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OPPORTUNITIES FOR THE DENTAL
PROFESSION**

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J Am Dent Assoc 2000;131;1721-1728

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THE SURGEON GENERAL'S REPORT ON AMERICA'S ORAL HEALTH: OPPORTUNITIES FOR THE DENTAL PROFESSION

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ABSTRACT

Background and Overview. The release this year of “Oral Health in America: A Report of the Surgeon General”—the first such report on this topic in U.S. history—gives national visibility to the scope and breadth of oral health and disease in America. The report emphasizes oral health’s inextricable link to general health and well-being. Although the country has seen major improvements in oral health, some population groups have yet to benefit from these improvements. To address health disparities and improve quality of life for all Americans, the surgeon general’s report calls for the development of a National Oral Health Plan.

Conclusions. “Oral Health in America” identifies opportunities for the dental profession on behalf of the nation’s overall health. The profession is

uniquely positioned to ensure that all components of the National Oral Health Plan are addressed: changing perceptions to ensure that oral health is seen as integral to general health; removing barriers to care; enhancing health infrastructure; accelerating the transfer of science into practice; and continuing to participate in private/public partnerships.

Clinical Implications. The report’s findings highlight the importance of assessing patients’ known risks of experiencing oral diseases and of educating patients about health-promoting behaviors. The integral role of oral health in general health, as described in the report, makes it imperative for health professionals to ensure appropriate referrals to practitioners in all areas of health care.

The relationship between dentist and patient is personal, private and productive. Thus, it was no surprise when we were told that U.S. Secretary of Health and Human Services Donna Shalala’s personal dentist stimulated her interest in commissioning the first surgeon general’s report on oral health in April 1997. The charge for this report was to “define, describe, and evaluate the interaction between oral health and general health and well-being [quality of life] through the life span in the context of changes in society.” In May, the report, called “Oral Health in America: A Report of the Surgeon General,” was released by U.S. Surgeon General David Satcher.¹ As the first such report for the United States, it provides the dental profession with an unprecedented opportu-

nity to demonstrate its continued leadership on behalf of the nation’s health.

A report issued by the U.S. surgeon general is a rare and special event. During the past 46 years, the surgeon general’s reports have focused primarily on the health consequences of smoking and tobacco-use practices. The non-tobacco-related reports are relatively few in number and tend to focus on other lifestyle behaviors. These reports are intended to focus the nation’s attention on important emerging public health issues—particularly those that require unusual and immediate interventions, those that affect a large proportion of the public, and those in which important new advances have been made or where the opportunity to further improve the

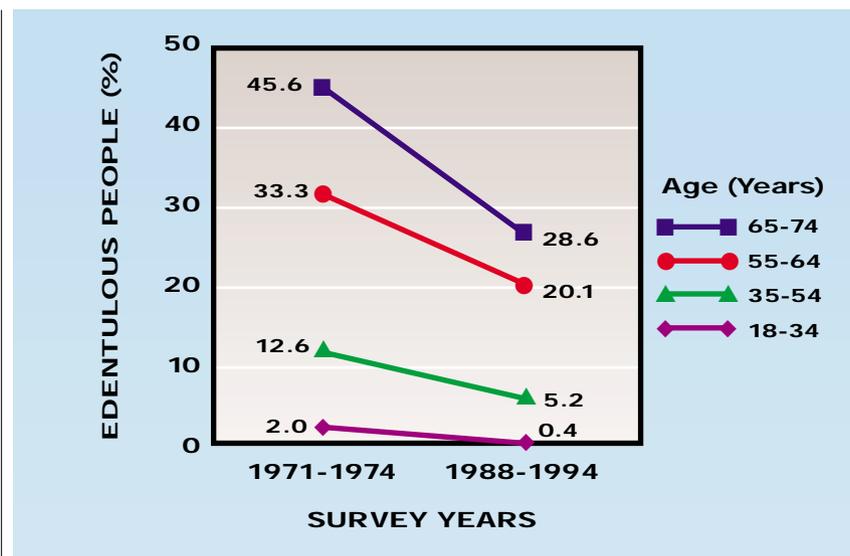


Figure 1. Rates of edentulism in U.S. adults, 1971-1974 vs. 1988-1994. The percentage of people without any teeth has declined among adults during the past 20 years. Source: National Center for Health Statistics.^{2,3}

nation's health has not been fully realized. In this category are reports on topics such as AIDS, mental health, maternal and child health, and oral health.

MESSAGES AND ACTIONS

For those in the dental profession, many of the messages of "Oral Health in America" are not new. Nevertheless, for the public and for the health care provider community at large, this report presents bold messages about the importance of oral health and what can be done to further improve it—and, thereby, improve general health—in this country. The report's major message is that "oral health is essential to the general health and well-being of all Americans and that improved oral health can be achieved by all Americans."¹

The report highlights the substantial gains in the oral health status of the American population over the past 50 years. However, it also points out that not all segments of the

population have participated in these gains. The reasons for this are many; inadequate access to care and inaccurate public perceptions of oral health are two of the foremost.

The report's major, and overriding, themes convey the messages that oral health means much more than healthy teeth and that oral health is integral to general health.

FIVE KEY QUESTIONS: WHAT THE REPORT ADDRESSES

The current and future challenges to the public, providers of oral health services, educators, researchers, administrators and policy-makers are found in the responses to the five questions that serve as the framework of the surgeon general's report:

- What is oral health?
- What is the status of oral health in America?
- What is the relationship between oral health and general health and well-being?
- How is oral health promoted

and maintained and how are oral diseases prevented?

■ What are the needs and opportunities to enhance oral health?

Here we will review the report's statements in response to each of these questions.

What is oral health? How many of us take the time to inform our patients of the wealth of functions and conditions affecting our mouths and other craniofacial structures that, in turn, affect our overall health? The surgeon general's report emphasizes the broad definition of oral health, stating that it includes all aspects of the dental, oral and craniofacial complex. The report provides a detailed reminder of the interaction, interconnectedness and inseparable aspects of oral and general health. It also reminds the report's readers that our oral-facial tissues have functions that we often take for granted, even though "they represent the very essence of our humanity. They allow us to speak and smile; sigh and kiss; smell, taste, touch, chew, and swallow; cry out in pain; and convey a world of feelings and emotions through facial expressions."¹

The report describes the development, genetics and functions of the oral-facial tissues from birth to old age. For even the most academically prepared reader, such an overview is a refresher. The report informs readers that some of these tissues are unique in the body; others are part of systems such as the mucosal and skeletal systems. It also highlights the intricate functions that saliva and the salivary glands perform in protecting against pathogens and promoting digestion and other functions.

What is the status of oral health in America? The report addresses the extent of selected major oral and craniofacial diseases and disorders, as well as the complex and multifactorial nature of their etiology and pathogenesis. It also describes the current understanding of a multitude of oral microbial infections, such as dental caries, periodontal diseases, *herpes labialis* and candidiasis. The rapidly evolving knowledge of the genetic aspects of oral conditions and of the role of microbes and risk factors provides dental practitioners with an opportunity for earlier diagnosis and increasingly nonsurgical management. The report emphasizes that lifestyle behaviors such as use of tobacco and alcohol and inappropriate diet pose risks for general health, including oral health. In this context, the challenges for oral health care providers are to determine to what extent our health education messages for patients are directed at these known risk factors, and how we can be more effective in changing behaviors that put our patients at risk.

There have been many gains in the nation's oral health in the last half-century, but challenges remain. For example, there has been a substantial decline in edentulism over the past 20 years^{2,3} (Figure 1). Yet, dental caries remains one of the most common diseases of childhood³ (Figure 2). Striking health disparities found for some populations include the five-year relative survival rate for oral and pharyngeal cancer⁴ (Figure 3) and the prevalence of cleft lip and palate⁵ (Figure 4) that differ between white and

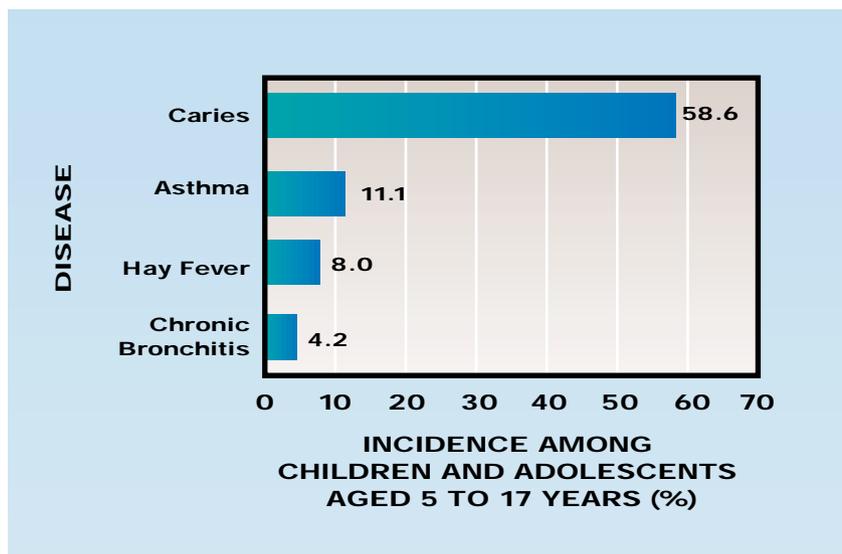


Figure 2. Most common diseases among 5- to 17-year-olds, 1996. Data for dental caries include decayed or filled primary and/or decayed, filled or missing permanent teeth. Data for asthma, chronic bronchitis and hay fever are based on reports of household respondents about the sampled 5- to 17-year-olds. Source: National Center for Health Statistics.³

African-American people. The numbers of untreated decayed teeth in poor people and non-poor people also show disparities³ (Figure 5). Finally, the report reveals that the common

The rapidly evolving knowledge of the genetic aspects of oral conditions and of the role of microbes and risk factors provides dental practitioners with an opportunity for earlier diagnosis and increasingly nonsurgical management.

symptom of pain is a sequela of many conditions affecting oral health, reducing quality of life and restricting daily functions.

The report's examination of trends in dental care visits explains some of the variations seen in oral health status, but more studies need to be done. Detailed data on the magnitude of oral, dental and craniofacial health are lacking. Data are not readily available to provide an accurate picture of specific racial and ethnic population groups and people with special needs. Such data would facilitate local, state and national efforts to design programs tailored to such populations. Given the racial, ethnic and age projections for the United States population in the coming decades, we can expect further changes in the nation's oral disease profile. We also can expect increasing numbers of patients frequenting our practices who have complex health conditions and are taking multiple medications.

What is the relationship between oral health and general health and well-

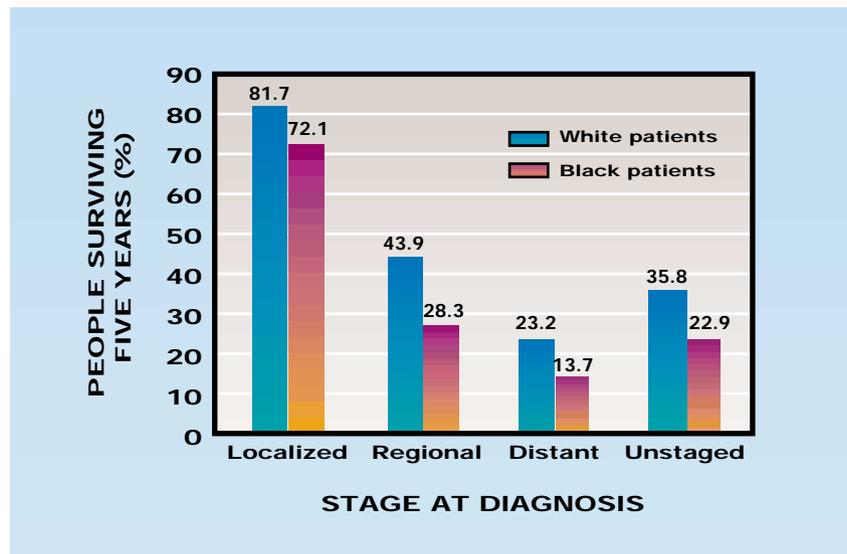


Figure 3. Five-year relative survival rates for blacks and whites with oral and pharyngeal cancers. Source: Ries and colleagues.⁴

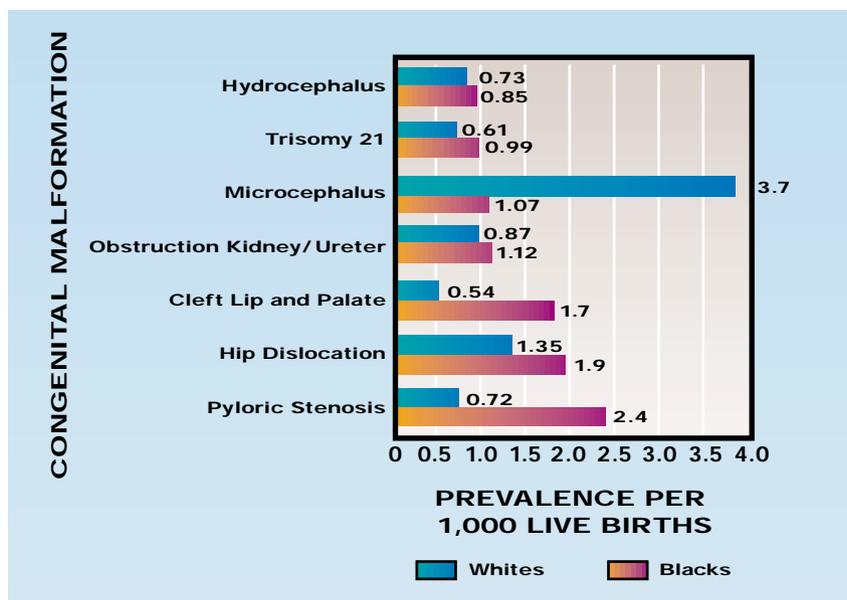


Figure 4. Most common congenital malformations among whites and blacks. Source: Schulman and colleagues.⁵

being? The answers to this question address the centerpiece of the report's charge. Oral health and general health are linked inextricably. The mouth reflects general health or disease status, and oral cells, tissues and fluids increasingly are being used as diagnostic tools. As dentists, we know that what we see in the mouth is a reflection of a patient's overall

health, medications, harmful habits and nutritional status. The report makes it clear that numerous systemic diseases and conditions, as well as many pharmaceutical therapies, have oral manifestations.

In addition, the report applies criteria for assessing the quality of the published scientific evidence regarding associations between oral health

and conditions and events such as diabetes, heart disease, stroke and adverse pregnancy outcomes. Further research is needed to determine whether these associations are causal or coincidental. These emerging findings should stimulate dentistry to consider how to maximize the delivery, referral and coordination of health care services with other health care providers so that patients benefit fully from evolving diagnostics and improved understanding of associations between oral health and other health conditions.

This portion of the report also demonstrates the relationship between oral health and quality of life. Oral health affects speech, eating, self-esteem, social interaction, education, career development and emotional state. The report notes that oral health clearly is related to well-being and quality of life when measured in functional, psychological and economic dimensions. Diet, nutrition, sleep and work all are affected by oral health status, and the overall societal burden that results from poor oral health is significant.

How is oral health promoted and maintained and how are oral diseases prevented? We in dentistry are fortunate to have an effective oral disease prevention and health promotion armamentarium for use by patients, dentists, other health care providers and communities in general. This is not the case for many other diseases that affect our population. The report emphasizes the importance of community water fluoridation as an effective, safe and ideal public health measure that ben-

efits all people regardless of age or economic stratum. It acknowledges, however, that most of the available preventive approaches are focused on dental caries and periodontal diseases and that further research is needed to develop measures to prevent other oral diseases and conditions.

Both the patient and the health care provider, particularly the dentist, play specific, critical roles in perpetuating oral health. For members of the public, as well as for health care providers not in dentistry, this interconnected web of responsibilities and roles is news. Of particular interest to dental care providers is the promise of risk assessment methods and new diagnostic tests that can be applied with individual patients. In addition, the report acknowledges the development of evidence-based care and clinical practice guidelines stimulated by the health professions. This development is predicated on systematic searches of the scientific literature and the application of standard review methods in a manner that minimizes bias. One can envision that all health professions eventually will have guidelines based on systematic reviews as an aid to clinical decision making. Patients and their needs always will serve as our ultimate guide.

The report describes the unique—and sometimes overlapping—contributions of the dental, medical and public health components of professional provision of oral health care. Some dentists, such as those who participate in lifestyle behavior modification programs, are involved in all three components. Estimates of

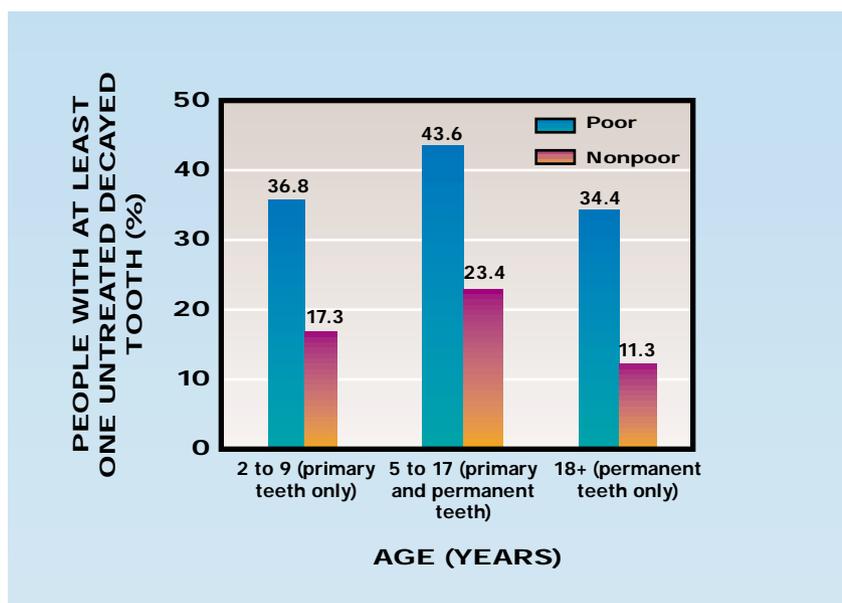


Figure 5. Percentages of poor people vs. nonpoor people with at least one untreated decayed tooth, by age. Source: National Center for Health Statistics.³

national expenditures for dental health care and financing and reimbursement mechanisms demonstrate that Americans do invest substantially in oral health care services, the costs of which totaled an estimated \$60 billion in 2000.⁶ However, this estimate does not include the many services rendered by other health care providers. The report also explores factors that affect the nation's capacity to improve oral health, such as the need for adding oral health to curricula for all health professions, the need for additional faculty members in dental schools and the need for the dental workforce to reflect the racial/ethnic and gender demographics of the U.S. population.

What are the needs and opportunities to enhance oral health? Determinants of health affect members of society across all life stages. The report discusses how a complex interplay of factors—individual biology, physical and socioeconomic

environment, personal behaviors and lifestyles, organization of health care services—bears on the level of oral health a person achieves throughout life. Dental professionals can be even more effective in their contribution to improvements in the oral health of Americans, particularly children, elderly people and people with disabilities. The report notes that access to care makes a difference in oral health status and that barriers to that access must be reduced and eliminated. This requires an informed public and knowledgeable policy-makers, integrated and culturally competent programs of care, and the resources to pay and reimburse for care.

The report notes that many factors need to be addressed to increase access to care. Although the availability of insurance increases that access, there are 108 million Americans who do not have any form of dental insurance coverage. For every person without med-

MAJOR FINDINGS OF 'ORAL HEALTH IN AMERICA: A REPORT OF THE SURGEON GENERAL.'

- Oral diseases and disorders in and of themselves affect health and well-being throughout life.
- Lifestyle behaviors that affect general health—such as tobacco use, excessive alcohol use and poor dietary choices—affect oral and craniofacial health as well.
- More information is needed to improve America's oral health and eliminate health disparities.
- Oral diseases and conditions are associated with

other health problems.

- Safe and effective measures exist to prevent the most common dental diseases: dental caries and periodontal diseases.
- There are profound and consequential oral health disparities within the U.S. population.
- The mouth reflects general health and well-being.
- Scientific research is key to further reduction in the burden of diseases and disorders that affect the face, mouth and teeth.

ical insurance, there are 2.7 people without dental insurance in this country.⁷ Federal and state assistance programs for selected oral health services exist, but they are limited in scope; furthermore, their reimbursement levels are low in comparison with the usual fees for care. Surely, reduction of these forms of barriers to care would have a profound effect on the numbers of people in a position to obtain needed dental care. In addition, the promise of science in creating new technologies for prevention, treatment, restoration and rehabilitation of oral and craniofacial disorders and conditions also may increase access to care.

The major findings of the report (see box, "Major Findings of 'Oral Health in America: A Report of the Surgeon General' ") send out resounding messages to patients, practitioners, program administrators and others concerned with the nation's health.

A FRAMEWORK FOR ACTION

Surgeon General Satcher states that "everyone has a role in improving and promoting oral health. Together we can work to broaden public understand-

ing of the importance of oral health and its relevance to general health and well-being, and to ensure that existing and future preventive, diagnostic and treatment measures for oral diseases and disorders are made available to all Americans."¹ He puts forth a framework for action, calling on everyone—individual people, health care providers, communities and policy-makers—to collaborate and take advantage of existing initiatives and develop a National Oral Health Plan to improve quality of life and eliminate health disparities.

Key components of this oral health plan require the continuation and expansion of public/private partnerships to improve the oral health of those who still suffer disproportionately from oral diseases, as well as to maintain the momentum of the gains already seen. In addition, components of the plan are needed to do the following:

- change public policy-makers' and health care providers' perceptions about oral health and disease so that oral health becomes an accepted component of general health;
- accelerate the building and application of science- and

evidence-based care to improve oral health;

- build an effective health care infrastructure that meets the oral health needs of all Americans and integrates oral health care effectively into overall health care;
- remove known barriers between people and the oral health services they need.

THE REPORT AS A SPRINGBOARD

The report stays true to its charge, highlighting the critical and extensive relationships between oral health and general health and between oral health and lifelong well-being. The media flurry at the time of the report's release shows the breadth of the national, state and local interest. At that time, both Surgeon General Satcher and Secretary Shalala emphasized the importance of oral health and warned the American people that ignoring oral health problems can be devastating. Many communities took the opportunity of the report's release to highlight their local and state oral health issues and programs.

In the press release, Secretary Shalala stated that the surgeon general's report on oral health "provides important reminders that oral health means more than sound teeth. Oral health is integral to overall health. Furthermore, safe and effective disease prevention measures exist that everyone can adopt to improve oral health and prevent disease. ... To ignore oral health problems can lead to needless pain and suffering, complications that can devastate well-being, and financial and social costs that significantly diminish quality of life and

FOR FURTHER INFORMATION

The World Wide Web offers a variety of sites containing information related to "Oral Health in America: A Report of the Surgeon General."

FULL TEXT AND SUMMARY

The full report and the executive summary can be found at "www.nidcr.nih.gov/sgr/oral-health.htm".

U.S. SURGEON GENERAL'S OFFICE

The official site of the U.S. surgeon general can be found at "www.surgeongeneral.gov/sgooffice.htm".

PRESS RELEASE

The press release about the report can be found at "www.nidcr.nih.gov/news/052500.htm".

HEALTHY PEOPLE 2010

The National Oral Health Promotion and Disease Prevention objectives referred to in the report can be found at "www.health.gov/healthypeople/".

CENTERS FOR DISEASE CONTROL AND PREVENTION

Fact sheets on the report and related items can be found at "www.cdc.gov/nccdphp/oh/sgr2000-fs1.htm".

burden American society."⁸

Surgeon General Satcher stated in the press release that "serious oral disorders may undermine self-image and self-esteem, discourage normal social interaction, and lead to chronic stress and depression as well as incurring great financial cost. They may also interfere with vital functions such as breathing, eating, swallowing and speaking. The burden of disease restricts activities in school, work, and home, and often significantly diminishes

the quality of life."⁸

The major messages of the report are well-known by the dental profession. However, this is the first time that a national leader has given such widespread visibility to the myriad of issues surrounding oral health. The dental profession can provide national leadership in changing the perceptions of the public, policy-makers and other health care providers about oral health and disease. As dental professionals, we can make sure that oral health is accepted as a critical component of general health. The report's findings provide the dental profession with the opportunity to inform and educate patients, other health care providers, the community and professional organizations of the existing methods we all can implement to promote and perpetuate our oral, dental and craniofacial health from childhood to old age. We need to inform others of the work that has been done and is under way. Dentistry has a proud tradition of preventing dental caries and periodontal disease, tobacco use and sports injuries, among others. But not everyone is familiar with these efforts. It is time that this story is told to those who may not be aware of it—and the best tellers of any story are those who have lived it.

The report gives the dental profession a "heads-up" in preparing for the challenges of a rapidly changing patient pool. The projected trends in the nation's demographics will present us with a different landscape of diseases and an older patient profile. As the knowledge base for oral health continues to evolve, the dental



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profession faces the need to stay informed, as well as to critically evaluate emerging technologies and ensure their timely incorporation into practice. The extensive array of conditions that affect the oral, dental and craniofacial complex also provides a challenge to all health care providers. Patients with conditions such as oral cancer, Sjögren's syndrome and cleft lip and/or palate require care from a multidisciplinary team of health care providers. Dental professionals need to ensure that they participate in patients' overall care regardless of patients' care setting, patients' route of entry into care or the reimbursement for services.

Finally, the dental profession must take the lead in ensuring that the country's health infrastructure is robust enough to meet projected oral health needs. We must recruit a diverse dental practice work force and take steps to ensure the expertise needed in dental school education, research and public health practice.

CONCLUSION

There is no question that dentistry is uniquely positioned to lead the nation in further improvements of oral health and to build on the many findings highlighted in the surgeon general's report on America's oral health. The report has proved to be a visible and far-reaching document. The full report contains much highly detailed information and provides a platform for future initiatives regarding oral health in America. We need to use it as part of the armamentarium to further enhance dentistry as a leadership profession in health

and ensure that oral health and dentistry are full partners in America's health agenda. ■

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