly unethical (Christensen, 2003).

Veracity is the principle that one must be truthful when communicating with the patient. This can be applied to all types of advertising. Statements referring to the dentist as the "best" or the "only master" or that identify the dentist as a "fellow" imply to the patient that the dentist is a specialist or has professional qualifications that are superior to other dentists who do not have such credentials and they are thus misleading (ADA, 2005). The same may be said about those who promote themselves as specialists in "cosmetic

dentistry,” “TMJ,” or “implants,” when such “specialties” are not recognized by organized dentistry.

Some states do allow such statements of fellowships or achievements in various dental organizations provided that full disclosure or disclaimers are given. However, although such statements may be legal (check with your individual state dental practice act), are they ethical? Just because something is legal does not make it ethical. Is the public not entitled to information about the dentist’s area of expertise that may affect the selection of a dentist? Any announcement that may be the least bit misleading should state all its qualifying aspects so that it is most clearly stated and avoids creating any false impression or misperception among the public. Again, to mislead the public in dental advertising creates a crack in the social contract or public trust that is conferred upon dentistry to allow it to function as a professional entity, with certain rights and privileges that are not available to the general public.

COMPETITION AND FUTURE Pitfalls

There are also pitfalls that occur when a group of individuals offering the same professional services begin to advertise in a community. Typically, as more professionals locate in the same community, advertising becomes more intense and competitive. With competitiveness, advertisements tend to approach puffery; i.e., “the exaggeration by the salesperson concerning quality of goods or service, when claims of superiority are based on opinions rather than facts” (Black, 1979). A clear example is the “Lifetime Porcelain Guarantee,” which has no basis in scientific evidence. Any such guarantees by a healthcare provider are highly suspect.

Dentists increasingly interact with a highly educated public that has easy access to information via the Internet. This raises the question, “How much information about a dentist’s abilities are patients of the twenty-first century entitled to so as to facilitate their autonomous decision making processes without misleading them?” This question certainly has no clear-cut answers, though some dentists have tried to answer it by reiterating the ADA Principles of Ethics and Code of Professional Conduct, which is a very fine place to start. However, to maintain dentistry as one of the more trusted professions year after year, dentists individually and collectively must be careful not to succumb to the influences of the marketplace. In order to maintain our social contract with the public, we, as trusted healthcare providers, must not become sellers of dental appliances or morph into “Veneers R Us,” “Image Care,” “Teeth in a Day,” “Crowns in an Hour” dentists. All the tremendous advances in dentistry are truly a blessing to those in need of such services. However, in their promotion to the public through advertising, dentists should not focus on the selling of dental appliances or restorations and forgo the actual healthcare needs of the patient.

PATIENT PERSPECTIVE

Another important consideration is the fact that people perceive and react differently to advertising (Ozar & Sokol, 2002). For the purposes of this article, I am condensing the many types of consumers into three basic types: (a) Skeptical Patients—those individuals who are wary of all advertising and do not trust any of it as totally true; (b) Thoughtful Patients—those who question the advertisement’s information or claims to see if it is reliable and give thought to its source, design, and content; and (c) Gullible Patients—those who trust almost all advertising and totally

believe that all that is advertised is true, especially if the source and design are believed to be credible. Of course there are many other types and possible combination of types that exist.

Skeptical Patients are not heavily influenced by any advertising, and as such, are not affected by advertisements that may be misleading or not fully ethical. There is little worry about this group being misled.

On the other hand, Thoughtful Patients tend to be reflective and need protection from unethical advertising because the sophistication of today’s marketing strategies is highly advanced. Most promotional advertising to this group will be looked upon with some interest, with a “show me” or “prove it” attitude.

Patients in the gullible group are of high concern because they rely heavily on the information in the advertisement and assume it is true. This group, therefore, would be highly affected by advertisements that may be misleading or not fully ethical. It is this third group that obviously needs more protection from unethical advertisements; and by doing so, the profession of dentistry and its contract with the public are also protected.

It must also be kept in mind that all types of patients, some more than others, often tend to look at dental advertising as truthful because the advertisement is being promoted by a healthcare professional who has had a trust-based relationship with society. It is hard for the general public to determine when advertising turns into puffery and puffery turns into untruths. Since it is unknown which one of the above types of dental consumer will receive the advertisement, ethical dental advertisements must be ethically constructed so as to not mislead the gullible patient,

because it is this group that is most easily affected and misled by sophisticated, unethical dental advertisements. We must remain on the side of proper, ethical advertising at all times to protect our social contract with society which allows us to function in the public interest as a profession.

As more and more dental professionals develop Web sites that are largely not reviewed for their veracity, there is a tendency to stretch the truth in the individual dentist's Web site. Therefore, when advertising, dentists must police themselves and raise themselves above the tendency of puffery and be respectful of the profession's social contract with the public. The dentist who creates a Web site must not only be aware of his or her patient audience, but also of the effect of such marketing on the dental profession's image in the context of its social contract with the public. This responsibility to fulfill dentistry's public trust, which is the basis for our professional status, must be ingrained in our dentists so they will maintain a high level of professionalism in their practices.

THE CHALLENGE

Dentistry's challenge with advertising is to balance the risks of harm to our professional status against the benefits to the patient of information that facilitates the patient's autonomy in decision making. Using advertising to sell dentistry is not an undertaking for an ethical professional who works to keep the patient's needs in the forefront. As such, ethical advertising remains an individual undertaking. Each dentist must take responsibility for properly informing patients about their treatment options and for providing realistic expectations of outcomes for each type of therapy that could be implemented (Graskemper, 2005). In addition, dentists must properly inform their patients about their own credentials. All of this could be enhanced during the years of

dental education through the reinforcement of appropriate ethical advertising and marketing for dental practices. In doing so, examples of actual marketing and advertising techniques should be presented for the students' discussion and future reference. It is noted that dental practice marketing is not a high concern among dental schools in that they must prepare the students for the technical aspects of dentistry in a limited time. However, courses that will enhance the students' approach to advertising ethically (almost all will advertise in some manner) will not only be a benefit to their future success but also improve the image of dentists and strengthen their social contract as a profession. This approach will help keep dentistry as the highly respectable and trusted profession the public has come to know. ■

REFERENCES

- Black, H. C. (1979). *Black's Law Dictionary*, (5th Ed). St. Paul, MN: West Publishing Co.
- California Dental Association v. Federal Trade Commission (1999). 526 U.S. 756, 7.
- Christensen, G. J. (2003). I have had enough, *Dental Town Magazine*, 9(4), 10, 12, 74-75.
- Gandolf, S., & Hirsh, L. (2007). Creating a seriously superior, marketing-smart practice brochure that gets patients, *Dental Economics*, June 26, 104.
- Giangregio, E. (2005). "The life and times of Painless Parker," *Chicago Dental Society Review*, 98, 38-39.
- Graskemper, J. P. (2005). Informed consent: A stepping stone in risk management, *Compendium*, 26(4), 286-290.
- Ozar, D. & Sokol, D. (2002). *Dental ethics at chairside*. Washington, DC: Georgetown University Press.
- Welie, J. V. M. (2004a). Is dentistry a profession? Part 1. Professionalism defined, *Journal of the Canadian Dental Association*, 70(8) 529-532.
- Welie, J. V. M. (2004b). Is dentistry a profession? Part 2. The hallmarks of professionalism. *Journal of the Canadian Dental Association*, 70(9), 599-602.

Any announcement that may be the least bit misleading should state all its qualifying aspects so that it is most clearly stated and avoids creating any false impression or misperception among the public.

ORAL HEALTH CARE IS NOT AN ENTITLEMENT

David W. Chambers, EdM, MBA, PhD

ABSTRACT

The basic system for distributing oral health care in America is economic. With the assistance of government support and insurance to smooth out wide swings, Americans choose the level of care they desire and can afford. Adjustments to this system are desirable to both increased the overall level of oral health and to achieve a fairer distribution. These adjustments can be approached through (a) positive personal responses such as voluntary service, (b) working to improve the social good through the political process, or (c) proclaiming a right guaranteeing a minimum level oral health care. The first two approaches have much to recommend them. The argument from rights is not currently accepted by moral philosophers and appears to be ineffective. Further, the rights approach is off-putting and not conducive to positive discussions. In addition, it both undercuts the political approach based on the social good and questions the moral virtue of volunteerism.

Few of the good things in life are uniformly distributed across society. National defense, highways, access to the courts, and free public education are possibilities. Oral health care is not. It falls closer to the class of positive goods such as housing, access to jobs, and the kind of car one drives, all of which depend heavily on what one is able and willing to pay. Insurance smooths out and constricts the range of goods by protecting against the worst outcomes and by partially shifting risk to others. Research advances and product innovations, public regulation, and efficiencies that drive down cost are examples of what economists call externalities; those who pay less get more than they are entitled to, and sometimes more than they really want, when standards rise, because of the advances made possible by the heavy users.

Health care is one of the positive goods whose distribution is very largely determined by patterns of economic resources in society. This is true in America and is codified as a worldwide aspiration in the United Nations Declaration of Human Rights, which does not make health care a right. Article 25 of that declaration states that “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family.”

Although the fundamental basis for distributing oral health care is well established, many individuals in Western liberal democracies also believe that

some adjustments are necessary to the system. Some feel that insufficient attention is being paid to oral health compared with other choices individuals make, that infusion of more public resources would produce important benefits for everyone, that the system leaves some individuals with an unacceptable level of care, or even that there is overuse of dental resources at the high end that is drawing care away from the poorest who need it most. There is plenty of reason to believe that supplementing the basic “you get what you can pay for” system of oral health care has much to offer.

In this essay, I will look at the three most obvious approaches to adjusting the market system of healthcare distribution to make it fairer. In the baldest terms, these can be called: (a) “let me do what I can to help” (charity), (b) “let’s work together to see what improvements make sense” (the social good), and (c) “somebody ought to do something about this” (rights). I will briefly sketch the advantages of charity and the social good and then devote most of my attention to the argument that oral health care is an entitlement. I can find no good reasons to support this view. It is largely loose talk: well intended, even noble, but ultimately both an unnecessary duplication of effort compared to the position that oral health is a social good and a detraction from the wise allocation of resources and the motive of altruism common among professionals. It is difficult to take this strong stand. I favor

rights—they play an important role in human society. I also favor more and better oral health—the advantages to be gained in that direction are significant. I do not, however, favor the rights argument for oral health care: it is a bad argument for a good cause.

POSITIVE PERSONAL RESPONSES

One way to address perceived inequities in society is to roll up one's sleeves and do something about it oneself. That is the response of dentists and their staffs who volunteer for Give Kids A Smile, A Thousand Smiles, Rotoplast, or the many other organized oral health outreach programs. Closer to the office, there are screenings for pregnant teens, talks in the grade school, and fee adjustments that allow the poor to upgrade to better treatments. There are careers of charity where dentists forgo more lucrative opportunities to work on reservations, in prisons, or Federally Qualified Health Care Centers (FQHCs). The ADA estimates that the value of donated dental services equals approximately 5% of the value of all oral health services annually. This amount matches or exceeds the total federal budget for oral health care.

Philosophers and psychologists debate whether there really is a motive called “altruism,” and social policy critics note that the voluntary response from the profession is entirely too small to address existing disparities. Both of these concerns miss the point. A sizable proportion of the profession recognizes

that improvements can be made in the current distribution of oral health services and have chosen to do something about it themselves. They respond above what they are required to do; they act rather than pointing to the problem and making arguments that somebody else should do something. It is a positive personal response.

There is a difference between the charity of dental professionals and that of the green movement, animal rights, and political action committees. The overwhelming voluntary contribution of oral healthcare professionals is “in-kind” and is “dental care” (both puns fully intended). Dentists go with their charity, in contrast to those who send a check to save the whales. One is on very firm moral ground when trying to correct a problem by taking direct personal action. The whole argument about who caused the problem in the first place and what everybody else ought to be doing is short-circuited. As we will discover soon, however, those who believe in oral health care as a right regard the voluntary service responses of dentists as a sham.

ORAL HEALTH AS A SOCIAL GOOD

The social burden of poor oral health in America was chronicled in the Surgeon General's Report of 2000. We have objective measures of the benefits to society we might expect from making

Society is not stupid. If a better way to the common good can be shown, we will respond, as has been demonstrated in such cases as the environmental or civil rights movements, workplace discrimination, public water fluoridation, and airline safety. Society does consult its collective best interests, and substantial changes are possible when reasonable opportunities for improvement are convincingly expressed.

We are also held back because there is no word in our language for an individual who needs oral health care but is not a patient and because dentistry is paid for on a procedure basis rather than an outcome basis.

improvements. American school children lose about 75,000,000 hours of school because of dental disease, and three times that number of productive work hours are lost annually. The cost of nursing home care is inflated by nutritional problems and their attendant medical effects cause by inability to eat. Hospital care and emergency room responses to dental neglect are enormously expensive. Dentists in uniform know their mission is to ensure that our young men and women are service-ready. Oral health is more than a private benefit; it a common good that society as a whole enjoys.

Society is not stupid. If a better way to the common good can be shown, we will respond, as has been demonstrated in such cases as the environmental or civil rights movements, workplace discrimination, public water fluoridation, and airline safety. Society does consult its collective best interests, and substantial changes are possible when reasonable opportunities for improvement are convincingly expressed. There is a case to be made that society as a whole will be better off if its oral health can be improved. This is the argument that oral health is a social good. It is a good argument.

The ADA, state health departments, various specialty organizations, and groups representing classes of individuals in need of care are among those working in this rational-political arena. The argument is not that someone is morally flawed because a third party is not getting as much oral health care as someone would like. Instead, it is a positive argument that society would benefit from investing in the oral health of its citizens and that anticipated benefits justify the costs of making things better.

We may underestimate the impact of the social good because so many dentists practice solo. Politicians confuse the matter by focusing on headline cases such as Diamante Driver since concrete examples are more persuasive than collections of statistics. We are also held back because there is no word in our language for an individual who needs oral health care but is not a patient and because dentistry is paid for on a procedure basis rather than an outcome basis.

There can be defensible differences of opinion about how to value the benefits of oral health or its absence on an individual basis. How do we weigh veneers for a well-to-do individual compared with endodontics and a crown for someone who has completely neglected his or her oral and general health and has every prospect of continuing to do so? How many appointment slots should a dentist set aside for Medicaid patients, and at what reimbursement levels? As important as these issues may be in an economic and bioethical sense, we need not wait on answers to them before addressing the aggregate oral health of Americans as an issue of the social good.

Unlike the personal positive response of volunteerism, where the individual dentist has almost complete control over what actions take place, the argument from the social good involves complex, multiparty decisions about the common good. Like the argument from the personal positive response, it means getting one's hands "dirty." It involves political give and take, trade-offs, or adjustments to account for emerging technology or economic downturns. But there is no requirement that those working for adjustments to the basic economic foundation of our healthcare system know in advance who is morally right or wrong before and while engaging in the process. The guiding principle is approaching the common good.

Dentistry is already a notable public good, in America an outstanding one. It will never reach all people with all the benefits that can be imagined, but a sound approach to extending its reach involves making a clear and reasoned case for its contributions to society in total.

ORAL HEALTH CARE AS AN ENTITLEMENT

There is another way to approach optimal oral health; one based on rights. On this view, society has a duty to provide protections, goods, and services that are universal and unconditional. Human rights are available to all humans; no one can be denied, even based on citizenship, criminal activity, or their own lack of interest or cooperation. When the class eligible for rights becomes restricted by characteristics of the recipient (as by age, income, years of residence, or oral status) or by limitations on the guarantor (such as whether there is enough money to fund the benefit), we use the term entitlement. The argument that oral health care is a right is an argument that there are classes of dental services that are due to all and that a society or dentist that fails to provide them is unethical, and in some cases acting illegally.

This position has been well laid out by Don Patthoff and David Ozar in *AGD Impact* (December 2007) and in chapter 13 of David Ozar and David Sokol's *Dental Ethics at Chairsides*. They frame their position this way: all individuals are entitled to a certain level of dental care if a society can afford it because oral health is a basic need. The level of care is variously defined as response to pain severe enough to impair function and correction of defects that interfere with respiration, speech, nutrition, and speech; emergency care and care that ends life-threatening situations; universal access; and most patient education,

restorative dentistry that preempts the need for later intervention, and some esthetic work.

The principle source for advocating from basic needs is Henry Shue's book *Basic Rights: Subsistence, Affluence, and U.S. Foreign Policy*. Shue arranges human needs in a hierarchy beginning with basic ones and progressing upward through social functioning and ultimately to flourishing. Basic needs include freedom from torture and freedom of movement, adequate nutrition to avoid starvation, and minimal preventive public health. Basic needs must satisfy two conditions: (a) it is not possible to pursue any other need unless basic needs are first met and (b) basic needs cannot be traded for other needs (thus, minimum income is not a basic need nor is health as defined by the United Nations). All of the discussions of basic needs or health as a right that I am familiar with are developed in the context of foreign aid to underdeveloped countries where conditions are truly horrific.

In moral philosophy, rights are recognized as having normative power: they oblige society to guarantee the rights. Societies that fail to do so are ethically flawed, and individuals who violate others' rights can be sued or even forfeit their own civil rights. Society may voluntarily accept such obligations by passing laws or developing regulations that create entitlements. When individuals are unable to engage the collective will of society, they sometimes still maintain a nominal claim for their assertion of a right. For example, the American colonies could not engage the interests of England, so they declared their independence, based on certain "self-evident truths" which were redeemed through war. Shue believes that any gap in basic needs automatically places the more favored nation under a moral obligation to eradicate the disparities in all other nations. Basic needs are not

suggestions or theoretical ideals: they are ethical imperatives.

Rights arguments involve guaranteed minimums. We are not considering a fair distribution of services across the whole range of needs and resources. A society's resources must first be allocated to ensure a baseline standard for everyone. Remaining resources in the common pool are then distributed on other grounds. If the existing system is unable to provide this uniform base coverage, resources must be taken from some in the form of taxes or fees for redistribution or regulations must be crafted to redirect services.

The Emergency Medical Treatment and Active Labor Act of 1986 (EMTALA) already provides for that minimum access, regardless of income or citizenship, that the many healthcare rights advocates are campaigning for. It is true that emergency room care for the sequelae of oral problems is inefficient, undignified, and costly; but these are arguments from the perspective of the social good, not a rights concern.

The voluntary service approach to adjusting the fundamental economic oral healthcare model depends on those who care doing what they can. The social good model involves discussions among concerned parties for a continuously better use of common resources. Both of these are two-party approaches involving direct contact between the professional and the beneficiary. Three parties are involved in the entitlements argument: the beneficiary, those who are obliged to provide the benefit, and the ethical judge who speaks "on behalf of" the beneficiary and attempts to force the behavior of the provider.

Beginning this important work by claiming that oral health care is an entitlement is a distraction. Our society has not embraced this view and it is unlikely that it will be shamed into doing so any time soon.

DIFFICULTIES IN THE ARGUMENT FROM ENTITLEMENT

Positive personal responses and working for the social good are complementary approaches to improving the distribution and overall level of oral health. The rights position is antagonistic to both. Noble language does not always lead to noble outcomes. We need to consider some of the difficulties that follow from claiming that oral health care is a right.

Of immediate concern is the fact that all moral philosophers are either silent on the question of health as an entitlement or, like such well-known writers as John Rawls and Norman Daniels, state clearly that it is not a right. The word “right” is sometimes used informally to mean something really important, or an aspiration. A teenager might stomp her feet and say “I have a right to a cell phone because every kid at my school has one.” Someone advancing a social policy who has run out of arguments might resort to claiming their position as a “right” or if really pressed a “fundamental right, and there is the end of it.” Rights language has a way of closing off rather than encouraging discussion. It is a loose way of talking. The English philosopher R. M. Hare finds this to be a positive danger rather than a simple inconvenience: “It is the unthinking appeal to ill-defined rights, unsupported by argument, that does the harm.”

A clear and passionate voice for the intrinsic rightness of health is Martha Nussbaum, a lawyer concerned with the interests of those with disabilities, the international poor, and animals. She “insists” (that is her term for laying out a philosophical position) that we must declare health, among other capabilities, a necessary condition for dignity at the

constitutional level. She concedes that there is currently no overlapping consensus on this position but is willing to leave it to the legislators, courts, and lawyers to bring about implementation of the ideal. In the legal sense, rights are not actionable; they must first be converted into laws or administrative regulations. This is the sense in which Nussbaum, Shue, and others in the international humanitarian rights movement write. Rights language diminishes other voices that should be heard, such as those of experts, the market, and even citizens who may prefer a different profile of what constitutes a good life. Deciding on behalf of others carries moral responsibility. Deciding on behalf of everyone is a very heavy responsibility, and making the decision a vague principle does not change that fact.

Rights are preemptory. Their posture is “I don’t care what else you are doing to try to make things better, that will have to wait until all the rights of all people have first been satisfied.” Rights, certainly the “basic needs” type, are not fungible. That means that they cannot be broken into parts and approached incrementally or worked into compromises, even with other rights. In theory, this entails that those who view oral health care as a right must bring this demand to the table as a precondition for even talking about improvements in our dental care system. They don’t play well with others in the political process of strengthening oral health as part of the social good. (In practice, most individuals who use rights language are happy to be at the table and are willing to leave their rights in the hallway as “aspirations.”)

Universal, unconditional entitlements to a level of oral health care run into conflict with the political process aiming for the maximum social good in these areas:

1. Other distributions of oral healthcare resources besides a universal minimal standard might be more effective in raising the overall level of oral health (this is the position of John Rawls). The best fire protection plan for a community may not be to sell some fire trucks to provide all citizens with fire extinguishers.
2. Oral health, despite its importance, may not be the most important issue facing society, and it would be prudent to work with those who are concerned about education, drunk driving, domestic violence, etc.
3. Oral health care might be optimized without optimizing oral health. Readers will note that I have consistently emphasized outcomes rather than processes (oral health rather than oral health care). Rights language speaks in terms of oral health care. A focus on ends rather than means will open more possibilities and promote more just distribution of resources.
4. Beginning from a position of ethical superiority based in asserted rights and coming to the conversation with a solution in hand that must be defended may actually shut off the search for the best common question and the best common solution.
5. In the end, rights language is a discussion stopper. Self-evident truths have a take-it-or-leave-it quality that does not invite constructive discussion.

There is also a tension between rights and positive personal responses. Rights language undercuts altruism and property rights. Shue, for example, describes basic needs as taking precedence over other rights, such as the right to own personal property, and thus concludes that legal action against thieves or cheats who are attempting to

claim what they call basic needs is not warranted. Medicaid fraud in the name of helping the poor or failing to pay the part of one's health bill thought to be unfair are considered ethical responses to an unjust system. Shue goes further, finding no merit in the altruism of those helping the underserved. Because the underserved are already entitled to care, we deserve no credit for ministering to them and can only stand morally reprehensible for withholding it. Shue advocates the "coercion of the unresponsive." Nussbaum concedes that most of what she advocates is not enforceable, but she does quote approvingly Grotius and other historical philosophers who argue that no one has an ownership right in anything that others need.

CONCLUSION

A higher quality and more available oral health care is a worthy vision and something to work toward. This can be achieved through advances in oral healthcare technology, better delivery systems, more affordable financing, engagement of help organizations that advocate for and support marginalized citizens, and political and regulatory steps based on recognition that oral health is a public good. Volunteering service is an effective and uplifting part of this process.

Beginning this important work by claiming that oral health care is an entitlement is a distraction. Our society has not embraced this view and it is unlikely that it will be shamed into doing so any time soon. If "rights" language were merely an innocuous and noble ideal, we could continue to talk in such loose terms while pursuing the

heavy lifting of improving oral health outcomes by other means. But there are negative side effects involved with the rights claim. First, it is poor philosophy. Second, it is off-putting to engage others who are key to advancing the cause of oral health by saying they are ethically off base. Third, entitlements are the business of legislators and lawyers, whereas oral health is a matter for professionals and patients. Fourth, the rights approach locks us into a strategy of moving up from the bottom at a uniform rate, and analysis from the perspective of the social good suggests there are more optimal approaches to triaging the shortage of oral health resources. Fifth, rights approaches undercut important norms such as private property and voluntary service to others. ■

RECOMMENDED READING



Summaries are available for the four recommended readings with asterisks. Each is about eight pages long and conveys both the tone and content of the original source through extensive quotations. These summaries are designed for busy readers who want the essence of these references in 15 minutes rather than five hours. Summaries are available from the ACD Executive Offices in Gaithersburg. A donation to the ACD Foundation of \$15 is suggested for the set of summaries on stress; a donation of \$50 would bring you summaries for all the 2009 leadership topics.

Daniels, Norman (1985).

Just Health Care*

Cambridge, UK: Cambridge University Press. ISBN 0-521-31790-0; 245 pages; about \$20.

Although he denies that access to health care is a right, Daniels develops a theory of distributive justice based on a minimal threshold of access needed to provide equality of opportunity. This entails compensatory care for those with handicaps, greater needs (including those resulting from personal choices such as smoking), and age, but not for those who want to advance their station in life. Daniels tackles some hard issues such as fairness to providers, regulations designed to equalize risk, cost allocation, and implementation—without having clear answers to any of these.

Hare, R. M. (1979).

“What is Wrong with Slavery?”

Philosophy and Public Affairs, 8 (2), 103-121.

A strong statement of the dangers of vague moral talk, unsupported assertions about personally favored positions, that stands in the way of well-grounded approaches to addressing such issues of social importance as slavery. Despite being addressed in the *United Nations Declaration of Human Rights*, slavery remains a significant and widespread problem today, including in the United States.

Kidder, T. (2004).

Mountains Beyond Mountains

New York, NY: Random House Trade Paperbacks.

The inspiring story of Dr. Paul Farmer, a specialist in infectious diseases, whose mission trips to Haiti metastasized into a worldwide network of third-world health care. There is an undercurrent of liberation theology in Farmer's work, a Roman Catholic movement to bring social justice to the poor through aggressive political means.

Nussbaum, Martha C. (2006).

Frontiers of Justice: Disability, Nationality, Species Membership*

Cambridge, MA: The Belknap Press. ISBN 978-0-674-02410-6; 487 pages; about \$25.

The question of justice toward three groups is considered: individuals with physical and mental handicaps, the poor in other countries, and non-human animals. The common characteristic is that that none of these can negotiate for a share of justice based on contributing to and receiving mutual advantage. All are said by Nussbaum to be entitled to full dignity, defined in terms of ten capabilities, such as bodily integrity, life, and affiliation. Capabilities are defined as “being able to” achieve a threshold or minimal level of the ten characteristics needed for a life of dignity. This is a political philosophy argument that Nussbaum defends as being potentially realizable, say at the level of constitutional amendments, even if it does not now exist.

Rawls, J. A. (1999).

Theory of Justice (rev. ed.)

Cambridge, MA: Belknap Press.

The most influential voice in the Western liberal tradition. “Each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme for liberties for others. Social and economic inequities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage, and (b) attached to positions and offices open to all.” In this view there is equality of opportunity and those who are already well off are entitled to even more so long as that also benefits those worst off in society. There is no guaranteed minimum.

Sen, Amartya. (1992).

Inequality Reexamined*

Cambridge, MA: Harvard University Press. ISBN 0-674-45255-0; 207 pages; price unknown.

Sen argues that there are multiple simultaneous dimensions over which we could argue for equality (income, liberty, satisfaction, etc.). Theories compete based on what they take to be the critical dimension of equality. He favors a dimension described as “capability” into which he combines resources necessary for effective functioning that realizes important life goals. The book is rich in discussions of issues such as the inability to clearly measure equality under any definition and the difficulty in answering questions about which aspects of initial starting positions should count are requiring remedy.

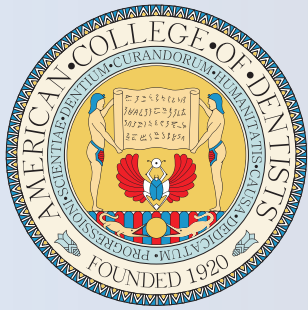
Shue, Henry. (1980).

Basic Rights: Subsistence, Affluence, and US Foreign Policy*

Princeton, NJ: Princeton University Press. ISBN 0-691-07259-0; 231 pages; about \$18.

Basic rights, such as security, subsistence, and some liberties, are necessary for the enjoyment of any other rights or preferences; they cannot be traded away without causing early death. The author argues that it is a duty for affluent countries to supply these if other governments fail to do so because degradingly extreme inequalities are unfair. “This is a book about the moral minimum—about the lower limits on tolerable human conduct individual, and institutional.”





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