Action for Dental Health: Bringing Disease Prevention into Communities

A Statement from the American Dental Association

December 2013
No matter how many times we see the statistics, they remain staggering. Nearly half of adults over age 30 suffer from some form of gum disease. Nearly one in four children under age five already has cavities. The number of emergency department visits in the U.S. for dental conditions increased from 1.1 million in 2000 to 2.1 million in 2010.

All of these people need treatment, but many won’t get it, at least not as soon as they should. The Affordable Care Act will improve the availability of care for many children from low-income families. But most of their parents, and other adults, even those who qualify for state-assisted medical coverage, will be left behind because there is no mandate for adult dental coverage under the Affordable Care Act.

Millions of Americans are living in what amounts to a dental health crisis. The ADA, state and local dental societies and individual dentists have a proud history of finding ways to provide care to people who for whatever reason cannot access it. But clearly, more aggressive action is needed. The ADA this year launched Action for Dental Health: Dentists Making a Difference, an aggressive campaign to deliver care now to people suffering from untreated disease; strengthen and expand the public/private safety net to provide more care to more Americans; and bring dental health education and disease prevention to people in underserved communities. Action for Dental Health now represents all existing and new ADA programs and initiatives aimed at improving oral health in underserved individuals and communities. For this reason, we have renamed this ongoing series of statements from its previous “Breaking Down Barriers to Oral Health for All Americans.”

This paper focuses on the third element of Action for Dental Health — preventing disease, a subject sufficiently broad that it will occupy more than one such paper. Disease prevention is the object of increasing focus in all of health care and holds the greatest promise for continued success. But dentistry is unique in both the length of time that it has practiced prevention and the degree of its success. The two most prevalent dental pathologies — tooth decay and gum disease — are almost entirely preventable. Education about the dangers of tobacco and alcohol use can, by leading to behavioral changes, help prevent oral cancer. For patients with oral cancers, early detection yields a much greater survival rate than those whose disease has progressed undetected. Significant facial trauma can be prevented with the use of mouth guards and other protective equipment in recreational sports.

Prevention will never be universal. There will always be disease that has progressed to the point that restorative care is needed. But the occurrence of disease can be reduced dramatically. To that end, we offer the following discussion of prevention — what works and why, what more is needed and the rewards that are possible by stopping disease before it starts.

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President
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Disease Patterns

Dental caries, the disease process that causes tooth decay, is the most prevalent childhood disease, and, according to the Centers for Disease Control and Prevention (CDC), affects more than 25 percent of U.S. children aged two to five and half of those aged 12 to 15. The problem doesn’t cease in adulthood. Twenty-eight percent of those 35 to 44 years of age have untreated tooth decay, and the rate is 18 percent in adults 65 and older. The occurrence of tooth decay is unacceptably high, and disproportionately affects minorities and low-income populations. For many American Indian and Native American communities, for instance, the occurrence of early childhood caries is approximately three times higher than it is in the U.S. as a whole.

Numerous factors other than income and ethnicity can determine oral health status — education level, age, language barriers, cultural factors, oral health literacy, ability to perform daily oral health care, insurance status and geography all come into play, often in combination with one another. Unhealthy behaviors such as neglecting to brush and floss, using tobacco and alcohol, and eating poorly also can adversely affect dental health.

Medical conditions also play a role. There are more than 125 health conditions that may affect or be affected by oral health, including cardiovascular disease, human papillomavirus (HPV) infection, HIV/AIDS, osteoporosis, obesity, and autoimmune disorders like rheumatoid arthritis. According to the CDC, adults with diabetes are almost twice as likely to have gum disease as non-diabetic patients of equivalent ages.

People with developmental disabilities suffer from a high occurrence of tooth decay and gum disease for a number of reasons, ranging from physical conditions like an inability to hold a toothbrush to a simple lack of understanding of how to practice basic personal oral hygiene. These types of disabilities can make people more susceptible to disease and at the same time, make it more difficult for them to obtain treatment.
Prevention Pays

Preventive measures in dental treatment are intended to defend against the onset of disease, such as using sealants to prevent cavities. These examples of national average costs for common preventive and restorative procedures show that stopping disease before it starts can yield savings.

This is why the ADA believes that insurers should not impose cost-sharing measures such as deductibles or copays on patients for preventive oral health services. The Affordable Care Act, in fact, forbids the imposition of copayments for preventive care for new health care policies created after March 23, 2010, including oral health risk assessments for children.

Maintaining Dental Health through Prevention

Extracting teeth, filling cavities, or performing root canal therapy are comparatively costly approaches to treating dental disease, when compared with preventive measures. And while emergency and restorative interventions like fillings and root canal therapy can stop disease, they cannot restore the natural tooth and gum tissue lost because of it. The most cost-effective way to ensure optimal dental health is by prevention.
health in both children and adults is through prevention, education and behavioral modifications. Community water fluoridation is a proven, effective prevention strategy. The estimated average cost for a community to fluoridate its water ranges from approximately 50 cents a year per person in large communities to approximately $3 a year per person in small communities. By one estimate, the cost of providing fluoridated water throughout someone’s life is less than the cost of a single filling.

While community water fluoridation has been one of the great public health successes of the past 100 years, state oral health officials know that more is needed, particularly in delivering care to mostly poorer, underserved populations. State oral health programs wisely direct a large percentage of their limited funds toward prevention, rather than treating disease that should have been prevented. In addition to state budget allocations, funding for these programs also comes from other sources. The private DentaQuest Foundation has provided funding to 20 states through its “Oral Health 2014” grants project. The grant program emphasizes prevention, and is designed to foster greater collaborations among not only dentistry and primary care medicine, but also faith-based organizations, public health and social service groups.

An increasing number of private foundations are emphasizing the importance of joining forces and improving oral health collectively. More than two dozen national and regional philanthropic organizations meet quarterly as the Funders Oral Health Policy Group. They are strong and active voices in community health and national health policy discussions. They are creating new opportunities for public-private partnerships focused on innovations for better oral health in communities across the United States.

**CDC Funding of Prevention Programs**

Other funding sources for state programs include various federal agencies like the Health Resources and Services Administration and the Centers for Disease Control and Prevention (CDC).

The cooperative agreements between CDC and the states range from $235,000 to $355,000 per year and are renewable. The agency awards these funds with the aim of improving oral health by monitoring oral diseases and implementing and evaluating disease prevention measures such as community water fluoridation and school-based sealant programs. While the CDC funds are not earmarked for prevention, states tend to spend the bulk of the money on preventive measures.

CDC provided funding to 20 states to strengthen their oral health programs. Grants to states totaled $6.8 million in 2013.
The New York State Bureau of Dental Health used its 2012 CDC grant ($331,000) to support, strengthen and improve its fluoridation program, including monitoring systems and providing technical assistance at the community level.

CDC funding also supports the Bureau’s promoting fluoridation through a statewide network of volunteer dentist speakers, collects data and evaluates existing oral health programs, including Medicaid dental services.

According to bureau director Dr. Jayanth V. Kumar, CDC grants also free up state money for other successful programs, such as establishing, operating and monitoring dental clinics based in 956 schools across the state.

“[S]ome are mobile, some are fixed,” he said. “Some are funded with private foundation dollars; some are funded with grant dollars.” The bureau has data showing that dental providers in communities with school-based programs have met the state’s target of sealing teeth in at least 50 percent of the children.

Over the past five years, Maryland has received approximately $1.5 million in CDC prevention funds. “We used it to do a lot with our fluoridation program,” said Dr. Harry Goodman, director of the Maryland Office of Oral Health. “I can’t imagine where we’d be without the CDC.”

The degree of resourcefulness that states put into extracting the maximum value out of these very limited funds is astounding. CDC should increase grant funding for state oral health programs exponentially.

Collaboration Between CDC and State Dental Directors

The CDC, working with the Association of State and Territorial Dental Directors (ASTDD), follows best practices for community oral health programs, including:

1. **Surveillance**, the ongoing systematic collection, analysis and interpretation of data for use in planning and implementing public health practices. CDC, working with the ASTDD, has developed a series of basic screening surveys that are available for state dental programs to use in determining dental disease rates.

   Surveillance of this kind “is part of the public health model,” said Rear Admiral Dr. William Bailey, then-acting director of the CDC’s Division of Oral Health, and current chief dental officer of the U.S. Public Health Service. “It’s important to know what the problems might be before you can develop a program to address them.”

   Much more detailed surveillance information than that provided by the “basic screening surveys” is gathered by the National Health and Nutrition Examination Survey (NHANES), which has gathered comprehensive health information from millions of Americans over the past 50 years.

2. **Collaboration**, including joint efforts among service agencies, health care provider groups, and patient advocacy organizations.

   The shame of it all is that we have some very well-understood preventive options, like water fluoridation and sealants. These measures can cut decay significantly, but we still have 80 million people without fluoridated water. And sealants? Well, we’re well below where we should be.

   *Bill Bailey, D.D.S., acting director of CDC’s Oral Health Division*
3. **Planning**, as a way to address the problem of oral diseases and to enhance the dental health of a given population. Ideally, a state oral health plan is based on appropriate findings at the state and local levels, and uses proven interventions.

Other states have adopted similar best practices for their oral health programs. The Georgia Department of Public Health’s Oral Health Section follows a multistep approach to incorporating prevention into its programs.

1. Identify disparities and the populations vulnerable to oral diseases through increased surveillance and data collection efforts.

2. Promote the importance of oral health to overall wellness through educating health care providers and the general public.

3. Seek to improve state policies that influence oral health.

4. Increase cooperation among community programs and state agencies to improve oral health.

5. Support improved access to oral health care for the underserved.

While this list of best practices reflects a desire to extend the benefits of oral disease prevention to more citizens, many states, including Georgia, face the reality of dwindling budgets that have made it difficult for oral health programs to thrive.

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**The National Health and Nutrition Examination Survey**

CDC uses the National Health and Nutrition Examination Survey (NHANES) to assess the health and nutritional status of adults and children in the United States. The survey, conducted annually, is comprehensive, combining interviews and physical examinations.

The NHANES interview includes demographic, socioeconomic, dietary, and health-related questions. The examination component includes medical, dental, and physiological measurements, as well as laboratory tests administered by medical personnel. Findings from this survey are used to determine the prevalence of major diseases, risk factors for diseases and for other purposes. Information obtained from NHANES is available through an extensive series of publications and articles in scientific and technical journals.

The most recent NHANES dental disease information showed that oral health disparities among demographic groups remain significant. The report, dated August 2012, showed that the rate of untreated cavities varied by race, ethnicity and poverty level among children and adolescents.

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**Percentage of Children Ages 6 to 9 with Untreated Disease**

*Based on preliminary results of a federal government survey, this statistic is consistent with the findings of prior government research.*
Educating Parents

To fight the growing prevalence of early childhood caries (cavities), oral health assessments should be made in children by age one.

“We need to push the 12-month exam,” said Jane Grover, D.D.S., former dental director for the Center for Family Health, a federally qualified health center (FQHC) in Jackson, Michigan, who now serves as staff director for the ADA Council on Access, Prevention and Interprofessional Relations. “It’s simply a great opportunity to teach parents about what they can do for their children in order to prevent that 4 a.m. sobbing toothache. We always hear that education is key. Well, where’s the best place for parents to get that oral health education? From the dentist.”

Dr. Dan Watt, dental director of the Terry Reilly Health Centers in Idaho, also emphasizes dental health education. His patient base consists largely of lower-income people who don’t qualify for Medicaid but who find it difficult to pay for dental care. He stresses the need to counter the erroneous idea that susceptibility to dental decay is solely a question of genetics.

“The thing that patients need to understand is that their problem isn’t genetic or ‘soft teeth,’ it’s exposure to dental bacteria,” Dr. Watt said. The bacteria that cause cavities can be transmitted from parents soon after children’s first teeth erupt. “We pick it up from our parents, our siblings, the kids in the day care center.”

“I tell patients to think of a lawn,” he said. “If you want to have a nice lawn, but the dominant plants in your lawn are weeds, you’ll have to do more than just mow, because the weeds will come back. You need weed killers and fertilizers. It’s the same type of thing in the mouth. People at high risk for oral disease have to do more than just brush and floss.”

Alice Horowitz, Ph.D., professor at the University of Maryland’s School of Public Health, agrees about the effectiveness of educating patients and their caregivers.

“What we need to do is focus on prevention. Prevention is key. Education is key. There are people who don’t know why fluoride is good, who don’t know what a sealant is.”

Comprehensive oral health education also should include the role of nutrition. Eating patterns and food choices play an important role in preventing, or promoting, tooth decay. Heavy sugar consumption has long been associated with tooth decay. “What we need to do is focus on prevention. Prevention is key. Education is key. There are people who don’t know why fluoride is good, who don’t know what a sealant is.”

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The Lifecycle of the Tooth

Teeth have a lifecycle that starts before birth. Age is one of the factors dentists consider in evaluating the dental needs of each patient.

Development in Utero
Teeth begin to form with the jaws of developing fetuses. Pregnant women should maintain their oral hygiene because their healthy mouths have a direct impact on the oral health of their babies.

Primary (Baby) Teeth
Children get their first tooth at around 6 months of age. It is important to clean these teeth regularly, first with a damp cloth and eventually with a small toothbrush. Children should be seen by a dentist by their first birthday. If a dentist believes that a child is susceptible to tooth decay at this age, he or she may apply fluoride varnish to strengthen the enamel.

Newly Erupted Adult Molars
At around age 6 children begin getting their first permanent molars. The best preventive care at this time, in addition to regular dental checkups, is the application of sealants, which seal out decay-causing bacteria. It’s a good idea to repeat this preventive measure when the second permanent molars erupt around 12 years of age.

Third Molars Eruption
This is the last stage of the tooth lifecycle. If there is not enough room for “wisdom teeth” within a child’s mouth, they may crowd out earlier teeth or become impacted, which would require surgical removal. A dentist can advise a patient on whether there is sufficient room for these teeth or if they should be removed.

Teeth are meant to last a lifetime. It is equally important to maintain good periodontal (gum) health to be able to support these teeth. Brushing twice a day with a fluoride toothpaste, daily flossing, drinking fluoridated water (or using appropriate fluoride supplements), eating a healthy diet and regular dental visits will make all the difference.
can adversely affect dental health if eaten immoderately or without brushing. Tomatoes and citrus fruits contain acids that can harm enamel. Fruit juices, widely considered a healthy alternative drink, can have just as much sugar as soda. Dried fruits can stick to teeth, prolonging the damage their natural acids can inflict. A lack of certain nutrients also can make it more difficult for tissues in the mouth to resist infection.

The ADA promotes a diet that is low in added sugar. The Association is lobbying Congress to reauthorize the U.S. Department of Agriculture’s Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) with its nutrition education and obesity prevention grant program (SNAP-Ed) intact. The ADA also has been working with the USDA to update the nutrition standards for foods sold in schools. The most recent proposal would inherently prohibit sugar-added soft drinks and sport drinks from being sold in elementary and middle schools, and restrict their availability in high schools.

**School-Based Screenings**

Twelve states (as well as some individual school districts) require that parents show proof that their children have received basic dental exams or assessments before enrolling in public schools. (In most of those that do, there is no penalty for noncompliance.) The goal is to ensure that the dental status of incoming students is at least determined and, optimally, that children identified as needing treatment can receive it. These requirements can help catch oral disease at a point when treatment can save teeth. ADA policy encourages state dental societies to seek legislation requiring these screenings. The American Academy of Pediatric Dentistry also supports school-entry dental screenings.

Many dentists consider these assessments to be the bedrock of preventive and early restorative care for children, but others remain skeptical about school-based screening requirements unless they are linked to available treatment. One former state dental director refers to them as “supervised neglect,” adding, “If you’re not offering treatment with [a screening] ... then it’s just going to be a piece of paper telling parents what they already know. But if you have some sort of program that gets these kids treatment, or tells parents how to get treatment, then a screening requirement will mean something.”

New York State schools are required to give parents a list of dentists who are willing to provide free or reduced-cost care, a measure that while not always successful, at least attempts to connect chronically underserved children with dental homes. The ADA defines a “dental home” as the ongoing relationship between the dentist, who is the primary dental care provider, and the patient, which includes comprehensive oral health care beginning no later than age one. Establishing dental homes for children, thus providing them with a treating dentist of record and a continuum of care, is critical to maintaining good oral health throughout childhood. Ultimately, every child should have a dental home, which will go a long way toward achieving a goal shared by the ADA’s Give Kids A Smile® program and the new Action for Dental Health campaign: eliminating cavities in U.S. five year olds by 2020.

Maryland has so far taken the middle ground. “When we do the screening in schools we want to have a plan in place so that when we find that the children have some dental disease that they have a dental home, some place they can go for treatment,” said Dr. Goodman, of the Maryland Office of Oral Health. His office is working with the Maryland State Dental Association and other stakeholders through the Maryland Dental Action Coalition to run and monitor a pilot program at a few schools where, following assessments, children with problems are given “a real bricks and mortar” referral, a dental home where treatment can be delivered at a reasonable cost.
The pilot program is funded by a grant from the Kaiser Family Foundation. The state requires that mobile clinics visiting schools must refer all children in need of care to dentists who are accepting Medicaid patients, in order for the mobile clinics to receive Medicaid reimbursements. “What I see is some sort of dental case worker, someone to steer these kids to care,” Dr. Goodman said. He cited the ADA’s Community Dental Health Coordinator program as a good model for his vision.

**The Community Dental Health Coordinator**

The Community Dental Health Coordinator (CDHC) is a new model of community health worker piloted by the ADA in a project begun in 2006. Their 18 months of online and clinical education prepares them to deliver oral health education and prevention services, and to help patients navigate an often daunting public health system to receive care from dentists. Most CDHCs come from the types of inner city, rural and Native American communities in which they work — in some cases the same communities in which they work. This all but eliminates the cultural, educational and language barriers that otherwise could impede their effectiveness.

The CDHC model “allows folks to go in and do the kind of education and community mapping and outreach that we haven’t done before in dentistry,” said Dr. Dunn Cumby, who directed the CDHC educational program at the University of Oklahoma. “It’s great when there are people that are from the community … and you give them the skill sets that they need to go into the community and then educate, navigate and bring them in to get the kind of treatment that everybody deserves.”

CDHCs understand the everyday struggles people in underserved communities face — the kind of struggles that sometimes put routine dental care out of reach.

“If you had the choice between trying to make sure your heat is turned back on or making sure that you can pay your bills, that’s going to be a higher priority than your oral health,” said Calvin Hoops, a CDHC at the Esperanza Health Center in north Philadelphia.

Angela Black is a community dental health coordinator (CDHC) for the Chickasaw Nation Division of Health. She graduated from the University of Oklahoma — College of Dentistry’s CDHC program in 2011.

“I became a CDHC to improve the lives of people throughout my community, by providing care and resources to my Native American patients,” Ms. Black said. “I desired to do more for the citizens I serve and my community.”

Her role as a CDHC, Ms. Black explained, is to help the people in her community overcome the barriers that can keep people — particularly lower-income people — from accessing the oral health care that’s available to them.

“Helping people locate access to care is uplifting and a life changing experience,” she said. “At the end of each day I am positively influenced by providing assistance to those who need it most.”
CDHCs are trained in a complete curriculum developed by experts in their respective fields and refined over a period of six years. This curriculum focuses on seven core competencies all CDHCs are required to master:

- developing and implementing community-based oral health prevention and promotion programs;
- prioritizing population and patient groups;
- providing individual preventive services based on approved plans;
- collecting diagnostic data;
- performing a variety of clinical supportive treatments;
- administrative functions; and
- placing temporary fillings in dental cavities in preparation for restorative care by a dentist.

With the educational phase of the CDHC pilot project concluded, the ADA has conducted a comprehensive evaluation of the program, examining such factors as patient satisfaction, improvements in dental health in host communities, and the financial viability of the CDHC model. That evaluation has shown that CDHCs are meeting and exceeding expectations.

So far the program has graduated 34 CDHCs who are working in eight states. CDHCs also have taken temporary assignments in two additional states to familiarize educators, safety net clinics and public officials with how CDHCs can dramatically improve oral health care access in underserved communities. And the ADA is working to encourage community colleges nationwide to launch CDHC programs. With millions of Americans lacking quality dental care, the CDHC model has an important part to play in bringing good oral health to those who need it most.

Most CDHCs come from the types of inner city, rural and Native American communities — in some cases the same communities — in which they work.
Conclusion

Disease prevention in oral health is too broad a field to cover in a single paper. This examination of disease patterns, health management, state oral health programs, oral health assessments and Community Dental Health Coordinators is a starting point. Future papers will cover such topics as school-based delivery of preventive care, community water fluoridation, periodontal disease, diet, tobacco and other behavioral factors, dental health education, outreach through the media, and evidence-based prevention.

The ADA is committed to moving prevention to the forefront, not only in the public health community, which already understands its critical role in oral health, but also among government, the educational community, the other health professions and the public.

Through Action for Dental Health: Dentists Making a Difference, the ADA is committed to achieving that, and is setting specific, measurable goals to do so.

**Leading collaborations to achieve and exceed the Healthy People 2020 goals, by dedicating resources to collaborations, public-private partnerships and community-based interventions.**

- Reduce the proportion of adults with untreated dental decay by 15 percent by 2020, exceeding by half the Healthy People 2020 goal of 10 percent.
- Reduce by 15 percent the number of children under 18 with untreated dental decay by 2020, exceeding by half the 10 percent Healthy People 2020 goal.
- Increase the proportion of low-income children who received any preventive dental services during the previous year by 15 percent by 2020, exceeding by half the Healthy People 2020 goal of 10 percent.

**Expanding Give Kids A Smile Local Community Screening and Treatment Efforts**

The Give Kids A Smile mission is to serve as a catalyst for community-based children’s oral health and wellness programs that are expandable, sustainable and innovative. Each year dentists and dental team members in communities around the country conduct free screenings and provide preventive care, such as fluoride varnish and sealant applications, as well as offer treatment to children in need while getting them into dental homes. Give Kids A Smile programs screened and treated 400,000 children in 2012.

- The ADA supports the Healthy People 2020 objectives that call for a 10 percent increase in children ages three through 15 who receive dental sealants.
Improving Utilization of the Existing Safety Net Through Community Dental Health Coordinators

The ADA believes that Community Dental Health Coordinators can provide a critical link between underserved communities and good oral health by focusing on oral health education and disease prevention. As of October 2013, 34 CDHCs are working in communities in eight states. The ADA and state dental societies are committed to expanding on these initial successes by working with public and private sector stakeholders in bringing CDHCs to more underserved communities.

The ADA has set a near-term goal of having CDHCs working in 15 states by 2015.

The ADA bases the Action for Dental Health prevention goals on the belief that simple, low-cost measures like sealing kids’ teeth, educating families about taking charge of their own oral health, and early screening, diagnosis and treatment will pay for themselves many times over, and will contribute to a healthier, more productive nation.

Resources:
ADA.org
Action for Dental Health
MouthHealthy.org
About the American Dental Association
The not-for-profit ADA is the nation's largest dental association, representing more than 157,000
dentist members. The premier source of oral health information, the ADA has advocated for the
public’s health and promoted the art and science of dentistry since 1859. The ADA’s state-of-
the-art research facilities develop and test dental products and materials that have advanced the
practice of dentistry and made the patient experience more positive. The ADA Seal of Acceptance
long has been a valuable and respected guide to consumer dental care products. The monthly
The Journal of the American Dental Association (JADA) is the ADA’s flagship publication and the
best-read scientific journal in dentistry.

For more information about this report, please call 202.898.2400 or email govtpol@ada.org.

For more information about the ADA, visit the Association’s website at ADA.org.

For more information about Action for Dental Health, visit ADA.org/action.

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