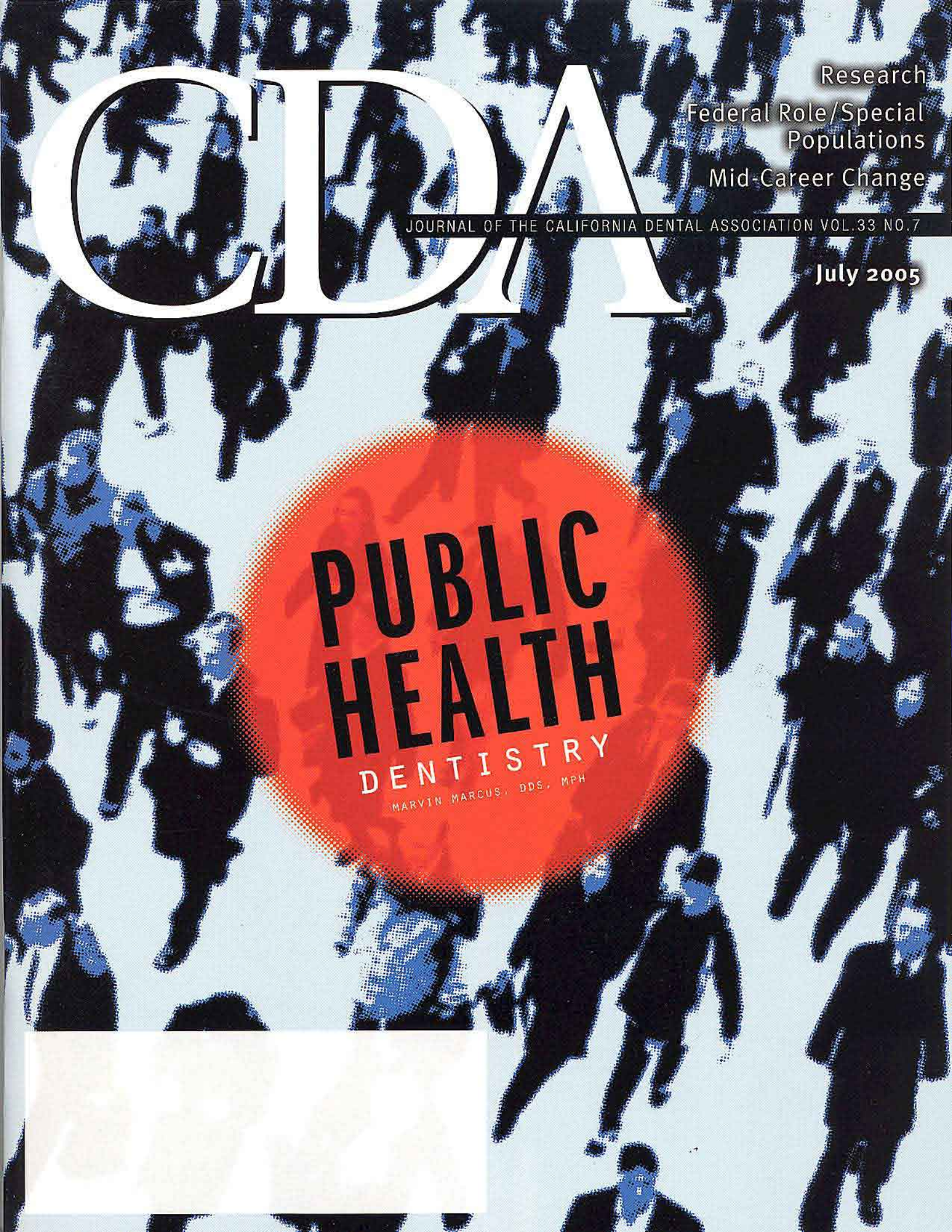
CDA

Research
Federal Role/Special Populations
Mid-Career Change

JOURNAL OF THE CALIFORNIA DENTAL ASSOCIATION VOL.33 NO.7

July 2005



PUBLIC HEALTH DENTISTRY

MARVIN MARCUS, DDS, MPH

OF THE CALIFORNIA DENTAL ASSOCIATION
Journal
CDA Journal
Volume 33, Number 7
JULY 2005

DEPARTMENTS

FEATURES

Alan L. Felsenfeld, DDS

He Who Pays the Piper

One of the givens in contemporary dental education is that costs will continually escalate. In recent years, we have seen an increase in tuition for students in the state schools, which have traditionally been significantly less expensive than the private schools. It is not surprising that the cost of private school education has increased similarly, creating a continuing tuition disparity between the two types of institutions but at a higher base price. Given our economy, it is unlikely this trend will reverse itself or even stabilize in future years.

The cost of education is only partially borne by tuition fees. Private institutions rely on endowments, charitable contributions, research grants, and clinic income to supplement tuition fees. For state institutions, traditionally, there has been a budget for the school as well as the non-budgetary sources of dollars as with the private schools. Unfortunately, governmental budget support of dental education has been decreasing. This is a trend that is unlikely to change given the economic history of our state. Couple this with the belief that legislators understand that dentists earn a reasonable living following their education and can afford to borrow and repay significant amounts of money to educate themselves, and one can understand how they are somewhat reluctant to increase funding for education to train those who have high earning potential. As a result of these issues, dental education has been marginalized in many university administrations. The net result of this downward spiraling financial situation has been the closure of at least five private schools within the past 10 years. Clearly, this is a trend that cannot continue if we are to educate young people.

Another negative trend in the financing of dental education has been the recent loss of federal graduate medical education dollars that, at least for a few years, funded postgraduate education for advanced training and specialization in areas that have traditionally been tuition bearing. In many institutions, postgraduate students who pursued orthodontics, periodontics or endodontics, for example, were paid a stipend as residents as would be the traditional medical or oral and maxillofacial surgery residents who are hospital-based. With the loss of this federal money, students have to consider their indebtedness relative to not only postponing their practice career, which will enable them to earn sufficient funds to retire their debt, but also increasing their debt by a significant amount of dollars to fund postgraduate education in a nonpaying specialty. Some educators believe this might limit the pool of qualified applicants to graduate programs due to the students' reluctance to encumber themselves further. If this trend continues, it stands to reason that talented students with diverse backgrounds might not avail themselves of promising careers as specialists for unfortunate reasons.

The deans at the dental schools are constantly seeking alternate means of funding for their institutions. Collaborative efforts with outside sources have taken a priority in their fiscal programming. Significant efforts are being made continually to seek donations from alumni or other interested individuals; foundation and research money, while generally limited, is pursued aggressively; and joint programs with den-

If this trend continues, it stands to reason that talented students with diverse backgrounds might not avail themselves of promising careers as specialists for unfortunate reasons.

Do we liken the programs set up by these corporations to Wal-Mart and assume they will bring an end to private practice as we know it?

tal and other industry companies are being explored on a regular basis as an alternate means of finance.

The University of Colorado School of Dentistry recently entered into a financial arrangement with the Orthodontic Education Company, a profit-making private enterprise that owns a series of orthodontic clinics, to fund a new building, as well as begin an orthodontic residency at that school. Sixteen entry positions were developed and accredited by the Commission on Dental Accreditation. The corporation is responsible for funding the educational costs of 12 of the 16 students. The remaining four positions are filled by students who are responsible for their own costs. For the students who are funded by the corporation, there is an obligatory long-term commitment to work at locations to be determined by the corporation. The salaries and benefits for these individuals are fixed by contract.

Conceptually, the corporation states that the orthodontists being educated for their program will practice in underserved areas to increase orthodontic availability to patients who might otherwise not have that option. In addition, it is proposed that the selection of students in this program will focus on diversity. The outcome of this program, with the ultimate distribution of graduates, remains to be determined since it has been functioning for only a short time and the first class is yet to be graduated.

There has been significant outpouring of concern for the integrity of dental education when corporate America has responsibility for the financing of programs. This is not unreasonable. However, it is important to understand the precedent for profit-making entities to be influential within the educational arena is already set in many ways. Numerous private specialist practitioner offices present continuing education courses to educate local dentists with the intention that the specialists will receive back referrals for care. There are also private companies that specialize in developing continuing education programs for profit. Most dental schools, while not profit-making organizations, rely on their own continuing education programs to produce income for the school to offset expenses.

The critics of these programs have been uneasy with the idea of indentured servitude for the young professionals who are pursuing their education through this mechanism. This, however, is hardly a new concept in dentistry. The military has programs, which have been in place for a long time (and work quite well), where they fund students for all or part of their education in exchange for which the student is obligated to return a fixed number of years of service. There are large groups in several of the dental specialties that identify an individual early in their career and fund them during postgraduate education through any number of mechanisms in exchange for which the individual will practice in that group. Similarly there was a *60 Minutes* televised segment where small towns that lacked physicians paid for the medical education of members of their community with the caveat of a contractual obligation to return there to practice.

Outside of health care, it is not uncommon for a law firm to identify students and offer similar educational enticements in exchange for a commitment to work for them. Businesses commonly send their junior executives to school to receive advanced degrees, with the understanding the executive will maintain their position with the company or be obligated to pay for their own education.

The orthodontic model has generated fears that graduates will be practicing in local communities, thereby undercutting and driving out the traditional practitioners. This remains to be seen in that

there have not been sufficient numbers of orthodontists produced by the system.

Philosophically, we live in a free-market economy and all need to compete at our own level. Do we liken the programs set up by these corporations to Wal-Mart and assume they will bring an end to private practice as we know it? We agree there are numerous underserved individuals, and it is suggested these companies will allegedly provide care for them. This a noble cause. But remember, these companies are essentially profit-making capitalist groups, and while social good is important, the bottom line always will be dollars.

Alternate means of financing education at the predoctoral and graduate levels exist, will remain, and need to be maintained. There is no question arrangements such as with the Orthodontic Education Company will continue to develop to provide education that is otherwise becoming fiscally difficult for students. We must be cautioned that the curriculum, selection of students, hiring of instructors, outcomes assessment and certification of professionals must remain forever in the hands of the educators who are responsible for providing the highest level of learning for these individuals. Corporate America, the federal or state government, foundations, or individuals cannot interfere in the process. Students who elect alternate means of financing their education must be fully aware of the significance of their actions. It is clear we are in a changing financial environment. Programs cannot, and should not, be sold to the highest bidder. The inevitable change in the fiscal structure of dental schools must not alter our commitment to our profession at the highest level. CDA

The Importance of Public Health Dentistry

By Debra Belt

Conversations with public health dentists encompass the continuum of health, disease and prevention, and plumb the depths of research, programs, services, and policy. Most notably, discussion about the field reveals trends toward collaborative approaches and concrete solutions to large-scale issues destined to become societal burdens if left unaddressed.

Public health dentists are quick to note their three core functions of "assessment, assurance and policy development" and point out that the profession underlies every aspect of delivery of dental care to the public.

"There is a huge opportunity here in developing policy to achieve better oral health for California's children,"

Jared Fine, DDS, MPH.

"Public health dentistry is the integration of the art and science of dentistry with the practice of public health to achieve the optimal level of oral health for the population as a whole, as well as to assure care for individuals," said Jared Fine, DDS, MPH.

Fine, who is a dental health administrator for Alameda County and a board member of the Dental Health Foundation, has worked in the arena of public health dentistry for 30 years. He said the practice requires the ability to address a number of core public health functions and all the surrounding issues. For instance, the basic function of assessment, which includes surveillance, seeks to measure the level of disease in the population, as well as the factors that led to the level of disease. Included in this is the dissemination of information to the public at large, as well as those in the field, and descriptions of the resources to treat or prevent the disease.

Fine referenced the 2005 Oral Health Needs Assessment, a statewide initiative to provide information about the oral health status of California children in kindergarten and third grade as an example of surveillance currently under way.

"We are aware of the great extent of disease in the population," Fine said. "The assessment will help quantify this and enable the development of resources and policies to address the problem. It's been 11 years since the last assessment was conducted."

Results from the assessment are expected this fall.

"There is a huge opportunity here in developing policy to achieve better oral health for California's children," Fine said.

"I think of public health dentistry as an integral part of the health system," said Jennifer Holtzman, DDS, who received her MPH from UCLA in June. As an assistant professor at the USC School of Dentistry, Division of Health Promotion, Disease Prevention and Epidemiology, Holtzman has been actively involved in the core public health function of assurance, or providing programs and services that address issues. As director of USC's Doctors Out to Care and Neighborhood Mobile Sealant Program, she works with freshman and sophomore dental students to provide oral health education, screenings, sealants and fluoride treatments to elementary schoolchildren. These programs are part of a network of services delivered by a range of sources including government programs, nonprofit organizations, and California's five dental schools.

"Public health dentistry explains and informs what clinical dentists see in practice every day," said Irene Hilton, DDS, MPH, who works as a clinical dentist for the San Francisco Department of Public Health and at La Clinica de la Raza in Oakland. "Public health dentistry includes interventions such as community water fluoridation and sealants that patients benefit from, analysis and administation insurance programs that pay for services, as well as understanding of factors influencing behaviors that affect oral health, such as why people will or won't brush their teeth or will or won't or eat cariogenic foods."

Public health dentists cite a litany of issues where these core functions apply. Issues such as early childhood caries, oral health care for the elderly, and lack of dental insurance on a national scale are but a few. However, beyond listing the problems, public health dentists offer workable solutions.

Fine referred to examples such as the First 5 California Oral Health Education and Training Program — a joint venture of the CDA Foundation and the Dental Health Foundation to educate health providers, community members, and First 5 Commissions on oral disease prevention for children age 5 and younger. He also emphasized the "real world" impact of the issue if left unaddressed.

"In the example of early childhood caries, kids can suffer immediate as well as long-term effects," he said. "Children

with untreated dental disease can't eat well, grow, thrive or experience positive self-esteem. They will not be prepared to do well in school or fully participate in their young lives."

Holtzman, who is interested in studying the effect of oral health on academic performance, said public health dentists anticipate being part of a solution to ease the impact of people with oral disease who would end up in hospital emergency rooms.

"So much of disease is preventable; we just need to be able to provide the preventive strategies," she said.

Fine pointed out that public health dentists are in the favorable position of being able to keep preventive strategies on the radar screen of the public, the business community, policy makers, and health professionals.

"One of our advantages in oral health is that there are concrete solutions and answers to oral health problems," said Fine. "We are fortunate that more and more people are willing to sit at a table and talk about unresolved issues and doable solutions."

Aloe Vera Has Healing Properties for the Mouth

Aloe vera, which has been used to heal skin for more than 2,000 years, also can be utilized for oral problems such as canker and cold sores, herpes simplex viruses, gingivitis, and lichen planus, according to an issue of *General Dentistry*, the Academy of General Dentistry's clinical peer-reviewed journal.

"There is good evidence to support using aloe vera for oral health problems," said Kenton A. Ross, DMD, an Academy of General Dentistry's spokesman. "I believe a number of patients will be interested in this inexpensive alternative." Aloe vera, which does not sting or have a bad taste when applied, reduces pain associated with canker sores and speeds healing.

In the article, Richard L. Wynn, PhD, included a study done on a patient with lichen planus, which affects the skin and oral mucus membranes. The patient consumed 2 ounces of aloe vera juice every day as well as applied aloe vera lip balm. The lesions cleared up in four weeks.

Wynn said consuming aloe vera juice and the topical use of the gel are two modes of delivery recognized by the FDA. It is suggested that people interested in using aloe vera for oral health problems should contact their dentist first for proper treatment techniques.

No Difference in Whitenening Brands' Effectiveness

Although there were great variations in the amount of time needed for whitening techniques, a recent study, published in the March/April 2005 issue of *Operative Dentistry*, found there was no difference in the efficacy among three types of techniques.

Over-the-counter whitening strips, at-home bleaching, and in-office bleaching all offered patients the same results in terms of whitening, said authors Drs. Thorsten Auschill, Elmar Hellwig, Sonja Schmidale, Anton Sculean, and Nicole Areweiler. Even reported side effects were minimal for all three procedures.

It took 16 days to achieve the desired level of whitening for over-the-counter strips; seven days for at-home bleaching; and one day for the in-office procedure. Patients generally preferred the more time-consuming procedures, the authors wrote, because "it required less chair-time" in the dental office.

Honors

Francisco Ramos-Gomez, DDS, MSc, MPH, an associate professor at the University of California San Francisco School of Dentistry, has been named a participant in the Department of Health and Human Services' 15th annual Primary Health Care Policy Fellowship, an intensive six-month program that seeks to teach participants about primary health care policy, the legislative process and resource identification.

Rubella Milestone Achieved

The rubella virus, also known as congenital rubella syndrome and a key cause of birth defects such as blindness and deafness, no longer is considered a major public health threat in the United States.

"The elimination of rubella in the United States is a tremendous step in protecting the health and well-being of pregnant women and infants," said Julie Gerberding, MD, MPH, director, Centers for Disease Control and Prevention. "A disease that once seriously harmed tens of thousands of infants is no longer a major health threat, thanks to a safe and effective vaccine and successful immunization programs across the country. We should take pride in this accomplishment, and also recognize that we must maintain our vigilance or we can see a resurgence of disease."

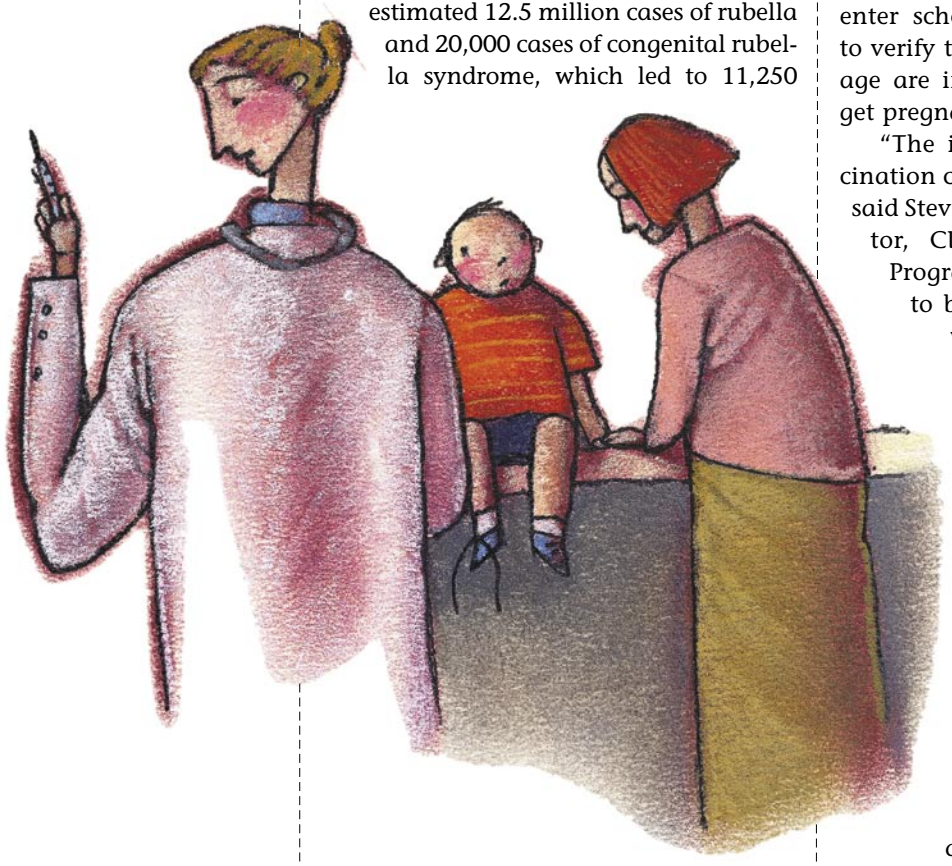
Between 1964 and 1965, there were an estimated 12.5 million cases of rubella and 20,000 cases of congenital rubella syndrome, which led to 11,250 fetal deaths; 2,100 neonatal deaths; more than 11,600 infants born deaf; 3,580 blind newborns; and 1,800 infants born with mental retardation.

With vaccine licensure in 1969 and the development of rubella vaccination program preventing infection during pregnancy, cases dropped sharply in the United States. By 1983, there were fewer than 1,000 cases reportedly annually. Six years later, the CDC established a rubella elimination goal and incidences fell to an all-time low. By 2001, less than 100 cases were reported. As of last year, there were only nine cases in the country.

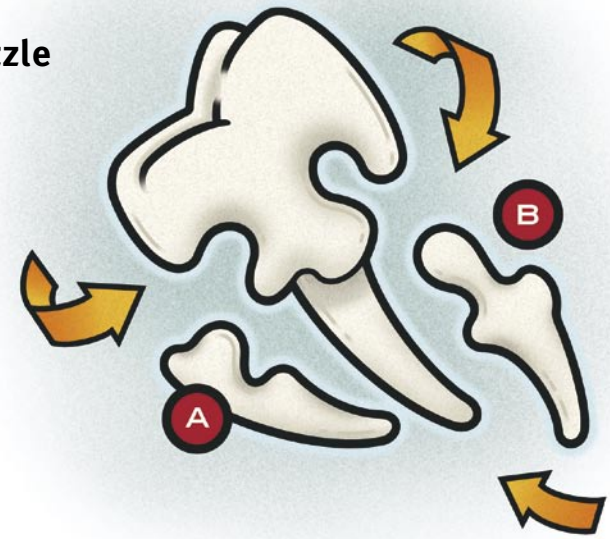
Currently, about 93 percent of the nation's children younger than 2 are vaccinated against measles, mumps and rubella, according to the CDC's National Immunization Survey. More than 95 percent of the nation's children are vaccinated against rubella by the time they enter school. It is especially important to verify that all women of child-bearing age are immune to rubella before they get pregnant.

"The importance of continuing vaccination cannot be emphasized enough," said Steve Cochi, MD, MPH, acting director, CDC's National Immunization Program. "Cases of rubella continue to be brought into the country by worldwide travelers and because of bordering countries where the disease is active."

Since the mid-1990s, the United States has worked closely with the Pan American Health Organization and Mexico to improve rubella control. The efforts have resulted in notable reductions of rubella in many nations of the Americas. In September 2003, ministers of health of all countries in the Americas resolved to eliminate rubella and congenital rubella syndrome by 2010.



Researchers Solve Enamel Puzzle



In an attempt to grow natural tooth enamel, researchers unlocked one mystery of enamel formation; and it may have long-term applications.

Growing artificial enamel has been a long-time goal among dental science researchers and in the medical device community. It is thought that enamel, as a filling material, could outperform composites and silver-mercury alloys. Medical device developers have long sought durable natural materials to use instead of titanium and plastic parts.

In a recent issue of *Science*, researchers report that they had been trying to study amelogenin, a protein secreted by cells in gum tissue, by crystallizing it. Amelogenin's closest analogue is collagen. But unlike collagen, which remains an important part of bone structure, amelogenin degrades and vanishes during the process of enamel mineral growth. Additionally, by its nature, it cannot form a lasting platform or scaffold for enamel development. Amelogenin's transient role makes study difficult.

After a year, researchers were unable to obtain amelogenin crystals but their efforts did produce what looked like microscopically long, fettuccine-like fibers. The fibers consisted of tiny balls of amelogenin molecules.

Janet Moradian-Oldak, BSc, MSc, PhD, professor at the University of Southern California School of Dentistry and the paper's lead author, called the fibers "micro ribbons" and was struck by the similarity in the structure between the ribbons and the calcium hydroxyl apatite crystals that make up the bulk of enamel.

Oldak wondered if the micro ribbons were the scaffold for which she had been looking. "I think what you need is a bit of imagination to be able to link these things," she said.

When the ribbons were mineralized and dipped into calcium phosphate solution, researchers obtained aligned and organized apatite crystals like those found in enamel. Although the work was done in vitro, studies of the literature showed observations of similar structures in vivo, including a report of "beaded rows" of amelogenin nanospheres alongside developing crystals in enamel.

"We demonstrate that amelogenin protein has a strong tendency to assemble in linear arrays of nanospheres, and we propose that this property is a key to its function as a scaffolding protein during the early stage of enamel mineralization," the researchers wrote.

Oldak and Chang Du, a USC postdoctoral research associate, collaborated with Giuseppe Falini at the Universita di Bologna in Italy. The National Institute of Dental and Craniofacial Research supported the research.

"The in vitro self-assembly system of Du et al. will be a useful guide to the development of biomimetic structures," wrote Arthur Veis, professor of cell and molecular biology at Northwestern University in the perspective companion to the *Science* paper. "Others have shown that minerals can develop within protein and synthetic polypeptide gels, but a scaffold was necessary to provide long-range order. In contrast, Du et al. show that the self-assembly of the amelogenin nanospheres, and their further assembly into nanosphere arrays, forms its own scaffold that can direct the alignment of the mineral crystallites."

> "I THINK WHAT YOU NEED IS A BIT OF IMAGINATION TO BE ABLE TO LINK THESE THINGS."
>
> JANET MORADIAN-OLDAK, BSC, MSC, PHD

There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle.

ALBERT EINSTEIN

Infection Control Supplemented

The Centers for Disease Control and Prevention has supplemented ADA and CDC information on the 2003 Guidelines for Infection Control in Dental Health Care Settings with a 108-slide presentation.

The guidelines identify infection control practices the CDC recommends for all settings where dental treatment is provided. Although CDC recommendations are not regulatory, some practices are mandated by federal, state, or local regulations.

The CDC overview of the 2003 dental-specific guidelines and accompanying speaker notes can be downloaded as a PowerPoint presentation or viewed on the CDC website, www.cdc.gov/oralhealth. Some slides update information in the guidelines that were issued Dec. 19, 2003.

The concluding slide directs viewers to periodically check the CDC Oral Health page for infection control updates, additional materials, and other pertinent oral health information.

Upcoming Meetings

2005

Aug. 17-20	Sixth Annual World Congress of Minimally Invasive Dentistry, San Diego, (800) 973-8003.
Sept. 9-11	CDA Fall Scientific Session, San Francisco, (866) CDA-MEMBER (232-6362).
Sept. 25-28	Pacific Coast Society of Orthodontists/Rocky Mountain Society of Orthodontists Joint Annual Session, San Diego, www.pscortho.org.
Oct. 6-9	ADA Annual Session, Philadelphia, (312) 440-2500.
Nov. 4-6	Second International Conference on Evidence-Based Dentistry, Chicago, www.icebd.org.

2006

March 15-18	Academy of Laser Dentistry, Tucson, www.laserdentistry.org.
April 27-30	CDA Spring Scientific Session, Anaheim, (866) CDA-MEMBER (232-6362).
Sept. 15-17	CDA Fall Scientific Session, San Francisco, (866) CDA-MEMBER (232-6362).
Oct. 16-19	ADA Annual Session, Las Vegas, (312) 440-2500.
Dec. 3-6	International Workshop of the International Cleft Lip and Palate Foundation, Chennai, India, (91) 44-24331696.

To have an event included on this list of nonprofit association 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.

Dental Applications for Platelet-Rich Plasma

An increasing number of oral and maxillofacial surgeons are taking advantage of recent advances in the use of autologous platelet-rich plasma, wrote James Papp, DDS, in the January/February 2005 issue of the West Michigan District Dental Society's *Bulletin*.

Often called a platelet gel, it is a concentration of a patient's own platelets developed from a small blood sample.

Papp, whose practice is limited to periodontics and implant dentistry, said the use of platelet-rich plasma has become widespread in plastic, vascular, and reconstructive surgeries, among other fields, adding that it has a number of dental applications. Applications are primarily related to implant site preparation and peri-implant osteogenesis. He noted that studies recently have shown significant benefits in the use of platelet-rich plasma in bone grafts to treat intrabony defects around teeth.

Additionally, when used in conjunction with esthetic soft tissue root coverage, platelet-rich plasma can drastically lower postsurgical swelling, bleeding, and pain, as well as helping to speed wound healing, accelerating the time up to 50 percent.

A Dental School and a Bank: Partnership for Community Service

Tom Mitchell, PhD; Ronald Mito, DDS; Benjamin Hong, MBA; Min J. Kim, BA; and No-Hee Park, DMD, PhD

Abstract

The University of California Los Angeles School of Dentistry/Nara Bank, a public-private partnership, is a model of collaboration between an academic institution and the private finance world. At the outset, none of those involved anticipated these diverse entities would have common ground. But through a series of open and frank discussions, the leadership of the School of Dentistry and Nara Bank identified business opportunities that are not only mutually beneficial, but also central to their respective core values of providing community service. To date, this partnership has generated a commitment from Nara Bank to provide funding and facilities support for community-based health fairs, the creation of a patient care fund, and practice loans for recent graduates who commit to practicing in underserved areas. The concept of a public-private partnership of dissimilar business entities offers the possibility of a new means of support for dental schools.

In an era in which state-supported dental schools are facing significant budgetary challenges to maintain and expand their community outreach programs, the University of California Los Angeles School of Dentistry has recently forged a mutually beneficial partnership with a local commercial bank, which may serve as a possible model of collaboration. Robert Reich wrote, "Fiercer competition has spread to nonprofit institutions as well. Even the stuffiest, most hidebound universities, hospitals, museums, and charities must now innovate, because they're subject





Authors / Tom Mitchell, PhD, is assistant dean and director of Development of the University of California Los Angeles School of Dentistry.

Ronald Mito, DDS, is associate dean of Clinical Dental Sciences and professor of Clinical Dentistry at the University of California Los Angeles School of Dentistry.

Benjamin Hong, MBA, is the former president and chief executive officer of Nara Bank.

Min J. Kim, BA, is executive vice president and chief operating officer of Nara Bank.

No-Hee Park, DMD, PhD, is dean and professor at the University of California Los Angeles School of Dentistry. He also is professor of Department of Medicine (hematology/oncology), David Geffen School of Medicine at UCLA.

Figure 1. Participants of the second dental fair at a Wilshire branch of Nara Bank, Oct. 2, 2004.

to the same underlying dynamic that's affecting the rest of the economy."[1]

For academic institutions and programs not only to survive, but also to thrive in today's world, it is essential to be creative and innovative, and actively seek potential partners for collaborative benefit. In *Competing for the Future*, the authors stated, "The need to bring together and harmonize widely disparate technologies … means that competition is as much a battle between competing and often overlapping coalitions as it is a battle between individual firms. Competition for the future is both intercorporate and intercoalition."[2]

The UCLA School of Dentistry has had a long history of community service and involvement. The school established a modest five-chair community dental clinic in Venice in 1969 to provide dental care to an ethnically diverse low-income population of children and adults in the West Los Angeles area. Over the years, through public private partnerships, the school purchased a former bank building, relocated the community clinic, and renamed it the Wilson-Jennings-Bloomfield UCLA Venice Dental Center. This 20-chair state-of-the-art clinic provides comprehensive care to more than 15,000 patient visits per year to patients of all ages. The school also operates the UCLA Children's Dental Center at the Edward R. Roybal Comprehensive Health Center in East Los Angeles and conducts a series of mobile clinics and health fairs throughout Southern California.

Community outreach is an important component of the school's educational approach and curriculum. Students are required to earn at least one-third of their selective credits in service-learning environments. While participation at either the Venice or Roybal facilities are required rotations, students also volunteer at various clinics and health fairs and gain invaluable experience in treating a wide variety of patients with a multitude of oral health care needs.

Over the years, the UCLA School of Dentistry has forged connections with many community-minded individuals and organizations in the Los Angeles area. Through these efforts, an innovative scholarship program, established by a leading local bank to assist Korean-American youth, became known. Not knowing initially what possibility there might be for some sort of collaboration between these two disparate institutions, discussions were initiated with the bank's senior management. In Peter Drucker's words, "First, organize yourself to see the opportunity." Then it is critical "to implement the innovation effectively."[3]

Development of Relationship and Plan

While a dental school and a commercial bank might upon first consideration appear to be two quite different enterprises with little, if anything, in common, there were, in fact, a number of avenues of possible collaboration. Most importantly, the leadership of Nara Bank, as well as the School of Dentistry, has a strong commitment to help the local community and is open to creative ways to achieve this objective. While many private firms make substantial charitable donations directly or indirectly each year for the betterment of their local communities, few become actual partners in the delivery of beneficial services.

After several meetings of the senior management of both institutions, Nara Bank entered into an agreement with the School of Dentistry in April 2004. Nara Bank agreed to sponsor and publicize, through radio and newspaper advertisements, a series of dental fairs to be held on Saturdays at some of their local branches. The bank also offered to provide its employees as interpreters to assist patients in communicating with dental students and faculty.

The dental fairs were free of charge, and open to Nara Bank customers and residents of the Koreatown area of Los Angeles. The School of Dentistry would transport four or five fully equipped mobile dental chairs, and distribute free toothbrushes, dental floss, and various oral hygiene instructional materials. At a typical dental fair, dental students and faculty would screen perhaps 150 to 200 adults and children, and, if needed, apply dental sealants or other preventive treatment services. Patients needing follow-

up treatment were referred to one of the school's various clinics at the Westwood campus or at the Venice Dental Center.

To assist customers and local residents who wanted to avail themselves of a dental treatment program, the bank established a special loan program to extend credit up to $5,000, and a financing program. For many of these low-income, mainly immigrant patients, who had limited familiarity with the U.S. financial system, these low-interest loans provided them with an opportunity to begin to establish their personal credit. Additionally, to provide an oral health care safety net for the indigent, Nara Bank pledged $50,000 to create a patient care fund at the Venice Dental Center. These funds were allocated on a case-by-case basis for those without an alternative means of funding their dental care.

Nara Bank also offered to create a line of business loans — at very favorable rates — specifically designed for graduates of the UCLA School of Dentistry, if they agreed to open a practice in an underserved area. These loans could be used to finance leasehold improvements, equipment purchases, building acquisition, or the purchase of an existing practice. Loans were made available to dental students for the purchase of laptop computers, instruments, and other equipment.

The UCLA School of Dentistry-Nara Bank partnership continues to offer a creative model of how the healing power of modern dentistry can be made available to those who most need it. While Nara Bank made a charitable donation for the betterment of the community, it became a partner in this endeavor. As the partnership matures, other possible avenues of collaboration not doubt may emerge.

Benefits

UCLA School of Dentistry

From this partnership, the UCLA School of Dentistry expanded its offering of community health fairs. At least three times a year, Nara Bank hosts a dental health fair using one of its bank branches as a screening site. This community outreach not only is a service to patients, but also provides dental students with the opportunity to obtain invaluable experience in assessing the oral health care needs of a diverse population.

Figure 2. After oral examination, Dr. John Yamamoto explains his findings to a patient during the second dental fair at a Wilshire branch of Nara Bank.

Patients and Community

Patients have the opportunity to avail themselves of oral health care services at one of the school's low-cost clinics with loan support for up to $5,000, and concomitantly can begin to establish their consumer credit. Through the Patient Care Fund, indigent patients receive treatment for the relief of pain and infection at the Venice Dental Center.

Nara Bank

Nara Bank continues to contribute to the betterment of its community by sponsoring dental health fairs at local branches, providing low-cost financing for dental treatment, establishing a patient care fund, and assisting recent dental graduates who would like to open their practices in underserved areas. The bank is thereby able to open new markets for specialized loans.

Conclusion

Nearly all dental schools struggle in today's economic environment to advance education, patient care, and community service. The concept of a public-private partnership, like the UCLA School of Dentistry-Nara Bank partnership, offers a model of collaboration. CDA

References / 1. Reich R, The future of success: working and living in the new economy, first edition. New York, Vintage Books, 2000.

2. Hamel G, Prahalad CK, Competing for the future, first edition. Boston, Harvard Business School Press, 1994.

3. Drucker P, Managing the nonprofit organization, first edition. New York, HarperBusiness, 1992.

4. www.narabank.com

To request a printed copy of this article, please contact / No-Hee Park, DMD, PhD, dean, University of California Los Angeles School of Dentistry, 10833 Le Conte Ave., Los Angeles, Calif., 90095-1668.

Public Health Dentistry

MARVIN A. MARCUS, DDS, MPH

I was quite honored to be asked to put together an issue of the *Journal of the California Dental Association* devoted to dental public health. Not many practicing dentists think of public health as a dental specialty.

Professor Silverstein's paper presents the pathways and programs that dentists can take to become part of the specialty. Dr. Yamamoto, who recently became board eligible for the specialty, provides a personal view of his transition from private practice to public health dentistry.

We felt that the scope of this issue should also go beyond that of the specialty itself, and discuss areas where nonpublic health dentists become involved in the issues and programs that concern the public's oral health.

This involvement extends to research, public policy, advocacy, and education. Professor Weintraub provides a perspective of dental public health research that includes classic epidemiological detective work and examples of public health research projects undertaken at the UCSF School of Dentistry. Dr. Reifel provides a clinical perspective of public health dentistry in California, describing the various federal clinical programs throughout the state.

Finally, Professor Maida and I use broad strokes to examine the various players involved in oral health public policy and programs in the state, and areas where we are moving ahead and trailing behind.

We hope that these papers will provide you with a helpful view of dental public health as a specialty and as a process in California.

Guest Editor / Marvin Marcus, DDS, MPH, is professor and chair, Division of Public Health and Community Dentistry at the University of California Los Angeles School of Dentistry.

Pathways in Dental Public Health

Steven J. Silverstein, DMD, MPH

ABSTRACT

Dental public health is one of the nine specialties of dentistry recognized by the American Dental Association Commission on Dental Accreditation. Dental public health has been defined as the "science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts. It is that form of dental practice which serves the community as a patient rather than as an individual. It is concerned with the dental health education of the public, with applied dental research, and with the administration of group dental care programs as well as the prevention and control of dental diseases on a community basis."[1]

This article will describe the many career and educational pathways dentists may follow to become involved in the practice of dental public health.

There are approximately 150 active diplomates of the American Board of Dental Public Health. Most are employed by the federal government, schools of dentistry, and state and local governments.[2] The following pathway leads to achieving diplomate status.

First, one must have a dental degree and then obtain a master's degree in public health or an equivalent degree from a school accredited by the Council on Education for Public Health of the American Public Health Association.[3] A number of schools now offer distance learning programs as an alternative to the traditional 12-month curriculum. After achieving a master's degree in public health, the second year of required education is a residency in dental public health from one of the 14 ADA-accredited programs.[4] The University of California San Francisco offers the only accredited program on the West Coast. The residency is a practicum and is competency based. The UCSF program has a distance learning option, and support for the resident is based on the availability of funding.[5]

UCSF also offers a Dental Public Health Seminar Series which covers current topics. The series can be accessed by residents pursuing the distance learning program via a toll-free telephone bridge line with seminar presentations placed

Author / Steven J. Silverstein, DMD, MPH, is professor and program director, Dental Public Health at the University of California San Francisco School of Dentistry.

This professional educational program transforms one's thinking from focusing on the individual patient to focusing on the community.

on the web, or in person at the UCSF Laurel Heights campus. More information on the seminar series is available online at http://www. ucsf.edu/dphtalk/.

The following is a list of the general competencies that a resident must achieve before completing the program.[6]

- Plan oral health programs for populations.
- Select interventions and strategies for the prevention and control of oral diseases and promotion of oral health.
- Develop resources, implement, and manage oral health programs for populations.
- Incorporate ethical standards in oral health programs and activities.
- Evaluate and monitor dental care delivery systems.
- Design and understand the use of surveillance systems to monitor oral health.
- Communicate and collaborate with groups and individuals on oral health issues.
- Advocate, implement, and evaluate public health policy, legislation, and regulations to protect and promote the public's oral health.
- Critique and synthesize scientific literature.
- Design and conduct population-based studies to answer oral and public health questions.

After the completion of the residency and two years of experience, the dental public health professional is able to apply to the American Board of Dental Public Health for specialty board certification.[7]

The Dental Public Health Workforce

The dental public health workforce is made up of a variety of professionals. This is evident in the membership of the American Association of Public Health Dentistry.[7] The organization changed its name from "Public Health Dentists" to "Public Health Dentistry" many years ago to recognize this fact. Members are dentists without graduate training, dentists with master's in business administration, public policy, law, pediatric dentistry, doctorate degrees in epidemiology, etc. Additionally, a large number of dental hygienists, with and without public health degrees, are involved in dental public health activities. In fact, many hygienists serve in state and federal agencies. There also are many dental health educators involved in the field, and their education is varied.

How Can I Become Involved in Dental Public Health?

California is fortunate to have many master of public health programs throughout the state. These can be traditional, executive, or distance learning programs. This professional educational program transforms one's thinking from focusing on the individual patient to focusing on the community. After completing a master's in public health, one can continue one's education, or look for dental public health opportunities. Entry-level positions usually are a mixture of administration and clinical care associated with the position of dental director of one of the many community health centers dental clinics in California. Job postings and other information on oral health programs are listed on the California Primary Care Association's website.[8]

Careers with local and state government in California are rare as very few of the counties or cities in the state utilize dentists as program administrators. Networking is a primary vehicle for job location and career transformation. One first needs to identify the dental public health programs in each county, city, or state then volunteer to be on one of the advisory committees associated with these programs. This is where an opportunity will appear. These local committees often write or receive grant funding from outside sources and are in need of professional help to implement these programs.

If one is willing to relocate, there are many dental public health opportunities nationwide. There are positions in state health departments; the federal government, including the Indian Health Service; Bureau of Prisons; community health centers; and schools of dentistry. Flexibility is key to locating a dental public health position.[7,9-10]

There are also dental public health opportunities in pharmaceutical industry, such as Procter & Gamble; Colgate; and Pfizer. The dental insurance industry also employs dental public health professionals as dental directors and quality assurance auditors. A list of California companies can be found at the California Association of Dental Plans' website.[11]

While a basic interest in dental public health will suffice in many entry-level work positions, board certification in the specialty is required in higher-level positions of responsibility where the planning of high-quality health care programs for large groups, conducting critical research in public health, or teaching postgraduate level courses in public health is the ultimate aim.

California Endowment Scholars in Health Policy at Harvard University

The California Endowment Scholars in Health Policy at Harvard University is a one-year, full-time, academic degree-granting program designed to create health professional leaders, particularly minority physician leaders, who will

pursue careers in health policy, public health practice, or academia. The program is designed to incorporate the critical skills taught in schools of medicine, public health, government, business, and dental medicine with supervised practical leadership forums conducted by senior faculty and nationally recognized leaders in minority health and public policy, a seminar series, and scholarship travel. The program is designed to prepare health professional leaders who will, over time, improve the capacity of the health care system to address the health needs of minority and disadvantaged populations. So far, three dentists from California have graduated from this program. More information can be found online.[12]

Herschel S. Horowitz Scholarship

The American Association of Public Health Dentistry Foundation's Herschel S. Horowitz Scholarship supports dentists pursuing dental public health graduate education. The scholarship is made possible through donations to the foundation and contributions from the family of Dr. Horowitz. Dentists enrolled in a full-time accredited master's of public health program or the first year of a two-year advanced education in the dental public health program are eligible to apply for up to $25,000 in support. The application is available online.[7]

American Dental Association's Hillenbrand Fellowship Reinstated in 2005

The Hillenbrand Fellowship, offered every other year, will support one dentist fellow who has demonstrated strong leadership potential and who desires to make a career transition from dental practice, education or research to management and leadership in a health-related organization.

The program will be enhanced by the ADA's partnership with the Kellogg School of Management at Northwestern University, which offers experiential learning and university-based teaching.

The dentist chosen for the fellowship will complete a 12-month internship at ADA headquarters in Chicago, focusing on nonclinical organizational experience and education. The program will provide an intensive orientation to all ADA agencies and departments, orientation to other oral health organizations, academic courses and hands-on project management experience. Although the focus will be on learning about leadership in private sector organizations, there will also be basic orientation to federal and state government agencies playing key roles in oral health. More information can be found on the ADA's website.

If one is willing to relocate, there are many dental public health opportunities nationwide.

Board-Certified Public Health Dentists

Even though the number of diplomates of the American Board of Dental Public Health is small, approximately 150, they presently have, and previously had, a significant influence on oral health policy in the United States. Diplomates have held leadership positions at the federal level such as the National Institute of Dental and Craniofacial Research (Dr. Dushanka Kleinman, chief dental officer of the U.S. Public Health Service); the Centers for Disease Control and Prevention Division of Oral Health (Dr. William Maas); assistant surgeon general; and staffing of the surgeon general's office in conjunction with the publication Oral Health in America: A Report of the Surgeon General (Dr. Caswell Evans). Diplomates have been the president of the American Public Health Association (Drs. Allukian and Evans) and the American Association of Public Health Dentistry (Dr. Jane Weintraub). They have served as executive directors of the International Association of Dental Research (Dr. Robert Collins, deputy executive director) and the American Dental Education Association. Also, diplomates have been deans at a number of dental schools in the United States (Dr. Teresa Dolan, University of Florida School of Dentistry and president of the American Board of Dental Public Health; Dr. John C. Greene, past assistant surgeon general and dean emeritus, UCSF School of Dentistry). CDA

References / **1.** American Dental Association Commission on Dental Accreditation.
2. Tomar SL, Assessment of the dental public health infrastructure in the United States. NIDCR, Contract No. 263-MD-012931, July 2004.
3. Council on Education for Public Health of the American Public Health Association, http://www.ceph.org
4. ADA-accredited programs Dental Public Health Programs, http://www.ada.org
5. UCSF School of Dentistry, http://dentistry.ucsf.edu
6. (No authors listed), Dental public health competencies, *J Public Health Dent* 58(Suppl 1):121-2, 1998.
7. American Association of Public Health Dentistry, http://www.aaphd.org
8. California Primary Care Associations, http://www.cpca.org.
9. Indian Health Service, http://www.ihs.gov
10. Bureau of Prisons, http://www.usajobs.gov
11. California Association of Dental Plans', http://www.caldentalplans.org
12. The California Endowment Scholars in Health Policy at Harvard University, http://www.mfdp.med.harvard.edu/fellows_faculty/california_endowment/index.htm

To request a printed copy of this article, please contact / Steven J. Silverstein, DMD, MPH, Dental Public Health at the University of California San Francisco School of Dentistry, Box 0758, San Francisco, Calif., 94143.

COMMENTARY

Beyond the Operatory: From Patients to Population

JOHN YAMAMOTO, DDS, MPH

ABSTRACT

There is a shortage of dental public health specialists in the United States, and the number of dentists entering the field is declining. A number of disincentives and barriers to pursuing training and a career in dental public health have been identified. This article gives a personal account of one dentist's transition from private practice to public health dentistry.

The landmark report Oral Health in America: A Report of the Surgeon General shed light upon the profound and consequential disparities in oral health that exist within the U.S. population and the need for more information to eliminate these disparities and improve the oral health of all Americans.[1]

Reducing these disparities will require data on health, disease, health practices, and care use for the diverse segments of the population as well as wide-ranging approaches to improve oral health promotion and disease prevention and increase access to care for at-risk populations. The one dental specialty among the nine American Dental Association recognized specialties whose scope of practice is to address these issues is dental public health. Dental public health specialists possess "broad knowledge and skills in program administration, research methods, the prevention and control of oral diseases, and the methods of financing and providing dental care services."[2]

Dental public health is one of the smallest of the dental specialties, with fewer than 200 board-certified specialists nationwide.[3] Evidence from the most current workforce literature indicates there will be a shortage of specialists in dental public health to meet the expanding national need.[4,5] Despite the need for more dentists trained in dental public health, very few recent dental school graduates are entering the field. According to data from the American Dental Education Association annual survey of senior dental students, public health dentistry postgraduate programs have consistently been the least popular of the nine dental specialties.[6]

Since 1995, less than 1 percent of senior dental students have applied for these programs; and during the last three years of the survey (2000-2003), there has been a declining trend. Because so few recent graduates are entering the field, trends in public health education suggest that a high percentage of the students entering MPH degree programs and dental public health residencies are in the middle of their careers.[5] However, the actual number of individuals entering the field is small, and it is likely that many more are interested in pursuing dental public health training but are unable to leave their practices.

This leads to the question: Why do so few dentists pursue training and careers in public health dentistry?

In February 2002, the Health Resources and Services Administration sponsored a National Dental Public Health Workshop that brought together representatives from dental public health residency programs, government, professional organizations, and dental public health resident trainees

Author / John Yamamoto, DDS, MPH, is an adjunct assistant professor and acting director at Wilson, Jennings, Bloomfield, University of California Los Angeles Venice Dental Center, Division of Public Health and Community Dentistry, UCLA School of Dentistry.

to begin to address the dental public health workforce issues.[7] The attendees worked in groups and identified key problems in workforce development such as the lack of understanding of what dental public health specialists do; a training program model that creates financial and logistic barriers by requiring recent graduates and those in mid-career to complete a master's in public health degree followed by a separate dental public health residency; the low compensation compared to other specialties and private practice; the perception that dental public health is a nonclinical specialty; and low visibility and prestige among dental students, faculty, and school administration. The workshop made recommendations to address many of these challenges that have been incorporated into the long-range strategic planning to ensure an adequate dental public health workforce to meet the oral health needs of the United States.

As a recently trained, board-eligible public health dentist who entered the specialty at mid-career, many of the issues listed above are personally relevant. Although I cannot speak for others who have chosen to pursue a career in dental public health, I will try to explain how I made the decision to go from treating patients in private practice to serving the public and community. As with most dental students, when I was in my fourth year, ready to graduate from the University of California San Francisco School of Dentistry and enter the "real world," the field of dental public health was not on my radar screen. I was vaguely aware that the specialty existed, but I really had no concept as to what the field entailed. I wanted to be a general dentist because of the variety of patients I could care for and the range of procedures I could provide. The first seven years in private practice were rewarding for me both clinically and personally; however, I began to feel professionally unfulfilled and unsettled. I began to question why we (dentists) base so much of our treatment decisions on what the patients' dental benefits cover; why we (dentists) flock to communities and compete for patients with good dental benefits and good oral health while in other communities, people lack any dental benefits and have almost no access to basic dental care; and whether we (the dental profession) are providing quality dental care. So I began to contemplate a change in the direction of my career.

I began to realize that the incentives and disincentives built into the health care system have a profound effect on the way dentists practice dentistry.

As I was reaching this crossroad, I was fortunate to have the unique opportunity of spending an extended period in Japan observing and interacting with Japanese dentists. I began to learn about the structure and financing of the Japanese health system. They have a universal health care system through employers and the government that provides access to dental care for all citizens. I saw that despite having similar clinical skills and techniques, Japanese dentists practiced in a very different manner. I observed that Japanese dentists provide many more patient visits per day than American dentists; however, they do not complete many more procedures. One example of this that I observed was a single root endo that took six visits (15 to 20 minutes in duration) to complete that would have been completed in one visit in the United States. As I gained an understanding of the reimbursement for care in terms of the fees and patient co-payments, I began to think about how the financial incentives built into the system drive how care is delivered. The experience made me reflect upon the way that dentistry is practiced in the United States, and I began to realize that the incentives and disincentives built into the health care system have a profound effect on the way dentists practice dentistry. With the experiences I had and a new perspective of the dental profession, I had also found an appreciation and understanding of public health dentistry that I did not have as a dental student or recent graduate. I felt a growing need to better understand how dentistry in the United States is structured and financed, how quality of care is determined and assured, and why there is an access-to-care problem.

Like many dentists, who, after a number of years in practice, find themselves attracted to a specific niche of dentistry like lasers or TMJ therapy, I found myself being drawn toward health services. To find the answers to my questions and to get some career guidance, I found myself at the UCLA School of Dentistry seeking advice from the dental public health faculty. The advice I was given was, that if I really wanted to work on these issues, I would need to "go back to school and get educated" by enrolling in an MPH program. The decision of going back to school and starting a new career track was difficult as I was faced with many uncertainties. Was I ready to commit to a new career track in dentistry? Could I afford to stop practicing and accept the change in lifestyle and drop in income? Would I miss treating patients? Would I be comfortable being a student again, sitting in lectures and writing papers?

After reflecting on all of the issues, I came to the decision that I would pursue training in public health by enrolling in a full-time, one-year MPH program at the UCLA School of Public Health. I

thought that if I did not like it, I could always go back to private practice. The one year of study in the MPH program exceeded my expectations. I was learning new skills in epidemiology, economics, ethics, health policy, statistics, and community health in addition to acquiring a broad base of knowledge about the U.S. health care system, and interacting with classmates and faculty from diverse health care backgrounds. The concerns I had imagined never materialized. Although I did miss treating patients, the interesting and diverse curriculum and learning environment was more than enough to make up for any drawbacks.

The education I received in the MPH program was just the tip of the iceberg in terms of the breadth of knowledge in the field of public health. I knew that I needed more training and focus on the area that I was interested in, dental public health. I applied for, and was accepted into, the dental public health residency at UCSF. The program is ideally suited for those in mid-career pursuing training in dental public health. The program was flexible and could be completed through a distance learning program. For many people pursuing professional training and advancement, one must be prepared to relocate to attend the institution where the programs are offered. I was fortunate in that I did not have to relocate for a year and I could continue working on the projects I started at UCLA. The training I received combined and built upon my dental training and practice experience with the newly acquired knowledge and skills from the MPH program.

Upon completion of the dental public health residency, I was fortunate to be able to find a position at the UCLA School of Dentistry as an adjunct assistant professor in the Division of Public Health and Community Dentistry. The wide range of activities and projects I have become involved with has been incredibly rewarding and has allowed me to utilize much of the knowledge and skill I acquired during my public health training. I have been able to utilize research skills through my involvement in projects studying the out-of-pocket costs for dental care in patients with HIV/AIDS; the perceived need, access and oral health status of a Hispanic immigrant community in Los Angeles; and the self-reported oral health status of enrollees in capitated and fee-for-service dental benefit plans. I have been able to serve the community through UCLA's prevention and oral health promotion programs, such as the dental screening and sealant health fairs, a school-based sealant program, and early childhood caries risk assessment, prevention and promotion program for Head Start children. I have been able serve as a dental consultant to the firm contracted to conduct quality assurance audits for the California Department of Managed Health Care. This activity has provided me with an opportunity to help ensure the quality of dental care for a large percentage of Californians.

One of the more rewarding activities has been the opportunity to pass on the knowledge I have gained to dental students through teaching courses on the regulation of dental practice, culture and health, and ethics and health policy. Although I believed a career in dental public health meant an end to my clinical career, I have returned to clinical care as the acting director of UCLA's Venice Dental Center, a 20-chair community dental clinic, which provides dental care to an ethnically diverse, lower-income population whose needs are great but resources are sorely limited.

The transformation from a private practice general dentist to a trained and practicing public health dentist has opened doors I could not have imagined when I began this journey.

The transformation from a private practice general dentist to a trained and practicing public health dentist has opened doors I could not have imagined when I began this journey. The diverse and interesting projects and activities coupled with the satisfaction that one is helping to improve the oral health of the population has made the barriers and disincentives for a career in dental public health trivial. Although a career in dental public health is not for everyone, for those who desire a broader approach than through private practice to improve and protect the oral health of the population, this may be your calling. CDA

References / **1.** U.S. Dept. of Health and Human Services, Oral Health in America: A report of the surgeon general. Rockville, Md., U.S. Dept. of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

2. Burt BA, Eklund SA, The practice of dental public health. In: Burt BA, Eklund SA. Dentistry, Dental Practice and the Community, fifth ed., Philadelphia, Penn., WB Saunders Co, 29-37, 1999.

3. American Association of Public Health Dentistry, diplomates of the American Board of Dental Public Health www.aaphd.org (accessed May 3, 2005).

4. Wotman S, Pyle M, Duffy R, Residency training in dental public health: assessment of status, needs and issues. *J Public Health Dent* 58:68-74, 1998.

5. Shulman JD, Niessen LC, et al, Dental public health for the 21st century. *J Public Health Dent* 58:75-83, 1998.

6. Weaver RG, Haden NK, Valachovic RW, Annual ADEA survey of dental school seniors: 2003 graduating class. *J Dent Educ* 68(9):1004-27, 2003.

7. Weyant RJ, Report of recommendations from the National Dental Public Health Workshop, February 10-12, 2002, Bethesda, Md., *J Public Health Dent* 63(4):258-62, Fall 2003.

To request a printed copy of this article, please contact / John Yamamoto, DDS, MPH, Wilson, Jennings, Bloomfield, University of California Los Angeles Venice Dental Center, 323 S. Lincoln Blvd., Venice, Calif., 90291.

RESEARCH

Dental Public Health Research in Action: Population and Community-Based Research

JANE A. WEINTRAUB, DDS, MPH

ABSTRACT

Dental public health investigators conduct research from a population and societal perspective. Population-based epidemiologic studies are at the heart of dental public health research, as well as many other types of clinical and translational studies that aim to benefit dental practice, influence oral health policies, and improve the oral health and health of the public.

This article gives examples of dental public health research in action, including many ongoing or recently completed studies conducted in California.

In their quest to improve oral health, dental practice and health policy, dental public health researchers often venture far from dental offices to conduct their field work. They sometimes take on the persona of a detective and may find themselves in unexpected places and puzzling situations. In at least one instance, a public health team found itself escorted by armed guards.

The scene of this particular "adventure" occurred on an island in the middle of the St. Lawrence River: half in United States territory and half in Canada. It began when the New York State Health Department received reports of a high prevalence of enamel defects in children's teeth presumed to be "dental fluorosis," allegedly caused by an aluminum plant emitting particles containing fluoride into the environment. Local cows were eating contaminated grass, presumably consuming large quantities of fluoride, which led to skeletal fluorosis in some of these animals. To further complicate the issue, three different Mohawk tribal councils resided on the island, giving this potential environmental issue an international and inter-tribal setting. A dental public health team from the New York State Health Department conducted an epidemiologic investigation of children residing on and off the St. Regis reservation. During the course of the investigation, violence broke out between two feuding tribal councils, unrelated to dental concerns.

At this time, the author was in the process of moving to Albany, N.Y., to begin her dental public health residency with that state's health department. She received newspaper clippings showing the research team being escorted to the dental examination site by armed guards. Their epidemiologic investigation subsequently revealed that the children did not have fluorosis, but instead exhibited tetracycline staining on their teeth, a finding confirmed histologically. Interviews with parents led the team to a pediatrician who had been prescribing tetracycline. Many families with young children routinely kept a bottle of the antibiotic in their refrigerator for use when their children were sick.[1] Mystery solved.

This example of dental public health research in action is more dramatic than most. As with most types of research, there is a problem to be solved, often involving some detective work. Information is gathered and subsequent analysis leads to the thrill of discovery. For dental public health investigators, the problem often focuses on an aspect of oral health that involves a community or population-based approach to determine the answer. Unlike the clinical practice of dentistry that focuses on the individual patient,

Author / Jane A. Weintraub, DDS, MPH, is the Lee Hysan Professor and Chair, Division of Oral Epidemiology and Dental Public Health, Department of Preventive and Restorative Dental Sciences at the University of California San Francisco School of Dentistry.

dental public health focuses on the larger population and societal perspectives. It may include people with or without access to dental care. Dental public health considers many determinants of oral health including behavioral, biologic, environmental, health care delivery systems, and other contextual factors, and seeks to understand how these factors interact over time. Often, dental public health research begins with an epidemiologic survey or needs assessment to identify the oral health status of a community. With this information, oral health problems are identified and interventions designed. Many types of research may be included under the dental public health umbrella including, but not limited to, epidemiologic studies, clinical trials, qualitative and evaluation research, oral health promotion and health education, as well as health services research and health policy research.

The California Oral Health Needs Assessment of Children, conducted in 1993-1994 by Pollick and colleagues, is an example of an epidemiologic survey designed to determine the oral health status of preschool and schoolchildren in the state.[2] This assessment revealed a high prevalence of early childhood caries in some California population groups. Among all preschool children, the prevalence of early childhood caries was 14 percent. However, among low-income families, Asian children enrolled in Head Start programs had a prevalence of 39 percent; and Hispanic children had a prevalence of 44 percent. Another study conducted by Ramos-Gomez and Martinez near the U.S.-Mexico border showed the prevalence among Hispanic children between the ages of newborn and 5 to be 58 percent.[3] This dental public health problem provided the focus for the NIH-funded Center to Address Disparities in Children's Oral Health, nicknamed the CAN DO Center, based at the University of California San Francisco (www.ucsf.edu/cando). The mission of the CAN DO Center is to conduct research to understand, prevent, and reduce oral health disparities. It is one of five such centers across the nation.[4]

Public health research often involves a multidisciplinary team working together. The CAN DO Center is a good example. In addition to public health dentists, the team includes experts in epidemiology, biostatistics, cariology, health psychology, pediatric dentistry, medicine, health policy, information systems, health economics, microbiology and anthropology. The center currently works closely with its two community partners, the San Francisco Department of Public Health and the San Ysidro Community Health Center, located at the U.S.-Mexico border, as well as the National Institute for Dental and Craniofacial Research.

It is important to study not only individual factors, like those the patient will present in the dental chair, but also the contextual factors that may change over time.

The center uses an octahedron model as the framework for organizing its research themes (**Figure 1**). The horizontal plane has four corners that represent the child, the family, the community and the health care system. The Y-axis represents the continuum between health and disease. A combination of factors can interact in different ways to determine where a child might be on the health status continuum. It is important to study not only individual factors, like those the patient will present in the dental chair, but also the contextual factors that may change over time. For example, a dentist's recommendations about lifestyle factors, such as eating a healthy, noncariogenic diet and getting sufficient exercise are more feasible to implement for a family in a high socioeconomic status neighborhood with access to fresh produce, and safe, well-lit streets and parks, than a family living in an unsafe neighborhood without nearby access to a full grocery store.

The CAN DO studies include two randomized clinical trials, the gold standard of clinical research, to test ways to prevent early childhood caries. One trial, conducted at the San Francisco Chinatown Public Health Center and the San Francisco General Hospital Family Dental Center, has been testing the efficacy of fluoride varnish and parental counseling to prevent early childhood caries.[5] Young children, mean age 22 months old, were randomized to one of three treatment arms: assigned to receive either fluoride varnish once or twice a year along with parental or caregiver oral health counseling, or counseling only without fluoride varnish. Data collected at enrollment indicated that the low-income, mostly Hispanic families seen at San Francisco General Hospital were more likely to report giving the child a pacifier dipped in honey, while their mothers were more likely to have recent dental caries experience than those at the Chinatown Public Health Center. However, at the Chinatown Public Health Center, caregivers were more likely to report that they do not brush their child's teeth; and if they do, they do not use fluoride toothpaste.[6] These differential caries risk indicators and cultural practices are important to identify when planning health promotion and caries prevention activities. All low socioeconomic status communities are not the same and "one-size-fits-all" programs to prevent oral disease may be inappropriate.

The second CAN DO clinical trial focuses earlier in the disease prevention pathway, with pregnant women instead of young children. This study is being conducted by Ramos-Gomez at the San

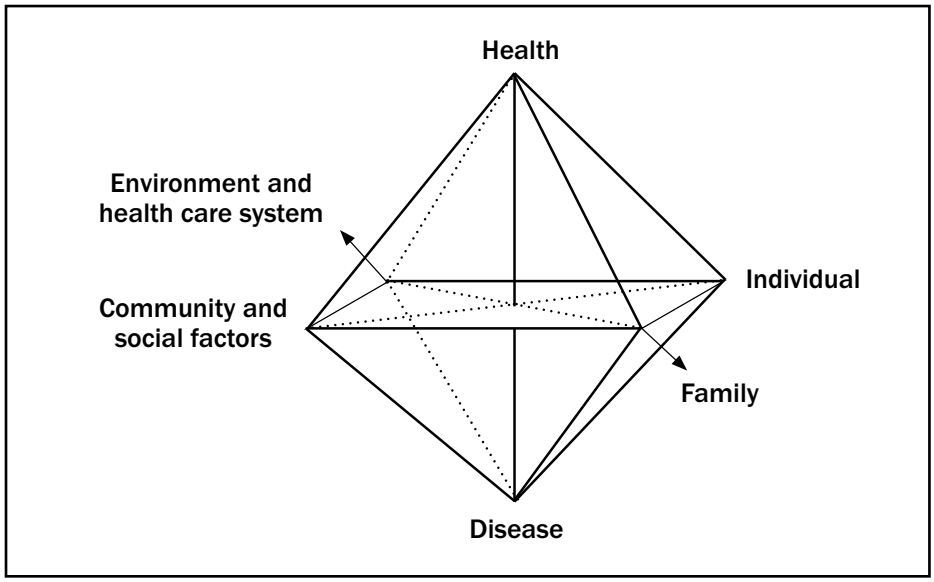


Figure 1. Octahedron model: a multifaceted approach for studying health and disease.

Ysidro Community Health Center.[7] Pregnant women are recruited and receive oral health counseling. One recruitment strategy is hosting baby showers at the health center by the research team. For some of these women, this is their only baby shower; and they are very appreciative. Once the babies are born, the women are randomized to either "usual care" or the "intervention group." The women in the intervention group receive a chlorhexidine rinse regimen beginning four months postpartum. The intent is to reduce their salivary levels of cariogenic bacteria and thus the potential for transmitting the bacteria by shared foods and utensils to their babies. The children, once they are old enough, will receive fluoride varnish applications. Mother and child both receive periodic oral health screenings and referral for dental care as needed. This caries management model is conducted in conjunction with well-child visits and integrated with other health center programs and activities.

Another CAN DO study, initiated by the late Dr. Patricia Evans and later completed by Hilton and Stephen at the San Francisco Department of Public Health, is an example of qualitative research designed to determine access and cultural barriers to preventive dental care for children.[8] Focus groups were conducted among San Francisco parents and caregivers of 1- to 5-year-old children in four race/ethnic groups: Chinese, Filipino, Hispanic, and African-American. Separate groups were conducted for younger and older caregivers, U.S. born and not U.S. born, as well as in English and other languages. Different attitudes toward prevention and beliefs regarding oral health care were elucidated. For example, when asked when was the best time to take their child to the dentist, non-U.S. born caregivers were more likely to respond with older ages than U.S. born caregivers. Many parents indicated that they have tried to overcome their personal bad dental experiences to provide good dental experiences for their children and grandchildren. Unfortunately, several of the parents told stories of their children being strapped down, criticized and being denied services because of "poor behavior." Ironically however, although children's bad behavior (kicking, hitting, crying, etc.) was described to a lesser extent by other ethnic groups in the study, African Americans were the only parents who openly spoke of being sanctioned by dental staff. This raises a serious concern about how the racial or social perceptions held by dental staff affect their behavior toward African American clients, versus their treatment of similar or same behaviors in clients from other ethnic backgrounds. A different perspective was provided by an older Chinese immigrant caregiver who noted "My grandkids sometimes lose their teeth while brushing so there is no need to go to the dentist." She also brought up the idea that plaque increases bodily "heat," and discussed traditional Chinese dietary and herbal remedies for tooth problems, a discussion enjoined readily by the other participants in the focus group. This discussion about diet and eastern "medicine" beliefs was useful as it points to the role of cultural values, age, and immigrant status in linking beliefs about teeth and preventive care (or conditions associated with oral health). These "invisible" cultural perspectives are often difficult for dentists to uncover and understand as, in turn, these are such taken-for-granted cultural ideas that patients may not be able to articulate them very fully even when asked. The long-term goal is to use these types of information to design culturally appropriate programs, interventions, and oral health services.

Not all dental public health research is focused on children or prevention. Each age group across the lifespan has unique dental concerns and challenges. Other types of research focus on the relationships between oral health and systemic health. The research is often designed to be translational in nature, evaluating the effectiveness of new techniques, diagnostic tools, or materials, with implications for dental practice or health policy. For example, an NIH-funded randomized clinical trial comparing methods of getting dentists to provide tobacco cessation to their patients is currently being conducted by Walsh and colleagues at

UCSF in conjunction with Delta Dental of California. This study will compare the effects of low vs. high intensity cessation training for dentists and their staff and whether or not they receive third-party reimbursement. Three types of outcomes will be measured: 1) patients' report of their dentists' assessment and treatment of tobacco use behaviors during target visits, 2) dentists' knowledge, attitudes and behaviors related to assessment and treatment of tobacco use, and 3) patients' report of their compliance with dentists' tobacco control recommendations. The results of this study will have important implications for incorporation of tobacco cessation activities in dental practice and subsequent prevention of tobacco-related oral and other diseases.

In another project, results of a survey showed that most dentists did not routinely ask their patients about family violence, even when injuries around the head and neck were present.[9] Dentists who reported some education about the issue were more likely to ask. The investigators designed an engaging and very brief multimedia tutorial specifically targeted to dentists. To address the lack of published studies reporting on ways of helping dentists address this issue, the investigators conducted two rigorous controlled trials, one with a sample of University of California San Francisco and University of the Pacific dental students and the second with practicing dentists.[10,11] The study results found strong evidence that the tutorial helps dentists to provide an effective and compassionate response when their patients exhibit signs of domestic violence.

Sometimes, dental public health researchers analyze an oral health component of a larger health-oriented study. For example, the 2001 California Health Interview Survey included several questions about dental utilization and dental insurance. Dental public health researchers used this statewide survey to make population estimates of the number of children and adults who utilize dental care on an annual basis and the type of care received. They have been able to estimate that 2 percent of California adults, age 18 and older, and 18 percent of California children ages 2 to 11 have never been to a dentist.[12,13] In a state as large as California, these percents translate into thousands of people: about 553,000 adults and 954,000 children. Children with any dental insurance were more than twice as likely to have a dental visit in the past year than uninsured children, (95 percent CI=2.3-3.1), and twice as likely to have had a preventive dental visit in the past year (95 percent CI=1.9-2.4).

Dental public health researchers are also involved with evaluation research and concerned about outcomes such as oral health related quality of life, cost of care, and patient satisfaction. A project conducted by Hyde and colleagues investigated these issues in a new, unique program initiated by the San Francisco Departments of Human Services and Public Health that provided rehabilitative dental care to adults in the "welfare-to-work" Personal Assisted Employment Services Program program.[14] Completed dental treatment was associated with improved oral health related quality of life, measured by positive changes in dimensions, such as psychological discomfort and disability, physical pain and social disability.

Not all dental public health research is focused on children or prevention.

Dental public health researchers encourage young investigators to enter the field. Last summer, UCSF dental student Jung Park, along with UCSF mentors and assistance from the California Department of Health Services, the SF dental public health agency, and the San Francisco Health Plan, evaluated the new "universal health care program" for low-income children in San Francisco County, called "Healthy Kids."[15] This public program, which includes financing for dental care, was initiated in the county in 2002, the second California county, after Santa Clara, to do so. Information was gathered to describe the program, assess dental utilization and provider participation, and the types of services being provided. Some comparisons could be made with the Denti-Cal program, the long-standing publicly financed program for low-income children, though the eligibility requirements are different for the Healthy Kids program. This example of dental health services research accrued information that can be used by other counties deciding whether or not to initiate similar programs.

Another UCSF dental student, Tiffany Hsu, spent a summer conducting a survey of dental and medical patients, and parents of pediatric dental patients, attending the four San Francisco health centers that provide dental services.[16] In addition to dental care for children, two centers do and two do not also provide adult dental services. This project is an example of dental health policy research because at the time, there was concern that the programs for adult dental services would be cut, thus, this project had health policy implications. She wanted to compare the oral health status and dental utilization patterns of patients at these different types of centers, and determine the patient perceptions of the ramifications of eliminating adult dental services.

A final example of the intersection of dental public health research and dental practice was the Florida investigation of the potential transmission of HIV from an infected dentist to several of his patients following invasive dental procedures.[17] The dental public health team from the Florida Department of Health and the Centers for Disease Control and Prevention were able to review dental records, develop appropriate interview questions for the dental office employees and evaluate the

sterilization and infection control techniques, and other practices used in the dental office. The investigative procedures developed were subsequently used in other investigations. Although lapses in infection control and other dental office practices could not explain these transmissions, findings led to increased awareness among the dental community and public about recommended procedures.[18] Ultimately, improved compliance with infection control and development of universal precautions changed the practice of dentistry.

Conclusion

The American Association of Public Health Dentistry and the Oral Health Section of the American Public Health Association have developed a detailed research agenda for dental public health.[19] The mission statement for the American Association of Public Health Dentistry is "Optimal Oral Health for All!" Similarly, the ultimate goal of dental public health research is to improve the oral health of the public and obtain optimal oral health for all. CDA

References / **1.** Rebich T, Kumar J, Brustman B, Dental caries and tetracycline-stained dentition in an American Indian population. *J Dent Res* 64(3):462-4, 1985.

2. Pollick HF, Isman R et al, Report of the California oral health needs assessment of children, 1993-94. Oakland, Calif., The Dental Health Foundation, 1999.

3. Ramos-Gomez F, Martinez E, Oral health status among young children from the U.S. California-Mexican Border. IADR meeting, San Diego, March 2002. http://iadr.confex.com/iadr/2002SanDiego/techprogram/abstract_8544.htm.

4. Milgrom P, Garcia RI, et al, Improving America's access to care. The oral health disparities centers program of the National Institute of Dental and Craniofacial Research. *J Am Dental Assoc* 135(10)1389-96, 2004.

5. Weintraub JA, Ramos-Gomez F, et al, Efficacy of fluoride varnish in preventing early childhood caries. IADR meeting, Baltimore, Md. March 9, 2005. http://iadr.confex.com/iadr/2005 Balt/techprogram/abstract_59534.htm

6. Weintraub JA, Ramos-Gomez F, et al, Caries risk indicators among families of young Asian and Hispanic children. *J Dent Res* 82(Special Iss A), 2003. http://iadr.confex.com/iadr/2003SanAnton/ techprogram/abstract_23963.htm

7. Ramos-Gomez F, Gansky SA, et al, Predictors of retention of pregnant women in a community-based trial. IADR meeting, Baltimore, March 10, 2005. http://iadr.confex.com/iadr/2005Balt/techprogram/abstract_64334.htm

8. Evans P, Hilton I, Stephen S, Identifying cultural differences to early preventive oral health care in children 1- to 5-years-old. American Public Health Association annual meeting, San Francisco, 2003.

9. Love C, Gerbert B, Caspers N, Bronstone A, et al, Dentists' attitudes and behaviors regarding domestic violence: The need for an effective response. *J Am Dental Assoc* 132(1), 85-93, 2001.

10. Danley D, Gansky S, Chow D, Gerbert B, Preparing dental students to recognize and respond to domestic violence: The impact of a brief tutorial. *J Am Dental Assoc* 135 (1), 67-73, 2004.

11. Kwon N, Herzig K, Danley D, Gansky S, et al, Testing a domestic violence tutorial with dental students and dentists. *J Dent Educ* 69(1): 146, 2005

12. Isong UO, Weintraub JA, Racial/ethnic disparities in dental care access among Californian adults. *J Dent Res* 82(Special Iss A), 2003. http://iadr.confex.com/iadr/2003SanAnton/techprogram/abstract_25587.htm

13. Isong U, Weintraub JA, Patterns of dental utilization among 2- to 11-year old California children. *J Public Health Dent*, in press.

14. Hyde S, Weintraub JA, Satariano WA, An evaluation of the San Francisco Department of Human Services Welfare Dental Program. *J Public Health Dent* 65(2):104-9, 2005

15. Park J, Isong U, Weintraub JA, Evaluation of a new program for public financing of dental care. National Oral Health Conference, Pittsburgh, May 2, 2005.

16. Hsu TH, Chaw JK, Stephen S, et al, Potential effects of proposed budget cuts on access to oral health services in San Francisco. *J Public Health Dent* 64(Supp 1):S49, 2004.

17. CDC. Epidemiologic Notes and Reports Update: Transmission of HIV infection during an invasive dental procedure, Florida. *MMWR* 40(2):21-7, 33, 1991.

18. Ciesielski C, Marianos D, Oh CY, Dumbaugh R, et al, Transmission of human immunodeficiency virus in a dental practice. *Ann Intern Med* 116:798-805, 1992.

19. Tomar SL, A research agenda for dental public health – rationale and development. *J Public Health Dent* 52(1 Spec No):8-11, 1991.

To request a printed copy of this article, please contact / Jane A. Weintraub, DDS, MPH, Division of Oral Epidemiology and Dental Public Health Department of Preventive and Restorative Dental Sciences, University of California, San Francisco School of Dentistry, 3333 California St., Suite 495, San Francisco, Calif., 94143-1361.

Federal Role in Dental Public Health: Dental Care for Special Populations

Nancy Reifel, DDS, MPH

ABSTRACT

California is home to more than 70 dental clinics operated or funded by the U.S. government. They operate on annual appropriations from Congress to serve a specific population and regulations that specify the type of dental services provided are usually promulgated at the national level. Dental clinics have the challenge of creating a program that delivers high-quality care within these financial and programmatic constraints. In California, U.S. government appropriations are the main source of funding dental clinics of immigration services, the Veterans Administration, the Bureau of Prisons, the Coast Guard, and American Indian clinics. The evolution and current practices of these five dental public health programs are described.

California is home to more than 70 dental clinics operated or funded by the U.S. government. Some contract with private practice dentists to provide care for their patients. Dentists may have had patients who received treatment at one of these clinics, or dentists themselves may have worked or trained at one of the federal dental clinics. The author would like to provide a tour of the federal dental programs in California. This paper also includes the goals of the clinics, the people they serve, the dentists who work for them, and the challenges the programs face in carrying out their missions.

The federal government's clinical dental programs are funded through the departments of Health and Human Services, Veterans Affairs, Justice, and Homeland Security. They operate on annual appropriations from Congress to serve a specific population defined in the legislation that established the clinical care program. Regulations are usually promulgated at the national level, and often specify the type of dental services provided by the clinic. Dental clinics have the challenge of creating a program that delivers high-quality care within these financial and programmatic constraints. In California, the U.S. government staffs dental clinics for immigration services, the VA, the Bureau of Prisons, and the Coast Guard. Federal funds support American Indian clinics through contracts with tribes and Indian organizations. There are more than 50 community clinic programs with dental clinics in the state. The federal government, through the Health Resources and Services Administration, has increased funding for community clinics in the past few years. Nevertheless, Health Resources and Services Administration grants to these clinics are only a portion of their operating budget. The purpose of this paper is to describe dental clinics wholly or mainly funded by the federal government. It is not intended to include community clinics; however some of the clinics described may be classified as community clinics.

Immigration Services

The U.S. Public Health Service began its relationship with the Immigration and Naturalization Service during the great influx of European immigrants in the late 1800s. In 1891, the Public Health Service was responsible for the examination and quarantine of immigrants at Ellis Island.[1] Since then, the role of Immigration Health Services, a division of Health Resources and Services Administration, has expanded its scope of service and now delivers primary health care to INS detainees. This new direction is reflected in the mission statement: "We promote global health through the delivery of primary

Author / Nancy Reifel, DDS, MPH, is an assistant researcher, Division of Public Health and Community Dentistry at the University of California Los Angeles School of Dentistry.

health care to undocumented migrants."[2]

The average length of stay for people housed at immigration services' facilities is less than 60 days. Everyone who is processed should receive an initial dental screening. Because stays are usually short, the dental care provided mostly is for emergency services to relieve pain and suffering, or to prevent medical problems. A small percentage of individuals are detained six months or more, in which case, basic dental care is provided.[3] Immigration Health Services provides dental care through contracts with private practice dentists and through its own dental clinics staffed by federally employed dentists and dental hygienists. Three service processing and detention centers in California have on-site dental clinics. The San Pedro Detention Facility opened in 1991 with 450 authorized beds. The clinic is accredited by the Joint Commission of the Accreditation of Health Care Organizations and the National Commission on Correctional Health Care. Approximately 25,000 adults are processed annually at San Pedro, with an average length of stay of 57 days. The El Centro Service Processing Center is about the same size, screening about 1,000 people every day, and maintaining an average daily census of 500 to 600 adult males. The San Diego facility opened in 2001 and is one of the largest medical centers within the division, with an average daily census of approximately 1,200 detainees.[4] Although most of the patients seen at these facilities are Mexican nationals, people from more than 50 countries are served every year.

Detention is psychologically traumatic for immigrants, and the severity of symptoms increases with a lengthy detention.[5] Both emergency and basic dental care alleviate some of the physical discomfort experienced by this vulnerable group of people. Professionals of the Immigration Health Services describe their work in the following statement: "We add dignity to a necessary process of alien detention, serving without fanfare at the forefront of public health protection for the American populace."[4]

Detention is psychologically traumatic for immigrants and the severity of symptoms increases with a lengthy detention.

Veterans Administration

Government-sponsored health benefits for veterans traces its roots as far back as the founding of the country when states and communities looked after the welfare of veterans. In 1811, the federal government authorized the first domiciliary and medical facility for veterans.[6] The VA's health care system now has 163 hospitals; more than 850 ambulatory care and community-based outpatient clinics; 137 nursing homes; 43 domiciliaries; and 73 comprehensive home-care programs.[7] As the program grew, recruiting a well-trained staff became difficult. Beginning in 1924, bills were introduced in Congress to affiliate VA hospitals with medical schools for the purpose of improving the standard of medical care. These efforts were not successful until 1946.[8] Today, the VA health care system has a threefold charge: Provide comprehensive oral health care for eligible veterans, educate health care professionals, and conduct basic and applied oral health research.

The VA Dental Service strives to "deliver high-quality dental care to eligible patients as part of a comprehensive, integrated health care system."[9] The annual budget can vary from year to year, and Congress does not allocate sufficient resources to provide complex dental care to all eligible veterans. To accommodate these budget constraints and meet the commitment to high quality comprehensive care, the VA established a 10-tiered eligibility system that governs access to care. Additional requirements must be met to be eligible for outpatient dental care. Currently, access to dental care is limited to veterans with service-related dental conditions; dental conditions that aggravate a medical problem treated by the VA; those who were prisoners of war; those who are 100 percent disabled; and participants in special vocational rehabilitation, homeless, or residential programs.[10] Veterans who meet the eligibility requirements for dental care are a small subset of the VA patient population. In 2003, there were 26 million veterans. An estimated 4.8 million (18.5 percent) received care through the VA system, and about 470,000 (1.8 percent) received dental care.[12] Access to VA care in California is also limited. There are 14 VA dental clinics, and a small (3 percent of the total patients served) contract care program for a state with more than 2.5 million veterans. Veterans who meet the eligibility requirements for dental care and gain access to the clinics are likely to have complex treatment needs. Many veteran dental patients are medically, physically, and/or emotionally compromised, presenting unique treatment challenges for VA dentists. When a veteran is accepted into the dental program, comprehensive treatment is provided.[9] The VA is unique as a publicly funded dental program in that it provides complex rehabilitative dental care, but only to a small subset of qualifying beneficiaries.

The VA system is required by legislation to use some of its resources in the education of health care professionals and the conduct of basic and applied oral health research. When budgets are limited, balancing the competing needs of clinical care, education and research is difficult. Every hospital maintains an affiliation with medical and den-

tal schools for the purpose of training and research. The VA supports more than 350 dental residency positions nationwide.[9] In California, there are general practice residencies offered in Loma Linda, Long Beach, Martinez, Palo Alto, San Diego, San Francisco, Sepulveda, and West Los Angeles. Long Beach offers a specialty residency in endodontics, and West Los Angeles has residencies in periodontics and prosthodontics.[13] Because dental patients have complex treatment needs, and the VA provides comprehensive care, dental residents have the opportunity to develop skill in specialty areas as well as general dentistry.

The unique patient pool, a commitment to high-quality comprehensive care, an integrated health care system, and support for research, combine to offer the VA dentist opportunities for continual improvement of oral health care through research and practice. For example, the VA maintains an HIV registry to track oral conditions associated with HIV, and also maintains the largest registry of dental implants in the United States.[9] The VA system is a leader in geriatric oral health research. The program has added to the knowledge of oral conditions of the elderly such as xerostomia, periodontal disease predictors and progression, tooth loss, and aspiration pneumonia.[14-17] In general, research conducted by the VA adds to the knowledge of clinical outcomes and health services utilization. Its purpose is to improve patient care.

Bureau of Prisons

Beginning in 1930, U.S. Public Health Services' commissioned officers from the Department of Health and Human Services have provided medical, dental and mental health services to inmates in facilities of the U.S. Bureau of Prisons. Today, civil service dentists are also hired by the Bureau of Prisons.[18] The bureau is committed to providing high-quality dental care to its clients. To that end, 100 percent of its health care facilities are in compliance with standards of the Joint Commission on Accreditation of Health Care Organizations.[19] Further, the bureau's dental program has implemented a system of continuing quality improvement that involves peer review and staff privileging.

Patients of the bureau's dental clinics often have greater oral health care needs than the average citizen.

Inmates are provided essential medical, dental, and mental health (psychiatric) services in a manner consistent with community standards for a correctional environment. Patients of the bureau's dental clinics often have greater oral health care needs than the average citizen. Many are from communities with limited access to dental care and have long-standing unmet dental treatment needs. Others present dental treatment challenges from alcohol and drug abuse, HIV infection, or tuberculosis, for example.[20] Meeting their treatment needs may require solving difficult problems in treatment planning and a high degree of technical skill. Cmdr. Ron Bajuscak, described his work: "I practice dentistry on a very needy category of patients. … This presents a true clinical challenge and a diagnostic potpourri of dental cases, from those who have never seen a dentist before to those who present with very unique pathological findings."[21]

Federal prisons have more than 150,000 people under their jurisdiction.[22] This number has increased rapidly since 1998, largely due to aggressive law enforcement policies and lengthy sentences. The bureau's dental program is staffed by about 150 dental officers from the federal government's Public Health Services. In California, the bureau employs 18 dentists in eight locations to provide services for a population of 12,000 inmates.[22] About 25 percent of the dental officers in the U.S. Public Health Services' commissioned corps serve with the bureau.[23] Officers have an opportunity to participate in oral health policy discussions at a national level. In the words of Lt. Cmdr. Gina Thornton-Evans, who began her career with the Federal Bureau of Prisons in 1997, "I started out as a staff dental officer and then I was promoted to chief dental officer. I was responsible for the operation of two dental facilities and a patient pool of more than 1,600. One of the many advantages of the PHS is the opportunity to make geographic moves and agency changes. In June 2000, I had the opportunity to do a dental public health residency at the Centers for Disease Control and Prevention in Atlanta, Georgia. The experiences that I have had here have given me a broader view of oral health from a national, state, and local level. I have had the opportunity to meet many individuals who have been very instrumental in the growth of dental public health and the area of oral health."[21]

Coast Guard

The U.S. Coast Guard, a unit of the armed forces of the United States, has responsibility for protecting the security of the nation's coasts and waterways, stewardship of the coastal environment, and guarding the safety of the public in these regions.[24] Through an agreement with the U.S. Public Health Service, commissioned officers are assigned to the Coast Guard. About 10 percent of public health service dentists (60) are assigned to the Coast Guard.[23] The dental corps' primary charge is to ensure that all active duty and reserve corps members are free from dental disease, thereby maintaining their worldwide assignability.

As Benjamin Franklin said,

"For the want of a nail, the shoe was lost;

For the want of the shoe, the horse was lost;

For the want of a horse, the rider was lost;

For the want of the rider, the battle was lost;

For the want of the battle, the kingdom was lost;

And all for the want of a nail."[25]

Swap "nail" for "tooth" in Franklin's axiom and it captures part of the challenge of today's Coast Guard dental readiness.

The good oral health of members is essential to the ability of the Coast Guard to perform assigned missions without being distracted by dental problems. The role of the Coast Guard in national security has been elevated with its transfer from the Department of Transportation to the Department of Homeland Security. Both active duty and reservists may be called upon to meet the growing responsibilities of the Coast Guard. The dental service of the Coast Guard has been very effective in meeting the needs of new recruits. In 2003, 73 percent of recruits arriving at one training center were in need of dental treatment ranging from routine to acute care. All but 1 percent had finished their dental treatment by the end of training. The Coast Guard has been less successful in the oral health maintenance of its active duty and reserve members. About one-third have not met the minimum requirement for an annual dental examination. Newly implemented methods of tracking are expected to improve compliance with dental readiness standards.[25]

California has three Coast Guard stations with dental clinics. They are in San Pedro, Alameda, and Petaluma. Like most of the Coast Guard dental clinics, these are small. Eight dental officers staff the three clinics providing a full range of services, including operative, endodontics, periodontics, exodontia, prosthodontics, and limited orthodontics. A career with the Coast Guard is rewarding with opportunities for advanced professional training. The Coast Guard takes pride in the fact they have the highest retention rate of dentists of all the uniformed services divisions.

Indian Health Service

The final federally funded dental program is the Indian Health Service, where the author has worked for the past 20 years. Health services for Indian tribes grew from a few doctors at military outposts in the 1800s to an integrated comprehensive national health care system. The federal government operates about half of the clinics across the country; and Indian tribes, with federal funding, operate, approximately half of the clinics. The history of Indian health programs in California is unique. Federally sponsored health care for California tribes was terminated in the 1950s and did not resume until 1970, when a consortium of nine tribes lobbied Congress for health services. They were successful in obtaining a special appropriation that funded the newly formed California Rural Indian Health Board to develop clinics. The administrative offices originally were in Albany, Calif., a fortunate coincidence for the author as she was attending the University of California at Berkeley at the time, and was able to secure a part-time job as an assistant to a dental equipment technician. California tribes had identified dental care as the most pressing need, so dental clinics were planned and built early on. In 1975, Congress passed legislation that applied rules to, and expanded the right of, Indian tribes to contract with Indian Health Service to manage their health care. Tribes throughout California took advantage of this new policy. Several of the founding members of the California Rural Indian Health Board consortium split off and now manage the programs independently or through local tribal organizations. Other tribes established new programs. Today, 34 tribes and tribal consortia operate more than 60 dental clinics throughout California, employ more than 120 dentists, and see more than 42,000 patients every year.[27] Native American children and adults of all ages are eligible for care at California's tribal and urban dental clinics.

Operating on a global budget allocation that is insufficient to meet all of the oral health needs of eligible Native Americans, Indian dental clinics have targeted prevention programs to reduce the need for treatment.

The clinics are integrated into the economic and social structure of a tribal community. Buildings are harmonious with the surroundings. Health programs respect traditional practices. Responsiveness to the needs of the community is enhanced because tribes and tribal consortia are responsible for the management of health programs as defined in federal legislation. Health boards set priorities for care and guide development community programs that meet the unique needs of each region.

California Indian communities continue to place a high priority on developing their dental programs. Tribal programs have built clinics with state-of-the-art facilities that offer a full range of dental services. However, because California tribal health programs are funded at only 30 percent to 40 percent of the level of need, each community must make its own

decisions about allocation of scarce resources.[28] Some California tribal dental programs have addressed the problem by implementing special programs to reduce oral health problems in the community. For example, 45 percent of children between the ages of 2 and 5 have early childhood caries.[29] Indian dental clinics responded. The Feather River Tribal Health initiated a children's dental program. The Indian Health Council established a community-based oral health education program, and the Native American Health Center in San Francisco started an infant oral care program. Operating on a global budget allocation that is insufficient to meet all of the oral health needs of eligible Native Americans, Indian dental clinics have targeted prevention programs to reduce the need for treatment.

Conclusion

A career with federally funded dental clinics is challenging. Dentists must provide services in a manner consistent with current professional standards of care, meet the oral health needs of the eligible population, and be responsive to the social and cultural characteristics of the community — all within the annual budget allocation. Each of the five programs funded by the federal government has the same challenges, but the characteristics of the populations served are very different. The priorities for care that have evolved in each program are uniquely suited for the specified population. Dentists who work for the clinical care components of federal dental public health treat individual patients, but also respond to the needs of the community they serve.

For more information about federal dental programs, visit online:

- U.S. Public Health Services' Commissioned Corps, http://www.usphs.gov/
- Immigration Health Services, http://inshealth.org
- Veterans Administration, http://www1.va.gov/dental/
- Bureau of Prisons, http://www.bop.gov//jobs/job_descriptions/dental_officer.jsp
- Coast Guard, http://www.uscg.mil/hq/g%2Dw/g%2Dwk/wkh/wkh/dental/index.htm
- Indian Health Service, http://www.ihs.gov/MedicalPrograms/Dental/index.cfm. CDA

References / **1.** Migliaccio G, Fact sheet on the Division of Immigration Health Services. http://www.inshealth.org/documents/Division_ Factsheet.pdf (Feb. 27, 2005).

2. DIHS Strategic Plan for FY 2004-2008, October 2003.

3. U.S. Immigration and Customs Enforcement, detention operations manual, medical care detention standard, approved Sept. 20, 2000.

4. http://inshealth.org/TourFacilities.htm (Feb. 27, 2005).

5. Keller AS, Rosenfeld B, et al, Mental health of detained asylum seekers. *Lancet* 362(9397):1721-3, Nov. 22, 2003.

6. About the Department of Veterans Affairs, http://www.gla.med.va.gov/pages/aboutVHA.htm (Feb. 20, 2005).

7. Office of Public Affairs Media Relations, Department of Veteran Affairs, state summary, California and U.S. Department of Veterans Affairs, August 2004.

8. History of Veterans Health care, http://www.va.gov/facmgt/historic/Medical_Care. asp (May 9, 2005).

9. Practicing as a VA dentist, http://www1.va.gov/Dental (Feb. 20, 2005).

10. Office of Dentistry, http://www1.va.gov/Dental (Feb. 20, 2005).

11. VA publications, manual M-4, part 3, outpatient dental program.

12. The Budget for Fiscal Year 05, Department of Veterans Affairs http://www.whitehouse.gov/omb/budget/fy2005/pdf/appendix/vet.pdf (Feb. 20, 2005).

13. VA Offering Dental Residency Programs, http://www1.va.gov/dental/ page.cfm?pg=9 (Feb. 20, 2005).

14. Janket SJ, Jones JA, et al, Xerostomic medications and oral health: The veterans' dental study (part I). *Gerodontology* 20(1):41-9, July 2003.

15. Inagaki K, Krall EA, et al, Vitamin D receptor alleles, periodontal disease progression, and tooth loss in the VA dental longitudinal study. *J Periodontol* 74(2):161-7, 2003.

16. Page RC, Krall EA, et al, Validity and accuracy of a risk calculator in predicting periodontal disease. *J Am Dent Assoc* 133(5):569-76, 2002.

17. Terpenning MS, Taylor GW, et al, Aspiration pneumonia: Dental and oral risk factors in an older veteran population. *J Am Geriatr Soc* 49(5):557-63, 2001.

18. U.S. Department of Justice, Federal Bureau of Prisons, about the Federal Bureau of Prisons. http://www.bop.gov/about/index.jsp (Feb. 27, 2005).

19. U.S. Department of Justice, Federal Bureau of Prisons, state of the bureau, 2003.

20. Harrison PM, Beck AJ, Prisoners in 2003, Bureau of Justice statistics bulletin, November 2004.

21. Dental Testimonials, http://www.usphs.gov/html/dental_testimonials.html (Feb. 27, 2005).

22. Bureau of Prisons, weekly population report. http://www.bop.gov/news/weekly_report.jsp (Feb. 27, 2005).

23. Where do dentists work? http:// www.usphs.gov/html/dentist.html#work (Feb. 20, 2005).

24. http://www.uscg.mil/overview (May 9, 2005).

25. Flag Voice 216, July 12, 2004, http:// www.uscg.mil/HQ/G-W/FLAGVOICE/fv216.htm (Feb. 20, 2005).

26. Coast Guard personnel manual. Health and safety directorate (CG-11). Coast Guard dental program, http://www.uscg. mil/HQ/g%2Dw/g%2Dwk/wkh/dental/ (Feb. 20, 2005).

27. Indian Health Service U.S. Department of Health and Human Services regional differences in Indian Health 2000-2001.

28. California Rural Indian Health Board, Inc. Appropriations testimony on Indian Health Service FY 05.

29. Indian Health Service U.S. Department of Health and Human Services, the 1999 oral health survey of American Indian and Alaska Native dental patients: Findings, Regional Differences and National Comparisons, June 2001.

To request a printed copy of this article, please contact / Nancy Reifel, DDS, MPH, Division of Public Health and Community Dentistry, University of California Los Angeles School of Dentistry, Box 951668, 63-087 CHS, Los Angeles, CA 90095-1668.

Dental Public Health in California: A Mixed Picture

Marvin Marcus, DDS, MPH, and Carl A. Maida, PhD

ABSTRACT

Californians face significant dental public health problems. To address these problems, state government, professional organizations, and philanthropic entities in some areas have joined forces. Major issues such as fluoridation, access to care, and the role of the Dental Board of California are examined in terms of the varying roles these critical segments play in affecting the oral health of Californians.

This issue of the *Journal* is dedicated to an examination of public health dentistry in California. While often thought of as innovative and at the "cutting-edge," the state presents a mixed picture of publicly funded oral health programs. Public health concerns sometimes take a lower priority or are overlooked by state government in an era of cutbacks. California lags behind other states in many public goods crucial to the overall quality of life of its residents. This dichotomy is evident in dental public health as it is in education, general health, and air quality. This paper assesses selected dental public health programs, identifying those where innovations have occurred and other program areas where the state has inadequately addressed the dental public health needs of its population.

The Association of State and Territorial Dental Directors and the Centers for Disease Control and Prevention report that more than two-thirds of the states employ full-time dental directors; however, California is not one of them. Usually state governments employ dental directors who use a public health approach to plan innovative oral health programs, implement them, and monitor outcomes. Instead, California has an Office of Oral Health whose chief and four employees oversee the state's Children's Dental Disease Prevention Program and Community Water Fluoridation Program. The children's program serves about 300,000 preschool and elementary schoolchildren annually through contracts with nonprofit organizations, local health departments, and school districts. The other program provides technical assistance to communities on fluoridating its water supplies. In 1995, California passed legislation that paved the way for communities to add fluoride to its water supplies. This legislation exemplifies how public oral health initiatives work in California, as the bill did not provide state money to implement fluoridation, stating rather that funding should come from federal grants or private sources. The California

Guest Editor / Marvin Marcus, DDS, MPH, is professor and chair, Division of Public Health and Community Dentistry at the University of California Los Angeles School of Dentistry.

Author / Carl A. Maida, PhD, is adjunct professor, Division of Public Health and Community Dentistry at UCLA School of Dentistry.

Endowment, a private, statewide health foundation, granted $15 million to assist in implementing the measure through a public-private partnership with the California Department of Health Services, the California Dental Association, the Dental Health Foundation, and the Los Angeles County Department of Health Services. Oral Health America, a nonprofit organization, awarded California an "A" for its fluoridation efforts in a 2005 report on eight states that advanced one or more of the action steps outlined in the U.S. surgeon general's National Call to Action to Promote Oral Health.[1-2] Until recently, only 17 percent of the state's population accessed fluoridated water supplies, compared to the estimated 50 percent of Californians who currently have access. Although realizing a marked improvement in this preventive benefit by bringing fluoridated water to more than 18 million residents in six counties, California still ranks 40th in the nation in water supply fluoridation.

Foundation Partnerships

California also received an "A" in Oral Health America's 2005 report for its efforts to "increase oral health workforce diversity, capacity, and flexibility."[1] Here again, partnerships between foundations, professional organizations and dental schools have been chiefly responsible for addressing issues of diversity in the dental profession and in providing dental services to underserved populations. The Robert Wood Johnson Foundation and The California Endowment jointly funded all California dental schools in an effort called Pipeline, Profession and Practice: Community-Based Dental Education."[3] The initiative seeks to establish community-based clinical education programs, integrate community-based practice experiences into educational programs, and also increase recruitment and retention of disadvantaged students. Through this joint funding effort, innovative postbaccalaureate programs have been created to assist disadvantaged students in preparing themselves for the competitive process of applying to dental school. The "Pipeline" initiative has generated two additional funding partnerships to date. The CDA Foundation has contributed funds to help the dental schools develop Northern and Southern California regional postbaccalaureate programs. The W.K. Kellogg Foundation has provided scholarships for disadvantaged students through a program administrated by the American Association of Dental Educators.

With waning public support, California has been fortunate that private funders have come forward to assist its dental schools in meeting the needs of the community.

With waning public support, California has been fortunate that private funders have come forward to assist its dental schools in meeting the needs of the community. Nonprofit sector health philanthropies have also been instrumental in assisting the state in addressing dental public health issues in the face of declining public support. The California Endowment, the California Wellness Foundation, and the California HealthCare Foundation grew out of governmental requirements that such foundations be established when health care organizations converted from not-for-profit to for-profit entities.[4] Other foundations have been established by individuals to support their philanthropic interests. Regardless of their genesis, dentistry is fortunate that these foundations have begun to take an interest in oral health issues. Although this paper focuses on statewide efforts, it should be noted there are many foundations working at the local level, such as the UniHealth Foundation to fund programs addressing public oral health concerns.

The Impact of Voter Propositions

In 1988, the voters passed Proposition 99, the California Tobacco Tax and Health Promotion Act, with tax revenues earmarked for health research, preventive education, and health care for the medically indigent.[5] Ten years later, Proposition 10, the California Children and Families First Act of 1998, was passed and is expected to generate $700 million annually on behalf of community health care, smoking cessation for pregnant women and young parents, child care and early child development programs.[6] The California Children and Families Commission, or First 5 California, was established with Proposition 10 funds to support children's readiness for school and school's readiness for children, the latter promoting the success of young children as they move from early care settings to elementary school.

In 2004, First 5 California launched two major oral health programs.[7] The first, the California Oral Health Initiative, is a $7 million effort to prevent caries in very young children through an education and training program for dentists and primary care medical providers, and a consumer education program. The CDA Foundation and Dental Health Foundation have primary responsibility for this partnership of professional associations, dental schools, and other health and provider organizations. The second, the Insurance-Based Oral Health Demonstration Project, seeks innovative ways to provide preventive and restorative services to young children, including those with disabilities and special needs, and those living in rural, frontier, and underserved areas. This $3 million, three-year effort currently funds 21 projects throughout the state administered by Delta Dental, Access Dental,

Health Plan of San Joaquin, and the Santa Barbara County Health Plan. These First 5 California efforts use public funds, namely tobacco tax revenues, which have been funneled through commissions to address educational and public health needs of children in the state. The mechanism for this approach was the statewide proposition, a legislative process that narrowed the funding gap in children's oral health care through bypassing competition in state budgets and governmental executive prerogatives.

A Changing Dental Board

A traditional state function is the regulation of dental practice through dental boards. In recent years, the Dental Board of California has undergone considerable pressure from the state's executive and legislative branches. In 2001, there were two senate bills that impacted the state Dental Board. Senate Bill 26 required that a monitor be appointed to evaluate the board's disciplinary system. The second, Senate Bill 134, signed into law by former Gov. Gray Davis, disbanded the Dental Board of California on July 1, 2002. This legislation resulted in appointment of a new board, one more sympathetic to the "mercury in amalgam" issue. Earlier this year, Gov. Arnold Schwarzenegger proposed to abolish all independent boards, including the Dental Board. This approach is consistent with the governor's political philosophy to reduce government regulation; however the proposal met with strong opposition and the governor backed down. Although the proposed 2005-2006 budget funds the Dental Board at approximately $11.5 million, the board's role is clearly changing; the degree to which it will be involved in board examinations, in disciplinary actions, and in regulating dental practice will be closely watched.

Unmet Needs

The last major area involves the financing of needs-based dental services. In California, low-income individuals may access a number of existing programs based upon their level of poverty. These include Healthy Families, the Child Health and Disability Prevention Program, and Denti-Cal, for both adults and children. The latter program is by far the largest and is a part of the Medi-Cal program. The Medi-Cal program, administered by the California Department of Health Services, is a major source for health care in poor and underserved communities. The 2005-2006 California state budget request for this program is $12.9 billion, an 8.2 percent increase over last year.[8] Denti-Cal, the state's Medicaid dental program, serves about 4.75 million Medi-Cal beneficiaries. In most California counties, Denti-Cal is administered by Delta Dental through a competitive contract with the Department of Health Services, which has overall responsibiliy for the program. Serving as the fiscal intermediary, Delta Dental authorizes or denies treatment and processes claims; hence, it has a great deal of administrative responsibility. In Los Angeles, Riverside, and San Bernardino counties, many Medi-Cal beneficiaries receive dental services through a managed care dental plan. In Sacramento County, Medi-Cal beneficiaries can only receive Denti-Cal services through private dental HMOs through a program known as Geographic Managed Care.

In 2002, the Health Consumer Alliance produced a report based on an analysis of calls received by Medi-Cal consumers about problems accessing dental care. The report stated there were a number of barriers to access, specifically for children who were being denied access to medically necessary dental care guaranteed by federal law.[9] One allegation for limited access was that the Department of Health Services apparently had not abided by its own written standards ensuring access to essential dental care. The other allegation was that providers were not fully informed about Denti-Cal services available to Medi-Cal beneficiaries. There also were burdensome authorization procedures, with requests not processed in a timely manner, and often denied for unsound reasons. The barriers low-income younger consumers face in accessing Denti-Cal services are especially disconcerting in light of the surgeon general's findings in Oral Health in America that conditions of the mouth in children and youth, left untreated, can cause infection and signal more systemic health problems, which may result in lifelong personal, educational, and social consequences.[10] Low-income adults may also face barriers in the form of limits on Denti-Cal benefits, as Gov. Schwarzenegger has proposed a $1,000 cap on adult dental services per year as part of his Medi-Cal redesign proposal. With respect to this dental benefit limit for adults, the Legislative Analyst's Office has withheld "recommendation at this time, pending additional information from the administration."[11] CDA has also expressed concern over the proposed $1,000 cap.[12]

A Mixed Picture

To address its residents' dental public health needs, the state will be required to embrace many types of programs that involve partnerships among government agencies, professionals, and nonprofit organizations. Because of the scale of public oral health challenges in California, especially access and prevention, the three sectors will need to work collaboratively to resolve them, even though interests may not always be compatible. As members of the professional sector, together with their colleagues in dental education programs, practicing dentists will need to understand the issues, and become involved at a number of levels. This may involve individual voluntary efforts on behalf of free clinics, dental school-operated clinics and other community dental sites. Individuals may also take a leadership role in local professional, nonprofit and community organizations as board members and advisers. With the increased focus on oral health issues at the state level, it is becoming more important for practitioners to take an

advocacy role on behalf of significant dental public health issues. In the current policy arena, where there is an opportunity to increase the state government's role in public oral health, the involvement of the professional sector is essential. As discussed in this paper, private philanthropy has been actively engaged in supporting a number of oral health initiatives throughout the state. However, foundations do not view their role as sustaining these initiatives permanently because of their interest in spearheading and shepherding promising programs. It then becomes critical for the governmental and professional sectors to work together to develop mechanisms that will sustain effective dental public health programs in the long term. CDA

References / 1. Oral Health America, A for Effort, Making the grade in oral health: an oral health America special grading report, Chicago Ill., February 2005.

2. http://www.surgeongeneral.gov/topics/oral health/ U.S. Department of Health and Human Services. A national call to action to promote oral health. Rockville, Md., U.S. Department of Health and Human Services. Public Health Service, Centers for Disease Control and Prevention and the National Institutes of Health, National Institute of Dental and Craniofacial Research. NIH Publication No.03-5303, May 2003.

3. Pipeline, profession and practice: Community-based dental education website: http://www.dentalpipeline.org/

4. Hall MA, Conover CJ, The impact of Blue Cross conversions on accessibility, affordability, and the public interest. *Milbank* Q 81(4):509-42, 2003.

5. Hu TW, Bai J, Keeler TE, Barnett PG, et al, The impact of California Proposition 99, a major anti-smoking law, on cigarette consumption. *J Public Health Policy* 15(1):26-36, Spring 1994.

6. Sutherland C, McCroskey J, Halfron N, The challenges of measuring the impact of Proposition 10. In Halfon N, Shulman E, Hochstein M (Eds.), building community systems for young children, UCLA center for healthier children, families and communities, 2001.

7. First 5 California: Fact sheet for the First 5 California early childhood oral health initiative, January 2004: http://www.ccfc.ca.gov/prg.htm

8. Legislative Analysts' Office, health & social services 2005-06 analysis, pg. C-14, Sacramento, Calif., February, 2005.

9. Health consumer alliance with the health rights hotline. Denti-Cal denied: Consumers' experiences accessing dental services in California's Medi-Cal program, Los Angeles, Calif., December 2002.

10. Oral Health in America: A report of the surgeon general. Rockville, Md., National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

11. Legislative Analysts' Office, health and social services 2005-06 Analysis, pg. 82, Sacramento, Calif., February 2005.

12. CDA online: 2005 Medi-Cal redesign proposal – CDA Statement: http://www.cda.org/cda_member/issues/2005_medical_redesign.htm

To request a printed copy of this article, please contact / Marvin Marcus, DDS, MPH, UCLA School of Dentistry, Box 951668, 63-045 CHS, Los Angeles, Calif., 90095-1668.

Consumers, not having ready access to jackhammers or government-restricted plastique explosives, have resorted to using their teeth to gnaw their way into their purchases.

Continued from Page 582

newly packaged products "child proof." This was a term that appealed to parents until they saw what the new wave of products was really like.

As a result of combining space-age know-how with new chemistry and physics discoveries, all over-the-counter analgesics are impervious to tampering, not only by children, but adults as well, even if they go to fitness classes twice a week and can bench press 400 pounds.

Apparently even bottled water has come under the aegis of the "protect them at any cost" advocates. I buy water in a 2.5 gallon container. In order to get the water to flow, a vent hole has to be punched in the top of the package. This is a container made of the same material from which Kevlar vests are made. You couldn't puncture it with an armor-piercing anti-tank weapon. It would protect a space shuttle upon atmospheric re-entry.

We are becoming a nation of would-be consumers, baffled and frustrated at every attempt to get at shrink-wrapped and factory-sealed products. It should have been foreseen that, as professionally trained tooth persons, we would become directly involved in this problem.

It is this trend toward anything labeled "For Your Protection" that has occasioned Reason No. 8 for saving teeth. Innocuous enough when applied to toilet lids in motels, the "For Your Protection" label has come to encompass an ever-widening area.

Consumers, not having ready access to jackhammers or government-restricted plastique explosives, have resorted to using their teeth to gnaw their way into their purchases. A four-pack of C batteries, for example, can be liberated by a determined gnawer in less than 45 minutes if his occlusion is good. This is why Energizer batteries, as touted by that irritating drum-beating rabbit, are said to last so long — nobody can get at them. Potato chip packages, soy sauce packets, and pre-packaged tomatoes, all fall under the same mantle of protectionism.

One of the supreme tests for oral efficiency is the child's toy that has a clear plastic covering normally used for bulletproof windows in a celebrity's limo. This shield is welded permanently to a cardboard backing featuring a Taiwanese translation of the toy's functions. The backing is not cardboard at all, but a material now in use for lining bank vaults. It would be challenging for the fire department's jaws of life and impossible for a denture wearer, regardless of how much adhesive he used, to open and present this gift to a grandchild.

There is a group of edentulous consumers dedicated to the return of paper bags as containers for just about everything that isn't wet. As dentists, we should support these people. Our new motto should be There, but for the grace of God ...

Reason No. 8 (teeth as container openers) should perhaps be assigned a higher priority in our patient education efforts than Reason No. 4 (teeth for great smiles), which is mainly for younger people during the mating season. If Reason No. 10 (teeth as an ongoing source of dental income) is to remain valid, all preceding reasons need to be vigorously observed. CDA

Robert E. Horseman, DDS

For Your Protection

Reason No. 8 for saving your teeth … Actually, this should be Reason No. 2, right after Reason No. 1, which, of course, is eating.

These reasons were conceived a long time ago when the toothpaste people and the floss manufacturers met with the surgeon general to think up compelling reasons for the people to care for their teeth. This was in 1938 when vulcanite was the material of choice for dentures and the specter of an entire nation trying to cope with maroon and pink false teeth was too horrible to contemplate. The "List of Reasons" has remained intact for nearly three decades and, except for the mandatory addition of a "new, improved" ingredient to be added to toothpastes every six months, the concept has proven to be durable.

Sixty years later, we are awash in a giant wave of consumer protectionism. This began when consumer protection agencies decided the Chevy Corvair was "unsafe at any speed," although it didn't burst into flames nearly as well as the Ford Pinto. Thanks to Ralph Nader, we now have that formidable civilian tank, the Chevy Suburban.

The agency discovered at the same time that consumers were actually using the products they purchased, some of which had the potential to do them mischief. For example, many years ago, aspirin bottles had tops that could be unscrewed by an individual with average motor skills, thus making the acetylsalicylic acid inside readily available to a vulnerable public. The marketing and packaging people moved quickly to protect us from ourselves, calling their

Continued on Page 581

Many years ago, aspirin bottles had tops that could be unscrewed by an individual with average motor skills.

BLATANT ADVERTISEMENT