OF THE CALIFORNIA DENTAL ASSOCIATION

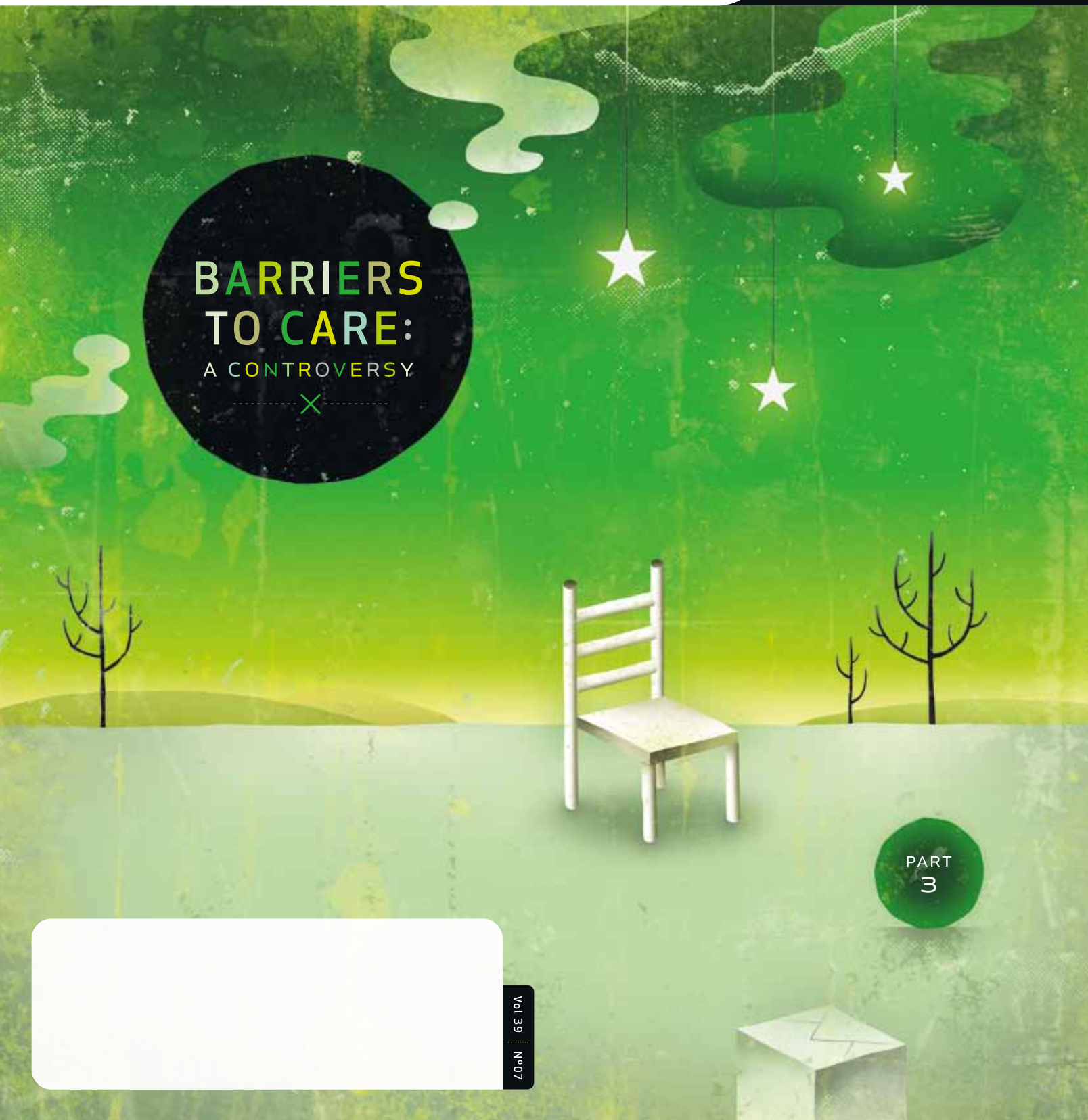
Journal

JULY 2011

Promoting Access to Care

Getting Help for Children

Societal Expectations



BARRIERS TO CARE: A CONTROVERSY

PART 3

Vol 39 No 07

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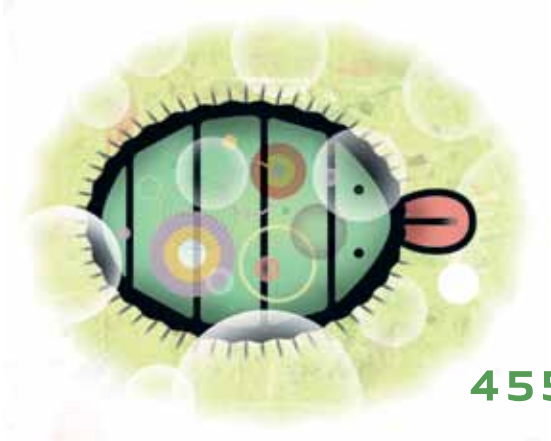

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FEATURES

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Journal

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CDA JOURNAL, VOL 39, Nº7

Simple Answers

KERRY K. CARNEY, DDS

With a simple answer, you know right where you stand. You are for it or against it. No hand wringing.

Simple answers are so nice. With a simple answer, you know right where you stand. You are for it or against it. No hand wringing. No re-evaluating to make sure nothing has been missed. You have the question. You have the answer and you move on.

The problem is: life's questions are seldom solved with simple answers. Take for example, solutions for overcoming barriers to receiving oral health care.

The question itself is not simple. Part of what makes grappling with barriers to care complicated is the nature and number of the underlying questions. Who is not getting care? Why are they not getting care? Are we considering variables beyond the operatory? Do we mean to address the social deprivations that seem to trump fluoride? What measures can be effectively and realistically taken to ameliorate the disparity? And finally, what is the desired outcome? Is the goal a population free of oral pain and dysfunction? Is it a population free of oral disease? How do we assess and measure success?

In the *Journal's* January and February issues, our goal was to provide some context and history as well as a spectrum of ideas on the subject. In the July issue, we bring you more information and ideas.

As professionals, we make knowledge-based decisions every day and those decisions take into consideration many factors. It is important to be able to engage in a knowledge-based discussion around these issues as well.

So much of the information we need has not been readily available, such as:

- The capacity of the dental delivery system in California;
- An analysis of the sustainability of various existing and proposed alternative dental provider models (cost of education, productivity, sustainability through reimbursement system). (Are they viable? Are they safe?); and
- The efficacy of training providers from the target population.

Independent research is being completed that will address some of these questions. CDA has asked about:

- The relationship between the income of general dentists and an increase in the number of children included in California's oral health care system; and
- The efficacy of a state dental director in building recognition for the importance of oral health and in promoting funding?

There are many gaps in our knowledge, but CDA has been committed to doing the necessary research. The processing of that information will be thorough and deliberative. It is essential that CDA remain the recognized expert on improving access to dental care.

We do know that there is already plenty of activity by external groups. Half of all of the states have some activity on barriers to care. The proposed and enacted legislation is patchwork. The workforce models being promoted vary significantly and have little if any research to back them up.

The W.K. Kellogg Foundation is working in five states and their multiple-year strategy is just beginning. Their goal is to create a new dental provider who can render basic restorative care. The Pew Center on the States is working with the Children's Partnership to promote the expansion of the dental team to meet the access needs of California's underserved children.

These are reputable national policy organizations with significant funding. The political/social backdrop to all of this is national health care reform. The reform requires the inclusion of pediatric dental benefits by 2014. There is money and momentum to this movement.

This is a problem that will not be solved by one group alone. It will require the concerted and coordinated effort of many organizations and stakeholders to eliminate all barriers to care. The least desirable solutions are those proposed by external groups based on expediency and emotion.

Some of our core values at CDA include:

- Concern for the quality of care;
- Respect for the unique value of the dentist; and
- Support for our members and their practices.

CDA has a long history of commitment to improving access to care for underserved populations. CDA Foundation programs and tremendous amounts of donated care by member dentists have not reversed the increasing trend in growth of underserved populations.

There is not one simple answer to solve the problem. Increased reimburse-

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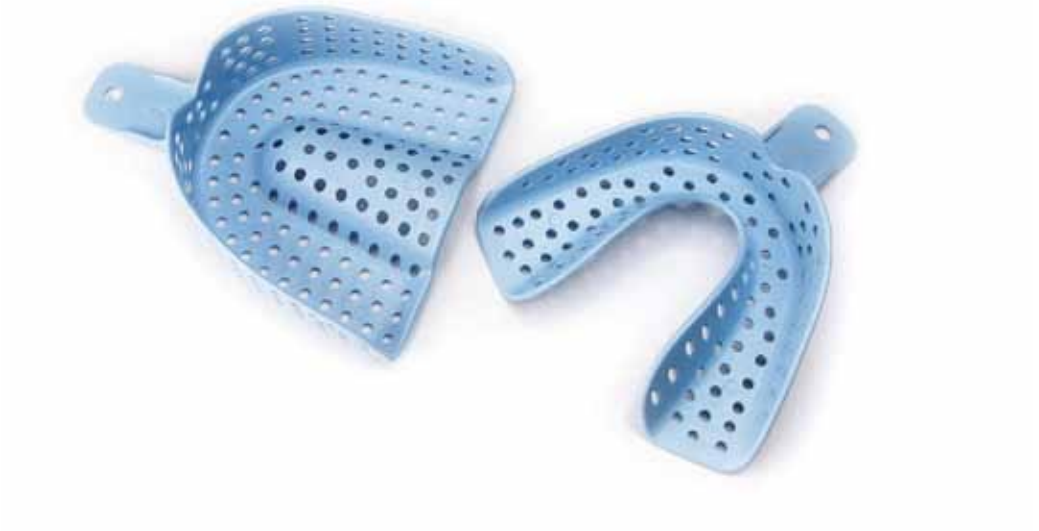

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EDITOR, CONTINUED FROM 449

ment in government programs, reduced bureaucracy, loan forgiveness, oral health literacy, universal fluoridation, workforce innovations, social support: none of these alone will answer the problem as a whole.

There are barriers to care that affect approximately 30 percent of the national population and more than 10 million Californians. If organized dentistry fails to acknowledge and address oral health care disparities and barriers to care, there are many external groups eager to enact their solutions. As dentists, we have an important role to play in determining how disparities in oral health care are addressed. The future of dentistry should be shaped by those who practice it.

We must protect the system that works well for the great majority of the population. Proposals for solutions must rest on data and not emotion.

Make no mistake about it. Removing all barriers to oral health care is a Herculean task. But even Hercules had to have help in dispatching his Hydra.■■■■

The *Journal of the California Dental Association* welcomes letters. *We reserve the right to edit all communications and require that all letters be signed. Letters should discuss an item published in the* Journal *within the past two months or matters of general interest to our readership. Letters must be no more than 500 words and cite no more than five references. No illustrations will be accepted. Letters may be submitted via e-mail to the* Journal *editor-in-chief at kerry.carney@cda.org. By sending the letter to the* Journal*, the author certifies that neither the letter nor one with substantially similar content under the writer's authorship has been published or is being considered for publication elsewhere, and the author acknowledges and agrees that the letter and all rights of the author with regard to the letter become the property of the California Dental Association.*

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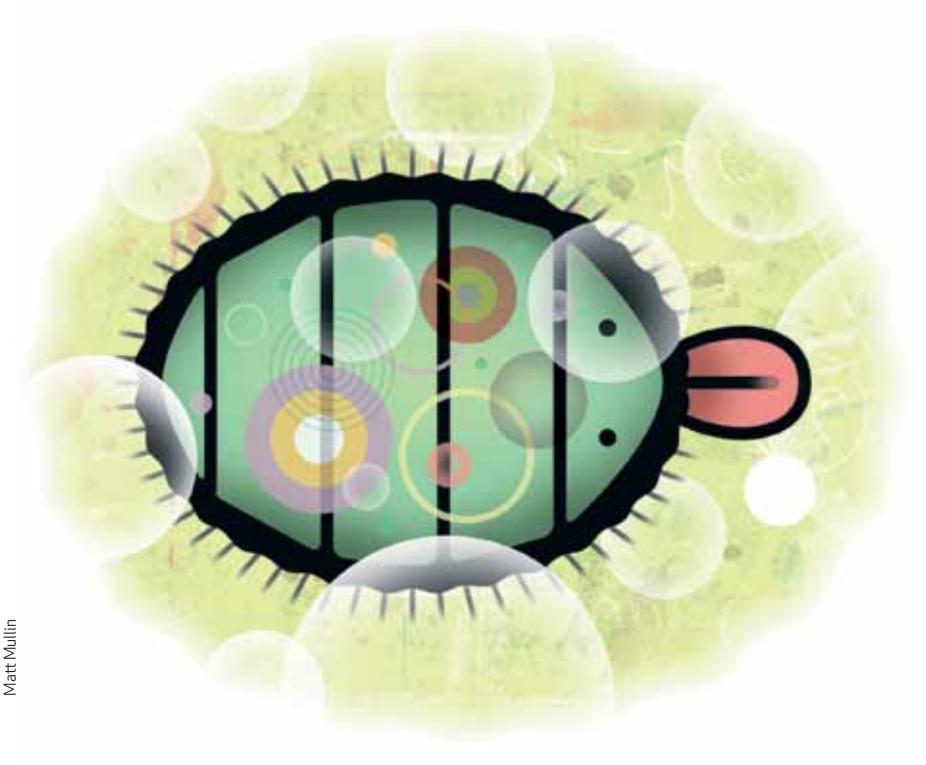

Matt Mullin

Light Shed on Nanoscale Interfaces in Teeth, May Aid in Design Materials

The chemical structure of teeth and bone in humans and animals at the atomic scale has long been a mystery. Until now. Two Northwestern University researchers, using a high-tech imaging tool and along with the tooth of a marine mollusk, are cracking the code and creating a 3-D map in the process.

Atom-probe tomography produces an atom-by-atom, 3-D reconstruction of a sample with subnanometer resolution. This technology can scrutinize organic and inorganic parts, opening up the opportunity to track fluoride in teeth, and cancer and osteoporosis drugs in bone, according to a news release. Information of organic/inorganic interfaces may help scientists create new materials: flexible electronics, polymers, and nanocomposite materials, such as organic photovolta-

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Dental Implants: Less Root Than Crown Can Be Successful

A new study has found that dental implants can be successful with less root than crown. In a study published in the *Journal of Oral Implantology,* researchers evaluated the status of implants that had been in place for more than five years. Radiographs were used to examine 309 single-tooth short-length implant-supported restorations in 194 patients. All of the implants had been surgically placed between February 1997 and December 2005, according to a news release.

The crown-to-root ratio for a tooth to serve as an abutment for a partial denture has been considered 1 to 2, twice as much root as crown. Earlier studies have given diverse results about ratios for implanted teeth. Excessive crown-to-implant ratios have been named as detrimental to long-term survival of an implant, while disproportionate ratios have been noted in high rates of implant survival.

The current study found an average crown-to-implant ratio of 2 to 1. The authors said that stable implants could be produced with less of the tooth serving as root. Additionally, no statistically significant relationship was found between increasing crown-to-implant ratios and decreasing bone-to-implant contact levels around the implant.

To see the full article, *Crown-to-Implant Ratios of Short-Length Implants,* go to www2.allenpress.com/pdf/orim-36-06-425-433.pdf.

Youths With Asthma Also Have Higher Risk for Developing Caries

Children and teens who are asthmatics tend to be more carious and experience gingivitis than their counterparts of the same age but do not have asthma.

In a thesis presented at the Sahlgrenska Academy in Gothenburg, Sweden, those in the age groups of 2, 6, 12-16, and 18-24, with and without asthma, were studied.

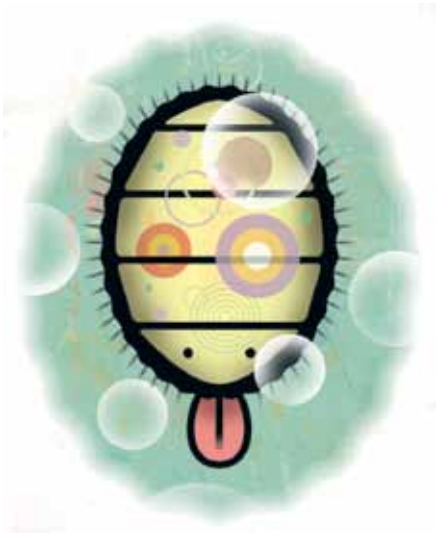
In the first study, 3-year-olds with asthma had more caries than their same-age counterparts who did not. "The children with asthma had a greater tendency to breathe through the mouth; they became dry in the mouth, and, were therefore given sugary drinks more often. This may have contributed to them developing higher caries prevalence," said Malin Stensson, a dental hygienist and researcher at the Department of Cariology, Institute of Odontology at the Sahlgrenska Academy. These same children then were monitored in a study from age 3 to 6.

Comparisons were also made between youths between the ages of 12 and 16 who suffered from long-term moderate or severe asthma to those in the same age range who did not have asthma.

"Only 1 out of 20 in the asthma group was caries-free, while 13 out of 20 were caries-free in the control group. One factor that may have influenced the development of caries is somewhat lower level of saliva secretion, which was probably caused by the medication taken by those with asthma," said Stensson, adding, "Adolescents with asthma also suffered more often from gingivitis than those without asthma."

Researchers also examined the oral health of those between the ages of 18-24. The results from the groups with and without asthma were similar to those in the 12-16-year-olds, although the differences between those with asthma and those without were not as large.

NANOSCALE, CONTINUED FROM 455



ics that combine the best properties of organic and inorganic materials.

"The interface between the organic and inorganic materials plays a large role in controlling properties and structure," said Derk Joester, PhD, senior author of the paper published in *Nature*. "How do organisms make and control these materials? We need to understand this architecture on the nanoscale level to design new materials intelligently. Otherwise we really have no idea what is going on."

Joester, the Morris E. Fine Junior Professor in Materials and Manufacturing at the McCormick School of Engineering and Applied Science, and Lyle Gordon, a doctoral student in Joester's lab and coauthor of the paper, were surprised by the chemical heterogeneity of the fibers, which hints at how organisms modulate chemistry at the nanoscale. They are eager to determine how organic fibers interface with inorganic minerals, important to understanding hybrid materials.

"The tooth's toughness comes from this mix of organic and inorganic materials and the interfaces between them," said Joester in a news release via *ScienceDaily*. "While this is in principle well-known, it is intriguing to think we may have overlooked how subtle changes in the chemical makeup of nanoscale interfaces may play a role in, for instance, bone formation or the diffusion of fluoride into tooth enamel. In this regard, atom-probe tomography has the potential to revolutionize our understanding."

Joester and Gordon imaged the teeth of the chiton, a marine mollusk that continually makes new rows of teeth — one a day — to replace mature but worn teeth. Similar to a conveyor belt, the older teeth move down the creature's tongue-like radula toward the mouth where it feeds. Whereas humans have enamel, chitons' teeth have magnetite, a hard iron oxide.

The two researchers now are studying the tooth enamel of a vertebrate and plan to apply APT to bone, which also is made of organic and inorganic parts, to learn more about its nanoscale structure.

Tobacco Manufacturers Must Reveal Their Ingredients

The Federal Drug Administration has ruled that tobacco manufacturers who have changed their recipes must demonstrate the revised or new products are considerably "equivalent" to those made prior to February 2007.

"This law requires the FDA to carefully consider what impact these changes or new products have on the public health," said Lawrence R. Deyton, MD, MPH, director of the FDA's Center for Tobacco Products. "No longer will changes to products consumed by millions of Americans be made without anyone knowing."

The grandfather date of Feb. 15, 2007, and authority for the rule stems from the Tobacco Control Act of June 2009. The rule applies to cigarettes, smokeless tobacco products, and roll-your-own tobacco products but not to electronic cigarettes. Tobacco companies had until last March to submit evidence to the FDA that new or changed products are "substantially equivalent" to those made before February 2007.

Tobacco companies, Deyton said, have never before had to tell the FDA what was in their products. They still don't – unless they want to sell a new product, or one that was altered since February 2007. If that is the case, according to a news release, the company must present detailed evidence that the new product is no worse for the public health than the old product. This affords the FDA to know exactly what is in the old and new products, and how they are made.

Per the ruling, products are considered modified if they have "a change in design, any component, any part, or any constituent, including a smoke constituent, or in the content, delivery, or form of nicotine, or any other additive or ingredient." In order to be classified as unchanged, the company must show that the new or altered product is no more toxic, addictive, or attractive to minors than similar products made before February 2007. A senior company official such as the CEO must sign a letter certifying that changes to the product will not have these effects.

Respiratory Diseases Linked to Status of Gum Health

A recent study suggests that those who have periodontal disease run a risk for respiratory infections including pneumonia and chronic obstructive pulmonary disease.

Infections such as these — one of the leading causes of death in the United States — are produced when bacteria from the upper throat is drawn into the lower respiratory tract.

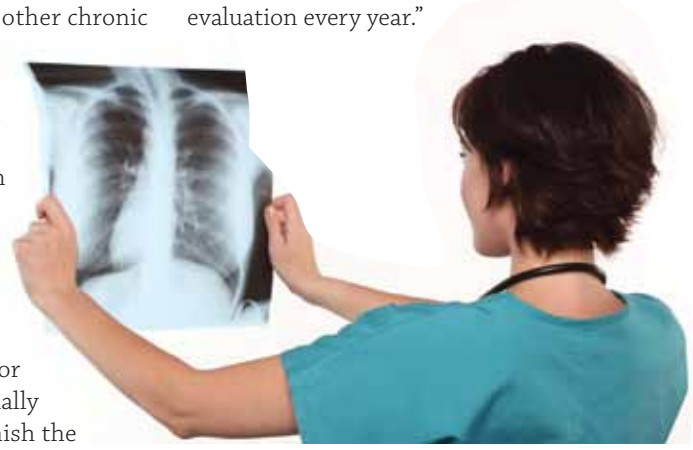
Two hundred individuals, who had at least 20 natural teeth and were between the ages of 20 and 60, participated in the study, which was published in an issue of the *Journal of Periodontology*. All participants underwent a comprehensive oral evaluation to measure periodontal health status.

Half of those who took part in the research were hospitalized patients suffering from a respiratory disease such as acute bronchitis, COPD, and pneumonia. The other half had no history of respiratory disease.

Results showed that those with respiratory infections had poorer periodontal health than their counterparts who were disease-free. Researchers believe the presence of oral pathogens associated with periodontal disease may increase a patient's risk of developing or exacerbating respiratory disease and note that additional studies are needed to more conclusively understand this link, according to a news release via *ScienceDaily*. Previous research has associated gum disease with other chronic inflammatory diseases such as cardiovascular disease, rheumatoid arthritis, and diabetes.

"Pulmonary diseases can be severely disabling and debilitating," said Donald S. Clem, DDS, president of the American Academy of Periodontology. "By working with your dentist or periodontist, you may actually be able to prevent or diminish the progression of harmful diseases such as pneumonia or COPD. This study provides yet another example of how periodontal health plays a role in keeping other systems of the body healthy."

Clem emphasized the significance of regular oral care to help prevent periodontal disease. Taking good care of your periodontal health involves daily toothbrushing and flossing. You should also expect to get a comprehensive periodontal evaluation every year."



A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.

WINSTON CHURCHILL

Kerr SonicFill

Kerr Corporation has announced the launch of its time-saving composite system that enables clinicians to perform posterior restorations with an easy-to-use, single-step, bulk fill technology that requires no additional composite capping layer. Dentists can go from placement to polished in less than three minutes on cavities up to 5 mm. SonicFill's delivery system lowers the viscosity of the composite during placement, the composite then immediately returns to a nonslumping, highly sculptable state that is easy to carve without being sticky. For more information call 310-458-3382.

Somerman Named New NIDCR Director

Martha J. Somerman, DDS, PhD, has been named new director of the National Institute of Dental and Craniofacial Research, effective Aug. 29.

Somerman has been dean of the University of Washington School of Dentistry for the past nine years, as well as holding appointments as professor in the School of Dentistry's Department of Periodontics and as adjunct professor in the Department of Oral Biology. Additionally, she has served on the medical staff of the Seattle Cancer Care Alliance and as a member of the associate medical staff of the University of Washington Medical Center and the Harborview Medical Center.

Somerman previously was on the faculty of the University of Michigan School of Dentistry and the Baltimore College of Dental Surgery. While at Michigan, she was a professor and chair of the Department of Periodontics/Prevention/Geriatrics, and held the William K. and Mary Anne Najjar Endowed Professorship, in addition to being a professor of pharmacology at the university's School of Medicine. In Baltimore, she was assistant professor then associate professor in the periodontics and pharmacology departments.

UPCOMING MEETINGS

2011	
July 28–31	AGD Annual Meeting and Exhibits, San Diego (888) AGD-DENT or agd.org/sandiego
Sept. 12–17	American Association of Oral and Maxillofacial Surgeons, Philadelphia, aaoms.org
Sept. 14–17	FDI Annual World Dental Congress, Mexico City, www.fdicongress.org. Please also view this related video: http://www.youtube.com/watch?v=3N4okaVMYhs
Sept. 22–24	*CDA Presents the Art and Science of Dentistry*, San Francisco, 800-CDA-SMILE (232-7645), cdapresents.com
Oct. 10–13	ADA 152nd Annual Session, Las Vegas, ada.org
Oct. 23–26	National Primary Oral Health Conference, National Harbor, Md., nnoha.org/conference/npohc.html
Nov. 6–12	United States Dental Tennis Association, Palm Desert, Calif., dentaltennis.org
2012	
March 29–April 1	CSPD/WSPD Annual Meeting, Portland, Ore., drrstewart@aol.com
April 26–28	World Federation for Laser Dentistry, 13th Annual World Congress, Barcelona, Spain, wfldbcn2012.com
May 3–5	*CDA Presents the Art and Science of Dentistry,* Anaheim, 800-CDA-SMILE (232-7645), cdapresents.com
Oct. 18–23	ADA 153rd Annual Session, San Francisco, ada.org

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

Periscope offers synopses of current findings in dental research, technology, and related fields.

ENDODONTICS

W. CRAIG NOBLETT, DDS, MS, FACD

Revascularization and Pulp Space Tissue

Wang X, Thibodeau B, et al, Histologic characterization of regenerated tissues in canal space after the revitalization/revascularization procedure of immature dog teeth with apical periodontitis. *J Endod* 36(1):56-63, January 2010.

AIM: This in vivo study was designed to examine the type of tissue present in the pulp space following the revitalization/revascularization procedure in immature dogs teeth with induced apical periodontitis.

METHODS: Sixty double-rooted premolars were included. Prior to completion of root formation, the pulps were exposed and infected with supragingival plaque to induce apical periodontitis. Following the development of apical periodontitis, the pulp spaces were debrided and treated with the triple antibiotic paste described by Banchs and Trope (*J Endod,* 2004) as part of the revascularization procedure. Three months after completion, histologic exam was performed to characterize the tissue present in the canal.

RESULTS: The canal walls exhibited increased thickness due to the apposition of newly generated cementum-like tissue. Intracanal bone, or bone-like tissue was also observed in many cases. The connective tissue present was similar to periodontal ligament.

CONCLUSIONS: The thickening of immature roots following the revascularization procedure was due to the deposition of a cementum-like tissue and, in some cases, bone-like tissue, associated with a periodontal ligament-like connective tissue adjacent. A regenerated pulp tissue was not observed in these cases.

CLINICAL RELEVANCE: The short evaluation period in this study may represent a limitation in characterizing the tissue formed following the revascularization procedure. In humans, it is likely that a cementum-like tissue is formed to increase root width as is found with a conventional apexification procedure. The expectation that a functional pulp tissue is regenerated by this procedure is not likely to be realized based on the findings of this study.

ORTHODONTICS

GLENN SAMESHIMA, DDS, AND ELAINE N. CHOW, DDS

Self-Ligating Versus Conventional Brackets

Miles P, Weyant R, Porcelain brackets during initial alignment: are self-ligating cosmetic brackets more efficient? *Aust Orthod J* 26(1):21-6, November 2010.

AIM: To evaluate the differences of effectiveness, discomfort, and used chairtime between self-ligating (SL) porcelain brackets and conventional porcelain (CP) brackets tied with ligature wires.

METHOD: Sixty-eight consecutive patients, planned for no extractions in the upper arch, were randomly divided into two groups. One group had indirect bonding of SL porcelain 0.018-inch In-Ovation C brackets from upper canine-to-canine, and metal In-Ovation brackets from upper first premolar-to-first molar. The second group had indirect bonding of CP 0.018-inch Clarity brackets from upper canine-to-canine, and metal Victory brackets from upper first premolar-to-first molar. The brackets in group 2 were tied with coated ligature wires. The Irregularity Index was measured before the start of treatment (T1) and 10.7 weeks (T2) after initial wires were placed. The discomfort level of each group was measured on a seven-point Likert scale at four hours, 24 hours, three days, and one week after initial wire placement. Finally, the time (assisted and unassisted) used to untie and ligate the six anterior teeth was recorded. Due to incomplete records, the final number of subjects was 60.

RESULTS: There was no significant difference of the Irregularity Index between groups at T1 ($p < 0.91$) or T2 ($p < 0.12$). No difference of discomfort was rated by patients between the two bracket types ($p < 0.90$). A significant difference was found between groups for the time to untie and ligate both bracket systems (SL porcelain brackets were faster, $p < 0.001$)

CONCLUSION: Between SL and conventional porcelain brackets, there was no significant difference in alignment discomfort. SL brackets are significantly faster to tie and untie than CP.

BOTTOM LINE: Using SL porcelain brackets saves 22 seconds per bracket compared to CP during initial alignment. After initial alignment when elastomeric modules can be used on CP, this time differential will decrease. Also, the use of a chain over the SL brackets could increase the ligation time.

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TECHNOLOGY

JIN-HO PHARK, DDS, DR.MED.DENT.

Candy Additives and Enamel Lesions

Walker GD, Cai F, et al, Casein phosphopeptide-amorphous calcium phosphate incorporated into sugar confections inhibits the progression of enamel subsurface lesions in situ. *Caries Res* 44(1): 33-40, 2010.

AIM: The purpose of this study was to investigate the potential of casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) added to hard candy confections to slow the progression of enamel subsurface lesions in an in situ model.

METHODS: Two randomized, double-blind, crossover studies were conducted to investigate the potential of CPP-ACP added to hard candy confections to slow the progression of enamel subsurface lesions in an in situ model. The confections studied were: (1) control sugar (65 percent sucrose + 33 percent glucose syrup); (2) control sugar-free; (3) sugar + 0.5 percent (w/w) CPP-ACP; (4) sugar + 1.0 percent (w/w) CPP-ACP; (5) sugar-free + 0.5 percent (w/w) CPP-ACP. Participants (10 and 14 in study 1 and 2) wore a removable palatal appliance containing enamel half-slabs with subsurface lesions, except for meals and oral hygiene procedures, and consumed one confection six times a day for 10 days. The enamel half-slabs were inset to allow the development of plaque on the enamel surface. Participants rested for one week before crossing over to another confection. The appliances were stored in a humid container at 37 degrees Celsius when not in the mouth. After each treatment period, the enamel half-slabs were removed, paired with their demineralized control half-slabs, embedded, sectioned, and then analyzed using transverse microradiography.

RESULTS: In both studies consumption of the control sugar confection resulted in significant demineralization (progression) of the enamel subsurface lesions. However, consumption of the sugar confections containing CPP-ACP did not result in lesion progression, but, in fact, in significant remineralization (regression) of the lesions.

CONCLUSIONS: Remineralization by consumption of the sugar + 1.0 percent CPP-ACP confection was significantly greater than that obtained with the sugar-free confection.

CLINICAL RELEVANCE: Casein phosphopeptide-amorphous calcium phosphate has been demonstrated to exhibit anticariogenic activity in randomized, controlled clinical trials of sugar-free gum and a tooth cream. This study shows the anticariogenic effect of CPP-ACP even if embedded in a cariogenic carrier.

PERIODONTICS

GERALD I. DRURY, DDS

Laser in Nonsurgical Periodontal Therapy: A Systematic Review

Slot D, Kranendonk A, et al, The effect of a pulsed Nd:YAG laser in nonsurgical periodontal therapy. A systematic review. *J Periodontol* 80(7):1041-56, 2009.

BACKGROUND: The aim of this study was to evaluate the additional therapeutic effects of using a pulsed Nd:YAG laser in the initial treatment of patients with periodontitis.

METHODS: The Central Register of Controlled Trials were used. The databases were searched up to and including January 2009. The criteria were randomized-controlled clinical trials or controlled clinical trials conducted in humans with good general health. The interventions used in the studies included the use of the Nd:YAG laser as monotherapy or as an adjunct to SRP. The control groups examined were either conventional therapy or placebo. Evaluation parameters (plaque, bleeding, gingivitis, PD) were scored and statistical analysis was used. Heterogeneity was assessed by factors, such as study design, evaluation period, type of Nd:YAG laser, comparison treatment, industry funding, and smoking.

RESULTS: Eight studies were identified and included for further analysis. Data was collected from each of the articles and only descriptive analysis was possible.

DISCUSSION: The effectiveness of SRP in the treatment of periodontal disease is universally accepted. It was suggested that SRP, after Nd:YAG laser therapy, may be more efficient in removing root deposition. Some studies provided some evidence that the clinical effects of Nd:YAG laser treatment on gingival inflammation and PD are similar to those obtained with SRP and UltraSonic (US) or US alone. No evidence was found that using the laser provided additional benefits over those of the conventional approach. Only five studies reported CAL as a parameter, and the majority found no differences among laser treatment, conventional periodontal therapy, or sham treatment. Differences in laser settings may explain the varying degrees of success across the studies in eliminating pathogens. Three reviews showed no beneficial effect of laser compared with conventional therapy.

CONCLUSIONS: The majority of studies analyzed showed no beneficial effect of Nd:YAG laser compared with conventional therapy. No evidence exists that the Nd:YAG laser is superior to traditional modalities of periodontal therapy, neither as a monotherapy or as an adjunct to nonsurgical periodontal treatment.

BOTTOM LINE: No benefit of laser over conventional nonsurgical therapy.

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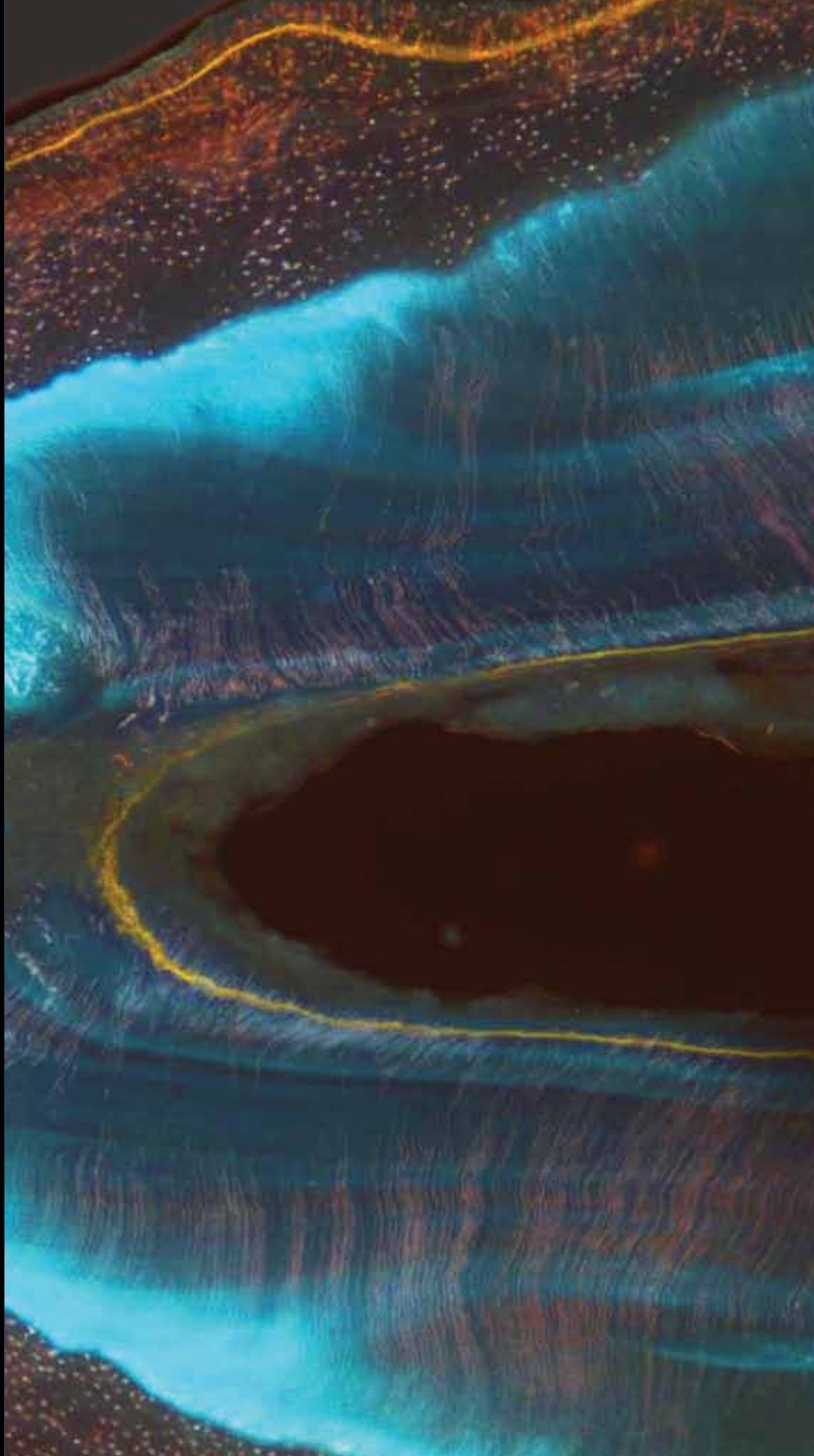

Headlining Speakers

Stephen Buchanan, DDS, FICD, FACD

Endodontics

The New Art of Endodontics: Everything's Changed Except the Anatomy.....Friday morning lecture

The New Art of Endodontics: Gaining Procedural Mastery With New Tools.....Friday afternoon lecture

The New Art of Endodontics: The Workshop .....Saturday workshop

John O. Burgess, DDS, MS

Restorative Dentistry

The Directly Placed Adhesive Restoration.....Friday lecture

Bleaching Discolored Teeth and Restoring Endodontically Treated Teeth .....Saturday morning lecture

Dental Materials

Preventive Materials — Using Them to Build an Effective Practice .....Saturday afternoon lecture

Joe H. Camp, DDS, MSD

Endodontics

Pulpal Management of Young Permanent Teeth, Traumatic Injuries and MTA Uses.....Thursday morning lecture

Mechanical Instrumentation and Obturation of Root Canals .....Thursday afternoon lecture

Pulpal Management of Young Permanent Teeth, Traumatic Injuries and MTA Uses..... Friday morning workshop

Mechanical Instrumentation and Obturation of Root Canals ..... Friday afternoon workshop

John A. Kanca, DMD

Esthetic Dentistry

Adhesive Dentistry 2K11 .....Friday lecture

Gerard Kugel, DMD, MS, PhD

Cosmetic Dentistry

Esthetic Dentistry: Keys to Success ..... Saturday lecture

Karen Davis, RDH, BSDH

Dental Hygiene

America's Sweet Tooth Obsession and Its Impact on Oral and Systemic Health.....Thursday morning lecture

It's Not What You Say, or Is It? Effective Communication and Enrollment Skills for the Dental Team.....Thursday afternoon lecture

Howard S. Glazer, DDS, FAGD

Product Review

What's Hot and What's Getting Hotter!.....Friday lecture

First Impressions Do Count! Impressions and Provisional — No Fuss, No Muss ..... Saturday morning workshop

Composites Can Be Beautiful: Hands-on Composite Layering and Class II Restorations..... Saturday afternoon workshop

Mark E. Hyman, DDS

Practice Management

A 360 Slam Dunk Guide for Successful Teams .....Friday lecture

Ask and Ye Shall Receive! The Art of Getting to "Yes"..... Saturday lecture

Ronald Jackson, DDS, FAACD, DABAD

Operative Dentistry

Anterior Composite Artistry: Conservative, Versatile, Underused.....Friday lecture

Composite Artistry Workshop.....Saturday workshop

Corky Willhite, DDS

Esthetic Dentistry

Freehand Composite Bonding: The "Ultimate Esthetics" Course .....Thursday morning lecture

Transitional Bonding: Nontraditional Composite Restorations for Major Occlusal and Esthetic Changes.....Thursday afternoon lecture

Transitional Bonding: Adding Incisal Length for Function and Esthetics ..... Friday morning workshop

Making a Dark Tooth Bright ..... Friday afternoon workshop

CDA Presents will feature more than 400 exhibiting companies showcasing the latest in dental technology, products and services. Stay ahead of the curve by exploring the innovative new products being launched in the exhibit hall.

Thursday–Saturday
Sept. 22–24, 2011

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Thursday, 9:30 a.m.

Exhibit Hall Days and Hours
Thursday, 9:30 a.m.–5:30 p.m.
Friday, 9:30 a.m.–6 p.m.
Saturday, 9:30 a.m.–4:30 p.m.

Family Hours
Daily, 9:30 a.m.–noon

Registration Hours
Thursday, 6:30 a.m.–5:30 p.m.
Friday, 6:30 a.m.–6 p.m.
Saturday, 6:30 a.m.–4:30 p.m.

CDA Party at the exploratorium®

It was created by a physicist and houses a geometry playground, microscope imaging station and a calculator powered by the force of gravity. It's the Exploratorium, the destination of this year's CDA Party. Join us for a bountiful buffet, fascinating exhibits and live music from '80s cover band Tainted Love.

Friday, Sept. 23
7–10 p.m. (please arrive by 8 p.m.)

Exploratorium
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(Transportation available from the Moscone Center)

$65 per person/Event # 044
Two complimentary beverages will be provided, and a cash bar will be available throughout the evening.

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City Information

San Francisco is famous for its scenic beauty, cultural attractions, diverse communities and world-class cuisine. This very walkable city is dotted with landmarks recognized throughout the world: the Golden Gate Bridge, cable cars, Alcatraz and the largest Chinatown in the United States. To learn more about "the most European of American cities," visit **onlyinsanfrancisco.com**.

Weather

September is usually a beautiful time of year and an ideal time to visit. The average high is 73 degrees, with an average low of 55 degrees.

Advance Restaurant Reservations

Not sure where to dine in San Francisco? Contact **reservationstonight.com** or call or fax toll-free at 800.392.DINE (3463). When contacting Reservations Tonight!, mention the California Dental Association meeting. There will also be a restaurant desk available at the Convention Center.

Ground Transportation to and From the Airport

San Francisco International Airport lies just 14 miles south of downtown San Francisco. The approximate time from SFO to downtown ranges from 20 to 30 minutes, depending on the time of day and mode of transportation. For complete information on airport transit, visit **flysfo.com**.

- SuperShuttle offers frequent shared-ride service between airports and hotels.
- Taxi service is available from SFO to downtown. Voluntary ride-sharing for two or more people with a maximum of three destinations is permitted.
- The San Francisco Bay Area Rapid Transit system connects with SFO. The SFO BART Station is located in the International Terminal with direct links (one level above) to all terminals via the SFO AirTrain. Travelers can take the BART line from downtown San Francisco to the SFO International Terminal in just 29 minutes for approximately $8. Visit bart.gov for schedules and station information.

Cable Cars

San Francisco's iconic cable cars operate along three routes: the Powell-Hyde line, which begins at Powell and Market streets and terminates at Victorian Park; the Powell-Mason line, which also begins at Powell and Market but terminates at Bay Street; and the California Street line, which runs from the foot of Market Street to Van Ness Avenue.

Ferries

Water taxis depart from several points in San Francisco and go to the following destinations: Alameda, Larkspur, Oakland (Jack London Square), Sausalito, Tiburon and Vallejo. Excursion service also operates between San Francisco and Alcatraz and Angel islands.

Dentist Registration Categories

Abbreviation	Registration Category	Advance Reg. Fee	On-Site Fee
A	CDA member dentist	Free	Free
B	ADA life member	Free	Free
C	ADA member residing outside of California	$200	$225
D	Member dentist of recognized dental society outside of U.S.	$200	$225
E	Active-duty military dentist (VA, federal, state dentist)	$75	$100
F	CA nonmember dentist (one-time rate)	$75	$75
G	Nonmember dentist	$800	$890
H	Inactive dental license	$250	$275
I	Dental student/CDA member	Free	Free
J	Dental student/graduate/non-member	$25	$50

Please Note: Dentists may register staff and guests, but not other dentists. Dentists may not register under any category except dentist, and nonmembers must be identified.

Allied Dental Health Professional Categories (ADHP)

ADHP includes RDA, RDH, RDA(EF), RDH(EF), RDHAP, DA, business administrative staff (AS), and dental laboratory technician (LT). Include license number and type on form when registering.

Abbreviation	Registration Category	Advance Reg. Fee	On-Site Fee
K	ADHP CDA member*	Free	Free
L	Guest of ADHP	$20	$25
M	ADHP Non-CDA member registering without a dentist	$20	$25
N	ADHP Non-CDA member registering with a dentist	$5	$25

*An ADHP member is a dental professional who is not a dentist but has an independent, paid membership with CDA.

Other Registration Categories

Abbreviation	Registration Category	Advance Reg. Fee	On-Site Fee
O	Non-exhibiting dental dealer, manufacturer, consultant	$150	$175
P	Non-dental professional (MD, DVM, RN etc.)	$150	$175
Q	Guest of dentist (includes ADHP nonmember)	$5	$25

Saturday Exhibits-Only Pass

Nonmember dentists who want to explore the exhibit hall can register on-site for a one-day pass on Saturday, Sept. 24. The cost is $175 and is for Saturday exhibit hall hours only. It is not valid for continuing education courses. To register, please visit the membership counter during on-site registration hours on Saturday, Sept. 24. Then experience all that the *CDA Presents* exhibit hall has to offer.

cda PRESENTS

The Art and Science of Dentistry

Advance Registration Deadline: Aug. 17, 2011

	Instructor	Course #	Day/a.m./p.m.	Fee
Required Courses				
California Dental Practice Act	Robin	001	Thursday	$20
Infection Control	Morgan-Arns	002	Thursday	$20
California Dental Practice Act	Curley	003	Friday	$20
Infection Control	Morgan-Arns	004	Friday	$20
California Dental Practice Act	Curley	005	Saturday	$20
Infection Control	Cuny	006	Saturday	$20
Thursday Workshops, Sept. 22				
Embezzlement (Dentist)	Gunn	007	a.m.	$50
Embezzlement (Dentist & Spouse)	Gunn	008	a.m.	$75
QuickBooks	Gunn	009	p.m.	$140
Crown Lengthening	Low	010	a.m.	$295
		011	p.m.	$295
Implants	Sadowsky	012	a.m.	$295
		013	p.m.	$295
Lasers	Roshkind	014	a.m.	$195
		015	p.m.	$195
Team Round Table	Wallace	016	Full Day	$45
Practice Opportunities	Industry Speakers	017	a.m.	$45
TDIC Risk Management Courses	Iwata/Watkins	743	a.m.	$50
		744	p.m.	$50
Friday Workshops, Sept. 23				
Endodontics – Pulpal Mgmt.	Camp	018	a.m.	$295
Endodontics – Instrumentation/Obturation	Camp	019	p.m.	$345
Esthetic Dentistry – Anteriors	Hooper	020	a.m.	$245
Esthetic Dentistry – Posterior	Hooper	021	p.m.	$245
Esthetic Dentistry – Anterior & Posterior	Hooper	022	Both a.m. and p.m.	$495

	Instructor	Course #	Day/a.m./p.m.	Fee
Friday Workshops, Sept. 23 (continued)				
Cone Beam Anatomy	Miles	023	a.m.	$125
		024	p.m.	$125
Esthetic Dentistry – All Things	Miyasaki	025	a.m.	$225
Esthetic Dentistry – Min. Invasive	Miyasaki	026	p.m.	$225
Esthetic Dentistry – Transitional Bonding	Willhite	027	dentist	$245
		028	RDAEF	$195
Esthetic Dentistry – Making a Dark Tooth Bright	Willhite	029	dentist	$245
		030	RDAEF	$195
TDIC Risk Management Courses	Iwata/Watkins	745	a.m.	$50
		746	p.m.	$50
Saturday Workshops, Sept. 24				
Endodontics	Buchanan	031	a.m.	$345
		032	p.m.	$345
Temporaries/Impressions	Glazer	033	a.m.	$125
Composites	Glazer	034	p.m.	$125
Temporaries/Impressions & Composites	Glazer	035	Both a.m. & p.m.	$225
Anterior Composites	Jackson	036	a.m.	$245
		037	p.m.	$245
Mini Implants (participant)	LaBarre	038	Full day	$1,295
Mini Implants (observer)	LaBarre	039	Full day	$495
Dentist as Business Person	Castagna/Moore	040	a.m.	$120
Doctor as CEO	Castagna/Moore	041	p.m.	$120
Laser Certification	Roshkind/Coluzzi	042	Full day	$795
Root Retained Overdentures	Schnell/Roberts	043	Full day	$325
Special Events				
CDA Party		044	Friday	$65
WineFUNdamentals Tasting Reception		045	Friday	$25
Invisalign Clear Essentials I		046	Saturday	$1,695
Invisalign Clear Essentials II		047	Saturday	$350

Photocopy for additional registrants. Only one dentist per form.

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License # | **ADA #**

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City | State | Zip

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Advance registration deadline is Aug. 17, 2011. Register today!

Best: Register at **cdapresents.com** (secures an immediate seat in a workshop or special event)
Good: Register by fax at 877.714.3184
OK: Register by mail at *CDA Presents*, 1201 K St., 16th Floor, Sacramento, CA 95814

To ensure that proper C.E. credits are granted, licensed dental professionals must include their license number and formal name as listed with the Dental Board of California. Please complete all areas of this form legibly. Be sure to include titles and badge categories.

- Registrations are processed in the order they are received.
- If your registration is received by the deadline, you will receive your order at least two weeks prior to the meeting.
- Mailing will begin in early July.
- Refund requests for ticketed programs must be made in writing and materials returned to CDA no later than Aug. 23, 2011.

CDA member dentists will receive complimentary registration. All other staff/guests (nondentists) are $5 per person if registering with a dentist.

Primary Registrant (Print or type only primary registrant's name only.)		**Registration Information**				**Workshops and Required Courses**						**Total Fees**
Last Name	Formal First Name and Middle Initial	Category Letter	License #	Title	Fee $	Course #	Fee $	Course #	Fee $	Course #	Fee $	Fee $

Staff/Guests Badges (Dentist cannot be registered as guests/staff.)		**Registration Information**				**Workshops and Required Courses**						**Total Fees**
Last Name	Formal First Name and Middle Initial	Category Letter	License #	Title	Fee $	Course #	Fee $	Course #	Fee $	Course #	Fee $	Fee $
1.												
2.												
3.												
4.												
5.												
6.												
7.												

Special Event Tickets

This area is for the purchase of membership party and special event tickets. Please indicate the total number of tickets per event you wish to purchase in the adjacent area. Use the above area to purchase registrant-specific workshop tickets.

Event #	Fee $		Quantity of Tickets		**Total Fees**
		X		=	Fee $
		X		=	
		X		=	

Method of Payment

☐ Check or Money Order (Payable to California Dental Association)

☐ American Express ☐ MasterCard ☐ Visa

Credit Card # | Exp. Date

Signature
(Your signature will indicate approval for charges to your account.)

Printed Name
(Please print name as it appears on card.)

Grand Total

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CDA JOURNAL, VOL 39, Nº7

A CONTINUING FORUM

KERRY K. CARNEY, DDS

GUEST EDITOR

Kerry K. Carney, DDS, is editor-in-chief of the *Journal of the California Dental Association.*

This is the *Journal's* third issue devoted to the barriers to care controversy. In this issue, the *Journal* provides information on a new dental team member, the community dental health coordinator (CDHC). The forum includes ideas about the importance of children's oral health needs and the ADA's response to some proposed solutions to the reduction of barriers to accessing oral health care. Ideas are presented about the dentist's role as a professional in the context of a societal contract and, finally, a reminder that we need to be working toward risk assessment, management and prevention of caries rather than focusing on surgical intervention models as we consider solutions.

Dr. Dunn H. Cumby, Marsha W. Beatty and Sydney Sevier write about the ADA's community dental health coordinator (CDHC) pilot training program. They recently initiated the training process with the third and final cohort of trainees, and just completed a series of site visits to the second cohort, which is starting the internship portion of their training. In the summer of 2010, Dr. Cumby addressed the CDA Workforce Taskforce and became a valuable resource for information on the ADA's CDHC model.

Shelly Gehshan and Marko Mijic discuss the impact of barriers to oral health care for children. Ms. Gehshan is a policy analyst, senior program manager, and health policy expert who has nearly 20 years of experience working for state policymakers on issues affecting low-income women, children, and families. She is the director for the Pew Children's Dental Campaign, a five-year dental health initiative. Mr. Mijic is assistant to the assistant secretary for Planning and Evaluation, U.S. Department of Health

and Human Services. Ms. Gehshan addressed the CDA Board of Trustees in 2009.

Also included is a statement from the American Dental Association on *Breaking Down Barriers to Oral Health for All Americans: The Role of Workforce.* This is the first in the ADA's series on access to oral health.

David Nash is a board-certified pediatric dentist and has served as a member of the Board of Directors of the American Academy of Pediatric Dentistry, and as president of the College of Diplomates in Pediatric Dentistry. Dr. Nash is the William R. Willard Professor of Dental Education, a professor of pediatric dentistry, College of Dentistry, University of Kentucky. He also holds joint appointments as professor of behavioral science in the College of Medicine, and professor of public health ethics in the College of Public Health. He led in the establishment of the University of Kentucky Hospital's Ethics Committee in 1994, and served as its chair until 2005. From 1987-1997, Dr. Nash was dean of the University of Kentucky College of Dentistry.

Dr. Nash is an advocate for the introduction of a new member of the dental team – a pediatric oral health therapist – to address the problem of access to care for children. His work has been widely published. Dr. Nash addressed the CDA Board of Trustees, the Workforce Taskforce and the CDA House of Delegates in 2009. His paper is a version of his address to the House.

Our final contributor is Dr. Featherstone, dean of the University of California, San Francisco, School of Dentistry. Dr. Featherstone grew up in New Zealand and experienced care under the dental therapist provider model. He has written a letter with his views on the importance of caries management by risk assessment in the context of addressing barriers to care. ■■■■

CDA JOURNAL, VOL 39, Nº7

CDHC, a Possible Change Agent Promoting Access to Care

DUNN H. CUMBY, DDS, MPH; MARSHA W. BEATTY, BS, MPH; AND SYDNEY T. SEVIER, BA, MA

ABSTRACT Access to oral health care has been a topic of concern among dental and community health professionals in the United States for some time. The American Dental Association is piloting a new program aimed at expanding the current dental health workforce and alleviating some of the problems associated with access to care. This paper explores the potential benefits of the community dental health coordinator program while examining some of the lessons learned in its initial implementation in Oklahoma.

AUTHORS

Dunn H. Cumby, DDS, MPH is a clinical professor and chairman, Department of Dental Services Administration, Community Dentistry Division and co-director of the CDHC Pilot Training Program at the University of Oklahoma College of Dentistry, Oklahoma City. He also maintains a private 35-year dental practice in Oklahoma City.

Marsha W. Beatty, BS, MPH, is co-director of the CDHC Pilot Training Program at the University of Oklahoma College of Dentistry, Oklahoma City.

Sydney T. Sevier, BA, MA, is the senior program assistant with the CDHC Pilot Training Program at the University of Oklahoma College of Dentistry, Oklahoma City.

ACKNOWLEDGMENTS

The American Dental Association is funding the CDHC Pilot Training Program through 2012 and is seeking additional future funding from corporations, foundations, and governments. Henry Schein, Inc., the largest provider of health care products and services to office-based practitioners, recently became the first such corporate supporter of the CDHC program, donating dental equipment valued at approximately $860,000.

Special thanks are extended to Janet E. Powell, OUCOD Community Dentistry Division, for her invaluable assistance in preparing and editing this manuscript.

Access to care has become a buzzword in the current health care debate. There are many arguments supporting and denying that an access to oral health care problem exists in the United States. However, no one can deny the higher rates of dental disease in low-income and diverse populations and the need to make dental treatment more affordable for these high-risk groups. In addition, the issue of preferred practice locations (which determine where health professionals choose to practice) has created a distribution problem within the dental health workforce.[1-3]

Among those arguing whether an access to oral health care problem exists, there is little consensus regarding how to address it and there are many conflicting and competing proposals to solve the problem. Some states such as Minnesota, Alaska, and Maine have implemented new dental workforce models in order to make inroads in addressing access to oral health care, while several other states (Kansas, Ohio, New Mexico, Vermont, Washington, etc.) may soon to follow.[4-6] Among those models are the American Dental Hygiene Association's (ADHA) advanced dental hygiene practitioner, the Alaska Native Tribal Health Consortium's dental health aid therapist (DHAT) as outlined online at www.ykhc.org/1045.cfm, the American Association of Public Health Dentistry (AAPHD) pediatric oral health therapist, and the American Dental Association's (ADA) community dental health coordinator (CDHC).[7-9] Of particular note is the ADA's intent to have the CDHC focus on prevention and to work under the supervision of a licensed dentist rather than to have them function as somewhat independent midlevel health care providers. The ADA's CDHC initiative sets a new standard for introducing a potential new member of the dental team by utilizing an evidence-based approach rather than a lobbying approach. The CDHC program was designed using preliminary research for the development of a new curriculum and workforce model to be evaluated and improved

throughout the pilot process. Following its initial implementation, the CDHC model will be evaluated on a number of levels, including measures related to access to oral health care as well as changes in oral health indices within the communities involved.

The CDHC initiative began in 2005 with the appointment of a task force to analyze all available data and information regarding the adequacy of the current dental workforce to meet the access needs. They were also charged with the responsibility to make recommendations for more viable workforce models. Dr. Robert Brandjord, past president of the ADA and former chair of the ADA Workforce Models National Coordinating and Development Committee, was the driving force behind this initiative. One aspect of their review was to examine the total U.S. population in 2000 and the ability of that population to gain access to dental care. They discovered that of the total population, 281,000,000 (89 percent) were generally healthy, or lacking severe medical co-morbidities. Of that generally healthy group, 53,500,000 (19 percent) were either remote or nonremote and economically disadvantaged. The task force realized that access to oral health care might not be a problem for populations living in nonremote large communities, which were generally healthy and had sufficient resources (transportation, insurance, private pay funds, etc.) to acquire dental care. The data suggested that two of the major barriers to access to oral care are sparsely populated rural areas and disadvantaged populations. The task force recommended targeting the underserved to expand access for oral health care in support of this ADA initiative.

Three alternatives were considered for expanding access to the underserved populations: 1) increasing the number of dentists, 2) increasing the number of clinics and, 3) expanding the reach of existing safety-net clinics. The task force recognized that to increase the number of dentists is a costly, long-term solution and there are no guarantees those dentists will serve the underserved. Increasing the number of clinics is also a long-term solution requiring funding streams and staff to support them. Expanding the reach of health care personnel into the rural and/or disadvantaged populations not only makes sense but is also supported by existing medical models (emergency medical technicians, surgical technicians, respiratory therapists, medics, or corpsmen). Much like the CDHC model, these medical models allow for better resource allocation, more efficient staff utilization, increase in patient load, and thus an ability to provide more services on a fixed budget.[10-13]

PATIENTS WITH NEEDS beyond the scope of the CDHC are referred back to the dental facility to be treated by the supervising dentist or hygienist, or both.

The development of a new dental workforce model (CDHC) began to take shape, as the use of existing medical health care extenders and their effectiveness were guides for developing the CDHC model. In addition, the task force looked at the Pine Hill study, which demonstrated just how effective a comprehensive community-based prevention effort could be.[14] Faced with a seemingly unending stream of patients with pediatric dental emergencies, the chief dental officer and clinic administrator of the Pine Hill Health Center in Pine Hill, N.M., took a proactive approach toward addressing the dental needs of their patients. They initiated a dental disease control program designed to reach all the children in their Navajo community. Coordinated community outreach, the involvement of key community partners (e.g., the Pine Hill School system and Head Start programs) and the systematic administration of inexpensive fluoride rinses by dental clinic staff, as well as by trained members of the school and Head Start staffs, were all a part of their disease control strategy. The net result was an overall decrease in active decay among elementary-age schoolchildren from 63 percent to 37 percent in the course of a single year. In addition, much of the active decay previously identified had been remineralized and did not require further treatment.

Under the leadership of Brandjord, the ADA began the process of developing a well-designed curriculum and implementation process. The ADA established a five-year pilot program that targeted underserved populations served by IHS, tribally run facilities, and federally qualified health care centers (FQHC).

The Vision

The original vision for the CDHC encompassed an integrated dental health system that includes a patient record, a secure online database, and mobile technology to enable remote supervision by a licensed dentist. This allows the CDHC to provide preventive and palliative treatment at remote sites. Then, patients with needs beyond the scope of the CDHC are referred back to the dental facility to be treated by the supervising dentist or hygienist, or both. Ideally, as new patients are triaged into the facility, the dentist will have all the records needed to treat patients upon their arrival, making their initial clinic visits more productive and efficient. The CDHC navigates the patient through the

TABLE 1

A Summary of the CDHC Instructional Modules

The CDHC curriculum is organized into three domains or learning clusters:

1. Community health promotion skills
2. Dental skills
3. Community-based field experience

FIGURE 1. CDHC instructional timeline (total = 18 months).

system, addressing any transportation needs and explaining any financial obligations the patients may incur. The CDHC tracks patient appointments and places them on preventive maintenance recall. The CDHC also helps patients connect to appropriate community-based resources.

The CDHC was designed to be the community health worker (CHW) of the dental team; in other words, a community health worker with dental skills. Like community health workers, the CDHC is trained to promote health while providing leadership, peer education, and resources to support community empowerment. They are also trained to integrate information about health and the health care system into the community's culture, language and value system, thus reducing many of the barriers to health services. While 17 states offer some sort of training or certification program for CHWs, Minnesota and Alaska are the only two states that have partnered with Medicaid to make those services reimbursable.[14,15] However, a specific set of dental skills (coronal polishing, application of sealants, fluorides and varnishes, palliative temporary restorations, and scaling) may give the CDHC the immediate ability to become financially sustainable as a new dental health worker. This financial sustainability is critically important to the widespread acceptance of any new workforce model.

CDHC Curriculum to Support the Vision

The primary focus of the CDHC is to reduce the incidence of oral health disparities in underserved populations by improving access to dental care and by targeting the causes of oral disease. As a result, the main functions of the CDHC are oral health assessment, oral health promotion, prevention of dental disease, palliative care, and patient navigation. The CDHC curriculum is founded on those five main functions and is designed to prepare CDHC trainees to screen for oral health problems, develop and implement community-based oral health promotion programs, provide preventive dental services, temporize dental cavities in preparation for permanent care by a dentist, and provide individual and community-wide assistance in gaining access to health services and health-related resources. These concepts and skills provided the foundation for development of the CDHC online didactic courses, their corresponding in-person instructional sessions, and performance evaluation guidelines.

In its current form, the CDHC training program is an 18-month endeavor. During the first 12 months, CDHC trainees complete 36 credit hours of didactic course work through Rio Salado College in Tempe, Ariz. The courses are presented in an online format supplemented by strategically scheduled in-person clinical instruction and performance evaluations conducted at university-based national pilot sites and/or clinics affiliated with these. The didactic courses provide the dental theory that supports an appropriate level of clinical practice, as well as health promotion theory that supports community engagement. **TABLE 1** provides a summary of the CDHC instructional modules.

The CDHC curriculum is a module-based system. During the pilot program, every trainee is required to successfully complete every module, including trainees who are dental assistants, expanded-function dental assistants (EFDA), hygienists or CHWs, to ensure consistency and a more accurate evaluation of the program. In the future, some trainees could test out of certain modules, reducing both educational costs and the time required to deploy them. A short summary of the CDHC curriculum is available online at ada.org/sections/educationAndCareers/pdfs/cdhc_curriculum_outline.pdf. Upon successful completion of the didactic course work, CDHC trainees begin a six-month internship in a community setting, during which they apply dental and health promotion theory to practice and become competent, safe, and professional dental workers. The internship is conducted as a partnership between a community agency/clinic site, the university pilot site, and Rio Salado College. Under the supervision of a licensed dentist, CDHC interns "learn by doing" as they hone their clinical and health promotion skills. **FIGURE 1** provides a summary of the CDHC instructional timeline.

Indeed, the goals of the internship are to provide the CDHC intern with sufficient experiences to become competent and safe health professionals. The supervising dentist reviews and evaluates the trainees' clinical skills while administrative staff works with the trainees to develop and implement community outreach activities. As stated in the

ADA-issued CDHC Internship Manual, ideally, up to half of the 1,040 internship hours are spent in direct patient encounters. This includes providing preventive services such as applying dental sealants, providing fluoride treatments, taking dental radiographs, and placing interim restorations. This also includes time that interns spend one-on-one with patients providing oral health instruction, admission/intake interviewing, and assistance in navigating the oral health care system. The remaining 520 internship hours are spent planning and implementing community-based oral health programming or providing screenings and preventive dental services in remote locations. The CDHC pilot program staff recognizes that there may be slight variations in the way internship hours are divided, depending on the specific situations at different clinic sites. However, by the end of the internship period, the CDHC is expected to have achieved all the competencies outlined for the program and should be prepared to work in community settings and in community clinics. CDHC trainees earn an additional 14 college credit hours through Rio Salado for coursework completed during the internship period.

The community health worker component of the CDHC pilot program prepares trainees for their role in the community as advocates, leaders, educators, and providers of preventive dental services in a community setting. Not only do the trainees become familiar with health care systems and legal issues related to health care, but also develop the skills needed to help others navigate the system and become good stewards of their own health. For example, CDHCs receive training in motivational interviewing (MI) during which they work one-on-one with patients to evaluate their oral health status and assist the patient in determining their personal oral health goals. In addition, CDHCs are trained to identify various community resources such as transportation, insurance, and other forms of assistance and to assist patients with accessing those resources. This is in keeping with the program philosophy that the CDHC should work in communities where residents have limited or no access to dental care. Since CDHC trainees come from the communities in which they will serve, they have a unique understanding of the socioeconomic, cultural, and language barriers that deter people in their communities from seeking dental care. A large part of the CDHC program's success will be having the right people, with the right skills, in the right place.

CDHCS ARE TRAINED to identify various community resources such as transportation, insurance, and other forms of assistance and to assist patients with accessing those resources.

The online coursework in the CDHC curriculum is estimated to involve a maximum of 700 clock hours per student. Because of the online instructional format, much of this time is asynchronous, although trainees are required to complete all online course assignments as scheduled and to complete all courses by the predetermined course end date. Up to 18 full days of in-person clinical training and skills assessments at the university pilot site are scheduled during the didactic instructional period, primarily during weekend sessions. The supervising dentist at the trainee's clinic site provides professional oversight of the trainee, monitors the trainee's progress, completes ADA-provided assessment documentation, communicates with the university site regarding trainee progress, works cooperatively to resolve issues, and participates in the external program evaluation. CDHC project staff at the university pilot sites provides training at the start of the internship period to prepare supervising dentists for their various roles and responsibilities. Staff support for the supervising dentists is also made available throughout the internship period as needed.

The Oklahoma Story

In 2007, the ADA solicited letters of interest from parties that were interested in becoming one of three proposed pilot sites targeting rural, urban, or Native American/IHS populations. Oklahoma is largely rural, sparsely populated, and has many residents who experience high rates of poverty and uninsurance; it was selected for the CDHC rural pilot program site.

The state of Oklahoma is comprised of a population of approximately 3.7 million people according to the 2009 U.S. Census estimates.[16] Population density determined by persons per square mile varies significantly. Fifty-three percent, or 41 of the 77 Oklahoma counties, are in the lowest category range of 2-26 persons per square mile.[17] Only two counties within the state have population densities in the highest range category: Oklahoma and Tulsa counties.

As the ADA found in nationwide trends, the population density of Oklahoma rural areas contributes to a disparity in access to oral health care. The per capita dollar spent on dental care per Medicaid and Medicare enrollee in

TABLE 2

Oklahoma Counties With Active CDHCs by Population Density, Median Household Income, Poverty Level, and Clinic Type

County	Population density (persons per square mile)	Median household income	Percent below poverty level	FQHC/ tribal/IHS
McCurtain	18.6	$30,470	25.6%	FQHC
Okmulgee	56.9	$37,460	20.3%	Tribal
Osage	19.7	$42,330	13.1%	FQHC
Pontotoc	48.8	$34,465	19.4%	Tribal
Pushmataha	8.4	$27,771	25.8%	FQHC
Seminole	39.3	$31,547	22.0%	IHS

the state of Oklahoma ($239) is much less when compared to that spent in the United States ($277).[18] In addition, dental services received by citizens of the state are also lower than in the United States. Only 58 percent of the population 18-years-old and older had a dental visit within the past year, compared to 70.3 percent of the United States.[19] The edentulous rate in Oklahoma is 31.1 percent, but only 20.5 percent for the United States, making Oklahoma No. 6 in the nation for loss of natural teeth.[20] The percent of adults receiving a prophylaxis in Oklahoma was 56.6 percent as compared to 69 percent for the rest of the country.[21] One very important positive indicator is that 75.36 percent of the state population has fluoridated public water as compared to only 72.4 percent in the United States.[22] Unfortunately, most of these fluoridated water supplies exist in the metropolitan areas of the state and not in the already dentally underserved rural areas.[23]

As of 2008, Oklahoma was ranked 45th in median household income and seventh in the number of persons living below poverty level.[24] These rankings have a direct impact on access to oral health care in terms of insurance coverage, transportation, and basic financial resources. Economic conditions like these discourage dentists from practicing in many inner city and rural areas, creating location-specific dentist shortages. These factors contribute to Oklahoma's ranking of 50th in the nation in terms of dental visits; they also help make Oklahoma a prime location for the implementation of the CDHC program.

Sparse population density, poverty, and location-specific dental shortages are not the only factors that make Oklahoma an attractive site for the CDHC pilot program. For underserved residents in Oklahoma, there are 37 FQHC service delivery sites as of 2009.[25] Oklahoma is also home to 33 federally recognized Native American tribes. According to estimates based on 2008 census data, Oklahoma has the third-largest Native American population in the nation (291,390). According to the Oklahoma Health Care Authority, there are currently 11 IHS health care facilities and 46 tribally run health care facilities across the state. While many of these facilities also host a dental clinic, many oral health problems remain untreated. Because many oral health needs of this population group have gone unmet, placement of CDHCs in Indian health facilities could address some of the existing gaps in oral health care and oral health education (e.g., diet and nutrition counseling, tobacco cessation counseling, oral hygiene instruction, gingivitis, and caries prevention). As the FQHC, IHS, and tribally run facilities are already designed to provide free or sliding-scale services to the communities, they make a perfect choice for hosting CDHC workers.

Thus, recruitment for the CDHC pilot program in Oklahoma began by identifying FQHC, IHS, and tribal health care facilities that serve rural and underserved segments of the Oklahoma population. The recruited facilities were asked to identify potential trainees for the CDHC pilot program. It was important to involve the facilities in this process, as each trainee needed a place to complete their internship under a supervising dentist. If a trainee was not already an employee at a facility, the facility agreed to hire them at the end of the didactic training and the beginning of the CDHC internship period. The facility also agreed to maintain the trainee's employment for the duration of the pilot program.

The facilities' involvement in the trainee recruitment process allowed for selection of an active and local community member for the training program. Primary to the success of the project is the recruitment of trainees indigenous to the areas in which they serve. They must be able to utilize appropriate language and cultural cues to promote adoption of effective oral hygiene and other preventative practices among community members. A high school education is required for application to the program, but trainees must also exhibit a keen interest in a commitment to the communities in which they serve.

Currently, Oklahoma has two active cohorts of trainees in the CDHC program, and a third has just been recruited. The first cohort has completed their training and internship and is now working in their communities as community dental health coordinators. The second cohort will soon transition from the didactic portion to the internship phase. The first two cohorts currently include seven students from six rural counties who are distributed across three FQHCs, two tribally run health care facilities, and one IHS center (TABLE 2).

Discussion: Challenges Faced and Lessons Learned

As the start of training approaches for the third and final cohort of the CDHC pilot program, a number of meaningful challenges have already been faced and significant lessons have already been learned. Some of these challenges and lessons have already impacted the manner in which the training program has been implemented, others will impact the manner in which the evaluation component will be conducted, and still others have significant implications for how (and whether) the CDHC workforce model might be rolled out to other parts of the country for widespread implementation. They include the following:

1. Several of the clinical procedures originally envisioned for the CDHC workforce model (specifically, scaling for type I gingivitis and the placement of interim restorations), fell outside existing rules and regulations for the practice of dentistry in the state of Oklahoma. This also applied to the remote supervision of CDHCs by a licensed dentist.

These legal issues required the university to work very closely with the Oklahoma Board of Dentistry to outline those clinical procedures and supervisory approaches that could be legally performed by CDHC trainees within the state. Indeed, some of these issues were resolved only after the legality of training program was challenged and an official opinion was both requested and received from the Oklahoma Office of the Attorney General. Compromises were made by the ADA and the university pilot site to keep the pilot project in compliance with applicable state laws. In particular, the Oklahoma pilot sites began to focus primarily on having the CDHC provide preventive services that were consistent with state law, rules, and regulations for expanded-function dental assistants (i.e., X-rays, coronal polishing, topical fluorides, and sealants) as opposed to scaling and temporizations. A strong, positive working relationship with the appropriate state regulatory boards and the state dental association are essential to successful implementation of any new workforce model, especially one that is perceived as "pushing the envelope." CDHC program design must remain flexible to allow for appropriate implementation on a state-by-state basis.

THE AVAILABILITY OF wireless Internet access devices and accompanying data plans for CDHC trainees in remote rural communities was sometimes an essential element for success.

2. The authors were surprised by the level of push back against the CDHC pilot program by Oklahoma hygienists. Much of this opposition seemed to come from a history of poor relations between the dental establishment and political posturing. Perhaps, if all members of the current dental workforce had been involved in the program planning process very early on, some of the infighting could have been avoided.

3. The online instructional format that formed the core of the pilot training program required CDHC trainees to have consistent, stable access to the Internet if they were to take full advantage of this 21st century approach to the educational process. These included not only extensive online reading assignments, high-quality multimedia presentations and various online assignments, quizzes, and examinations but also a variety of online student support services. Trainees with unstable Internet connections tended to struggle with their online coursework and had limited access to the resources available to them. The availability of wireless Internet access devices and accompanying data plans for CDHC trainees in remote rural communities was sometimes an essential element for success. Alternative, less-desirable solutions to this challenge included the process of downloading hard copies of course content and assignments for some trainees and shipping that to them at program expense.

4. Dental clinics in remote rural areas come to the table at significantly different stages in the process of incorporating electronic patient records into routine clinic operations. At the onset of the pilot program in 2009, participating clinics in Oklahoma were all across the board in this regard, with some still using paper records while others were moving toward digitized information systems. A small number of these facilities had already incorporated electronic patient records and digital X-ray capabilities into their systems. The availability of digital patient information significantly impacts the facility's ability to capture relevant data for patient management and program evaluation activities. Of equal importance to program evaluation efforts is the compatibility of the digital systems being used by various facilities.

While all of these patient record issues can be adequately addressed along the way, having a good understanding of the variability in each facility's status proved to be an important aspect of the planning and implementation process.

5. As mentioned previously, successful implementation of the CDHC program in Oklahoma communities has been

closely tied to financial sustainability, and financial sustainability is closely tied to whether or not CDHC services are reimbursable. In particular, FQHCs have had to pursue changes in scope from HRSA that can lead to billing options for CDHC procedures performed out in the community. The willingness of Oklahoma FQHCs to pursue these changes is indicative of their commitment to the CDHC workforce model, as is the overwhelming support, enthusiasm, and creativity of participating clinic administrators, supervising dentists, and CDHC trainees. In addition, the current lack of certification for community health workers in Oklahoma and most other states prevents participating facilities from billing for most CDHC outreach and patient navigation functions. New legislation, regulations, training and exploration of the CHW model can result in new revenue streams to support the viability of the CDHC workforce model.

Conclusion

The CDHC Pilot Training Program still is a work in progress. The project staff at OUCOD looks forward with great anticipation to the training period for the final cohort and to implementation of the evaluation phase of the project. Our new vision for Oklahoma includes a statewide CDHC network comprised of facilities, administrators, dentists, hygienists, state-certified CDHCs, dental assistants, and others who are committed to reducing the incidence of oral health disparities in underserved populations by improving access to dental care and by targeting the causes of oral disease. What a concept.■■■■

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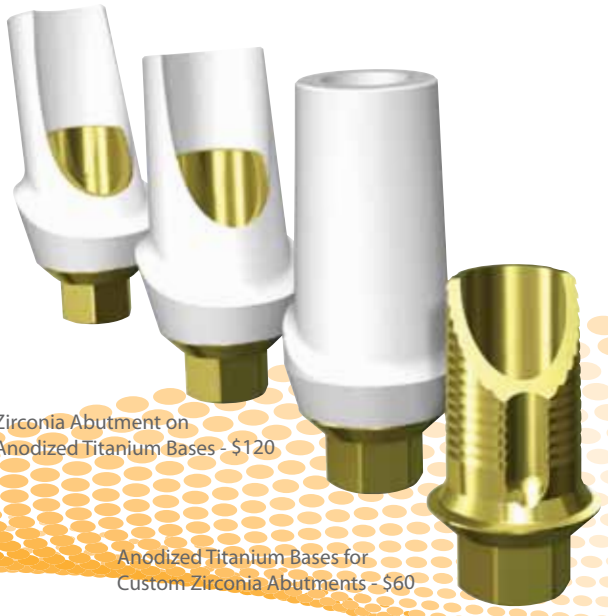

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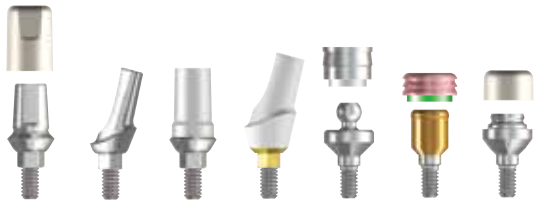

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Getting Help for Children: The Need to Expand the Dental Workforce

SHELLY GEHSHAN, MPP, AND MARKO MIJIC, BS, MPP

ABSTRACT Millions of children in America suffer from poor oral health due to lack of access to dental care. The landmark U.S. Surgeon General's Report in 2000 highlighted significant disparities, yet poor oral health remains an epidemic. America's system of delivering dental care is poorly equipped to address access disparities. However, opportunities abound to improve access and expand the dental workforce. Creative thinking and innovative solutions are needed to expand care to children in need.

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DISCLOSURE

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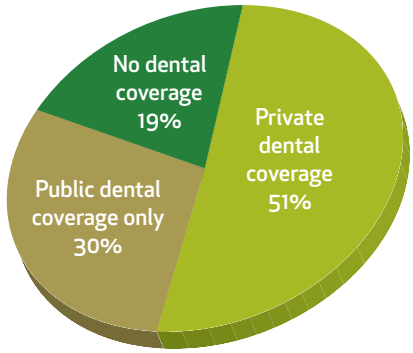
Access to dental care is a persistent problem for American children, particularly for children in low-income families and racial and ethnic minorities. Structural facets of the dental care delivery system contribute to this problem, including an insufficient dentist workforce and an inadequate resource base to finance care. There are also legal and cultural barriers unique to dentistry that impede children's access to care. This article describes the epidemiology of dental disease and the major barriers to access for children, and sets the stage for a discussion of how dental workforce innovations can address these barriers.

Children's Need for Dental Care

While oral health has improved for the majority of the population in the last 50 years, not all children have benefitted equally. Eleven years ago, the landmark report, *Oral Health in America: A Report of the Surgeon General,* brought long overdue attention to the great disparities in oral health among Americans. The report and the "Call to Action" that followed made more people aware of the issue and provided a valuable framework for future action. Although much has been accomplished since 2000, a great deal of work remains to be done. The need to provide access to dental health services to a significant portion of our nation's children who now lack it remains an urgent priority.[1]

Dental caries affects 58.6 percent of children between the ages of 5 and 17. It is "five times more common than childhood asthma and seven times more common than hay fever."[2] Dental care is the single greatest unmet health need among children yet, health care reform efforts at the national and state levels often focus on medical care alone.[3] Untreated caries in children exacts a daily



Source: Manski R, and Brown E, Dental Coverage of Children and Young Adults under Age 21, United States, 1996 and 2006, Agency for Health Care Research and Quality, statistical brief 221 (September 2008), hhtp:www.meps.ahrq.gov/mepswebdata_files/publications/st221/stat221.pdf.

FIGURE 1. 2006 dental coverage for children and young adults.

toll from children's lives in pain, difficulty sleeping, eating and playing, and problems performing in school. Elementary school educators report that the primary health concerns they address in their classrooms are toothaches.[2] The scale of the problem is particularly serious for young children: 28 percent of children aged 2 to 5 have had caries and, of these, 72 percent are in need of treatment.[4] Every year, an estimated 4.5 million young children develop early childhood caries, placing them at greater risk for future dental health complications.[5]

Treatment for extensive decay often involves costly hospital-based care that strains public resources. The North Carolina Medicaid program paid for such care for 5,500 children over two years, while Louisiana paid to treat 2,100 children in one year at an estimated average cost of $1,508 per admission.[5] In California, there were more than 83,000 visits to emergency departments for both children and adults for preventable dental conditions in 2007, a 12 percent increase over 2005, at a cost of $55 million.[6]

Children in low-income families and children from racial and ethnic minorities disproportionately bear the burden of dental disease and too often go without needed care. Twenty million children are without dental insurance coverage, while nine million children lack health insurance coverage.[7] Lack of dental insurance and a dentist's inability to provide the care needed are the reasons most often cited by parents for why their children do not get the dental care they need.[8]

Among children and young adults, 19 percent had no dental coverage at all and 30 percent had public coverage[9] (**FIGURE 1**). While dental coverage has expanded in the past decade, due primarily to the Children's Health Insurance Program, public insurance is not by any means a guarantee of care. For many years, only about one-quarter of children enrolled in Medicaid received a dental service in a given year. While this has improved in past years, to 34.3 percent in 2007, it still means that two-thirds of the most vulnerable children in the nation went without care.[10]

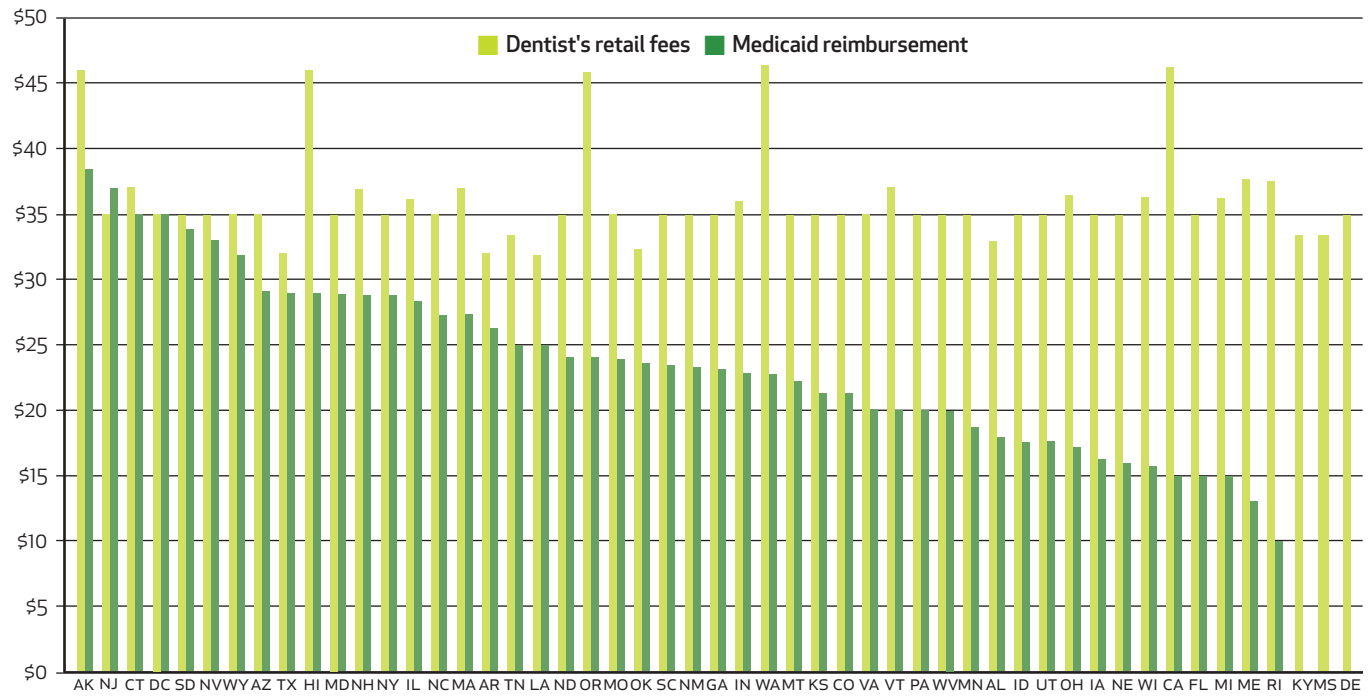
Poor oral health increases as income falls, with 54 percent of poor children and 49 percent of near-poor children suffering from caries, compared to 32 percent of children from middle- and higher-income families.[11] Overall, 31 percent of children aged 2 to 5 have untreated dental caries, but only 6 percent of high-income children have untreated caries.[12] According to the recent *National Health and Nutrition Examination Survey,* 36 percent of low-income Hispanic children, 34 percent of low-income black children, and 29 percent of low-income white children aged 6-19 had untreated dental caries.[13] This tracks closely with the percentage of families reporting difficulties in paying for dental care, with that factor cited as a barrier by 36 percent of Latino, 32 percent of white, and 26 percent of black children.[8]

Beyond income, children from racial and ethnic minorities face additional difficulties in accessing dental care. Recent research cited a "triple threat" for minority children, including greater risks for poor oral health, restricted access to dental care, and less dental care received.[8] Even worse, the *National Survey of Children's Health* found that 18 percent of Latino and 16 percent of multiracial children had never seen a dentist.[8] Preventive dental care for children is both critical and cost effective, as average dental costs of those who receive it are 40 percent lower than those who do not.[7] Provision of preventive care to young children also serves as an opportunity to educate parents and caregivers about their role in how dental caries is acquired, and may help parents to raise their expectations about their children's dental health.

The Current Dental Workforce

America's system of delivering dental care appears poorly equipped to address disparities in dental health that face low-income and minority children. According to the American Dental Association, almost one-third of the population has difficulty accessing the private dental care system because they are institutionalized, live in remote or rural areas, have special medical needs, can't pay for care, or face social and practical barriers to access.[14] The nation's dental workforce of 168,000 private practice dentists provides care to the roughly two-thirds of the population who do not experience these barriers.[15,16] The dental safety net (comprised of health centers, private charity care clinics, and dental and hygiene school clinics) is the first line of defense for the other third but it can serve only about 7 to 8 million of the estimated 82 million people who lack access to care.[17]

General dentists provide an average of $11,500 free care, and $21,566 in reduced-fee care to patients every year.[18] However, it is uncommon for dentists to participate in Medicaid. A recent federal report with data from 39 states found that only 14 states say that more than half of dentists treat any Medicaid patients at all. And only one of 41 states reported that more than



Souce: American Dental Association, State Innovations to Improve Access to Oral Health: A Compendium Update (2008), http:www.ada.org/2123.aspx (accessed May 28, 2009); American Dental Association, 2007 Survey of Dental Fees.

Note: This chart depicts the fee-for-service Medicaid payment rate for procedure code D0120 (periodic oral evaluation) for the largest group of children receiving fee-for-service benefits in the state, compared to the median fees charged by dentists in the state's region. The 10 regions are those that are defined in the ADA's 2007 *Survey of Dental Fees*. Medicaid payment rates for procedure code D0120 were not reported for Kentucky and Mississippi in the ADA Compendium. Delaware is not reported because it reimburses 80 percent of dentists' billed charges.

FIGURE 2. Percent of third-grade children with sealants by state.

half of dentists treated more than 100 patients in a year.[19] In terms of patients' insurance sources, less than 6 percent of patients who visited solo practice dentists had public insurance in 2007.[20] The paucity of dentists who accept Medicaid patients is a persistent barrier to access for children in low-income families.[21] From a dentist's point of view, participation in public insurance programs is often not a good business proposition. Reimbursement for Medicaid claims is generally much lower than dentists' charges and can be slow. Patient behaviors such as missed appointments further reduce the appeal.[22]

As **FIGURE 2** shows, Medicaid fees lag seriously below the retail fees for a dental exam. Most states have not made a concerted attempt to recruit dentists into the program or assist families in using dental care. A few states that have invested in these efforts report some improvements. In Alabama, for example, the Medicaid medical director visited dentists personally and met regularly with leadership, which — when coupled with modest rate hikes — resulted in improved participation. Rhode Island requires its dental administrative contractor to work with patients to help them access services and reduce missed appointments.[23] In its first year of operation, the Rite Smiles program saw dentist participation increase from 27 to 217, and increased access rates for children.[24,25]

Barriers to care for low-income children are exacerbated by the distribution of dentists. Most dentists in private practice choose to live and locate their practices in suburban and urban areas with a substantial base of paying or insured clients. The federal government has approved applications from more than 4,500 communities to be designated as "Dental Professional Shortage Areas" in the 50 states and the District of Columbia. To qualify, applicants for an area must submit a variety of data to prove there is a shortage of practitioners and that at least 30 percent of residents are below 200 percent of the federal poverty level.[26] (The U.S. Department of Health and Human Services calculates the severity of dental shortage by comparing the population of a dental health professional shortage area and the number of practicing dentists. Each dentist is assumed to be able to meet the needs of 3,000 people. The "unserved population" is calculated by multi-

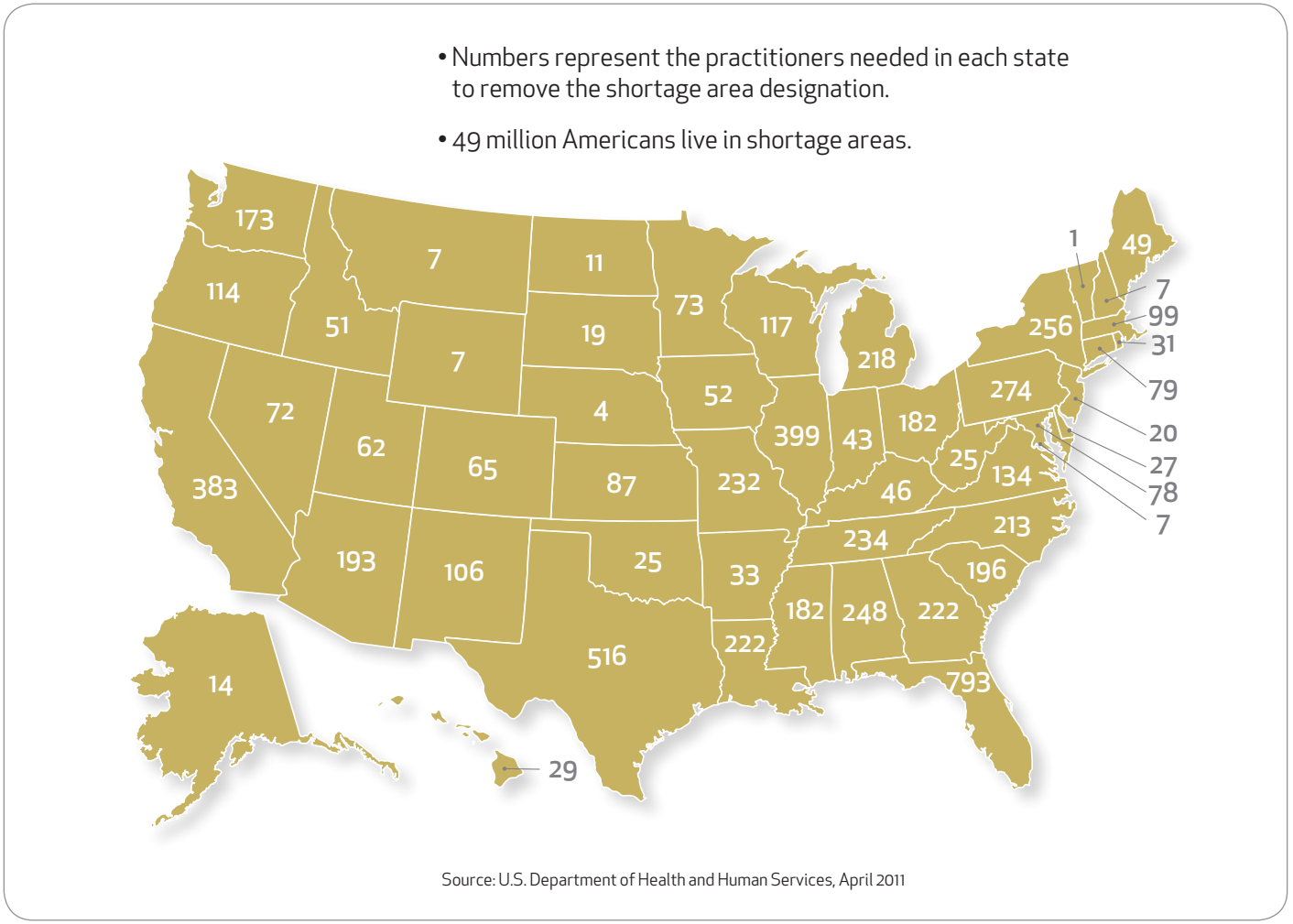


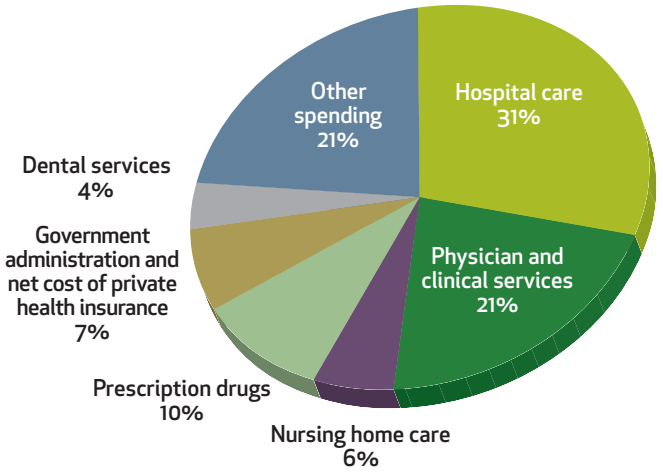
FIGURE 3. Designated health professional shortage areas for dental care.

plying the number of dentists by 3,000 and subtracting that figure from the total population of the designated area.) More than 50 million people live in those areas and an estimated 30 million of them are without access to a dentist. As **FIGURE 3** illustrates, it would take an additional 6,730 dentists practicing in those areas to improve access to care for the 30 million who now lack it.[27]

In regard to meeting the needs of minority patients, the lack of diversity among dentists has been a persistent issue since cultural sensitivity and the ability to communicate in patients' languages are important considerations for an increasingly diverse population. For example, nearly 27 percent of Asian/Pacific Islander children and 11 percent of Native American children do not receive the care they need because the dentist did not know how to provide care (due to cultural, language, and other barriers).[8] Despite dental school recruiting strategies, such as the Pipeline Project, dentists are a relatively homogeneous group. Most are white, most are men, although the latter has been changing. The portion of dental graduates who are women has grown from 1976, when less than 5 percent were women, to 2003, when nearly 40 percent were women.[28] Over the last 30 years, the portion of dental graduates who are white has dropped slightly, but the percentage of blacks, Latinos, and Native Americans has remained at about 10 percent. The only minority group that is growing among dental graduates is Asians, which increased from 3 percent in 1976 to 25 percent of graduates in 2002.[29]

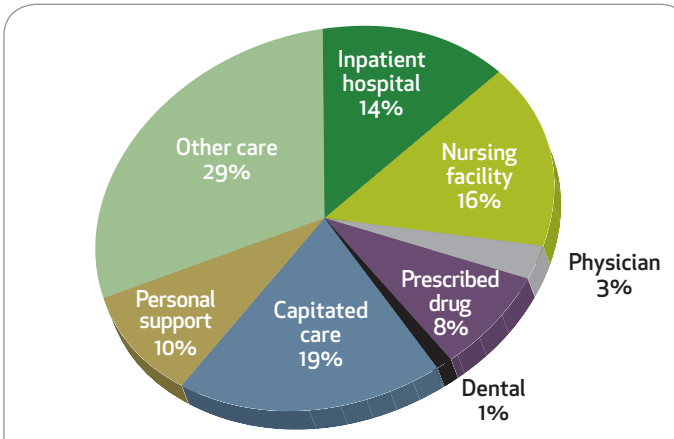
Current and Future Shortages of Dentists

The dental system's already poor capacity to meet the needs of unserved children will be greatly worsened by shortages in the dentist workforce that have been anticipated for years but will begin to make an impact in the coming decade. Although three new dental schools have opened in Florida, Nevada, and Arizona in the last 15 years, and eight more are in the planning stages, the number of dentists retiring every year will soon exceed the number



Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. http:/www.cms.gov/NationalHealthExpendData/downloads/tables.pdf (accessed April 8, 2010).

FIGURE 4. 2008 national health expenditures.



Source: U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, MSIS State Summary, FY2008: Table 17, FY 2008 Medicaid Medical Vendor Payments by Service Category (October 19, 2009). http://www.cms.gov/MedicaidDataSourcesGenInfo/MSIS/list.asp (accessed April 8, 2010).

FIGURE 5. 2008 medical expenditures by service category.

of new dentists graduating and entering practice. While the recent recession may delay retirement for some, in 2007, fully one-quarter of all practicing dentists were aged 60 or older and edging toward retirement.[30,31] While the recent economic downturn has delayed retirement for 39 percent of practicing dentists, the average age dentists expect to retire is still 65.[32] The ADA projects that the total number of private practice dentists available to serve our burgeoning population will rise only slightly between 2010 and 2020, from 167,540 to 174,073.[20] Therefore, the current ratio of dentists to population is at its lowest level in nearly 100 years.[33] As the supply of dentists shrinks, access shortages that are now experienced mostly by low-income, special needs, and rural populations may become a problem for all populations.

The practice of dentistry has changed significantly in the last 40 years in response to improvements in the oral health of the population, fluoridation, and rising incomes. While private dental practices historically had to respond to high rates of dental decay and irregular patterns of care, most can now focus on prevention, maintenance, function, and esthetics. In 1959, 42 percent of the services provided were exams and cleanings, and 58 percent were extractions and restorative care. In contrast, in 1999, a majority (76 percent) of services provided were exams and cleanings, and only 24 percent were extractions and restorative care.[33] The growth of cosmetic and esthetic procedures has been controversial among public health advocates and the ADA Council on Ethics, Bylaws and Judicial Affairs who fear it displaces a badly needed capacity that could be used for dental care for underserved patients.[34]

However, it has been lucrative for dentists who include such elective services in their practices. The American Academy of Cosmetic Dentistry (AACD) estimates that 2.7 million people received cosmetic dental services in 2006, earning dentists $2.75 billion. In 2007, the AACD predicted a 10.9 percent increase in the number of patients who elect to have a cosmetic dental procedure, potentially leaving dentists less time to do the routine dentistry.[35] The economic downturn may have reduced demand for cosmetic procedures temporarily, but also led to consumers spending less on dental care overall.[36]

Financial and Systemic Barriers

One of the major factors behind workforce and access difficulties is the inadequate financing base for dental care. Simply put: Available funding is inadequate to meet the treatment needs of those at highest risk of dental disease and preventive services. While 4 percent of our nation's health care spending is devoted to dental care, only 1 percent of Medicaid spending is spent for dental care for a much needier group (**FIGURES 4 AND 5**). In 2004, 101 million people lacked dental coverage of any sort.[16]

In a country reliant primarily on private practices, increased funding for dental care and insurance would spur demand for services and add pressure to increase supply. Unfortunately, increased funding to pay for services would not remove all of the access barriers facing low-income, special needs, and underserved patients, such as lack of transportation and childcare. Very few providers offer nontraditional hours for working patients who may be juggling inflexible minimum-wage jobs. Some offices are only accessible for ambulatory patients with private transportation, not those with physical

disabilities, special health care needs, or limited transportation options.[37] Most private practices have no formal connection to an integrated social service and medical care delivery system. Almost none offer the sorts of enabling services that many free clinics and most community health centers do such as walk-in and wait-in-line clinic hours, interpreters as federally required, case managers, child care, and help arranging transportation. While community health centers may be ideal places for low-income and underserved families to receive care, they are simply not available in enough communities.

The other sizable, but yet often unnoticed, gap in this country is for prevention efforts designed for the public and those at highest risk of dental disease. Dental insurance and treatment for children are critical, but they work individual by individual. What is poorly understood by policymakers, many advocates, and the public is the need for a robust dental public health prevention effort. Dental public health advocates are armed with two effective, proven interventions — community water fluoridation and school-based sealant programs — but the benefits of these interventions have not been available to every child who needs them. This again is due to shortages of manpower and funding. Public health dentists are in very short supply, and made up less than 1 percent of all dentists in 2006. Moreover, state and federal funding is grossly inadequate to ensure every state can mount comprehensive prevention programs.

Currently, one funding source, the Centers for Disease Control and Prevention (CDC) oral health program, has funding to provide 19 states with grants to build their prevention programs (**TABLE 1**). Many more states applied but no funding was available. President Obama's fiscal year 2010 budget proposed $13,074,000 for the entire CDC oral health program, although an estimated $28 million is needed for grants to ensure all 50 states can build their capacity. The Affordable Care Act passed in 2010 requires the CDC to expand the number of oral health infrastructure grants to all states, but funds have not yet been appropriated for this provision.

TABLE 1

States Funded by the Centers for Disease Control in 2010 to Strengthen Their Oral Health Programs and Improve the Oral Health of Their Residents

Alaska	Maine	Rhode Island
Arkansas	Maryland	South Carolina
Colorado	Michigan	Texas
Connecticut	Minnesota	Vermont
Georgia	Nevada	Wisconsin
Kansas	New York	
Louisiana	North Dakota	

Source: cdc.gov/OralHealth/state_programs/cooperative_agreements/index.htm.

Garnering more support for dental public health efforts could help reduce the prevalence of decay with its high human and financial costs. Lower disease rates would certainly reduce pressure on our current dental workforce.

In addition, the U.S. lacks systems of care that are designed to serve specific groups of patients. New Zealand, for example, created a school-based system of care for children in 1921. This system focuses on using dental therapists — primary dental care providers who complete two years of academic training and a one-year supervised preceptorship — to provide care for children in primary schools. Australia replicated New Zealand's system in 1965, placing dental therapists in schools where approximately 90 percent of children and adolescents receive comprehensive care every two years. While their system has its challenges too (funding and workforce shortages, and copayments that reduce participation), they have created a culture that ascribes a high importance to oral health and reduced caries rates.[38] The U.S. system has no direct corollary, although the dental health aid therapist program in Alaska is similar, in that it seeks to deploy therapists to provide basic prevention and treatment services in remote village clinics to Alaska natives.

Legal and Regulatory Barriers

A number of practical, legal, and regulatory barriers impede the expansion of prevention and treatment services. One of the more difficult barriers is the regulatory environment for the practice of dental hygienists and assistants who are the primary service providers for sealant programs. Dental hygienists and assistants operate under dental practice acts that first defined the practice of dentistry broadly a century ago, but have over time carved out specific, limited authority for allied dental providers that changes slowly over time, and varies state by state.

Scope of practice and supervision decisions are made by state legislatures through the political process, but most states use little or no research or scientific evidence to make them. Restrictions that do not reflect the state of the science make our current workforce less efficient and impede the implementation of common sense public health programs. For example, there are extreme variations across the country in supervision and exam requirements for hygienists applying sealants. In Washington state, dental

assistants can apply sealants under the supervision of a hygienist but in many southern states, hygienists can't apply sealants without a dentist on site.[39]

Recent systemic reviews by the CDC and ADA indicated that sealants can be effective in preventing caries even when applied to a tooth that already has incipient decay.[40,41] These advances in our understanding provide an opportunity for states to re-examine the basis of their law and practice. For instance, allowing dental hygienists to place sealants in school-based programs without requiring a dentist's exam, as 30 states currently allow, would make practical and scientific sense in all 50 states.

The same legal and regulatory barriers affect the educational requirements of the dental team. In more than 50 other countries around the world, dental therapists are trained in two years to provide primary dental care, including basic preventive and restorative procedures. In the United States, there were attempts in the 1950s and 1970s to create new providers that were at first supported, and then opposed by organized dentistry.[42] There is research that has established that providers other than dentists can be trained to provide restorative care with the same level of quality as dentists.[16,25,43-47] There is also research about new providers' productivity and efficiency, and positive attitudes about them from collaborating dentists.[49]

Currently, Minnesota is the only state that has created new provider categories called dental therapists and advanced dental therapists, although another dozen are considering similar moves. In May 2011, the first class of seven advanced dental therapists graduated in Minnesota. A similar model, called dental health aide therapists, has been deployed very successfully in clinics serving Alaska native villages.[47-49] Dentists in the United States might find that they, like their peers around the world, benefit from adding new providers to the team both in private practices, clinics, and schools. Basing decisions on the research, both from this country and internationally, would help legislators reduce the political nature of workforce decisions as they seek to expand the dental workforce and ensure quality of care.[47] Further research into the economics of incorporating new provider types would assist policymakers as well. One study estimated that hiring new auxiliary providers could expand the productivity and profits of private dental practices, even if 20 percent of the patient load was insured by Medicaid.[49]

DENTISTS IN THE United States might find that they, like their peers around the world, benefit from adding new providers to the team both in private practices, clinics, and schools.

Cultural Barriers

Dentists are a conservative and cohesive group. Their practices are very sensitive to downturns in the economy and changes in their payment structure. Organized dentistry has traditionally taken the stance — reasonable from a business perspective — that increasing the amount that government programs pay should be the primary response to address poor access to care. However, the research shows that increasing payment rates increases dentists' participation somewhat, but simply does not bridge the access gap due to continued problems patients face with transportation, language, child care, and other barriers.[25] One study found that in the six states that raised rates (by differing amounts), provider participation improved by at least one-third. Dentistry is facing renewed pressure to support workforce solutions such as allowing hygienists to deliver preventive services in the community, training hygienists and assistants to perform more procedures in safety net settings, and developing new primary care dental providers to care for underserved people.[25]

Thus far, when legislation has been introduced to recognize new providers to reach underserved people, as in Minnesota in 2009, organized dentistry has opposed them based on questions of patient safety. In the 1970s, there were attempts in Massachusetts and Kentucky to develop new dental providers that were initially supported, but later stopped by state dental associations. There still is opposition by some individual dentists to registered dental hygienists in alternative practice (RDHAPs) in California, even though they are limited by law to practicing in underserved areas, institutions, schools, and for home-bound patients.[50,51] Since RDHAPs are hygienists who can practice independently, most work in nursing homes. More discussion with dentists is needed to reduce misconceptions and fears about alternative providers and delivery models, foster collaboration, and promote a practice environment focused on care to underserved people.

Support for new approaches among organized dentistry is growing and is rooted in an understanding that their leadership is key to finding solutions that work for access problems. The Minnesota Dental Association spent considerable resources trying to defeat legislation to establish a new midlevel provider called an

oral health practitioner but ended up proposing similar legislation they preferred.

The Connecticut State Dental Association enacted a resolution in November 2009 endorsing a pilot project that would test the impact of dental health aide therapists in public health settings under dentists' general supervision. A number of state dental associations and several ADA presidents have put access to care for low-income people high on their agenda.

Georgia and Texas dental associations championed Take 5 campaigns to get each member dentist to accept at least five Medicaid families. Organized dental groups and many individual dentists often donate dental care and participate in annual voluntary days of service such as Give Kids a Smile. Nationally, the ADA has hosted two major access summits in November 2007 and March 2009 that drew together hundreds of people to craft solutions and form new partnerships.

Opportunities to Improve Access and Expand the Dental Workforce

The Affordable Care Act signed into law in March 2010 will change the landscape regarding workforce solutions and access to dental care for low-income and underserved children. The law expands health coverage to children and guarantees pediatric dental coverage to all children enrolled in state insurance exchanges. These provisions, when implemented, will expand the number of children with dental benefits by an estimated 5.3 million.[52] This will spur demand for dental services and require an expanded, possibly revamped workforce. Numerous provisions address dental workforce and service delivery. In an attempt to address concerns about workforce shortages, the legislation authorizes up to $60 million in funding for 15, five-year demonstration projects to train and evaluate alternative dental health care providers, with the goal of increasing access to dental health care services in rural and underserved communities. At the conclusion of the demonstration program, the secretary of Health and Human Services will conduct an evaluation in partnership with the Institute of Medicine. To boost delivery of medical and dental services, the law also authorizes an additional $11 billion in funding to community health centers.[53] The legislation also authorizes a National Health Care Workforce Commission to monitor workforce, analyze innovative approaches, and help coordinate federal efforts to ensure an adequate supply of professionals. The commission specifically includes the oral health workforce. In response to the tremendous need for care among Native Americans, the law allows the Indian Health Service to expand the dental health aide therapist model in states where state law has authorized them. These provisions provide states and tribes with a range of support to develop effective workforce models that are critical as the United States attempts to expand oral health services to low-income and underserved communities.

States also are starting to look for ways to expand access and fill gaps in the dental system's ability to provide care, for example, for young children at high risk. Most general dentists receive relatively little training in dental school in caring for children and many are not comfortable caring for children, particularly young ones. Only a tiny portion, 3 percent, of all dentists are

pediatric dentists who are skilled at caring for young children and trained to handle the highest need cases.[16] Washington and North Carolina started involving pediatricians in the oral health care of poor young children partly because of the continued difficulty in recruiting sufficient numbers of dentists to serve the Medicaid population.

California has a similar program, Pediatric Oral Health Access Program (POHAP), that provides training for general dentists in underserved areas to improve their ability to treat young children. It is a grant-funded program that requires participating dentists provide a certain amount of pro-bono care to low-income patients and to accept Denti-Cal patients in their practices.[54] Washington's successful ABCD program provided training to general dentists to see young children, and increased their reimbursement, but more providers were still needed.[55] Involving pediatricians proved to be a fruitful strategy, since they see young children frequently in the first years of life, and early prevention and education can reduce future decay and lower treatment costs. The American Academy of Pediatrics has led the effort to get state Medicaid programs to reimburse for the oral health services provider in the medical setting, with 40 states doing so as of 2010.[56]

Conclusion

Given that the access barriers brought to national attention 10 years ago by the U.S. Surgeon General remain a huge challenge today, it is clear that new thinking and approaches are necessary in order to expand care to children who need it. Some innovative dental workforce solutions are being developed across the country that promise to expand access. More states are expected to propose new providers such as dental therapists. Several dental associations and workforce experts are looking at developing a three-year modular program that would provide training for both dental hygiene and dental therapy.

These ideas would build on the current educational and delivery system, and keep dentists in their role as the most highly trained and compensated members of the dental team, and as team leader. As the field moves forward, dentists will need to learn how to incorporate these providers into practice and adapt to new delivery systems. More such efforts are needed that target unmet need among children and build on research and evidence about what works. ■■■■

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Breaking Down Barriers to Oral Health for All Americans: The Role of Workforce

ABSTRACT This statement from the American Dental Association is the first in a series offering the ADA's vision of a healthier, more productive nation, enabled by breaking down the barriers that impede or entirely prevent millions of Americans from enjoying good oral health. It is included as part of this issue to articulate the ADA's perspective on the national access debate.

SOURCE

This report is a statement from the American Dental Association. For more information about this report, call 202-898-2400 or email govtpol@ada.org.

Most Americans have access to the best oral health care in the world and, as a result, enjoy excellent oral health. But tens of millions still do not, owing to such factors as poverty, geography, lack of oral health education, language or cultural barriers, fear of dental care, and the belief that people who are not in pain do not need dental care. The ADA believes that all Americans deserve good oral health. We are committed to helping dentists, with their teams of allied personnel, provide the best level of care to all Americans who seek it; to increasing the prevalence of oral health literacy, which both prevents disease and educates the public as to how to get healthy and, more important, how to stay healthy; to ensuring that when care is needed it is provided; and to helping government and the private sector work together to end what former Surgeon General David Satcher famously called a "silent epidemic" of untreated oral disease.

With each passing year, science uncovers more evidence of the importance of oral health to overall health. Early diagnosis, preventive treatments and early intervention can prevent or halt the progress of most oral diseases—conditions that when left untreated, can have painful, disfiguring and lasting negative health consequences. Yet millions of American children and adults lack regular access to routine dental care, and many of them suffer needlessly from conditions which are for the most part preventable. Oral health disparities cut across economic, geographic and ethnographic lines. Racial and ethnic minorities, people with disabilities, and the poor are especially hard hit. Until a sense of value and a desire for oral health become the norm, the existing

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barriers will continue to block any significant progress toward improving the oral health of those who currently lack care.

The nation's dentists have long sought to stem and turn the tide of untreated disease—as individuals, through their local, state and national dental societies, and through other community organizations. To be sure, dentists alone cannot bring about the profound change needed to correct the gross disparities in oral health. But dentistry must and can provide the leadership that initiates change, or change will not occur.

Ultimately, education and prevention will be the linchpins in eliminating, or at least minimizing untreated dental disease. These signs will mark the birth of the first generation that could grow up essentially free of dental disease: when the day comes that we as a nation decide that oral health is a national priority and provide education to all families of newborns, expand public health measures such as community water fluoridation, and provide a dental home to every child. Until that occurs, the nation will be challenged to meet the needs for preventive and restorative care among large numbers of Americans who do not have dental coverage, cannot afford care, or face other barriers that block them from seeking regular oral care and dental visits.

It is critical to understand that addressing only one or even a few of the numerous barriers to care is the policy equivalent of bailing a very leaky boat. Scattershot efforts can provide some measure of relief among some populations for some time. But ultimately, we as a nation must muster the political will to address all barriers to care (**FIGURE 1**). Not doing so is a recipe for repeating past failures and missing opportunities to effect lasting, positive change.

It is with that in mind that the ADA offers this paper addressing one of the major barriers to care: the need for an adequate dental workforce, located where it is needed and sufficiently funded to carry out its mission. This includes having adequate numbers and types of allied personnel available to support the dentists who ultimately are responsible for diagnosing, planning treatment, and delivering those services that only dentists are adequately educated and trained to perform. It means pursuing innovations with dental team members to broaden dentistry's reach and capacity to treat the great number of people who currently reside outside the oral health care system.

Workforce has in recent years come to dominate discussions and debates about improving access to care. We welcome the increased focus on these issues from both new and existing stakeholders, but are disappointed in two unintended consequences of the vigorous discussions about how best to improve the availability of dental care to those who lack it: 1) the degree to which the fixation on workforce, a deceptively "simple" issue to grasp, has distracted policymakers and those who influence them from the much greater number and complexity of other barriers to care; 2) the shrill nature of the debate among various camps, which sinks well below the level of reasoned discourse and saps what should be a collaborative concentration on the factors on which all or most agree. We urge all stakeholders to dispense with accusations of base motivation. We will inevitably disagree on some points. But let us do so in the belief that we all share the same goal: improving the oral health of people who suffer from its lack.

Every group involved in any aspect of solving the nation's oral health disparities latches onto the same statistics, events and trends in order to argue its case: That dental disease is the most prevalent malady affecting the nation's children; that disadvantaged children experience a significantly greater burden of oral disease than other children, accounting for 80 percent of childhood dental disease; that a deplorably small percentage of disadvantaged children and adults see dentists regularly; that a great number of private practice dentists cannot afford to treat patients covered under Medicaid, SCHIP or similar programs; that evidence of links between chronic oral disease and nonoral disease continues to mount. The statistics and phenomena are well known. They do not support or oppose any one point of view. Rather, they are evidence of the numerous barriers that exist and of the inadequacy of some aspects of the current system. They should motivate every stakeholder. They should underlie effective advocacy for the changes that must occur. They are not indicators for any one solution, and attempting to use them as such is disingenuous, empirically unproven and oversimplified.

A STATEMENT OF BELIEFS

The ADA bases its policies and goals aimed at breaking down barriers to oral health on these core beliefs: the exemplary quality of dental care in America and the importance of oral health to overall health; that too many Americans do not benefit from this care and consequently do not achieve the good health that they deserve; and that the current system can be modified in ways that extend the benefits of good oral health to virtually everyone who needs and seeks it.

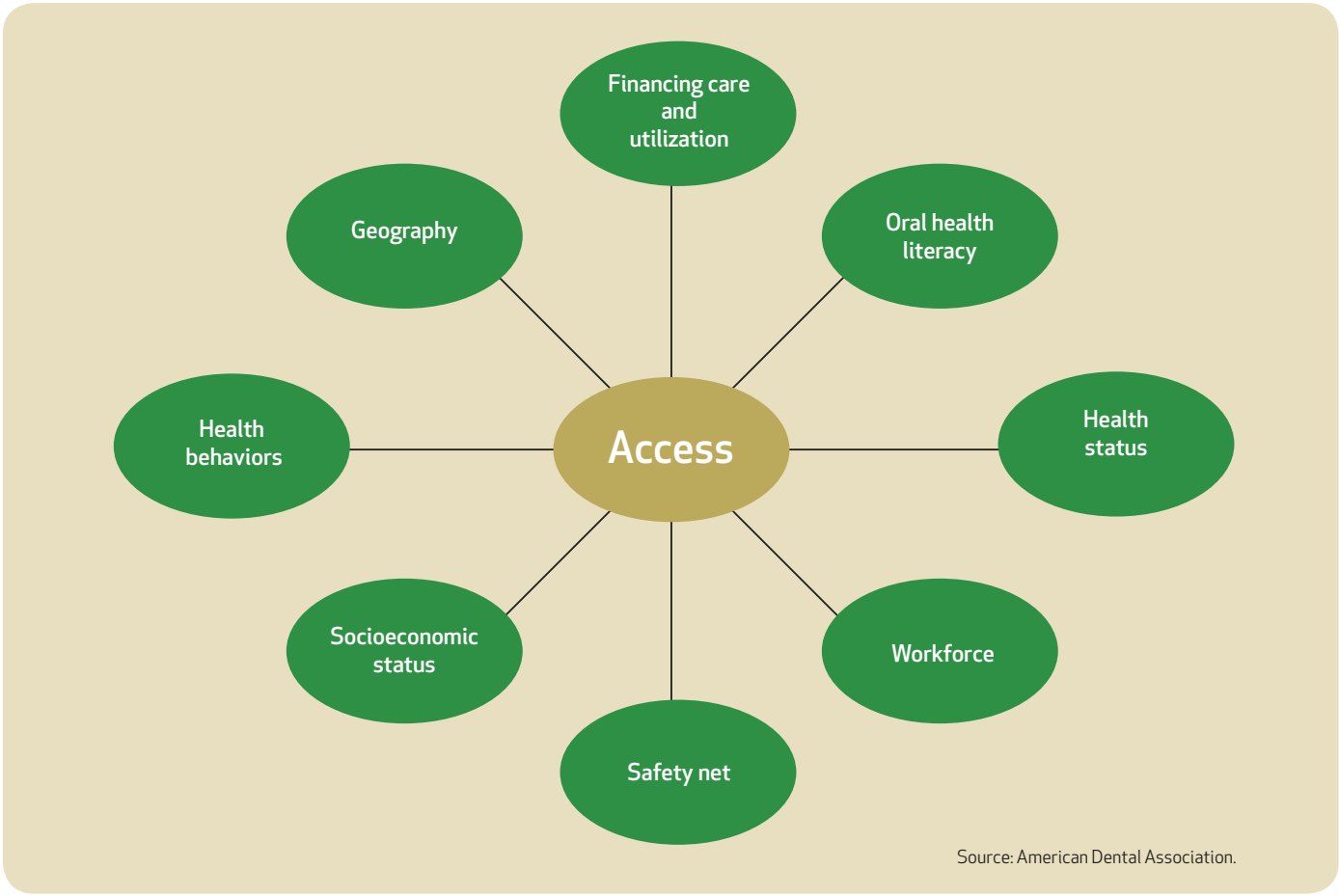


FIGURE 1. Barriers to oral health care.

On breaking down barriers to access:

- All Americans deserve access to oral health care provided by fully educated and trained dentists and the teams that support them.
- The degree of oral health disparities and the severity of untreated dental disease are unacceptable, especially among children.
- Achieving good oral health is a responsibility shared among dentists, their teams, and their patients.
- Community-based efforts through both state and federal governments and other groups can help deal with cultural, economic, and other barriers that can interfere with the development of the dental home environment.
- Only through substantial investment can the nation's dental safety net fulfill its purpose of meeting the needs of underserved individuals and communities.
- Realistic proposals to adequately fund the public health infrastructure must be cost-effective and prioritize those patients with the greatest needs and who will reap the greatest benefits.
- We are committed through advocacy and direct actions to identify and implement common sense, market-based solutions that capitalize on the strengths of the existing system while seeking innovations that extend that system to the greatest possible number of people.
- We believe that individual states are the best arbiters of how to improve oral health care delivery within their borders. We support their diverse efforts and seek to transfer knowledge to other states. At the same time, we believe that the federal government must guide and support the states in their efforts.
- Dentists can lead the way, but no matter how committed the profession is, dentists alone cannot foster the drastic changes needed to extend good oral health to all who seek it. We need the support of law and policymakers, other doctors and allied health profession-

als, educators, private industry, and ultimately, society at large. That said, dentists must be the go-to resource for all of these groups to ensure clinical quality. We believe that organized dentistry at all levels—local, state, and national—must consult, cooperate, and collaborate with other stakeholders, especially patients themselves, to create programs with people, rather than for them.

- Schoolchildren should receive regular oral health assessments to detect disease and allow for referral to dentists for comprehensive examinations and treatment. Oral health assessments should receive the same priority as vaccinations and other medical assessments required for public school attendance.

- Charitable projects sponsored by the ADA and state dental societies provide a tremendous amount of care to low-income adults. But they also point up the terrific need that charity alone can never meet. Medicaid and similar programs should extend the same dental benefits that now are almost exclusively provided to children to all people eligible for those programs.

- The economically disadvantaged are not the only significant populations suffering from poor oral health due to lack of access to care. Millions of vulnerable elderly Americans face the same conditions, as do millions more living in institutions or with chronic, profound disabilities. The increase of the elderly demographic over the next decades could overwhelm the system and further exacerbate the current crisis in access to dental care.

On the roles and responsibilities of the dental workforce

- The ADA is committed to both seeking funding for and, to the extent possible, sponsoring on its own, studies or evaluations of dental workforce or other oral health care delivery models.

- While innovative use of existing and some new dental team members shows great promise, only dentists should diagnose disease, develop treatment plans and perform surgical/irreversible procedures.

- Pilot programs that test new workforce models should recognize the dentist as the leader of the team and be based on valid assessments of outcomes, cost savings and efficiencies to increase capacity without jeopardizing patients' health.

- The local and national dental communities should take part in all discussions of new workforce models, whether they are offered by public, private, or charitable entities, at least to the extent that their views are heard and considered.

- Dental team members involved in pilot programs should be supervised by fully trained dentists, doctors who are responsible, ethically and legally, for patient care.

- The training of any new dental team member should occur through dental or dental-related education programs accredited by the ADA Commission on Dental Accreditation (CODA). CODA is nationally recognized by the United States Department of Education to accredit such programs conducted at the postsecondary level.

- Dentists, in cooperation with appropriate governing bodies, should determine the scope of practice of allied dental personnel with an eye to (1) which functions and procedures can be delegated, (2) what degree of supervision is appropriate for those procedures and personnel, and (3) which require the knowledge and skill of a dentist.

- Appropriate safeguards for patients must be in place when treatment is performed by any member of the dental team.

- Everyone who provides oral health care must have completed appropriate education and training and meet any additional criteria needed to assure competence within the scope of practice approved by authorized licensing bodies.

- State officials charged with governing the delivery of dental care are the ultimate legal arbiters of what constitutes the appropriate scope of practice of the various dental team members.

The Many Barriers to Optimum Oral Health in America

Funding

The simple, inescapable fact is that improving the oral health of people who currently are not receiving adequate care will require significant, ongoing investment, not only from government, but from the private sector as well. Obtaining substantial new funds for dental programs has always been difficult, now more than ever in the current economic decline. In order to successfully advocate for improved funding, stakeholders must demonstrate not only the human suffering that it can alleviate but also the long-term economic benefits. These include:

- Reduced health care costs—not just oral care, but also medical care. This is especially significant in light of how little of their Medicaid budgets states tend to allocate toward dental care. Further, it is reason for federal and state governments to fund adult dental Medicaid—now essentially nonexistent—because the adult populations are those most likely to suffer from conditions associated with periodontal disease, such as diabetes.

- Better school performance. Children with untreated dental disease have difficulty learning. They miss more school days than their healthier counterparts. Their social development is impaired. They suffer from low self-esteem. The long-term consequences of ignoring this are apparent. The benefits to be reaped by bringing more children into a continuum of care, while as yet unproven, are extremely promising.

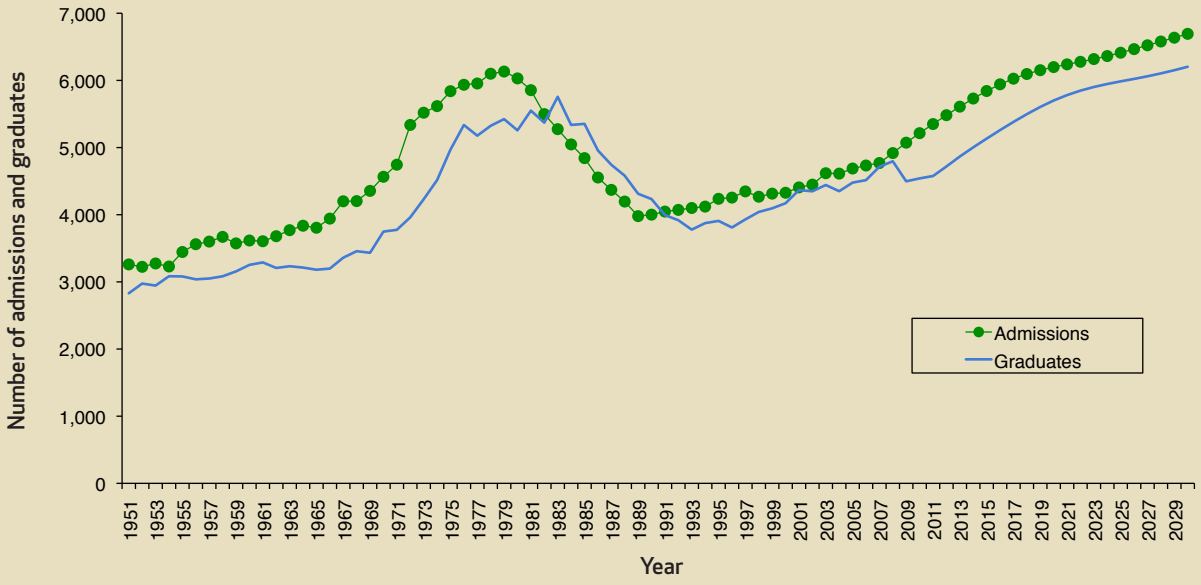
- Increased productivity. Adults suffering from untreated disease are more likely to miss work. Those whose disease has progressed to the point of obvious disfigurement face dramatically diminished employment prospects.

Even ignoring our societal obligations to the most vulnerable among us, the practical returns on greater investment in the dental safety net eventually could benefit everyone.

Better funding for public assistance programs is critical. Lack of funding is perhaps the most important barrier to better oral health in America. An ADA analysis of state children's Medicaid programs developed in 2003 and updated in 2009 demonstrated that when Medicaid reimbursement rates reach levels at which a majority of dentists consider the fees to be acceptable, participation and utilization increase dramatically. This is a tipping point, rather than a steady-scale phenomenon. But even when optimally funded, these programs cannot reach their potential without other significant reforms. These include reducing unnecessary red tape for dentists and patients, and helping patients overcome such related barriers as the needs for transportation, child care, or permission to take time off from school or work to receive treatment.

Geography

A consistent refrain among supporters of so-called "midlevel practitioners" is the claim that there are not enough dentists to care for a major influx of indigent patients and that baby boom dentists will retire in such numbers as to reduce what supposedly is an already inadequate dentist population. These claims seemingly lack a solid basis. In fact, studies conducted by the ADA and the American Dental Education Association have challenged these assumptions, citing many factors potentially affect-



Source: ADA Health Policy Resource Center.

FIGURE 2. Dental school graduates through 2030.

ing retirement patterns, as well as the potential impact of new dental schools and the continued growth in numbers of allied personnel. The studies indicate that the number of dental schools and graduates will increase steadily through 2030 and that the number of professionally active dentists will increase from its current level of approximately 180,000 to as much as 200,000 over the same period (**FIGURE 2**). (Although many factors can affect so large an undertaking as opening a dental school, some observers estimate that there will be as many as 20 new schools by 2020). Further, the report indicates that the age levels of the dental workforce will even out, in part because the dental population of baby boomers is retiring at later ages than its predecessors. This means that the available supply of active dentists will not suffer the major reduction that is commonly predicted.

Dentist workforce *size* is not a problem now, nor is it likely to be in the predictable future. The real problem is where the dentists are in relation to underserved populations. Put simply, the ADA believes that access disparities can be greatly reduced by a combination of getting dentists to the people and getting people to the dentists. Like any other economic sector, health care is market driven. This is especially true with dentistry, whose private practice model has held up so well because of its proven ability to prevent disease and, when disease occurs, intervene early with cost-effective treatment. In the economic sense, the populations in the most common underserved settings—remote rural areas, Native American communities and inner cities—cannot support a dental practice because no one is paying adequately for their care. Even many children who ostensibly are covered by federally or state-mandated programs live too far away from dentists who could provide care. For adults the barriers are twofold—no coverage and no available dentists.

Several proven models exist to alleviate geographic barriers, and others are being tested. The National Health Service Corps, the Indian Health Service and the loose network of Federally Qualified Health Centers use various combinations of incentives to place dentists in underserved areas, including student loan repayment. Some states also offer tax incentives for practitioners working in underserved areas. Some dental programs join forces with various school or social service entities to help address the need to provide transportation and other support services to help patients keep appointments.

THE ADA BELIEVES
that access disparities can be greatly reduced by a combination of getting dentists to the people and getting people to the dentists.

Education, language and culture

The vast majority of dental disease is either entirely preventable or can be easily cured through early intervention. The more educated a population group, the greater the likelihood of its members having a high degree of oral health literacy, a term that may sound deceptively sophisticated, given the simplicity of its concept: They know how to take care of their families' teeth and gums, and they seek (and can afford) regular preventive dental care. They know whether their community water system is fluoridated and how to compensate for nonfluoridated water with supplements or topical applications. They brush regularly with fluoridated toothpaste and use floss.

But too many others simply don't know about basic and largely affordable measures for preventing disease. In some cases this relates to lack of education. Many others have limited English proficiency or may come from countries and cultures with much lower standards of oral health than exist here. Some may not be comfortable interacting with people perceived as authorities. Key to breaking down these barriers is gaining trust, which can be accomplished through intermediaries from the same cultures as the target populations or by providing oral health education to schoolchildren who then can share what they learn with older family members.

Models for change

Even under chronic funding constriction, imaginative people maximized available resources and leveraged natural allies to dramatically improve the abilities of existing programs and systems to deliver care where it is most needed.

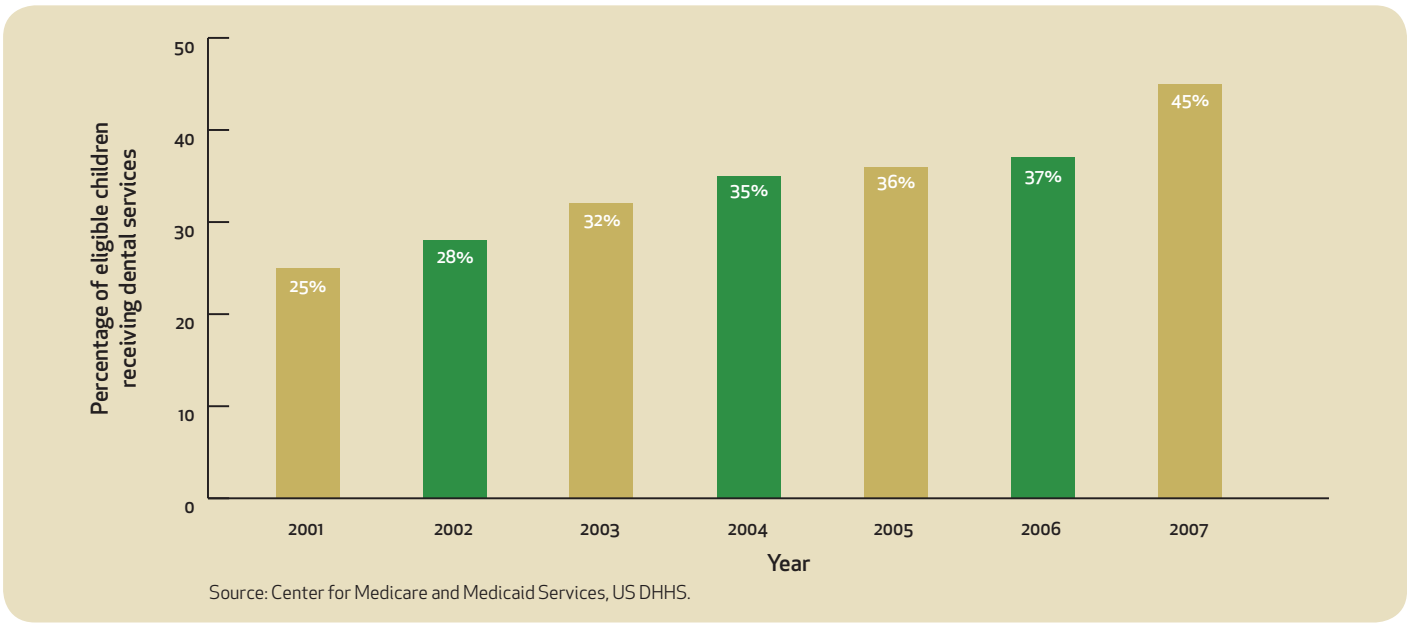
- Michigan's Healthy Kids Dental Medicaid demonstration program is a partnership between a state Medicaid program and a commercial dental plan, with the plan managing the dental benefit according to the same standard procedures and payment mechanisms it uses in its private plans. The proportion of Medicaid eligible children who saw a dentist at least once increased from 32 percent to 44 percent in the pilot program's first year. It also cut the number of counties with either no dentist or no dentist able to accept new Medicaid patients in half—from 19 to 10. This model demonstrates how contracting with a single commercial

entity that 1) has a strong existing dental network; 2) offers competitive market-based reimbursement; and 3) streamlines administration to mirror the private sector, can substantially improve access to care for Medicaid beneficiaries. In each succeeding year from program inception in 2000 through 2007, the proportion of the children enrolled for 12 months in a calendar year with at least one dental visit has continued to increase, with the access levels approaching 70 percent in children 7 through 10 years old, by 2007.

- Tennessee's TennCare program was the first attempt by a state to move its entire Medicaid population into a statewide managed-care system. The impact on dental services was disastrous. The number of participating providers dwindled from its 1984 level of more than 1,700 down to 386 general and specialist dentists available to treat the more than 600,000 TennCare eligible children. In 2002, the legislature enacted a statutory carve out of dental services, which mandated a contract arrangement between the state and a private dental carrier to administer benefits for children (under age 21). The state retained control of reimbursement rates and increased them to market-based levels.

  The new rate structure, in combination with administrative reforms, patient case management strategies and a requirement that the carrier maintain an adequate provider network, has substantially improved TennCare's provision of dental services. In just two years, the utilization rate among eligible beneficiaries increased from 24 percent to 47 percent. (Private sector utilization ranges from 50 percent to 60 percent.) As of June 2004, about 700 dentists were participating in the program, with 86 percent of participants accepting new patients.

- Alabama reformed its state-administered dental Medicaid program in 2000 to reimburse dentists at rates equivalent to those paid by commercial insurers. (The program still reimburses dentists at year 2000 rates.) The changes included creation of the Smile Alabama! initiative, which encompassed administrative reforms, a case management program, and increased outreach to both patients and dentists. As a result of the Smile Alabama! initiative, there has been a 216 percent increase (from 151 to 477) in the number of dentists who see more than 100 Medicaid patients a year, while the number of counties with one or no Medicaid dental provider had declined from 19 to three by September 2009. The effort resulted in an 84.3 percent increase in dental utilization, from 25 percent (103,630) of eligible children in FY2001 to 45 percent (190,968) of eligible children in FY 2007 (**FIGURE 3**).



Source: Center for Medicare and Medicaid Services, US DHHS.

FIGURE 3. Smile Alabama! (Medicaid) service improvements under new rate structure.

- This example, the smallest in scale, is in many ways the most intriguing, embodying a diverse group of local entities crafting a solution uniquely suited to local needs. In 2001, in Brattleboro, Vt., Head Start, the state health department, school officials and hospital administrators collaboratively established a fee-for-service, for-profit dental center to address the needs of the underserved in a rural community. The organizers raised $450,000 in three months and built a three-chair, state-of-the-art facility with sufficient infrastructure to expand to five chairs. Now in its 10th year, the Estey Dental Center serves both private paying and public assistance patients and pays a percentage of non-Medicaid revenues to the nonprofit contracting entity (the community partners). In its first two years of operation, the clinic cleared a huge backlog of children with acute and chronic dental needs and began to increase adult utilization as well.

These diverse initiatives share common elements. All of them utilized existing workforce models. They wrought significant, positive change through relatively minor funding increases combined with dramatic changes in administration. Each made it possible for more patients to receive care from the same population of dentists that existed before the programs were launched. Unfortunately, unlike Brattleboro's small-scale program, none of the statewide systems provide care to adults in any meaningful way.

Alternative workforce solutions

Multiple groups have offered models intended to provide clinical services—including surgery—to underserved populations. They are largely targeted toward serving people in remote rural areas, with the justification being that there are not and never will be sufficient dentists able to practice near enough to those areas to serve their residents. To a lesser extent, backers of these models also claim that they will care for other underserved populations, including people in inner cities and Native American tribal lands. The designers of these models often cite various dental therapist programs in other countries in which nondentists perform such surgical procedures as "simple" extractions, restorations, and even pulpotomies.

EACH OF THESE initiatives made it possible for more patients to receive care from the same population of dentists that existed before the programs were launched.

Both of these suppositions fail to withstand scrutiny. The assertion that no dentists will serve these populations risks becoming a self-fulfilling prophecy. Advocacy and finances directed toward experimental programs in which non-dentists perform surgical procedures undoubtedly will sap resources away from proven programs—such as the U.S. Health Resources and Service Administration's National Health Service Corps, Indian Health Service, the Public Health Service, loan forgiveness and tax incentives, and public/private partnerships, all of which are proven to place dentists where they are most needed.

Claims that the efficacy of therapists has been "proven" in other countries are simply deceptive. The midlevel programs in these countries differ so dramatically in scope of practice, populations served and degree of dentist supervision, that referring to them en masse is misleading at best. In fact, if you've seen one foreign midlevel program, you've seen one foreign midlevel program. Further, these claims largely lack longitudinal clinical assessments of health outcomes. We know of no study comparing any improvements in oral health among targeted populations to the potential outcomes had the same resources been directed to providing these patients with care from dentists. They are touted as brilliant successes with very little empirical evidence to support those claims.

Dental midlevel models often are compared to physician assistants or nurse practitioners, generally omitting the significant differences among those models. Physician assistants and nurse practitioners require up to six years of post high school education, not the two years or less suggested for many dental therapist models. Significant differences also are present among various dental midlevel models, most notably in their proposed scopes of practice and degree of supervision. They share, however, a critical attribute that the ADA opposes unequivocally: Allowing nondentists to perform surgical procedures, often with little or no direct supervision by fully trained dentists.

Three midlevel models dominate the current discussion of these personnel:

1. The Alaska dental health aide therapist (DHAT) model receives the most attention, as it is the only dental midlevel program in operation in the United States. It was designed to mirror its New Zealand counterpart. At its inception, program participants were even trained

in New Zealand, in part because the program's authors did not identify a U.S. dental school that would participate in training nondentists to perform surgical procedures. The program has since worked out a training curriculum with the University of Washington (although it is worth noting that the relationship is with the university's medical school and not its dental school). Now in its fifth year, the Alaska DHAT program is fielding a modest number of therapists who are providing care.

In a case study released in October 2010, the W.K. Kellogg Foundation declared the program a resounding success, even as the study's principal author admitted that the evaluation did not assess the overall impact of therapists' work. The study also failed to address the economic basis for or sustainability of the DHAT model.

Kellogg's release of this study was a prelude to its larger purpose—the rollout of plans to create DHAT programs in five additional states: Kansas, New Mexico, Ohio, Vermont, and Washington. However, the Alaska program benefitted from the federal government's power of preemption, enabling the DHAT program to circumvent the jurisdiction of the state's Legislature, courts and board of dentistry. Kellogg presumably must convince policymakers in the five targeted states, each of them with unique rules and policies governing education and health care, to allow DHAT programs to begin. The foundation has committed $16 million to setting up the program. It is unclear how much (if not all) of that sum will go toward the political activities needed to legalize DHAT practice and how much will be devoted to actually launching educational and training programs.

2. The American Dental Hygiene Association (ADHA) has for some years advocated the creation of an advanced dental hygiene practitioner (ADHP), a dental midlevel who, after earning a two-year master's degree, would be allowed to practice independent of dentist supervision. In addition to the existing scope of hygiene practice, ADHPs would diagnose oral disease, create treatment plans and perform "limited restorative procedures," including preparing and placing restorations, extractions and pulpotomies. Like the DHAT, the ADHP is expected to distinguish between complicated and uncomplicated treatments and refer the former to a fully trained dentist. Here again, the ADHA cites the use of various midlevels in 40 countries as evidence that a midlevel model will work in the United States, without acknowledging the great variations in training and scope of practice among those providers.

3. In 2009, the Minnesota Legislature, facing formidable pressure to enact an ADHP model, opted instead for a compromise worked out with the state's dental school, in which the school will train two levels of dental therapists. Dental therapists would graduate from an education program with either a baccalaureate or a master's degree. Dental therapists graduating with a four-year degree would practice under the direct or indirect supervision of a dentist for surgical procedures and could perform some nonsurgical procedures under general supervision. Those qualifying for advanced therapist status must have completed 2,000 hours of practice as a (four-year) dental therapist, and have graduated from a master's-level advanced dental therapy education program. Advanced dental therapists will then be allowed to perform certain surgical procedures under a dentist's general supervision with a written collaborative management agreement, that is, without a dentist actually on site with the therapist.

The models above share some basic flaws. They overload midlevel providers with more responsibility than they should be expected to bear. Their proponents consistently refer to certain procedures, including extractions, as "simple," saying that of course more complex cases will be referred to dentists. However, fully trained and experienced dentists argue that midlevels' training cannot adequately prepare them to distinguish between "simple" and "complex" cases. In fact, even fully trained dentists do not conclusively pronounce a procedure as simple until it has been *successfully* completed.

A second weakness rarely mentioned is the midlevel's questionable ability to distinguish between teeth that cannot be saved and should be extracted and those that could be saved by restorative methods beyond the midlevel's training. If your only tool is a hammer, every problem looks like a nail.

A greater and broader weakness among proponents of midlevel practitioners is their near-obsessive focus on midlevels as the ultimate solution to access problems. Differences in opinion about the appropriate scope and supervision of various dental team members aside, arguing so vehemently for any single workforce model, while failing to place equal or even greater emphasis on the numerous other barriers to care is either naïve or disingenuous. In some ways, these models are a solution in search of only one part of a problem.

Shifting from the clinical to the policy point of view, we know of no

empirical studies of the economic feasibility of dental midlevels. Proponents of these models either imply or assert that care from these providers will somehow be less expensive than that delivered by dentists, because they will earn less than dentists. We know of no evidence to support this. Compensation is a relatively small percentage of the costs of establishing and maintaining a dental facility. The difference between the salary of a dentist and that of a therapist or advanced hygienist would likely be offset by their lower productivity compared to a fully trained dentist and have a minimal effect on the overall cost of delivering care.

A different approach to augmenting the dental team

The ADA also is piloting a new dental position, the community dental health coordinator (CDHC), but one that represents a completely different philosophy. Modeled on the community health worker, which has proven extraordinarily successful on the medical side, CDHCs will function primarily as oral health educators and providers of limited, mainly preventive clinical services. Another significant function answers the need to treat patients with acute clinical needs without relegating those patients to surgery by nondentists. They instead help these patients navigate the system, including ensuring that the patient clears the red tape that can complicate their receiving the care to which they are entitled, finding dentists, booking appointments and helping to provide critical logistical support such as securing child care, transportation and permission to miss work in order to receive treatment.

The CDHC is based on some of the ADA's key principles for breaking down barriers to care: education, disease prevention, and maximizing the existing system. Rather than focusing strictly on treating disease, the CDHC provides education and preventive services. At its essence, oral health education is prevention at the most effective level. Models that focus exclusively or almost exclusively on performing procedures ignore these critical success factors.

THE COMMUNITY DENTAL health coordinator is based on some of the ADA's key principles for breaking down barriers to care education, disease prevention, and maximizing the existing system.

In many cases, underserved populations also face cultural barriers. This is nowhere more evident than among Native American communities that, in addition to their often remote locations and grinding poverty, often have difficulty interacting with people from the American mainstream. Similarly, increasing numbers of people living throughout the country have limited English proficiency or come from cultures that lack awareness of basic oral hygiene. CDHCs are recruited from these same communities, ideally not just similar communities but the actual communities to which they return and work. This critical factor can minimize and even eliminate these barriers that, though not often associated with access to oral health care, can affect it profoundly.

Public Health Interventions and Safety Net Delivery Systems

Efforts that emphasize disease prevention, such as community water fluoridation, sealant initiatives and school-linked health education and care programs are critical for improving the public's health, especially over the long term. But they are no substitute for comprehensive care provided by dentists to diagnose and treat disease.

Federal law requires all community health center applicants, as a condition of receiving federal funding, to demonstrate that they will provide dental services to the population served by the facility either on site or through a contractual arrangement. Unfortunately, these requirements have not significantly improved access to dental services for the underserved—the Federally Qualified Health Center system remains troubled. The dental safety net services provided through community health centers remain limited, and retaining dental providers through traditional means i.e., hiring dentists and dental auxiliaries on staff is challenging.

That said, dental clinics, whether government funded, private or nonprofit can have a critical role in communities that for whatever reason cannot attract sufficient private dental practices. In some communities these clinics may be the only resource available for dental care, and they often are overwhelmed. Many dentists who dedicate their careers to working in them do so out of powerful sense of social responsibility.

But the system cannot sustain itself relying solely on doctors who, upon completing grueling years of education and training, to say nothing of attempting to borrow and repay the cost of completing dental education, choose such selfless career paths. To attract

and retain more dentists to work in these facilities, these positions must pay competitively. Equally important, clinics need to implement new ways to partner with private practitioners, who not only can adjust to varying public sector caseloads, but who can confer a degree of efficiency on the system of care beyond the capabilities of clinics under their current administrative and compensation structures.

Dental schools also can be instrumental in improving the availability of dental services for communities. Their clinics and off-site training programs provide needed care to patients who otherwise could not afford it. The possibility exists that some dental school clinical practices could expand these services, using their medical school counterparts' faculty practice model, increasing the numbers of patients served, creating greater revenues for the schools, and providing greater clinical training opportunities for students and residents. Ninety-one percent of schools now require students to complete a rotation in a clinic or other underserved community setting. In 2008 through 2009, 57 dental schools reported over 260 average hours of community based clinical care provided by their students as part of their dental education.

There are a number of creative approaches being used by dental schools to provide community outreach and care for the underserved. One such example is the collaboration of the NYU College of Dentistry with the Henry Schein Cares Foundation which places dental students, faculty, residents and hygienists in clinical settings operated by Caring Hands of Maine (one of a number of domestic and international sites covered by the program), in an effort to establish sustainable oral health systems. Programs like this also offer the ancillary benefit of bringing students into direct contact with communities of people who have a demonstrable need for oral health care and the real impact they can have in providing that care as practicing dentists. Here again, any such training must be conducted under the appropriate supervision of fully trained dentists, for the benefit of both patients and students.

Conclusion

The preceding discussion takes place in a terrible context: an ongoing epidemic in the most powerful country in the world, one that corrodes lives, robs children of otherwise bright futures, aggravates chronic and expensive-to-treat medical conditions and even, as in the case of 12-year-old Deamonte Driver, kills.

Untreated dental disease in America is a national disgrace. The silent epidemic owes in part to a failure to speak up. Dentists have carried the burden of advocating and caring for the underserved, mostly alone, for decades, with only limited success. Perhaps most frustrating is that real change is within reach. The system of clinical care is essentially in place, one that has proven to be a model for the larger sphere of health care—patient education, focused prevention and, when needed, early intervention to restore optimal health. When brought into this system, patients are empowered to be stewards of their own health.

Changes to the dental workforce can be a key factor—though far from the only factor—in extending good oral health to millions of people whose well-being is diminished because they lack it. The use of expanded function dental assistants, oral preventive assistants and patient navigators like the community dental health coordinator can

As the nation's leading advocate for oral health, the ADA:

- Urges both new and existing stakeholders to work more collaboratively, recognizing that our shared values and goals greatly outweigh any differences in how we believe those goals should be pursued.
- Invites the broader community to join our movement. Educators, faith-based and charitable groups, additional doctors' and other health associations, and private industry all have roles to play. The more diverse the group, the greater its chances for success.
- Asks all stakeholders to collaboratively set ambitious yet realistic goals for the short- and long-term as a first step toward pooling resources and working in aligned purpose to effectively end untreated dental disease in America.

Timothy G. Giroux DDS/Broker

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2. Patient loyalty issues: Most patients will want to see the original doctor, even if he is only working a day or two per month. They will wait for his next open appointment, even 3-6 months if they are not in pain, or ask to smooth out that broken cusp until they can see him.
3. The risk of exposing your greatest asset to another doctor: Goodwill, i.e. your patient base, usually accounts for 70 to 80% of your practice value. What if the doctor backs out of the purchase & the patients, or staff, wish to leave with him? Unless there is a significant down payment that can be retained, covenants not to compete are generally unenforceable for associates. Usually young doctors do not have any sizable money to put down.
4. If the transaction is already consummated, the young dentist may be $350K in debt from school loans. He will soon realize that he cannot afford to keep the retiring dentist employed when he starts paying on the new debt of his practice loan & his own personal expenses.

Most patients will continue to go back to where they have been treated in the past. Patients know the staff & many have developed relationships with them. They do not want to have X-rays taken if they go to another dentist. They will normally give the new dentist a try & it is up to the new dentist to win them over.

In our experience, a good letter of introduction, gaining support of the staff & trying not to rock the boat too much in the beginning will yield a successful transfer of patients. A nationwide consulting firm places the attrition rate at only 5% if these suggestions are followed. That has also been our experience.

Timothy G. Giroux, DDS is currently the Owner & Broker at **Western Practice Sales (westernpracticesales.com)** and a member of the nationally recognized dental organization, ADS Transitions. You may contact ***Dr Giroux at*: wps@succeed.net or 800.641.4179**

greatly improve efficiency and capacity.

That other sectors of society are becoming increasingly vocal and passionate about the issue can only help. Disagreement among the new and old players in the field is natural and ultimately healthy. But one thing is sure—efforts to end the epidemic of untreated dental disease that do not position dentists as leaders and guides are doomed to fail. Expending precious resources on workforce experiments that ignore the experience and inarguable success of the existing delivery system would be a costly trip down the wrong road. The people we all want to help deserve better, and the dental profession stands ready to continue our work, aided by our new allies, toward our common goal of a healthier, more productive nation. ■■■■

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Societal Expectations and the Profession's Responsibility to Reform the Dental Workforce to Ensure Access to Care for Children

DAVID A. NASH, DMD, MS, EDD

ABSTRACT Societal expectations raise the issue of the nature of a profession and a profession's relationship with society. Influential policy leaders want reform of the oral health workforce and delivery system in such a manner as to ensure that improvements are made for accessing care, particularly for vulnerable and disadvantaged populations, especially children. This essay is based on a presentation to the House of Delegates of the California Dental Association on Nov. 13, 2009.

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This essay considers the inter-relationship of three concepts: the meaning of profession, societal expectations, and reform of the dental workforce; concepts with points of concurrence, but also elements of tension. However, the tensions existing must be responded to thoughtfully and creatively if the problem of access to oral health care for children is to be addressed.

There is increasing evidence that the expectations of society for access to oral health care are not being met with the current dental workforce and delivery system, and that influential policy leaders want reform. Dentists ask, "Upon what basis can society hold expectations for dentistry and anticipate that the profession should respond? What evidence exists that suggests society is dissatisfied with the profession of dentistry? What sort of oral health care reform could satisfy societal expectations?" This essay will attempt to respond to these questions.

The Nature of a Profession

Societal expectations for dentistry are grounded in what it means to be a profession, and the nature of a profession's relationship with society; the society that authorizes the existence of dentistry as a profession.

Abraham Flexner, a public intellectual and a major reformer of medical education in the early part of the 20th century, identified the characteristics of learned professionals.[1] His characteristics established the criteria for understanding the nature of a learned profession in 20th century America and have endured until today: 1) the work of professionals is primarily intellectual; 2) their work is based in science and learning; 3) their work is practical; 4) their work can be taught and learned through education beyond the usual level; 5) they organize into democratic collegial units; and 6) they exist to achieve societally defined goals rather than the self-interest of their members. Flexner went on to say, "professions are organs contrived for the achievement of social ends rather than as bodies formed to stand together for the assertion of rights for the protection of interests and privileges of their members." It is salient to reconfirm that the designation "profession" is not self-appropriated, but rather is a sociological concept; an appropriation of society earned as a result of achieving these specific criteria.

The terms profession and professional can have somewhat ambiguous meanings. In one sense a professional is "someone who is not an amateur." Kobe Bryant is a "professional" basketball player — clearly, not an amateur. However, in the much more profound sociological sense, a professional is someone who is a member of one of the traditional learned professions of law; medicine, with dentistry as a specialty thereof; and the clergy. These classical learned professionals emerged in the late Middle Ages, when the overwhelming majority of people were illiterate. In that society, there arose groups of individuals who, as a result of education, could read and write and thus were able to provide practical and needed services for those who were illiterate. Attorneys were able to draft contracts for the legal exchange of goods and property; physicians were able to read and study, thus learning of medicaments and procedures to palliate or cure disease; clergymen were able to study and interpret scripture for the unlearned.

These groups of individuals had access to knowledge to which the average human being had no access, and as a result possessed special power; knowledge is power. Attorneys had power over property; physicians — power over personal physical well-being; and the clergy power over divine providence. Lay people seeking assistance had to trust that these groups would use their knowledge in the public's best interest. Attorneys, physicians, and clergymen professed — that is vowed or promised — that they would always use their knowledge to further not their own personal best interests, but rather the best interests of their clients, patients, and parishioners; that they could be trusted. Financial gain, though essential, was derivative.

HISTORICALLY, DENTISTRY has focused on serving the oral health needs of patients and society, with the financial gain derived being a natural and appropriate consequence of the service provided.

The noted biomedical ethicist, William May, used the metaphor of covenant to help explain the nature of the relationship of a profession with society.[2] There are three elements in the classical concept of a covenant: 1) a pledge or promise; 2) an exchange of gifts; and 3) a change of being. Marriage is a well-understood covenant today. When a couple marry they promise to love, honor, and cherish one another in their marriage; they exchange gifts, wedding bands, as a symbol of the promises made; and, finally, they undergo a transformation of being. They are no longer single individuals but are now understood by society to be in the relationship and role of "husband" and "wife." Professor May argued that dentistry as a profession exists in a covenant relationship with society. Society has promised our profession a monopoly to care for the oral health of the American public. Our profession has promised society that we will care for its oral health faithfully and well. Society grants us the gift of self-regulation, and, in most instances, a dental education and student loans that are tax subsidized. We give society our knowledge and skills. As a result of the promises made and the gifts exchanged, a transformative change of being has occurred — we have become a profession; society has become our patient.

The status of dentistry as a profession is the legacy of previous generations of practitioners who, in advocating for water fluoridation and personal preventive therapies, were viewed and understood by society as placing the public good above personal monetary gain. Historically, dentistry has focused on serving the oral health needs of patients and society, with the financial gain derived being a natural and appropriate consequence of the service provided. Today, increasing numbers of dentists understand themselves to be practicing in the marketplace of health care, functioning within the context and culture of a business enterprise rather than that classically expected of a profession.[3]

The eminent free-market theorist,

Adam Smith, in *The Wealth of Nations,* drew a distinction between social goods and consumer goods.[4] He argued that for a market economy to function, it must be based on a foundation of what he called social goods. Among the identified foundational social goods are safety, security, education, and health care. Such social goods were for Smith outside the marketplace and not subject to the forces of supply and demand. Rather, they were seen as basic human needs and imperatives to be met by society in order for a marketplace to even exist. It is difficult to imagine a market-based economy surviving without citizens having a strong sense of personal safety and security, the physical health — including oral health — with which to work, and a basic education in the cognitive skills necessary to function in the marketplace. Smith was correct in affirming that health, including a "decent, basic minimum" of oral health, is a social good, not a consumer good. Basic oral health care is not analogous to purchasing furniture or buying a television. Oral health care, basic care that is not elective, care that is focused on preventing and/or eliminating oral disease, is not a commodity to be purchased in the marketplace. To accept basic dental care as a consumer good is to accept the access problem to oral health care that exists today.

Talcott Parsons, frequently referred to as the dean of American sociology, put it this way, "The core criterion of a full-fledged profession is that it must have means of ensuring that its competencies are put to socially responsible uses … professionals are not capitalists … and they certainly are not members of proprietary groups."[5]

Rashi Fein, the noted Harvard health economist, expressed distress regarding the transformations occurring, "A new language has infected the culture of health care. It is a language of the marketplace, of the tradesman, and of the cost accountant. It is a language that depersonalizes both patients and health professionals, and treats health care as just another commodity. It is a language that is dangerous."[6]

Emeritus professor Kenneth Arrow of Stanford University won the Nobel Prize in economics in 1972 partly because of his ability to demonstrate that health care cannot be considered a commodity of the marketplace due to the complexity of medical knowledge that creates a significant power differential between health professional and patient; thus precluding the patient from being able to correctly determine the relationship between the cost of care and its value — a requisite for a marketplace transaction.[7]

TO ACCEPT BASIC dental care as a consumer good is to accept the access problem to oral health care that exists today.

Arnold Relman, long-time distinguished editor of the *New England Journal of Medicine* put it bluntly, "Health care is not a business."[8]

The American medical educator and ethicist, Edmund Pellegrino, in an article in *The Journal of Medicine and Philosophy,* concluded, "Health care is not a commodity, and treating it as such is deleterious to the ethics of patient care. Health is a human good that a good society has an obligation to protect from the market ethos."[9]

Dentistry as a profession serves the end of human well-being, that is, oral health for individual patients and for society at large. While professionals derive financial gain from their life's work, it is truly derivative; a byproduct of fulfilling the promise or vow they made in becoming a professional. A profession is a way of life, a vocation, not only or simply a way of making a living. Dentistry understood as a business sees the oral health of patients, not as ends in themselves, but merely means to the dentist's personal ends. Dentistry as a business serves the end of personal profit, with oral health being understood as a means to that end. Understanding dentistry primarily as a business places dentistry in the marketplace, where oral health care becomes a commodity produced and sold for a profit. The business model of selling cures undermines the professional model — a model rooted in a tradition of caring.[10] Dentistry is, or should be, a profession. This is not to deny the business dimension of a profession. Professionals must pay overhead costs, provide for their families, and certainly deserve an honorable financial return for their services to individuals and society. However, dentistry is a business only in the sense that good business practices must exist in support of professional practice.

Societal Expectations

Today, society is examining its relationship with dentistry and is beginning to conclude that it is not being treated fairly in the social covenant, that the profession is failing in its responsibility of caring for the public's oral health. One of the most important and influential books of philosophy written in the 20th century was *A Theory of Justice* by the late professor John Rawls of Harvard University.[11] Rawls defined justice as fairness:

fairness in our individual interactions with one another, and fairness in the social contract — how we live and relate to one another in society and negotiate relationships that are fair. Justice is the foundational concept of ethics. Ultimately, all notions of ethics are about people cooperating with one another and in so doing, treating one another fairly. In all good relationships there is a sense of reciprocity, of mutuality, of believing one is receiving as much as one is giving. Society is concluding that its relationship with dentistry is out of balance — that it is giving more than it is receiving, primarily due to the inability of significant numbers of members of society being able to gain access to oral health care.

Evidence for society's unrest with the profession can be found in a 2002 report of the National Conference of State Legislatures (NCSL).[12] The Robert Wood Johnson Foundation had commissioned the NCSL to conduct a study of policy barriers to accessing oral health care, and to suggest opportunities for intervention by the foundation. The report expressed the view that "those who work on oral health issues seem very much rooted in the present and are not thinking about bold, new solutions." The report stated that a constant theme was "the lack of advocacy for oral health issues in general and access to dental care for low income people in particular." A consistent finding was that there is a steady undercurrent of negative feelings about dentists among the public policy leaders interviewed. Leaders in every state made offensive comments about dentists. The report went on to emphasize that the main and most powerful advocacy group for oral health issues in most every state is the state dental association.

The report expressed the view that dental associations are "poor advocates for access to dental services, particularly for Medicaid and S-CHIP beneficiaries, as they are perceived as self-serving in seeking increased reimbursement rates." It also suggested we are perceived as providing "false leadership or lip service to access issues for low-income people." The report stated that even though reimbursement rates may be below usual and customary fees, many state legislators believe that dentists "have a community service obligation … [to participate in these programs] that they are not meeting."

THE CHARACTER OF a society can be evaluated in terms of its concern for and care of the health of its children.

The Alaska Native Tribal Health Consortium's successful initiative of introducing dental therapists in Alaska gives testimony to dentistry's failings.[13,14] The Minnesota Legislature passed legislation authorizing the training and practice of dental therapists documents our failing.[15,16] The current interest of the Kellogg Foundation in funding multiple initiatives to expand the dental workforce through the addition of dental therapists annotates our failure.[17,18] The Health Research and Services Administration (HRSA) recently announced funding of $2.4 million to the Institute of Medicine to study ways to guide "federal investments in service delivery models that expand access to oral health care and improve its quality" is indicative of failure.[19] The Children's Health Insurance Program Reauthorization of 2009 (CHIPRA) mandating that the Government Accountability Office report to Congress on alternative dental care delivery models suggests dissatisfaction with dentistry's performance in caring for children.[20] Finally, the Patient Protection and Affordable Care Act, the bill passed by Congress and signed by President Obama on March 24, 2010, includes funding for demonstration projects for alternative dental health care providers, suggesting the inadequacy of the current workforce model in addressing societal needs.[21]

While society is upset with oral health care access generally, society is frustrated with the profession's inability to care for poor and minority children, our most vulnerable populations; a population that cannot be personally held responsible for their lack of oral health. To the extent that the Patient Protection and Affordable Care Act deals with oral health, it focuses on children, with dental insurance for children being a mandate in all policies sold through the exchanges.[21]

Norman Daniels, professor of bioethics at the Harvard School of Public Health, contends that a just society should provide basic health care to all, but redistribute health care more favorably to children.[22] He justifies this conclusion based on the effect health care has on equality of opportunity for children, with equality of opportunity being a fundamental requirement of justice. Poor and minority children, the most vulnerable individuals in our nation, have the highest prevalence of disease, the poorest access to care, and the poorest overall oral health. Justice demands they ultimately have "equal opportunity" to do well. If justice is to be served, and if the profession of dentistry is to fulfill its moral imperative, the dramatic inequities that exist in the oral health and oral health care for children must be ad-

dressed. The character of a society can be evaluated in terms of its concern for and care of the health of its children. President John F. Kennedy said it well, "Children may be the victims of fate; they must never be the victims of neglect."

In the a 2009 issue of the American Academy of Pediatric Dentistry's journal, *Pediatric Dentistry,* a past president of the academy said in an editorial, "There is no access problem where dentists are reasonably reimbursed."[23] There is scant evidence to support this view. Dr. Burt Edelstein, founder and executive director of the Children's Dental Health Project, in testimony before Congress in October 2009, on health care reform, cited evidence that an increase in professional fees appears to only marginally improve dentists' participation in Medicaid.[24] The academy past president went on to state, "The United States has the best model of delivering care that exists." However, the criteria for such as assertion were not described.

An editorial, *The ADA and Health Care Reform,* written by the chair of the ADA Council on Governmental Affairs, was published in the October 2009 issue of the *Journal of the American Dental Association*.[25] Highlighted in the sidebar of the editorial is the comment, "Fundamentally, our advocacy is guided by ADA policy based on a belief that the dental delivery system works extremely well for most Americans and should be left untouched by any reform effort." He continued by saying, "Reform bills don't address the fundamental problem with access to dental care in America: improving funding for dental services in Medicaid." The financial shortages that exist in state and federal budgets make such increased funding problematic. Society is becoming increasingly upset with the profession's lack of responsiveness and is beginning to demand creative, alternative, and affordable approaches to ensuring that every child in America has equal opportunity to flourish in life by having good oral health.

It is no longer reasonable, nor practical, nor effective for dentistry to advocate in defense of the current delivery system and workforce that cares for children. Society is simply exhausted with dentistry continuing to say essentially, "Give us more money and leave us alone." A professional association that evidences an attitude of protecting professional prerogatives will result in a diminution of society's respect. Dentistry has earned much societal respect over many years for advocating for water fluoridation and preventive dentistry, whatever is best for the oral health of Americans — not necessarily what is best for dentists. However, the language and work of our professional associations today sometimes belies a commitment to protecting dentists, rather than promoting the public good. To the extent this is true, we fail as a learned professional organization and deserve the appellation of a trade association.

WHAT IS GOOD

for the oral health of the citizens of United States is good for the profession of dentistry, including its business dimensions.

The Profession's Enlightened Self-Interest

The European enlightenment of the 18th century brought new social and political understandings. Among them was the appreciation and valuing of self-interest. However, there was also the realization that self-interest is ultimately grounded in the good of others — the common good. Thus emerged the notion of an enlightened self-interest. All are self-interested, and appropriately so. However, the self-interest of a profession is ultimately best served when it focuses on what is in the best interests of the society that has authorized its existence.

Charles E. Wilson, a noted entrepreneur of the marketplace and the chief executive officer of General Motors at the apogee of its success in the 1950s, while testifying before a congressional committee, made a statement that became widely misquoted, possibly because it seemed a counterintuitive comment for the leader of America's then-largest corporation. He is frequently misquoted as saying, "What is good for General Motors is good for the country." He spent the reminder of his life correcting people who misquoted him. As the congressional record indicated, what he actually said was, "What is good for the country is good for General Motors."[26]

What is good for the oral health of the citizens of United States is good for the profession of dentistry, including its business dimensions. However, the profession must be vigilant to ensure that dentistry never comes to believe nor promulgates the reverse: That what is good for the profession of dentistry is good for the country's oral health. ADA President Tankersly affirmed a position comparable to Charles Wilson's when he said at the 2009 ADA Annual Session, "What is best for the patient is what is best for the profession."[27] Society is the profession's patient, and access to care for all of America's children is best for dentistry.

In 2004, the American Dental Association legally challenged the existence of dental therapists practicing in Alaska.[28,29] The challenge failed in the courts and in the court of public opinion.[30] Such action was and is perceived by the public as being

blatantly self-interested — protecting our turf. Native American children have the highest rate of dental caries of any population group in the nation.[31] There are inadequate numbers of dentists to care for them. Dental therapists have been shown to be able to safely and effectively care for children for almost a century in other countries of the world, and now for almost five years in Alaska.[32-35] It would have been much more thoughtful and effective for dentistry's leadership to say, "Dental therapists could possibly be valuable members of our dental team in caring for America's children. The Indian Health Service clinics would be an excellent place to conduct a demonstration project to test their effectiveness. Let's advocate for health care reform that calls for demonstration projects for alternative dental providers, and encourage projects with the IHS." Such a statement would have been an example of enlightened self-interest.

Calling on the Western intellectual and cultural tradition of an enlightened self-interest is a needed corrective to the individualistic and business culture that is infecting the profession of dentistry today. The professional status granted dentistry by society, with the monopoly it affords, can be lost absent taking seriously the obligation that exists to ensure all of America's children have access to oral health care.

Conclusion

Dentistry must ensure that access to oral health care exists for all of Americans, but with priority consideration of children; access in such a manner that major barriers are destroyed; and parents, no matter their economic status, ethnicity, or cultural circumstance, can be assured their children will be treated justly by society in that they will have an equal opportunity, with other children, for good oral health. The profession must search for the "bold, new solutions" the *RWJ Report* of 2002 said dentistry was not thinking about. Inherited assumptions about how the delivery system has been structured in the past must be challenged, and a workforce and delivery system must be created that meets society's expectations; expectations that include all of our children reaching adulthood with good oral health.

The Greek philosopher Heraclitus recognized it more than 2,500 years ago when he said, "Nothing endures but change."

DENTISTRY MUST
ensure that access to oral health care exists for all of Americans, but with priority consideration of children.

Change is occurring and is challenging the profession. Change will continue. The environment is one of continual change. Health care reform is occurring. Society will not stand idly by while a significant number of children do not have adequate access to oral health care while a significant number of dentists refuse to treat children with public insurance; and while major oral health disparities exist between the poor and the economically advantaged. The question is whether or not the profession will be the leader of creative, effective change, or whether it will continue to be content to react to change not liked or wanted. It is instructional to realize that the same skeptical reaction the profession is having to adding new members to the dental team is not dissimilar to that which dentistry had as a profession with the introduction of dental hygienists in the early 20th century.[36] Yet, dental hygienists are now respected, important, and valued members of the oral health workforce.

Dentistry needs thoughtful, committed, courageous leadership from members of the profession. Dentistry must distinguish itself by being a true profession, a profession that can be trusted to place the welfare of society first and foremost in all of its deliberations; by being faithful to the covenant that exists with society; by creating a more effective and less expensive way to ensure oral health care for all of our children; and by not only meeting but exceeding societal expectations. ■■■■

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TO REQUEST A PRINTED COPY OF THIS ARTICLE, PLEASE CONTACT
David A. Nash, DMD, MS, EdD, University of Kentucky College of Dentistry, 800 Rose St., Lexington, Ky, 40536-0297.

CDA JOURNAL, VOL 39, Nº7

A View From Both Sides

JOHN D.B. FEATHERSTONE, MSC, PHD

ABSTRACT This letter to the editor is from one of the key figures in caries management by risk assessment. Dr. Featherstone brings a unique perspective to the access issue. He grew up in New Zealand and experienced care under the dental therapist provider model. His letter is included here because it complements the other articles by providing his views on CAMBRA in the context of addressing barriers to care.

AUTHOR

John D.B. Featherstone, MSC, PHD, is dean and professor at University of California, San Francisco, School of Dentistry.

I write this as a contribution to the debate about the desirability of having so-called midlevel care providers as part of the dental team.

First, we need to ask the question why do we need to consider an additional level of care for the oral health of the public? In simple terms, there is more dental disease in this country than we appear to be able to handle with the existing work force. The corollary is that there are large segments of the population, especially the underserved who have insufficient, or no, access to care. But is this true? Perhaps it is the way that we deliver care that is the issue rather than the number and skills of the providers. I submit that we need to consider the provision of health care in the broader sense, rather than focusing just on oral health.

I am in an interesting position to comment on these issues because of two things. Firstly, I have spent almost 40 years of my life conducting research into the mechanism of dental caries and ways to control and reverse the caries process. Of course, oral health is not just about dental caries, but I will focus on that as one of the biggest problems to deal with.

Secondly, I grew up in New Zealand where the so-called "dental nurses" provided dental treatment for children up to age 12. I experienced firsthand the successes and inadequacies of the system. Further, in the early years of my career in dentistry, I was involved closely with these providers as I started on the road to contributing to the unraveling of the mysteries of the disease we call dental caries. The provision of restorative treatment is the predominant mode rather than prevention and intervention. As a result, my passion for decades has been to find ways to understand the disease and, most importantly, to find ways to better predict the future risk of decay and how best to manage and prevent its progression.

We have reached the point now where we have evidence-based caries risk assessment and good intervention methods of therapy that can be used, based upon the assessed risk level. We call this "caries management by risk assessment" or CAMBRA for short. Restorative treatment goes hand in hand for the overall improvement of oral health with the aim being to prevent new decay and reduce or eliminate the need for future restorative work. This is no longer a dream: it can be a reality. Many of us around the world are now concentrating on improving the therapeutic approach and developing even

better detection methods and therapies.

So where does all this fit into the world of "barriers to care"? Let me lay out a scenario. If we have health care providers who can rapidly assess caries risk and provide preventive and interventive therapy, the need for restorative treatment will be dramatically reduced. If we spend sufficient resources on this approach, perhaps, the number of dental providers trained to do detailed technical tasks, such as restoration, can be more effectively used and a team approach can provide oral health care to far greater numbers of people.

How can we achieve this? We can teach health care providers such as dentists, dental assistants, dental hygienists, nurse practitioners, physician's assistants, family medicine providers, pediatricians, pharmacists, other auxiliaries all to do caries risk assessment and provide appropriate therapy. That is, to embrace the principles and practice of CAMBRA. The therapy includes fluoride treatments to enhance remineralization, antibacterials to reduce the cariogenic bacterial challenge, calcium phosphate therapy for remineralization, nanotechnology for remineralization, probiotic therapy, therapy to enhance salivary action, and products yet to be developed.

The role of CAMBRA should be extended through health care in the broadest sense utilizing work forces that are already seeing the patients most in need. I appeal to us all to think very openly for the good of our underserved populations and to use our resources in the ways I have outlined above to provide improved oral health to millions of children and adults in the United States and across the world. ■■■■

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C-9501 MARIN COUNTY–Remarkable oppty awaits you! Near HWY 101.~ 800 sf w/3 ops. **$300k**

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E-729 AUBURN - Busy retail shp ctr w/excellent signage & good traffic flow. 1750sf, 4ops. Plumbed for 2 add'l ops **$250k**

E-915 ELK GROVE—Averages 8 patients w/ approx 5-6 new pats/month. Located in an attractive professional building. 1,200sf / 4 ops. **$650k**

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G-751 WILLOWS- Complete remodel ~5 yrs ago. FFS GP. 2350sf /4 ops. Plumbed for 2 add'l. **Practice $50k / Real Estate $185k**

G-875 YUBA CITY–Estab. 30 + years, GP, FFS, 3575sf /9 ops, great location. **$1.63m w/Cerec**

G-883 CHICO VICINITY – Quality FFS GP. Attractive Prof Plaza. 1,990 sf w/ 5 ops **$535k**

G-952 PARADISE- Well-established fee-for-service practice. 1,138 sf w/3 ops **$185k**

G-975 CHICO ORTHO -Dedicated to providing quality treatment to an appreciative, qualifying Denti-Cal patient base. 25-30 patients per day w/~ 60 new pats/month. 900 sf w/ 2 fully equipped ops w/ plumbing for an additional op. **$90k**

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CENTRAL VALLEY CONTINUED

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3049 SAN JOSE GP

Well-located, across from O'Connor Hospital, general practice in 2,118 sq. ft.state-of-the-art facility w/ 3 fully-equipped ops. 2 pvt. offices (1 can be plumbed for 4th op.). This office is beautifully designed and is stunning. In addition to his general practice, owner treats sleep apnea patients. He is selling just the general operative portion of the practice and is willing to help for a smooth transition. Ideal for an experienced dentists looking to merge an existing practice.

3048 SAN JOSE GP

SOLD

Owner retiring from a small well-est. practice with great upside potential. 900 sq. ft. office with 3 ops. near medical center. 3 Dr. days/week. Owner willing to help for a smooth transition. Asking $95K.

3050 EAST SAN JOSE FACILITY

Exceptional opportunity for a beautiful state-of-the-art, first class facility with 8 large ops. & 2 pvt. rooms, in a well traveled area. 1 level shopping center almost fully-equipped office with high visibility signs near E. Capital Expressway and 101. If you want exposure, this is the place to be. Asking $190K.

3045 VACAVILLE GP

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3006 MONTEREY COUNTY ORTHO

Est. Ortho practice in 2,668 sq. ft. office with 5 open bay chairs in a professional dental complex. Panorex and Cephlometric X-ray machines. Stable and loyal referral base. Annualized GR as of Oct 2009 are $335K+. Owner retiring and willing to help for a smooth transition. Asking 227K.

3028 NAPA-SOLANO COUNTY GP

Owner retiring from well-est. practice in 1,400 sq. ft. facility with 5 ops. All fee-for-service pts. with great word-of-mouth reputation. 2009 GR $731K+, June 2010 FY on schedule for $771K+ with just 4/doctor-days. Asking $518K.

3047 WEST SAN JOSE GP

SOLD

Owner retiring from well-established practice in professional dental building with 3 ops in 950 sq. ft. office. Ideal location near O'Connor Hospital, Town & Country Village and Valley Fair Shopping Center. Avg. GR $169K+ w/60% overhead. Asking $95K.

3037 PLACER COUNTY GP

SOLD

Well est. Placer County General & Cosmetic Practice. 6 fully-equipped state-of-the-art ops., in single story 3,500 sq. ft. stand alone professional building. Avg. GR for past 4 years $1.4M+ with 61% overhead and just 4 doctor-days/week. Asking $1,134,000.

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- **BARSTOW:** *For Sale*-General Dentistry Practice. Gross Receipts $395K with an adjusted net income of $193K. Office consists of 1,100 sq. ft. 4 operatories. Intra-Oral Camera, Dentisoft. There are 3-hygiene days per week. Practice has been in its present location for the past 25 1/2 years.
- **BIG BEAR CITY:** *For Sale*-General Dentistry Practice. 26 years at current location. Gross Receipts $428K. 3-equipped operatories. Doctor owns the building. New lease available or option to purchase. #14345
- **CORONADO:** *For Sale*-General Dentistry Practice. Gross Receipts in 2010 $405K. Office space 1,400 sq. ft., 4 operatories, Laser, Intra-Oral Camera. 1,000 active patients. 2 hygiene days a week. Practice has operated in its present location for 40+ years. Owner retiring.
- **FOLSOM:** *For Sale*-General Dentistry Practice. Gross Receipts in excess of 1.5M the past three years. Adjusted Net of $550K. 2,700 sq. ft. office with 7 ops, Digital, Dentrix, Intra-Oral Camera, Laser, 5+year old equipment, 8 days hygiene. Beautiful office, great location. Owner retiring. #14336
- **FRESNO:** *For Sale*-General Dentistry IV Sedation Practice. (MERGER OPPORTUNITY) Owner would like to merge his practice into another high quality general dentistry or IV sedation practice. The merger would be into Buyers office. Seller would like to continue to work as either a partner or associate after the merger. 2010 collections were $993K with a $422K adjusted net income. There are 7 days of hygiene.
- **GRASS VALLEY:** *For Sale*-General Dentistry Practice. 2009 GR of $307,590 (3 days/wk) with adjusted net income of $105K. 3 Ops. refers out most/all Ortho. Perio, Endo, Surgery. Intra-Oral Camera, Diagnodent, EZ Dental Software. Good Location. Owner retiring. #14337.
- **GRASS VALLEY:** *For Sale*-General Dentistry Practice. Owner retiring. Gross Receipts $89K. Practice has been in the same location for the past 33 years. 2 equipped operatories, 3-4 available. Panoramic X-ray. Doctor owns building, which is available for purchase. This practice can also be combined with another Grass Valley practice also listed for sale.
- **GREATER CHICO:** *For Sale*-General Dentistry Practice. Gross receipts in 2010 were $584K, with an adjusted net income of $152K. Approx 1,100 active patients. 4 operatories, Pano, Intra-Oral Camera. Easy dental software. Leased office 1,200 sq. ft. Owner is retiring.
- **GREATER FAIR OAKS-SUNRISE AREA:** *For Sale*-Gross Receipts in excess of $1.1 Million dollars for the past three years. Adjusted net $450K. 2,400 sq ft office-5 ops. Hygiene days-6, Owner works 32 hours per week. Eagle Soft, Laser, Pano Intra-Oral Camera, fiber optics. Owner retiring. #14343
- **IRVINE & COSTA MESA:** *For Sale*-General Dentistry practice combined. Gross receipts combined $781K with adjusted net of $396K. Both office spaces are leased with 4-5 ops in each. Both are 1,600 sq. ft. Irvine is equipped with Intra-Oral Camera, Pano & Dentrix. Costa Mesa is equipped with Laser, Intra-Oral Camera, Pano and Dentrix
- **LAGUNA NIGUEL:** *For Sale*-General Dentistry Practice. 2010 gross receipts were $503k. 4 operatories, Pan, computerized with EZ dental software. 1,500 sq. ft. lease. 10 years in present location. Owner retiring. #14352
- **LAKE COUNTY:** *For Sale*-General Dentistry Practice. Gross Receipts 904K with adjusted net $302K. Practice has been in same location for past 23 yrs, and 25 yrs in previous location. 2,600 sq ft with 8 equipped treatment rooms. Intral-Oral Camera, Pano, and Data Con software. Owner to retire. #14338
- **LINDSAY:** *For Sale*-General Dentistry Practice & building. Gross Receipts in 2010 $330K with adjusted net income of $219K. Owner has operated in present location for 27 years. Office space 1,489 sq. ft., 3 operatories available (2 equipped), Intra-Oral Camera, Soft-Dent software. 3-hygiene days a week. Owner retiring.
- **LIVERMORE:** *For Sale*-General Dentistry Practice. 2009 Collections were $688K with an adjusted net income of $287K. There are 4 ops in this nicely updated 1,082 sq. ft. office space. Dentrix software, 6-days/wk hygiene. Owner has been in same location for 36 years with long-term employees. Owner is retiring. #14326
- **LOS ANGELES:** *For Sale*-General Dentistry Practice.1,200 sq ft 4ops, 29 yrs in present location. Gross Receipts $274K with adjusted net income of $89K. Owner to retire. #14348
- **MODESTO:** *For Sale*-General Dentistry Practice. 5 operatories, 32-years in practice. Gross Receipts $884K w/adjusted net income of $346. Dentrix, Cerec, and Intra-Oral Camera. Owner to retire. #14308
- **NAPA:** *For Sale*-General Dentistry Practice. Gross Receipts $800K, with adjusted net income of $250K. Due for Service. 1300 sq ft 4 ops 6 hygiene days. 38 yrs in present location, 30 yrs in previous location. Owner to retire.
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- **PLEASANTON:** *For Sale*-General Dentistry Practice. Owner has other practice in Bay Area only in Pleasanton 1 day/wk. 300 active patients. Excellent location-beautiful 1600 sq.ft. 5-op office. Equipment like new, intra-oral camera, pano, Easy Dental software. Must See.
- **PLUMAS COUNTY:** *For Sale*-3 equipped ops. Space available for 4th op. 1,245 sf office in good location. Gross Receipts $475K. Practice in present location over 50 years. Owner is retiring. #14318
- **REDDING:** *For Sale*-Owner looking for Assoc. trans. into Partnership w/Buy-Out. GR $1 Million dollars income $436K. 5.5 days hygiene, 2,200 sq. ft. #14293
- **RENO:** *For Sale*-General Dentistry Practice and Dental Building: 2009 Gross Receipts $517K with adjusted net income of $165K. 4 ½ hygiene days/week. 1, 800 sq. ft. with 6 equipped ops. (7 Avail). Dentrix software, Pano. Practice has been in its present location for 40 years. Owner retiring.
- **ROCKLIN:** *For Sale*-General Dentistry Practice. Gross Receipts $593K in 2010 with $240K adjusted net income. Office is 1,630 sq. ft., with 4 operatories equipped with fiber optics. Owner has been in present location for the past 13 years. 3 1/2 days hygiene. Intra-Oral Camera, Dentrix software. Owner to retire.
- **ROSEVILLE:** *For Sale*-General Dentistry Practice. Great Location. 2009 GR $900K with adjusted net income of $300K. 1,975 sq. ft. with 4 ops, 8 days hygiene/wk. Digital, Intra-Oral Camera, Dentrix, Trojan, fiber optics, P & C chairs - all less than 5 years old. Owner is retiring. #14327
- **SACRAMENTO/ROSEVILLE:** *For Sale*-One of many partners is retiring in this highly successful General Dentistry Group Practice. Intra-Oral Camera, Digital Pano-Dexis, electronic charts, owner Financing. Call for further information. #14334
- **SAN DIEGO:** For Sale-General Dentistry practice. Gross Receipts $414K. Practice has been operated by the same owner for the past 6 years. Leased 950 sq. ft. office with 3 equipped operatories. Dentix software, Intra-Oral camera, Panoramic X-Ray. Owner to relocate.
- **SAN DIEGO:** *For Sale*-General Dentistry Practice. 6 ops, Intra-Oral camera, Eagle Soft Software. Office square feet 2,300 with 3 years remaining on lease. 2009 Gross Receipts $1,448,520, with an adjusted net income of $545K. Doctor would like to phase out then retire. #14331
- **SANTA BARBARA:** *For Sale*-General Dentistry Practice. This excellent practice's 2009 gross Receipts $891K with steady increase every year. Practice has 6 days of hygiene. 1,690 sq. ft., 5 ops, Laser, Intra-Oral Camera, Schick Digital X-Ray, Datacon software. Doctor has been practice in same location for the past eleven years of his 31 years in Santa Barbara. Doctor is retiring. #14333
- **SAN LUIS OBISPO:** For Sale -Two Doctor General Dentistry Practice. Gross receipts $1,537,142 for 2010 with an adjusted net income of $691K. The office has 2,331 sq. ft. with 8 equipped operatories. Pano, E4D, and Dentrix software. Practice started in 1990 and has been in its present location since 1998. Approx. 3000 active patients. Great location with nice views.
- **SANTA CRUZ:** For Sale-General Dentistry practice. Gross Receipts $300K with a 57% overhead. Office is 1,140 sq. ft. 3 equipped operatories. Intra-Oral Camera, Pano, Digital X-Rays, and Dentrix software. Practice has been in its present location since 1980. Owner retiring.
- **SANTA CRUZ:** For Sale-General Dentistry practice. This excellent practice is centrally located in a professional complex. Office is approx. 1,885 sq. ft., 4 operatories with room for one additional. There are approx. 2000 active patients with 6 days of hygiene per week. Practice Pano, Intra-Oral Camera and Easy Dental software. Owner is retiring. Reasonable lease available.
- **TORRANCE:** For Sale-General Dentistry Practice: Owner has operated in same location for 20 years. Approx. 1,000 active patients, 1,080 sq. ft., Brican System, and Camsight software in this 2 equipped, 3 available-chair office. Gross Receipts $434K with 38% overhead. Owner relocating. #14320
- **TURLOCK:** For Sale- General Dentistry Practice. 2009 Gross Receipts $2,728,319 with an adjusted net income of $925,251. 13 days of hygiene in this tastefully decorated 4,500 sq. ft. office space. Owner is retiring form clinical dentistry.
- **VISALIA:** For Sale- General Dentistry Practice. Gross Receipts $616K with an adjusted net income of $ 32K. Office is 1,380 sq ft with 3 equipped operatories, Intra-Oral Camera, Digital X-Rays, Mogo software, equipment & leaseholds look new. 5 years in present location. Owner to relocate. #14347

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"Before I called Ray, I had a listing with another prominent Broker. After eleven months without a sale, I called Ray. He sold it in about a month! Would I recommend Ray? Yes!"

"In April, I asked Ray Irving to sell my practice. At the same time my friend decided to sell his practice. He employed another firm. My practice sold June 22. My friend's practice still hasn't sold and he was putting his dreams on hold."

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DR. BOB, CONTINUED FROM 526

It's not that Hirst, a former miner, wasn't looked after by the National Health Service, but after three decades of turning a deaf ear to inquiries of what happened to him, he was no closer to the solution. "I just can't hear anything out of it," he lamented, adding that it was almost impossible to buy a monaural CD or a single headphone.

"Well," the medics would persist, "can you hear anything *into* it?

"What?" And another decade went by.

The Royal Hallamshire Hospital in northern England recently found Hirst on its doorstep and it was here that a medic finally got to the root of the problem. "The nurse put a suction tube in my ear and cleaned it (the ear)," he explained subsequently to reporters from the *Sheffield Star*. Then, he goes on, she had a go at it with a microscope probe or maybe it was a probing microscope. No matter, the editors at the *Sheffield Star* would sort this out later.

Finally, selecting a pair of tweezers from her armamentarium, she fetched out an amorphous object later identified as a tooth and asked the startled Hirst, "Have you lost any teeth lately?" He confessed to not having had any teeth in his whole head for years, thanks to the enthusiastic assistance of the NHS.

Now, if we can believe the reporter got his story straight, Hirst's hearing recovered immediately. In retrospect, friends verged on the rhapsodic recalling this was the first time in ages he failed to preface any of his answers with the usual "Huh?"

Naturally, he was pleased as punch, but confessed he had no idea of how the tooth got imbedded in his ear, speculating it might be a "first" tooth, a bottom one of the "front incisors" he lost during some youthful shenanigans.

Researchers from the British tabloids, not content to just let the story die there, have stoked their neuroses to formulate this working hypothesis to explain the tooth-in-the-ear phenomenon: Years ago (1963), a sharp demarcation occurred when the Tooth Fairy Coalition of the Greater Western Hemisphere split, leaving the Brits at odds with the United Euro Tooth Fairy Federation of Western Europe. The USSR wasn't consulted and to this day nobody knows where Russian baby teeth end up, nor care.

The UETFF continued to honor the traditional placement of an exfoliated deciduous tooth under a pillow in exchange for whatever passed for money in those days. However, the English declared this was the grossest thing they ever heard, with soiling the linens an unacceptable risk. Initially they substituted the nasal passages as a likely depository during the child's sleep, but British weather being what it is, running noses were the rule, rather than the exception. Convolutions of the juvenile ear seemed the best solution. British parents, being apprised of the new rules, generally were able to extract the tooth before any mischief ensued, but an occasional slip up, as in Hirst's case, occurred.

In America, the cost of tooth redemption has escalated to such a budget-busting sum, kids are now subtly being encouraged to regard the Tooth Fairy as just another adult hoax along with Santa Claus and the Easter Bunny who has vainly tried to regain some cachet as a battery salesman.

In the U.K., Hirst appeared briefly in a telephone company commercial after his 15 minutes in British tabloids subsided. An actor holding a cellphone asked a distant figure played by Hirst, "Can you hear me now?"

"Yeth," Hirst replied. Thus far people have admirably refrained from asking about his other 19 deciduous teeth. ■■■■

CDA JOURNAL, VOL 39, Nº7

Can You Hear Me Now?

The One-Visit Perfect Smile and the Full-Denture Implant While You Wait are current de rigueur techniques familiar to everybody but dentists themselves.

Robert E. Horseman, DDS

ILLUSTRATION BY DAN HUBIG

I worry that a newspaper's function is to enable us to worry about things in all parts of the world. A common misconception is that the planet is nearing the point of self-destruction, citing television programming as prima facie evidence. Actually, the world isn't growing worse — it's only that the news coverage is getting better, at least in terms of quantity, not necessarily unbiased or accurate.

When the media occasionally focuses on our profession, it is seldom to our advantage. Usually they've rushed off precipitately to announce the end of drilling, the sempiternal discovery of caries-ending vaccines, or the soothing addition of aromatherapy and spa amenities to the gloomy prospect of a dental appointment. The One-Visit Perfect Smile and the Full-Denture Implant While You Wait are current de rigueur techniques familiar to everybody but dentists themselves.

That's why, when we are thirsting for off-beat entertainment, we rely on news emanating from the United Kingdom. Having dispatched with affectionate raillery the refusal of Elton John and the late Terry Thomas to do anything about their gape-toothed smiles, the British press recently served without comment the liberation of one Stephen Hirst.

Tooth Discovered in Man's Ear, Ending 33 Years of Pain (NewsCore)

Hirst, 47, a stoic subject, displaying the stiff upper lip of the Commonwealth's finest, suffered 33 years with infections and pain in his right ear. His eardrum had disintegrated when he was a teenager, not an uncommon problem with teenaged music lovers and similar to the results of 500 years of inbreeding manifested by the Indonesian graklich marsupial on the Island of Tsalfoi.

CONTINUES ON 525

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- ***November 6th, 2011*** – *Practice Sales & Transitions.*
- ***January 19th, 2012*** – Southern California Oral/Facial Study Club; *Dental Practice Act.*
- ***May 3rd, 2012*** – California Dental Association, Anaheim session; *Dental Practice Act.*

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