A United Voice for Oral Health

Final Report and Recommendations from the Michigan Access to Oral Health Care Work Group

July 2010

Prepared by
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A Message from the Chair

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In the last year, our health care has been discussed, debated, and, finally, changed across Michigan and the nation. Sadly, oral health's essential link to our overall health is all too frequently missing from this discussion. The need for oral health care is great in Michigan. Our awareness of this need is low. The responsibility for improving Michigan's oral health rests with all of us. Dentists, physicians, dental hygienists, nurses, dental assistants, insurers, public policy makers, community health organizations, parents, and patients all have a shared role to play in assuring meaningful access to a dental home for people in Michigan.

The ability to obtain dental care is unique to each Michigan resident. We must recognize each individual's unique barriers to oral health care. These barriers can include one's perceived need for care, health behaviors, cultural preferences, language, financial circumstances, and special needs. Michigan residents must value oral health care. We must recognize its importance and understand that good oral health is desirable and serves to foster better overall health. We must transform barriers into opportunities.

> ***"The time is always right to do what is right."***
>
> —Martin Luther King, Jr.

Unlike so many of our larger societal problems, the access to oral health care problem can be solved. By working together with modest resources in a sustainable and planned manner, we can improve oral health care for children and adults in Michigan. We know what works. There are proven programs of demonstrated effectiveness. We just need the political and personal will to reach for the solutions.

Michigan spends $1.8 billion annually on prisoners. Why are we not able to find a way to spend a fraction of that sum on dental care for our children? Every child deserves the chance to succeed and not be burdened by unnecessary pain and dental disease that affects his or her ability to thrive. Why are we not able to maintain a dental safety net of basic Medicaid coverage for adults instead of burdening our emergency rooms with people suffering from unmet dental needs, which too often lead to severe and costly medical complications?

It is time for Michigan to step up. Join us so that we might reach this vision for better oral health across Michigan. The benefits will be great. The time is right.

Norm Palm, D.D.S, M.S., Chairperson
Michigan Access to Oral Health Care Work Group

CONTENTS

EXECUTIVE SUMMARY

A Call for Action

Oral disease is almost entirely preventable, yet is among the most common ailments in the U.S. population. It is by far the most common chronic childhood disease among children in the United States, five times more prevalent than asthma (Crall 2006). An estimated 80 percent of adults have some form of periodontal (gum) disease (DHHS, January 2006).

The inequities that exist in systemic health and health care are also prevalent in oral health. Disadvantaged populations—those with low incomes and less education as well as some racial and ethnic minorities—experience higher levels of disease and lower levels of care than the general population.

As new objectives for improving oral health care in the coming decade are developed for Healthy People 2020, many of those identified for Healthy People 2010 remain unmet. To reach 2020 goals and to truly improve the oral health of Michigan's population will require a sustained effort on the part of oral health providers, insurers, the medical community, policymakers, state agencies, and residents alike.

> *This report is a call to action. Oral health is essential to the well-being of the children, families, and adults of Michigan. We must forego half-hearted and short-sighted policies that compromise the health of too many state residents. The work group speaks firmly with one voice:* ***Oral health care is necessary and cost-effective health care.*** *We must do more—much more—to assure that residents of our state have access to the oral health care they need and deserve.*

Michigan Access to Oral Health Care Work Group

In June 2009, the Michigan Dental Association (MDA) convened the 30-member Michigan Access to Oral Health Care Work Group to identify specific barriers to care in Michigan and to develop recommendations for improving access to care. A list of the work group members is provided in the Appendix.

The work group's charge—to deliberate and reach consensus on an assessment of access to oral health and offer compelling recommendations to improve access—was carried out over several months. During that time the work group put considerable time and energy into identifying its priorities for access to oral health care, reviewing best and promising practices, and identifying and voting on a set of recommendations on which the group agreed they could speak with a united voice.

The Final Report of the Work Group

The full report of the Michigan Access to Oral Health Care Work Group describes pressing issues in access to oral health care, including barriers to access, consequences of oral disease, and features of the oral health system in Michigan. It also highlights the oral health status of Michigan residents and disparities that exist with regard to access to oral health care for certain subsets of the population. Current programs aimed at improving access to oral health care, including some promising practices, are also described.

The members of the work group considered all of the information contained in the report and relied on their own experience and expertise to identify the group's priorities and propose and select its recommendations, which comprise the final section of the report.

Recommendations

The recommendations of the Michigan Access to Oral Health Care Work Group are organized within the priorities the members identified. The work group also identified a focus on children and families as a priority; however, because children and families are reached through actions in each of the other five priority areas, recommendations that are specific to this population are highlighted with this symbol within each of the other categories. Approximately half of all of the recommendations relate directly to this priority population.

To reach its final set of 17 recommendations, work group members voted to put forth the recommendations they supported most passionately and on which they believed that work group members could "speak with one voice." Thus, to be included in this report, a recommendation had to receive the support of at least two-thirds of the work group members in attendance. While the recommendations are numbered for ease of reference, the numbering does not reflect any order of importance; implementation of all of these recommendations is essential to improving access to oral health care in Michigan.

Funding and Payment for Oral Health Care

1. Identify new, dedicated sources of revenue to expand the Healthy Kids Dental program to all children and adults who would otherwise lack public dental coverage.

2. Advocate the inclusion of dental care as a mandatory service for Medicaid coverage.

3. Mandate an oral health division in the Michigan Department of Community Health.

Prevention and Early Diagnosis and Treatment

4. Include oral screening in Michigan Quality Improvement Consortium (MQIC) guidelines for physicians.

5. Educate and train physicians, nurses, physician assistants, and nurse practitioners to do oral screenings as defined by the American Academy of Pediatrics (AAP) for children and the American Academy of Family Physicians (AAFP) for adults; educate parents about oral health and the importance of having a dental home for the family.

6. Support and facilitate expansion of the American Academy of Pediatric Dentistry (AAPD)/Head Start dental home initiative, a partnership to develop networks of dentists to provide access to dental homes for children in Head Start programs.

7. Support the state's Community Water Fluoridation Advisory Committee in its efforts to educate and promote the value of community water fluoridation to professionals and the public.

Partnerships between the Medical and Oral Health Communities

8. Develop an oral health curriculum for health professional education and residency programs, as well as continuing education on oral health for all health care professionals.

9. Clarify, through guidelines issued by state health professions boards and professional associations and societies, physician responsibilities in oral health.

10. Review current state law to identify potential opportunities for interdisciplinary management of oral health care among all health professionals.

11. Support and facilitate the expansion of the Points of Light program, which encourages and trains nurses and physicians to apply fluoride varnish and to link children and families to a dental home.

New Models of Care and Workforce Scope of Practice

12. Authorize dental assistants to assist dental hygienists in the application of dental sealants in PA 161 programs and in health departments, schools, and community health centers.

13. Establish model volunteer dental programs, such as the Calhoun Dental Access Initiative, VINA, and others.

14 Study the effects of "alternative" dental providers, including PA 161 hygienists, on the provision of oral health care and the status of oral health in Michigan.

Education on the Value of Oral Health Care

15 Educate pregnant women and parents about the importance of their own oral health habits as a model for their children.

16 Educate the public and policymakers on the serious consequences (including death) related to lack of access to oral health care, demonstrating the link between systemic and oral health.

17 Implement a concentrated social marketing campaign to raise awareness of the importance of oral health care. Utilize tools such as Facebook, YouTube, and Twitter to reach youth and young adults.

A CALL FOR ACTION

Oral disease is almost entirely preventable, yet is among the most common ailments in the U.S. population. It is by far the most common chronic childhood disease among children in the United States, five times more prevalent than asthma (Crall 2006). Untreated oral disease can affect children's ability to concentrate and learn; their speech development; and their self-esteem. Adults suffer similarly. An estimated 80 percent of adults have some form of periodontal (gum) disease (DHHS, January 2006). Pain can cause difficulty chewing and swallowing, and adults with poor oral health are often less employable due to visible tooth decay or the loss of permanent teeth.

The inequities that exist in systemic health and health care are also prevalent in oral health. Disadvantaged populations (i.e., those with low incomes and less education as well as some racial and ethnic minorities) experience higher levels of disease and lower levels of care than the general population. While strategies for addressing these disparities, several of which are described in this report, have been tried, the disparities remain. Financial, structural, and cultural barriers all need to be addressed to create a comprehensive, lasting solution.

Preventive care for Michigan's residents is a critical part of this solution. Several prevention measures implemented in Michigan and across the United States (such as community water fluoridation and dental sealants) have successfully reduced oral disease among the populations they serve and have also reduced associated oral health care costs. Further, many oral health providers and others believe the establishment of a dental home for all residents by age 1 is essential to preventing oral disease. According to the American Academy of Pediatric Dentistry, a dental home is "the ongoing relationship between the dentist and patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way" (AAPD, October 2009).

The release of the report, *Oral Health in America,* by the U.S. Surgeon General in 2000 led to increased awareness among the American public of the importance of oral health, its links with systemic health, and the disparities that exist in access to oral health care. Based in part on the information included in the report, several objectives for improving oral health were set in Healthy People 2010, a national health promotion and disease prevention initiative. As new objectives for improving oral health care in the coming decade are developed for Healthy People 2020, many of those identified for 2010 remain unachieved. To be sure, progress has been made. But to reach 2020 goals and to truly improve the oral health of our state's residents will require a sustained effort on the part of oral health providers, the medical community, policymakers, state agencies, and residents alike.

This report is a call to action. Oral health is essential to the well-being of the children, families, and adults of Michigan. We must forego half-hearted and short-sighted policies that compromise the health of too many state residents. The work group speaks firmly with one voice: Oral health care is necessary and cost-effective health care. We must do more—much more—to assure that residents of our state have access to the oral health care they need and deserve.

Michigan Access to Oral Health Care Work Group

In June 2009, the Michigan Dental Association (MDA) convened the 30-member Michigan Access to Oral Health Care Work Group to identify specific barriers to care in Michigan and to develop recommendations for improving access to care. Leaders within the MDA thoughtfully selected the members of the work group to be representative of wide-ranging interests. A list of the work group members is provided in the Appendix.

The Charge

From the beginning, the work group's charge was clearly laid out:

> The Michigan Access to Oral Health Care Work Group will meet over eight to nine months to deliberate and reach consensus on an assessment of oral health access in Michigan and offer compelling recommendations to improve access to oral health care for the many Michigan adults and children who are not getting necessary dental care.
>
> The work group report will be the definitive study of access to oral health care in Michigan and the opportunities to improve oral health. It will be distributed widely not only to those who work in oral health every day, but also to policy leaders in state government, the private health care sector, and business, many of whom do not fully appreciate the value of oral health and the cost of the inadequate access that too many Michigan residents face. It will reflect the collective wisdom of committed and experienced leaders in oral health. It will call on stakeholders to share responsibility for advancing access to oral health care and oral health in our state.

This report represents the fulfillment of the work group's charge.

The Process

The work group met nearly every month from June 2009 through May 2010 to accomplish its charge. (It should be noted that the work group's activities were largely completed prior to the passage of federal health care reform.) The group was chaired by Dr. Norm Palm and facilitated by Public Sector Consultants. The agenda for each meeting was designed to move the work group ever closer to developing recommendations for improving access to oral health care in Michigan.

Identifying Priorities—Early meetings were spent discussing data and other information from research on access to oral health care to identify priority needs and populations. At the end of these discussions, work group members voted to select their top priorities for oral health care, which are:

- Funding and payment for oral health care
- Education on the value of oral health care
- Partnerships between the medical community and oral health care providers
- New models of care and workforce scope of practice
- Prevention and early diagnosis and treatment
- Focus on children and families

Two overarching considerations guided the group's work: (1) meeting the needs of the uninsured and (2) ensuring that recommendations stemming from the priorities have the support of a large majority of members such that they can speak with one voice on their support for the recommendations included in the final report.

Reviewing Best and Promising Practices—To help the work group formulate recommendations and gain an understanding of current efforts to improve access to oral health care in Michigan, several work group members and guest speakers were invited to discuss their oral health projects and programs. These presentations are described in the section of this report on promising practices.

Identifying and Voting on Recommendations—Finally, the work group members proposed and finalized a set of recommendations for improving access to oral health care in Michigan. The final set of recommendations can be found at the end of the report. To be included in this report, recommendations had to receive the support of at least two-thirds of work group members present at the meeting.

Organization of This Report

This report describes pressing issues in access to oral health care, including barriers to access, consequences of oral disease, and features of the oral health system in Michigan. It also highlights the oral health status of Michigan residents and disparities that exist with regard to access to oral health care for certain subsets of the population. Current programs aimed at improving access to oral health care, including some promising practices, are also described.

The members of the Michigan Access to Oral Health Care Work Group considered all of the information contained in this report and relied on their own experience and expertise to identify the group's priorities and propose and select its recommendations, which comprise the final section of the report.

BARRIERS TO ACCESS

While oral health care is integral to our general well-being, it is not readily available or accessible to everyone who needs it. Barriers, be they financial, structural, or cultural, prevent people from accessing oral health care. Due to these barriers (and potentially others), the apparent demand for oral health care does not reflect the true need.

Financial Barriers

Dental care can be unaffordable for people without dental insurance, and even for many who do have dental insurance. Financial considerations are the reason cited most often for lack of access to oral health care. About one third of adults in the United States report having skipped dental care or checkups in the past year because of the cost (Kaiser Family Foundation 2009). Other costs, including transportation, lost wages, and child care, may also influence a person's ability to visit an oral health care provider.

Structural Barriers

Even when insurance is available to help defray the costs of oral health care, oral health care providers may not be available to provide necessary care. This is a particular challenge for patients with special health care needs because many dentists are uncomfortable or unequipped to work with these patients.

Often, structural and financial barriers converge. Low-income families who are covered by Medicaid may be unable to find a dentist nearby who accepts Medicaid. One of the primary reasons that dentists give for not accepting Medicaid is its very low reimbursement rate coupled with a high administrative burden. Dentists have also been critical of the procedures Medicaid covers or, more specifically, the procedures it does not cover. For example, a patient may best be served by the fabrication of a partial denture to repair a bad tooth, but Medicaid covers removal of the bad tooth and surrounding teeth so a full denture can be provided. Some dentists and hygienists say they face an ethical dilemma by providing care they believe is substandard.

The safety net for low-income adults on Medicaid is extremely limited. For Michigan adults, Medicaid only covers emergency dental services, leaving these individuals few options for obtaining routine oral health care. Providers for low-income individuals without dental insurance, such as community health centers, often have lengthy waiting lists for appointments.

Cultural Barriers

One of the greatest barriers to accessing oral health care is a person's culture or environment, which significantly influences behavior. Culture can affect diet, oral hygiene habits, and perceptions of the seriousness of tooth decay (Fisher-Owens et al., September 2007). Among immigrants in the United States, the length of acculturation has been found to have some influence on use of dental services (Fisher-Owens et al., September 2007). As described later in this report, rates of tooth decay and tooth loss as well as previous year dental visits vary by race and ethnicity. Based on a review of health disparities in the Veterans Affairs Health System, Tinanoff and Reisine suggest that "underlying problems are, in part, cultural differences in how health care providers interact with ethnic minority patients, levels of patient trust, and how patients think about the etiology, course, and outcomes of disease, and access to social resources." (2009)

The influence of culture on use of dental services and oral health outcomes means that even when income is not an issue and services are available, learned behaviors can determine health-seeking behavior. Parents who visit the dentist are more likely to take their children for dental visits. Even after adjusting for factors such as presence of dental insurance and sociodemographic characteristics that have been found to influence the likelihood of having a dental visit in the previous year, parental use of dental services is a strong predictor of child dental visits (Isong et al. 2010). Strategies for improving access to oral health care must not be limited to addressing financial and structural barriers, but must also consider underlying individual and social factors that may limit access to care.

CONSEQUENCES OF UNTREATED ORAL DISEASE

In addition to pain and discomfort, untreated oral disease can have consequences for adults as well as children. Some of the economic, medical, and social consequences are described below.

Economic Consequences

The economic consequences of untreated oral disease stem from limited productivity among workers and the sheer cost of treating oral disease that could have been prevented.

Children with oral disease miss an estimated 51 million hours of school each year (DHHS 2000). Early experience with severe dental problems can have lasting effects through adulthood, limiting productive employment. Adults lose an estimated 164 million hours of work each year due to oral health problems or dental visits (Blumenshine et al. 2008).

It is widely accepted that prevention saves money. For a number of preventive dental services, the research bears this out. The age at which children have their first dental visit is inversely proportional to their total dental costs; that is, the earlier a child visits the dentist, the lower his or her total dental costs will be (Lee et al. 2006). The application of dental sealants (described later in this report) in children five to seven years old has been shown to reduce their need for and, therefore, the cost of restorative care (Dasanayake et al. 2003). Fluoride varnish, which protects teeth from enamel erosion, has been demonstrated as a cost-effective prevention measure in low-income children (Quinonez et al. 2006).

Between 2010 and 2019, annual spending on dental services in the United States is expected to climb from $107.9 billion to $180.4 billion, a 67 percent increase (DHHS CMS 2009). Included in these expenses are treatments such as root canals that might have been unnecessary with increased access to and use of preventive dental services. Programs that are designed to reach children at a young age can stem the tide of growing dental costs. For example, Healthy Kids Dental, a program that has successfully increased access to oral health care for children enrolled in Medicaid, saw a decrease in the dental costs of its enrollees from an annual average of $345 per user in 2001 to $299 per user in 2007 (Eklund, April 28, 2008).

Unabated progress of oral disease can not only cause more extensive damage to the oral cavity, but can lead to medical problems in the rest of the body (see Medical Consequences below). This increases the overall cost of health care, when preventive care or earlier intervention could have remedied the problem.

Medical Consequences

While oral health and systemic health are often treated through separate systems of care, a growing body of evidence is demonstrating a clear link between the two. Perhaps the most obvious connection is between the health of our mouth and our diet. When our mouth and teeth are healthy, we are better able to eat nutritious foods. Mouth pain can often make it difficult to chew firmer foods like fresh fruits and vegetables.

Increasingly, research is also demonstrating direct links between oral disease and other medical conditions such as diabetes, heart disease, stroke, and bacterial pneumonia (Barnett 2006). Periodontal disease in pregnant women has been linked to increased risk for pre-term births, and oral bacteria that cause dental decay can easily spread from parents to their young children. Infections in the mouth can also enter the bloodstream and spread to other parts of the body, with sometimes fatal outcomes.

Partnerships and improved communication between medical and dental professionals can help to ensure that physicians and other health care professionals are aware of these connections, engage in screening for oral disease, and make referrals when appropriate.

Social Consequences

People with oral disease can suffer socially as well as physically. Severe oral disease can negatively impact a person's appearance, which can lower self-esteem and make it especially difficult to find a job. Adults whose oral health problems have become visible with obvious decay or tooth loss are less employable than those with healthy-looking teeth. Children with poor dental health are more likely to perform poorly in school than their peers who are healthy (Blumenshine et al. 2008). New research is showing a connection between poor oral health and social problems including stress, anxiety, and loneliness (Barnett 2006).

MICHIGAN'S ORAL HEALTH CARE SYSTEM

Oral Health Care Workforce

A key factor in access to oral health care is the availability of oral health care providers. As of January 2010, 7,540 dentists and 9,986 hygienists were licensed in the state of Michigan. Surveys of licensed dentists and hygienists suggest that approximately 83 percent and 75 percent, respectively, are actively practicing in the state of Michigan (PSC, January 2010a and b).

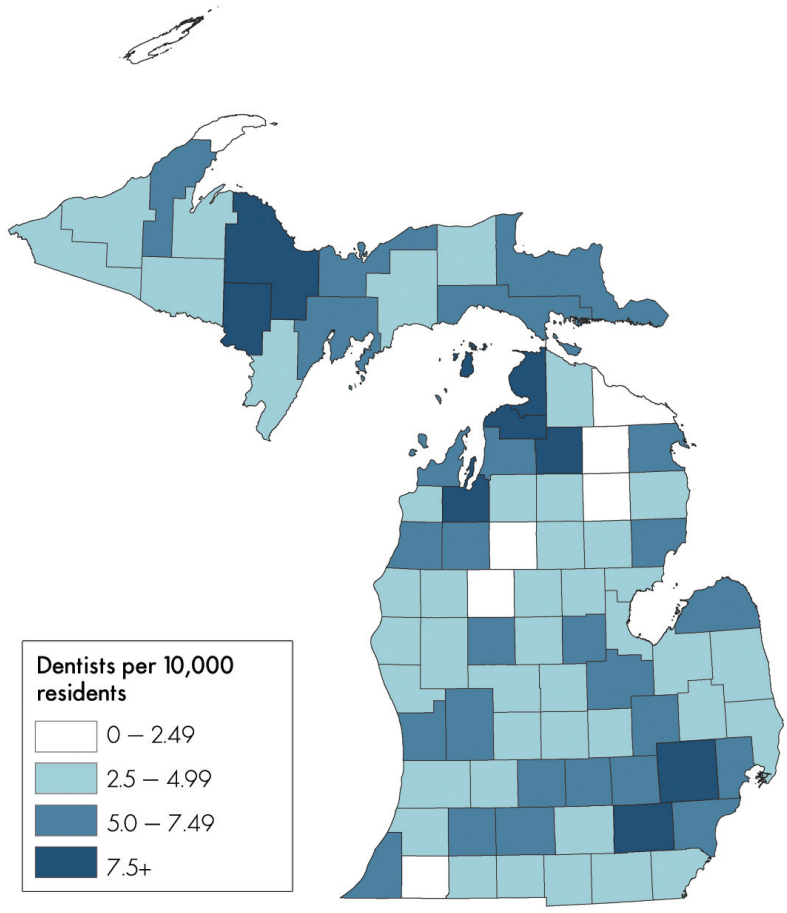
Access to oral health care providers is affected by both the geographic distribution of dentists and the number of dentists in a given area who will see patients who are uninsured or covered by Medicaid. A dental health profession shortage area (HPSA) is identified when there are too few dentists for either the general population or for a specific sub-population such as people with low incomes.

The geographic distribution of dentists is uneven across the state (see Exhibit 1). While some areas have large numbers of dentists, there are 14 counties in Michigan with fewer than five dentists (MDCH, February 2010a). One county has no dentists. Sixty of Michigan's 83 counties have either a partial or full-county geographic or population group dental health care HPSA designation.

The vast majority of dental HPSA designations are based on limited access to dentists for low-income populations. Six counties in Michigan do not have a single dentist who is enrolled in Medicaid. Slightly more than one-fifth (22 percent) of dentists licensed by Michigan and residing in the state had at least one claim for Medicaid in 2008 (CDC 2008). Only 10 percent can be considered critical access providers, that is, having Medicaid claims totaling $10,000 or more in 2008 (CDC 2008). Upon graduation, dental students very often have large student loans to repay, which can affect both where they choose to practice and whether they accept patients covered by Medicaid (see the sections on oral health settings and oral health coverage for further discussion of the acceptance of Medicaid among dentists).

Minority populations may have limited access to care due to the low number of dentists who are members of a minority group. Healthy People 2010 identified increasing the number of dental professionals from under-represented racial and ethnic groups as an objective for improving access to oral health care. In Michigan, approximately 90 percent of dentists are Caucasian; 3 percent each are African American or Asian; and only 1 percent each are American Indian/Alaskan Native or Hispanic (PSC, January 2010a). Among dental hygienists, 94 percent are Caucasian, and 1 percent each are American Indian/Alaskan Native, Asian, African American, or Hispanic (PSC, January 2010b). These figures do not reflect the state's racial and ethnic breakdown: 80 percent Caucasian,

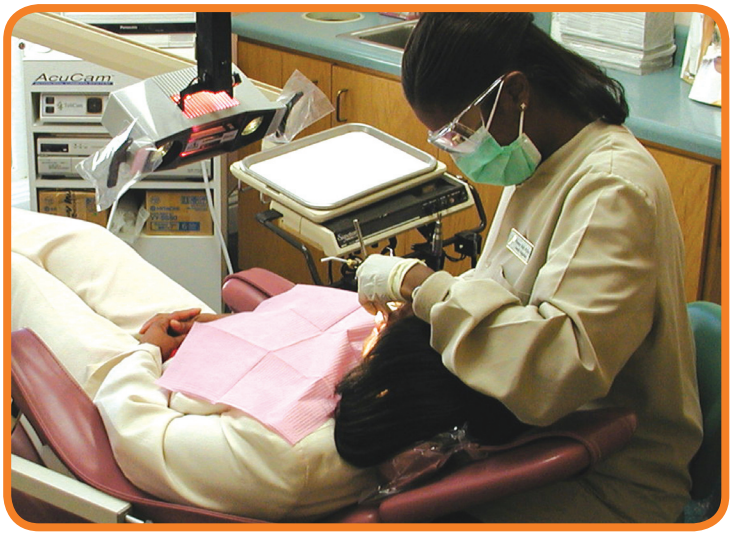
EXHIBIT 1. Distribution of Dentists in Michigan per 10,000 Residents, by County, 2010



SOURCES: U.S. Census Bureau, March 2009; MDCH, February 2010a.
NOTE: Number per 10,000 residents calculated by PSC.

14 percent African American, 4 percent Hispanic or Latino, 2 percent Asian, and 1 percent American Indian/ Alaskan Native.

Finally, the aging of dental professionals could have a potential impact on the future availability of oral health care. About half of currently active dentists are aged 55 or older (PSC, January 2010a), and just under half of all dentists currently practicing in Michigan say they only plan to practice dentistry for one to 10 more years (PSC, January 2010a). Although active dental hygienists are younger by comparison, with only 20 percent aged 55 or older, 40 percent of currently practicing hygienists in Michigan plan to continue working in the field for only one to 10 more years (PSC, January 2010b).



Currently, a mid-level dental provider, similar to a physician assistant or nurse practitioner in medicine, does not exist in Michigan. And, to date, no studies have been conducted to demonstrate whether the use of mid-level or "alternative" dental providers improves access to care for underserved populations. Hygienists, however, have been authorized through Public Act 161 of 2005 to provide preventive care, including the application of sealants, without a prior exam performed by a dentist, but still under the supervision of a dentist. Data collection is under way to determine the efficacy of hygienists practicing under PA 161. Studies of mid-level and alternative dental providers in other states would provide useful information to states as they decide whether to authorize an additional oral health provider.

While not traditionally considered members of the *oral* health care workforce, medical providers have a role in screening for oral disease and determining when a referral to a dentist is needed, particularly for young children. In Michigan, primary care medical providers can receive reimbursement for the provision of early preventive dental care to young children. Partnerships between dentists and pediatricians are increasing, and efforts are under way in the state to increase the provision of oral health care among pediatricians.

Oral Health Care Settings

In Michigan, oral health services are provided in a variety of settings. Having private dental insurance better enables the vast majority of residents to seek care from dentists in private practice settings. Access to private practice dentists is limited, however, for patients covered by public insurance and the uninsured. Alternative settings for the provision of oral health care are available for these patients, but access can still prove challenging. In addition, many oral health professionals are concerned that some alternative settings do not offer a comprehensive range of services and rarely lead to the establishment of an ongoing relationship between the patient and a dentist (Schneider, Rossetti, and Crall, October 2007). In other words, these settings do not provide a dental home, which the ADA defines as "the provision of comprehensive oral health care in an ongoing relationship between the dentist (the primary dental care provider) and the patient beginning no later than age one" (ADA, October 2005).

Private Practice

More than nine out of 10 licensed dentists practicing in Michigan are working in private practice. Approximately 66 percent work in a private solo practice, and 28 percent work primarily in a group practice (PSC, January 2010a). Many private practice dentists do not treat Medicaid-enrolled patients, citing low reimbursement rates, high administrative burden, and patient issues such as broken appointments. Among those who do treat Medicaid patients, nearly half report that the most significant administrative barrier is delayed reimbursement (Embree and Sohn 2009).

Nearly nine out of 10 (89 percent) private practice dentists in Michigan do report providing some level of unpaid care, however. About half (49 percent) report providing up to 20 hours of unreimbursed or unpaid care in a year (PSC, January 2010a). Another 40 percent

say they provide 21 or more hours of volunteer care in a year. Nationally, it is estimated that the average dentist provides over $34,000 in charity or reduced fee care annually (Gehshan, November 2009).

Community Health Centers

In 2008, Michigan had 29 federally supported community health centers (both federally qualified health centers [FQHCs] and FQHC look-alikes), with a total of 184 delivery sites. Community health centers (CHCs) offer services to low-income, uninsured, and Medicaid patients in underserved areas of the state. Currently, 27 CHCs at 57 delivery sites provide dental services to their patients. The National Association of Community Health Centers reports that in Michigan in 2008, CHCs employed 74 full-time dentists and 58 full-time dental hygienists who provided care to more than 200,000 patients. The types of dental services offered vary from clinic to clinic, ranging from cleanings to restorations.

Because FQHCs are mandated to provide care to anyone who comes to them for services, regardless of their ability to pay, they are a primary source of care for the uninsured. FQHCs in many cases depend on reimbursement for services provided to Medicaid patients to cover the cost of providing care for the uninsured. To assist FQHCs in covering the costs of providing services to the uninsured, they receive enhanced Medicaid reimbursement, which is greater than that received by private practice dentists and medical providers who treat patients covered by Medicaid. FQHCs are also eligible for various federal grants to support the purchase of equipment and the operation of facilities.

Local Health Departments

Michigan currently has 45 local health departments that provide public health services to all 83 counties. Nineteen of these health departments currently provide dental services. In 2006, Michigan Community Dental Clinics (MCDC), a nonprofit management services corporation, expanded its very successful Dental Clinics North model statewide to help local health departments create sustainable dental clinics. MCDC helps manage 17 dental clinics statewide.

Mobile Dental Clinics

Mobile dental clinics are best known for providing pediatric dentistry to low-income families, often in school-based programs. In addition to dentistry for children, these traveling clinics also serve indigent and at-risk populations. Services offered by most mobile dentistry organizations include oral health assessments, cleanings, sealant applications, x-rays, extractions, and some restorative work. During visits to schools, mobile dentists are able to meet some of the needs of uninsured children and those covered by Medicaid, who are less likely to visit a dentist elsewhere. These dentists also serve the home-bound disabled and persons in nursing homes and assisted living facilities.

While mobile dental clinics may provide some restorative work, they are primarily considered to be providers of diagnostic and preventive services. A study of Medicaid-enrolled children in Wayne County, Michigan, found that children treated by providers who billed Medicaid exclusively for diagnostic and preventive services were significantly less likely to receive restorative and/or surgical services compared to children who were treated by dentists who provided a comprehensive mix of dental services (Taichman et al. 2009).

Schools

School-based and school-linked Child and Adolescent Health Centers, which are funded through state school and community health appropriations, operate 59 *clinical* health centers across the state (MDCH, May 2010). These centers provide access to health care services for many children who are uninsured or covered by Medicaid. All clinical health centers include oral health assessment and referral among the services they provide; 11 of the 59 clinical health centers offer dental services on site (MDCH, May 2010). Unfortunately, when care is not provided on site, it can be difficult to ensure that children who are referred to a dentist actually obtain the needed care.

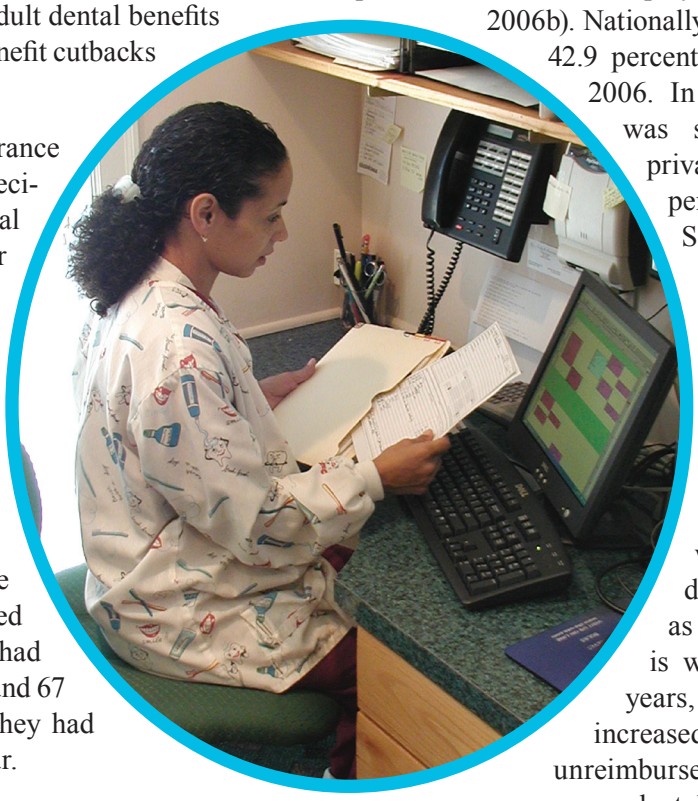
Oral Health Coverage

Almost 67 percent of adults and 77 percent of children had public or private dental insurance in Michigan in 2006.[1] While the breakdown of public versus private insurance is not available for Michigan, nationwide, 54 percent of people had private dental insurance and 12

[1] Public Sector Consultants analysis of data on the rates of dental insurance among those with and without health insurance from MPHI CRHOP, August 2006a.

percent had public dental coverage in 2004 (Manski and Brown 2007).

The majority of people in Michigan who have dental insurance also have health insurance. Given that the majority of people with health insurance in Michigan get their insurance through their employer (MPHI CRHOP, August 2006a), it is reasonable to assume that the majority of persons with dental coverage also receive it through their employer. Other dental coverage comes primarily from public programs, including Medicaid and county-based plans. Significantly more children obtain dental insurance through government programs than do adults. It is very likely that the number of people who have dental insurance has dropped with the recent economic recession, the elimination of adult dental benefits under Medicaid, and severe benefit cutbacks by employers of all sizes.



The presence of dental insurance significantly affects people's decisions and ability to obtain dental services. The Count Your Smiles survey, conducted by the Michigan Department of Community Health (MDCH) during the 2005–2006 school year, found that 90 percent of children with private insurance had seen a dentist during the previous year. Children with public dental insurance and those who were uninsured were much less likely to have had a dental visit, with 80 percent and 67 percent, respectively, saying they had visited a dentist in the past year.

Children who are uninsured or have public dental insurance are also more likely than children with private insurance to report problems with obtaining dental care. Approximately 25 percent of uninsured children had difficulties obtaining dental care according to the Count Your Smiles survey. The same survey indicated that 13 percent of publicly insured children had difficulty obtaining dental care. In contrast, only about 5 percent of those with private insurance reported having any difficulty obtaining dental services (MDCH, August 2006).

Lack of insurance affects adults as well. A survey of adults in the Detroit tricounty area (Macomb, Oakland, and Wayne Counties) found that people with dental insurance (not including Medicaid) were significantly more likely to report having regular dental visits than those without dental insurance (Sohn and Ismail 2005). Another study demonstrated that "people without coverage at all income levels were less likely to report a dental visit than were people with coverage (Manski, Macek, and Moeller 2002)."

Private Insurance

In 2006, just over half of Michigan employers reported that they offered dental insurance to full-time employees; additionally, 45 percent offered dental insurance to dependents of full-time employees (MPHI CRHOP, August 2006b). Nationally, private insurance paid for 42.9 percent of dental expenditures in 2006. In Michigan, the proportion was significantly higher, with private insurers paying for 50.4 percent of dental costs (Rohde, September 2009).

Medicaid

In July 2009, Michigan stopped providing coverage for routine dental care for adults through the Medicaid program. This was possible because adult dental services are *optional*, as opposed to *required*. It is worth noting that in recent years, the state of Michigan has increased funding to hospitals for unreimbursed care, which would include emergency dental care sought by adults who are uninsured.

For children, however, dental services are a mandatory, or required, covered service. Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) rules require the provision of comprehensive dental services to Medicaid-enrolled children (Schneider, Rossetti, and Crall, October 2007). As of December 2009, approximately 992,000 Michigan children were enrolled in Medicaid (MDCH, February 2010b). However, just 35.6 percent of Medicaid-enrolled children visited the

dentist in Michigan in 2008. Nationally, 40.4 percent of Medicaid-enrolled children had a dental visit in 2008.[2]

State Medicaid programs reimburse dentists at a national average of 60.5 percent of their usual fees, which is approximately the rate of reimbursement that is necessary for dentists to break even (Pew Center on the States, February 2010). In Michigan, dentists who treat Medicaid-enrolled patients are reimbursed at about 41 percent of their usual fees. In a survey of dentists in Michigan, 95 percent of respondents said they would not participate in Medicaid with a reimbursement level lower than 50 percent of the market rate (Embree and Sohn 2009).

For dentists in 61 counties in Michigan, the reimbursement they receive for treating Medicaid-enrolled children matches what they receive from Delta Dental of Michigan through the Healthy Kids Dental program (described below). In these counties children covered by Medicaid have much higher rates of past-year dental visits.

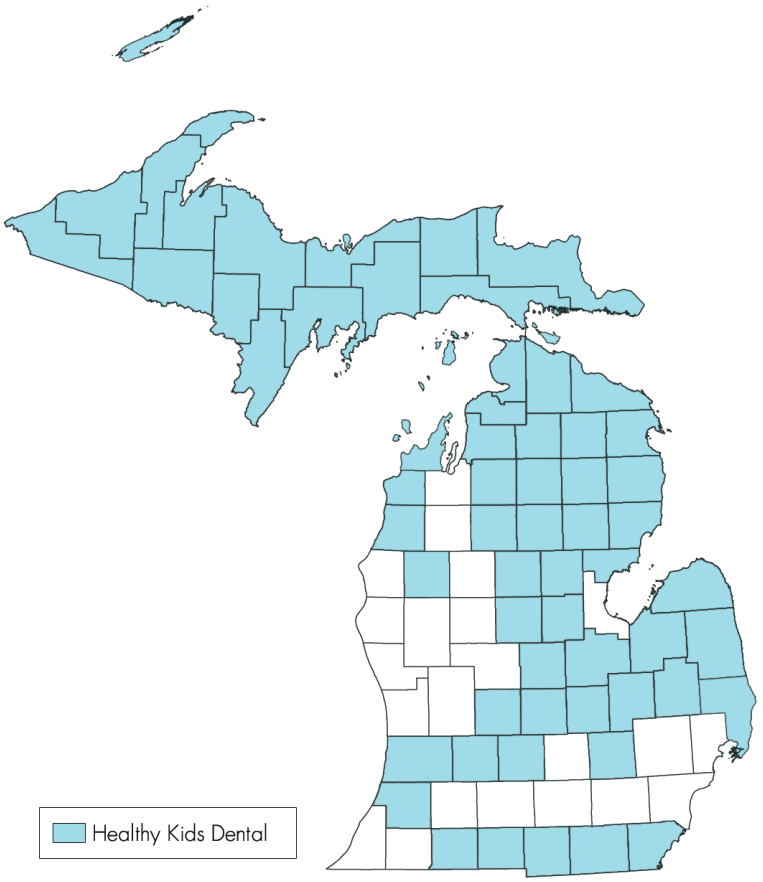
Healthy Kids Dental

Healthy Kids Dental, cited widely as an innovative model for increasing access to oral health care for Medicaid-enrolled children, provides dental benefits for approximately 308,000 Medicaid-eligible children (MDCH, February 2010b) in 61 counties in Michigan (see Exhibit 2). While dental benefits are available to all children enrolled in Michigan, most dentists do not accept Medicaid-enrolled patients due, in part, to low reimbursement rates. In the Healthy Kids Dental program, Michigan's Medicaid program contracts with Delta Dental of Michigan to reimburse dentists at rates that are lower than the "usual and customary" rates charged by dental providers, but significantly higher than the Medicaid fee schedule.

Medicaid-enrolled children who reside in the counties where Healthy Kids Dental operates are automatically enrolled in the Healthy Kids Dental program and receive a Delta Dental of Michigan dental insurance card (Farrell, March 27, 2007). These children have access to a statewide network of dentists, since 95 percent of dentists practicing in Michigan participate with Delta Dental of Michigan (Farrell, March 27, 2007). These dentists cannot refuse to treat Medicaid-enrolled children who are enrolled in the Healthy Kids Dental Program.

Studies of the Healthy Kids Dental program have shown impressive results. In the counties where it operates, Healthy Kids Dental has increased the percentage of Medicaid-enrolled children who visit the dentist. Fifty-six percent of children covered by Healthy Kids Dental visited the dentist in 2007, compared to 34 percent of all Medicaid-enrolled children in Michigan. Healthy Kids Dental also appears to be leading to the establishment of a dental home for many children enrolled in the program, with a large proportion having two or more preventive visits per year (Eklund, April 28, 2008). While the average number of procedures per child in the Healthy Kids Dental program has remained relatively constant, the

EXHIBIT 2. Map of Healthy Kids Dental Counties



SOURCE: Delta Dental, HKD-Covered Counties, July 1, 2008.

[2] Public Sector Consultants' analysis of 1995–2008 Medicaid Early & Periodic Screening & Diagnostic Treatment Benefits, DHHS CMS February 2010. Percentages were calculated by dividing the number of children aged 1–18 receiving any dental service by the total number of enrollees aged 1–18.

proportion of the procedures represented by restorations and oral surgery has decreased while preventive care has increased (Eklund, April 28, 2008). This translates into decreasing dental care costs for children enrolled in Healthy Kids Dental.

Healthy Kids Dental has also increased the number of dentists participating in Medicaid in the counties where it operates. The number of participating dentists has increased each year since its inception as has the average number of children treated per dentist (Eklund, April 28, 2008). In 2007, more than 2,000 participating dentists saw a total of about 101,000 children covered by Healthy Kids Dental. This is an average of 45 children per dentist, up from about 32 children per dentist when the program began in 2001.

The Healthy Kids Dental program was initially implemented in response to the need for improved access to oral health care in rural locations and, as it has expanded over the years, has remained in mostly rural counties. Thus, the program reaches only about 31 percent of Medicaid-enrolled children and does not cover children in some of Michigan's most populous counties where some of the greatest disparities in access to care exist. Unfortunately, extending the program to the remaining counties is a challenge because of the financial commitment required on the part of the state.

MIChild

MIChild is Michigan's state Children's Health Insurance Program (CHIP). MIChild provides health and dental benefit coverage for children under the age of 19 whose family income is between 185 and 200 percent of the federal poverty level. MIChild is administered by Blue Cross Blue Shield of Michigan, Delta Dental of Michigan, and Golden Dental Plan. Eligible families are required to pay a monthly premium of $10 regardless of the number of children to be covered. More than 32,000 children are currently enrolled in MIChild. In February 2009, Congress reauthorized and expanded CHIP. An important element of the reauthorization was the mandate to include comprehensive dental coverage for children in CHIP programs. While every state already covered dental benefits for this group, the mandate requires states with separate CHIP programs to either create a comprehensive state-defined benefit package that is consistent with a dental periodicity schedule, such as that used by EPSDT for Medicaid, or to elect coverage that is equal to a "benchmark" benefit package defined by the Centers for Medicare and Medicaid Services. The legislation also allows states to use CHIP funds to create dental coverage programs for children covered by private medical insurance but lacking dental insurance. Other dental provisions in the expansion include education programs for parents about the importance of oral health and including dental care among the initial core set of child health quality measures developed by the Secretary of Health and Human Services.

Self-Pay

Patients who are uninsured or whose dental insurance does not cover a necessary procedure often pay for dental services out of pocket. Nationally, almost half of all dental expenditures are paid wholly by the consumer. In Michigan, about 45 percent of dental expenditures are paid by the consumer (Rohde, September 2009).

Oral Health Programs for Increasing Access

Both the public and private sectors in Michigan have worked to increase access to oral health care for residents, despite the current economic slump. While these programs have successfully expanded access to services for people who would otherwise not receive them, they are by no means a comprehensive solution for creating and maintaining a dental home that provides continuous and reliable care.

Donated Dental Services

The Michigan Dental Association brought the Foundation of Dentistry for the Handicapped Donated Dental Services Program to Michigan in 1996. The program provides dental care for the mentally and physically disabled, the elderly, and the indigent. A network of volunteer dentists has provided services to over 3,755 people at a value of $10 million since the program's inception (JMDA, August 2009). Nearly 900 dentists currently volunteer for the program. In addition, fabrications, such as bridgework and teeth needed by patients, are donated by more than 200 dental laboratories across the state. The state provides about $150,000 annually for program administration, and the Michigan Dental Association donates office space for administrators and other support services. The program currently operates in 74 counties in Michigan, all but one of which are accepting applications. The program has been so successful that new enrollees can wait up to two years for services.

Public Act 161

In 2005, Public Act 161 was enacted in Michigan to expand the types of agencies for which dental hygienists could provide preventive dental services to underserved populations under the supervision of a dentist who is not on site. The law amended PA 58 of 1991 to revise the criteria for grantee health agency designation, adding schools and nursing homes and removing requirements related to the agencies' funding sources. Under PA 161, grantee health agencies are public or nonprofit entities, schools, or nursing homes that contract with a dentist or dental hygienist to provide dental services with MDCH approval. The intent of PA 161 and its predecessor, PA 58, is to improve access to care for dentally underserved populations by authorizing dental hygienists to provide hygiene services to patients who have not been seen first by a dentist. As of May 2010, there were about 140 registered dental hygienists practicing under such an arrangement in Michigan.

Michigan Day of Oral Health Outreach (MI-DOOR)

The Michigan Day of Oral Health Outreach (MI-DOOR) is a new initiative from Governor Granholm and the MDCH to provide dental services for many uninsured and medically underserved Michigan residents in different areas of the state. The first MI-DOOR event was held at the University of Detroit Mercy in May 2009. This program is based on models used in other states where many dental provider volunteers provide services to as many people as they can in a one-day event. Participants in the program must be uninsured and priority is given to those who have infections or severe pain. At the event in Detroit, more than 1,000 people lined up to receive care. Of those, 413 were seen by volunteers and 250 were given vouchers to come back at a later date to the University of Detroit Mercy School of Dentistry. The services provided were valued at over $240,000 and included 153 fillings, 445 extractions, 64 cleanings, 13 endodontic treatments, and eight denture repairs. More than 140 people were able to obtain free prescriptions for pain killers and antibiotics (MDCH, June 2009).

Give Kids a Smile Day

Give Kids a Smile Day is an American Dental Association initiative to provide free oral health care to at-risk children and to raise awareness of the number of children with unmet dental needs. During the nationwide event, thousands of dentists and other dental volunteers across the country provide free dental services to low-income and uninsured children. Since the Michigan Dental Association began partnering with the ADA in 2003 to hold the event in Michigan, more than 150,000 children have received free oral health education and treatment. In 2009, more than 20,000 Michigan children received free oral screenings, dental treatment, and oral health education from more than 500 dentists and nearly 1,500 additional staff and volunteers. It is estimated that more than $1 million in free dental care was provided that year alone.

Promising Practices

The Michigan Access to Oral Health Care Work Group listened to presentations of several promising practices for improving access to oral health care. The programs described below do not comprise an exhaustive list of approaches, but are a sampling of the innovative ways in which organizations across the state are attempting to improve access to and delivery of oral health care services.

Calhoun County Community Dental Access Initiative

The Calhoun County Community Dental Access Initiative (CDAI) is a project developed by a group of community leaders who came together in 2007 to address the need for increased access to dental care for individuals with acute and urgent conditions. With the input of private practice dentists, these leaders developed an initiative that is founded on the principles of "paying it forward" and sweat equity.

Dentists who participate in the CDAI commit to providing a certain number of visits for low-income, uninsured patients each month. The number of visits donated varies by dentist. Dentists who agree to see four or more patients a month receive a $1,000 bonus upon signing a letter of commitment, as well as a $1,000 annual resource fund that can be used for practice enhancements, office and dental equipment, staff training, and other materials and activities. These dentists also receive a $35 no-show fee if a patient fails to appear for a scheduled appointment. The no-show rate among CDAI patients, however, is significantly lower than it is for the commercially insured population. To date, a total of 35 out of 59 dentists in Calhoun County have agreed to donate their services through the CDAI. The CDAI currently employs two dental hygienists and has two volunteer hygienists.

CDAI patients also make a commitment to the program. Prior to their first visit with a dentist, patients are required to attend an oral hygiene class, meet with a dental hygienist for an exam, and volunteer for four hours at a nonprofit organization. At the dental appointment, dentists provide a full mouth exam, take x-rays, and develop a treatment plan. If follow-up care is needed, patients are required to complete four hours of volunteer service for every $100 of treatment value. As of May 2009, nearly 1,100 patients, who have volunteered a total of 7,700 hours, had been seen through the CDAI.

Financially, the CDAI provides a tremendous return on investment. While it costs about $117,000 to fund annually, the value of the services donated by the dentists and the patients amounts to nearly $600,000 annually.

Interprofessional Care

Interprofessional and co-managed care are emerging strategies to improve access to care in dentistry and medicine. In an interprofessional care practice environment, physicians, dentists, nurses, hygienists, and other providers work together to treat patients *and* their families holistically. A pilot of this type of practice, designed to develop an integrated educational practice environment, is housed in the University of Michigan School of Dentistry. Medical students, dental students, nursing students, and others work together in an interprofessional care clinic. The clinic is initially focused on underserved populations with emphasis on chronic disease care, especially diabetes. The university is seeking to foster a team approach to health care, and to develop relationships among health care professionals. The clinic does not have a hierarchical approach to care, but attempts to capitalize on the strengths of each of the health professions. It is hoped that this type of practice will lead to more effective clinical services and innovation, and the pilot will be studied to identify any improvements in patient care, efficiency, and cost savings.

Head Start/American Academy of Pediatric Dentistry Dental Home Initiative

The federal Office of Head Start and the American Academy of Pediatric Dentistry are partnering to create dental homes for Head Start children throughout the United States. Current Head Start performance standards require that Head Start children receive an initial dental exam and have a dental home. Since Head Start children typically come from low-income families, their access to oral health care can be limited. The primary component of the initiative involves developing networks of dentists to provide access to dental homes that meet the full range of oral health care needs for children enrolled in Head Start programs.

In Michigan, nearly all of the 26 local dental societies in the state have designated a lead dentist who will engage local Head Start program administrators to help facilitate the creation and identification of dental homes for Head Start children. At a Head Start Dental Home Conference

held in May 2010, local Head Start program directors and lead dentists met to share ideas on how to move the initiative forward at the local level.

Points of Light

Points of Light, a peer-to-peer program organized by private practicing pediatric and general dentists, is aimed at increasing infant oral health care by creating referral networks between dentists and pediatricians. Points of Light brings together Enhanced Care Through Appropriate Medical Referrals (ECTAMR), an initiative to improve access and quality of pediatric oral health care by enhancing appropriate referral timing, and the American Academy of Pediatrics' oral health policy, Oral Health Risk Assessment Timing and Establishment of the Dental Home, to promote active referral and communication between dentists and pediatricians.

The program attempts to address the challenges that the medical community faces in making dental referrals for infants and very young children by making them aware of dentists who are willing to see these patients, including those covered by Medicaid and MIChild.

Pediatric dentists are invited to implement Points of Light in their own communities by assembling a list of dentists in the community who are willing to see infants in their practices, providing in-services to these dentists on the treatment of infants and very young children, mailing an information packet to pediatric medical providers to make them aware of the dentists to whom they can refer young patients, and scheduling in-service sessions with pediatric medical providers regarding infant oral health to share information and provide training on oral screenings and the application of fluoride varnish.

VINA Community Dental Center

The VINA Community Dental Center is a volunteer-run community dental clinic for low-income individuals living in Livingston County who do not have dental insurance. The center was organized by private practicing dentists who sought to fulfill a need in the community that they believed was going unmet. Services are provided by volunteer dentists, hygienists, and assistants. The clinic is housed in the United Methodist Church of Brighton Annex. Approximately 10 patients are seen per day on each of the four days the clinic is open for services during the week. To be eligible for services, patients must provide proof of Livingston County residency and an annual household income at or below 200 percent of the federal poverty level. Patients pay a $15 appointment scheduling fee per visit. The fee is not refunded if a patient misses an appointment without providing at least 48 hours notice of cancellation.

Since opening in September 2008, the VINA Community Dental Center has served more than 2,000 patients. A cohort of 80 dentists, dental hygienists, and dental assistants regularly volunteer at the clinic. The clinic has one part-time dentist and one part-time dental assistant on staff in addition to a full time director. The clinic is funded primarily by grants and donations from community members.

ORAL HEALTH IN MICHIGAN

Several measures can help assess the oral health of Michigan residents and detect disparities. The indicators of oral health described below use the most recent data available. Healthy People 2010 has set targets for each of these indicators, which are among 22 Healthy People 2010 objectives for improving oral health. Michigan has met, or is close to meeting, some—but there is still much work to be done.

Community Water Fluoridation

Fluoridated public drinking water has been hailed as one of the most significant public health achievements of the twentieth century. There is strong evidence for the effectiveness of community water fluoridation in reducing rates of tooth decay in communities with varying rates of tooth decay and among children of varying socioeconomic status (Task Force 2002). According to the U.S. Centers for Disease Control and Prevention (CDC), every $1 invested in community water fluoridation saves $38 in dental treatment costs.

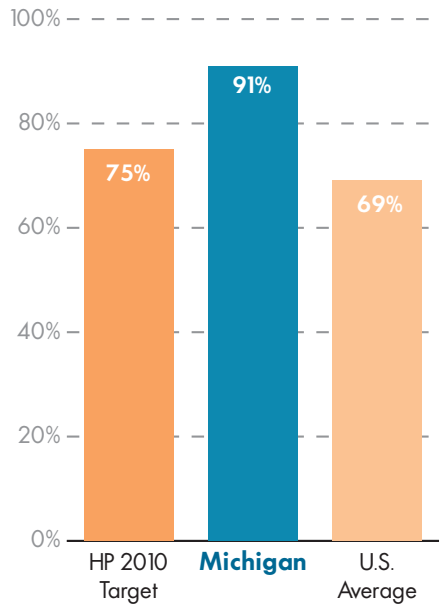
Community water fluoridation is an ideal public health activity because it is effective, eminently safe, inexpensive, requires no behavior change, and does not depend on access or availability of professional services. Water fluoridation also reduces or eliminates disparities in preventing dental caries among different socioeconomic, racial, and ethnic groups.

In 2009, 92 percent of people in Michigan who were served by a public water system received fluoridated water (MDCH, March 9, 2010); this exceeds the Healthy People 2010 target of 75 percent (see Exhibit 3). Fluoridated water only reaches about two-thirds of the state's population, however. While some areas of the state are fully served by fluoridated public water systems, water in rural areas comes primarily from private wells. In these communities, other sources of fluoride, such as fluoride mouth rinse programs, are especially important. In Michigan, rates of fluoridated water are lowest in the Upper Peninsula and the northern Lower Peninsula (MDCH, March 9, 2010).

Regular Dental Visits among Adults

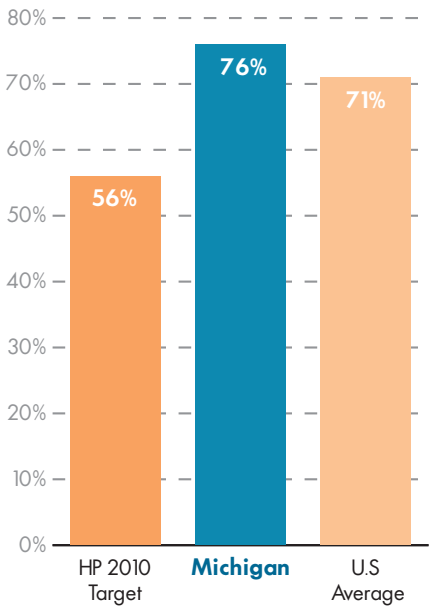
Visiting the dentist on a regular basis decreases the occurrence of cavities and increases the likelihood that other oral health problems, such as oral cancer, will be detected early. In 2008, about 76 percent of adults in Michigan reported that they had visited a dentist or dental clinic during the previous year (MDCH, January 2010), a much greater percentage than the Healthy People 2010 target of 56 percent (see Exhibit 4). For some populations, however, the target

EXHIBIT 3. Community Water Fluoridation



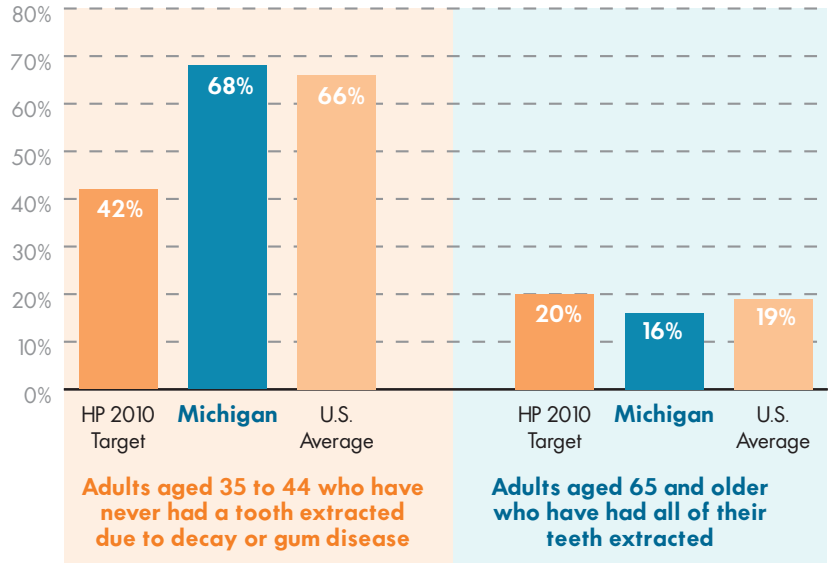
SOURCE: CDC, National Oral Health Surveillance System. Fluoridation Status, February 4, 2009.
NOTE: The chart shows the percentage of residents served by community water systems that receive fluoridated water. All numbers are rounded.

EXHIBIT 4. Regular Dental Visits among Adults



SOURCE: CDC, National Oral Health Surveillance System, Fluoridation Status, February 4, 2009.

EXHIBIT 5. Tooth Loss among Adults



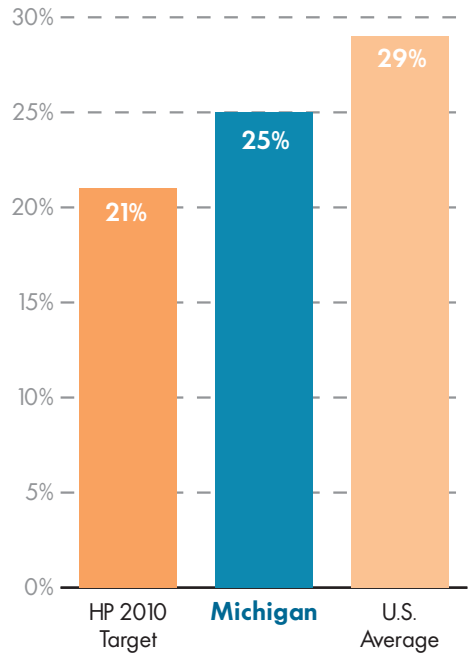
SOURCE: CDC, October 8, 2008.NOTE: All numbers are rounded.

is not met. Only 52 percent of adults with less than a high school education and 53 percent of adults with an annual household income of less than $20,000 reported having visited the dentist in the past year.

Adult Tooth Loss

The loss of permanent teeth due to decay or gum disease is often the result of inadequate access to oral health care. In 2008, 68 percent of adults in Michigan aged 35 to 44 reported they had never had a permanent tooth extracted due to decay or gum disease (CDC, October 8, 2008). Among those aged 65 and older, nearly 16 percent have had *all* of their permanent teeth extracted (CDC, October 8, 2008). For both measures, Michigan exceeds the targets set by Healthy People 2010 (see Exhibit 5). Not surprisingly, however, individuals with lower levels of income and education, who were less likely to visit the dentist, were much more likely to report missing permanent teeth. African Americans were also more likely than Caucasian and Hispanic adults to report having had any permanent teeth extracted.

EXHIBIT 6. Percentage of Third Graders with Untreated Cavities



SOURCES: CDC, May 15, 2009; MDCH, August 2006.
NOTE: All numbers are rounded.

Tooth Decay in Children

Tooth decay is the single most common chronic childhood disease. It has also been identified as a progressive disease. It is estimated that 11 percent of two-year-olds, 21 percent of three-year-olds, 34 percent of four-year-olds, and 44 percent of five-year-olds have visible cavities (Iida, Auinger, Billings, and Weitzman 2007).

Count Your Smiles, a survey of students and their parents conducted during the 2005–2006 school year by the Michigan Department of Community Health, estimated the extent of oral disease among Michigan children. The study found that 58 percent of third-grade students had experienced tooth decay on their primary or permanent teeth. This is far from the HP 2010 goal of only 42 percent of children in this age group experiencing tooth decay. Prevalence is higher in areas where the population is not served by community water fluoridation and also among children from low-income families (MDCH, August 2006).

Twenty-five percent of third-grade children had untreated tooth decay (MDCH, August 2006). This falls short of the Healthy People 2010 goal of only 21 percent for this age group (see Exhibit 6). Of states that have submitted data to the National Oral Health

Surveillance System, only nine had met the goal as of July 2009; 28 had not (Pew Center on the States, February 2010). Children without dental insurance were significantly more likely to have untreated decay, as were free and reduced-price lunch participants. African American and Hispanic children were also more likely to have untreated tooth decay than their Caucasian counterparts.

Dental Sealants for Children

One strategy for reducing tooth decay in children is the application of dental sealants—plastic coatings that are bonded to the tooth surfaces most susceptible to decay, especially the "pits and fissures" of molars. Dental sealants have proven effective in reducing cavities in these teeth, and they cost one-third as much as filling a cavity (Pew Center on the States, February 2010). Sealants are most effective if applied shortly after the eruption of permanent molars, once around age 6 and again around age 12 to 13. Healthy People 2010 set a target for 50 percent of 8-year-olds and 14-year-olds to have had dental sealants applied.

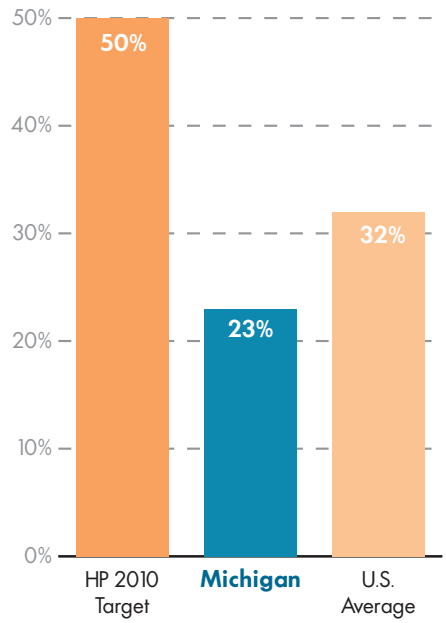
According to the Count Your Smiles survey, less than one-fourth (23 percent) of Michigan third grade students had sealants on their first molars (see Exhibit 7). Data is not available for 14-year-olds, but nationally, children aged 12 to 15 were more likely than children aged 6 to 11 to have sealants in 1999–2002 (CDC 2005). While dental sealant programs have proven effective in reducing dental caries, Michigan had sealant programs in fewer than 25 percent of high-risk schools in 2009 (Pew Center on the States, February 2010). Of the 24 states that have submitted data to the National Oral Health Surveillance System, Michigan ranks last in the percentage of 3rd grade students who have dental sealants (CDC, October 28, 2008). Children in the state could benefit from a statewide sealant program, which Michigan currently lacks.

Incidence and Early Detection of Oral Cancers

Oral cancer is cancer of the oral cavity or pharynx. The Michigan Cancer Surveillance Program maintains data on oral and all other cancers among Michigan residents. The program reported 5,832 new cases from 2002 to 2006, with a statewide incidence rate of 11.1 per 100,000 population (MDCH DVRHS 2009). The mortality rate for oral cancer from 2004 to 2008 for the state of Michigan was 2.6 per 100,000 population (MDCH DVRHS n.d.).

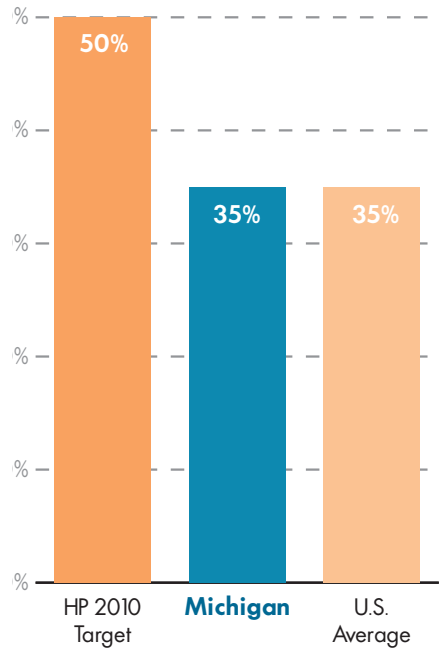
As with all cancers, the earlier an oral cancer is detected, the more easily it can be treated and the better the prognosis for the patient. Healthy People 2010 set an objective of detecting 50 percent of oral cancers in the earliest stages (in situ or localized). As shown in Exhibit 8, 35 percent of oral cancers in Michigan were detected in either of

EXHIBIT 7. Percentage of 3rd Graders with Dental Sealants



SOURCES: CDC, May 15, 2009; MDCH, August 2006.
NOTE: Michigan data is for 2005–2006. U.S. data is for 1999–2004. All numbers are rounded.

EXHIBIT 8. Incidence and early Detection of Oral Cancers



SOURCES: MDCH DVRHS 2009.

these stages from 2002 to 2006 (MDCH DVRHS 2009). For the African American population, only 27 percent of oral cancers were detected in the early stages. While there is little difference in the oral cancer incidence rates for Caucasians and African Americans, the mortality rate for African Americans (3.7 per 100,000) is higher than for Caucasians (2.5 per 100,000), which may reflect detection of the disease at later stages.

Disparities in Oral Health Care

Some populations in the state are faring far worse than others when it comes to oral health care. Minorities, those with low incomes and low levels of education, and people with special health care needs are far less likely to get needed dental care and are at much greater risk for oral disease and its associated consequences.

Racial and Ethnic Disparities

Across many of the indicators described previously, the non-Caucasian populations in Michigan are doing poorly, or at least not as well as their Caucasian counterparts. African American and other minority non-Hispanics are far less likely than Caucasian non-Hispanics or Hispanics to have visited the dentist or have had their teeth cleaned by a dentist or hygienist in the past year (see Exhibit 9). African American adults are more likely than adults of other races to have teeth missing due to decay or gum disease (MDCH, April 21, 2009). Minority children are more likely to experience dental caries and to have untreated tooth decay (MDCH, August 2006).

Data from the 2007 National Survey of Children's Health demonstrate that even when adjusting for income and insurance status, minority children (other than Hispanics) are more likely to lack a preventive dental visit in the past year (Liu et al. 2007). This suggests that strategies for improving access for these groups will need to do more than remove financial barriers.

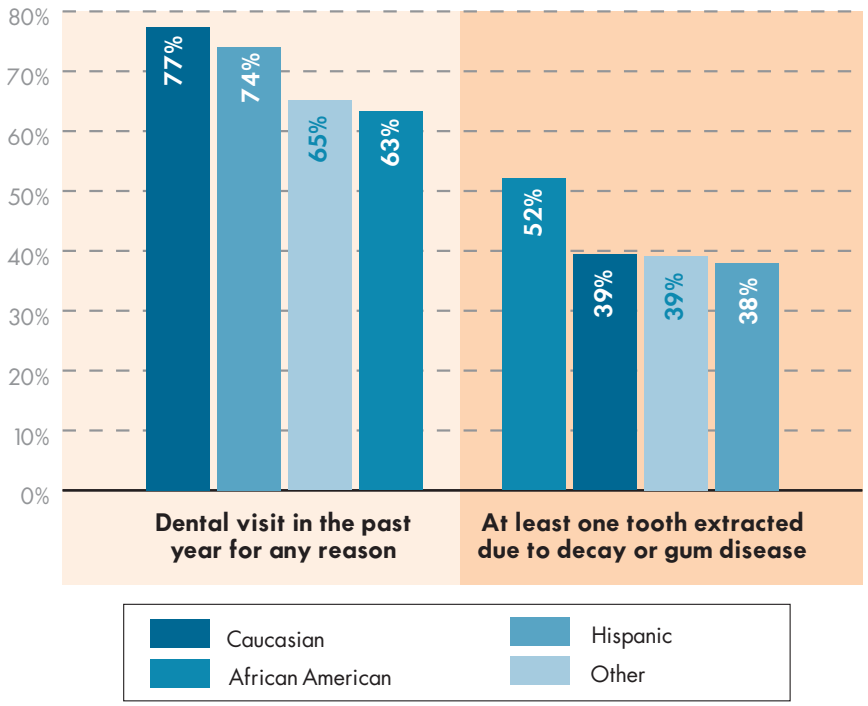
Socioeconomic Disparities

Income and education are strong predictors of oral health and access to care. It was noted earlier that about 45 percent of dental care expenses are paid for out-of-pocket by consumers. This suggests that income can play a strong role in decisions to obtain dental services. Nearly half (49 percent) of Michigan adults with an annual household income of less than $15,000 report they did not have a dental visit in the past year (CDC, October 8, 2008). Low-income adults are also more likely to have had six or more of their permanent teeth extracted due to tooth decay or gum disease (MDCH, January 2010).

More than half of Michigan adults with less than a high school education (52 percent) report that they did not have a dental visit in the past year (CDC, October 8, 2008). This population is also much more likely than adults with higher levels of educational attainment to have six or more of their permanent teeth missing due to tooth decay or gum disease (MDCH, January 2010).

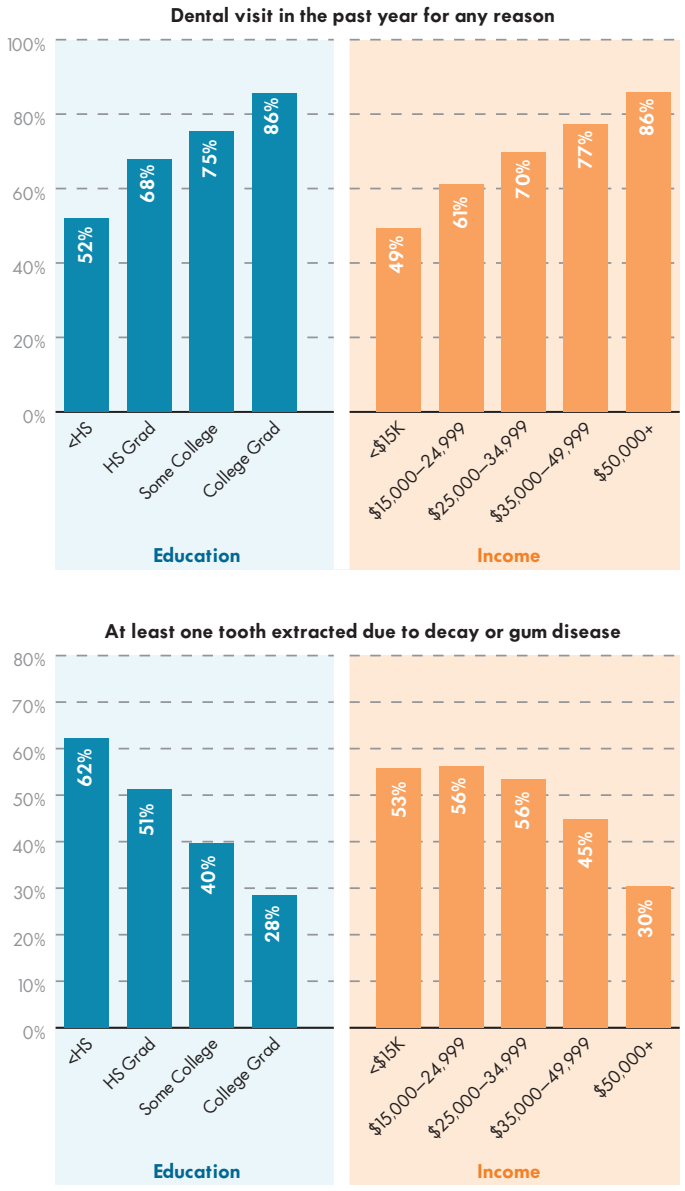
Nationally, children in low-income families and in families where parents have lower levels of educational attainment also are less likely to receive preventive dental care and are more likely to have

EXHIBIT 9. Dental Visits and Tooth Extractions among Michigan Adults, by Race and Ethnicity, 2008



SOURCES: CDC, October 8, 2008; MDCH, January 2010.
NOTE: All numbers are rounded.

EXHIBIT 10. Dental Visits and Tooth Extractions among Michigan Adults, by Education and Income Levels, 2008



SOURCE: CDC, October 8, 2008; MDCH, January 2010.
NOTE: All numbers are rounded.

unmet dental needs (Liu et al. 2007). The Count Your Smiles survey found that Michigan children enrolled in free and reduced-price school lunch programs are significantly more likely to need routine or immediate dental care. Children who have public dental insurance are also more likely than those with private coverage to have unmet dental needs (MDCH, August 2006).

Analysis of data from the National Survey of Children's Health found that while dental coverage (or lack thereof) is a predictor of access to care, holding this factor constant still reveals access problems for low-income families (Liu et al. 2007). This may be due to increased rates of Medicaid coverage among low-income children and a lack of providers who are willing to accept Medicaid. Access problems may also stem from limited ability to take time off from work to obtain dental care or to pay any deductibles associated with dental services.

People with Special Health Care Needs

Adults and children with special heath care needs include those with mild to severe cognitive or physical impairment, traumatic brain injury, dementia or Alzheimer's; hemophilia; and disorders such as autism. Older adults, including those in nursing homes, are also included in this category.

The rate and severity of oral disease is greater among people with special health care needs than in the general population due to difficulty in maintaining regular oral hygiene practices, medications that can cause and/or exacerbate oral disease, and barriers to accessing oral health care. Paul Glassman states that "the combination of inadequate attention to prevention, greater disease burden, scarce treatment resources, and more difficulty in performing treatment results in pain, suffering, and social stigma in these populations beyond that found in other segments of society" (Glassman and Miller 2003).

Analysis of data from the National Survey of Children's Health shows that children with special health care needs (CSHCN) are slightly more likely to have dental insurance than children without SHCN (Liu et al. 2007). However, data from this same survey also show that Medicaid-enrolled CSHCN received less needed preventive dental care than non-Medicaid-enrolled CSHCN (Kenney 2009). Regardless of insurance status, CSHCN have a higher prevalence of unmet need than children without special health care needs (Liu et al. 2007).

There are two main reasons for the lack of dental providers available to treat this population. First, many of these individuals are covered by Medicaid, which providers say does not provide high enough reimbursement, especially when treatment for individuals with special health care needs is likely to be difficult. Second, a majority of dentists are not trained to treat this population and/or do not have access to a facility that would enable them to provide the necessary treatment. A survey of dentists conducted by the MDCH in 2009 found that only about one in five responding dentists have been trained to treat patients with disabilities (MDCH and MOHC, August 2009). In addition, dentists who have not completed a general practice residency are usually not considered for privileges in a hospital, which often is the best place to provide the complex treatment needed by patients with special health care needs.

Improving access to care for this and other disadvantaged populations will require a diverse set of strategies to address the financial, structural, and cultural barriers that prevent access to dental services and good oral health for all Michigan residents.

RECOMMENDATION DEVELOPMENT

Speaking with One Voice

After spending time during the initial meetings identifying priority needs for access to oral health care and reviewing information on best and promising practices, the work group spent three meetings developing its recommendations for action. During two of those meetings, members proposed, discussed, and voted on more than 60 recommendations across the six priority areas. Thirty-two recommendations received support from a majority of members. To reach its final set of 17 recommendations, the members voted to put forth the recommendations they supported most passionately and on which they believed that work group members could "speak with one voice." Thus, to be included in this report, a recommendation had to receive the support of at least two-thirds of the work group members in attendance at the March meeting.

Focus on Children and Families

As noted earlier in this report, work group members identified a focus on children and families as a priority. The influence of parents' oral health on that of their children cannot be overstated: For oral health professionals to reach children, parents must have access to and understand the significance of oral health care.

Because children and families are reached through actions in each of the other five priority areas, recommendations that are specific to children and families are not listed in a category of their own. They are, however, highlighted with this symbol to draw attention to these recommendations. Approximately half of all of the recommendations relate specifically to children and/or families, while many of the others will, no doubt, also affect this priority population.

RECOMMENDATIONS

The Michigan Access to Oral Health Care Work Group proposes the following recommendations to improve access to oral health care in Michigan. While the recommendations are numbered for ease of reference, the numbering does not reflect any order of importance; implementation of all of these recommendations is essential to improving access to oral health care in Michigan.

Funding and Payment for Oral Health Care

1 Identify new, dedicated sources of revenue to expand the Healthy Kids Dental program to all children and adults who would otherwise lack public dental coverage. The Healthy Kids Dental program is increasing access to oral health care for thousands of children across Michigan. Even so, it reaches less than one-third of the children on Medicaid. Further, low-income children whose parents have access to and visit the dentist are more likely to also visit the dentist, but low-income adults in Michigan, including those covered by Medicaid, have no access to dental services beyond charity care.

Implementation of this recommendation could allow expansion of the Healthy Kids Dental program to all counties in Michigan and expansion of the covered population to include Medicaid-eligible adults without current oral health care coverage if a new revenue source were dedicated to Medicaid dental services. Expanding the Healthy Kids Dental program requires state funds that can be used to access federal Medicaid matching funds. Michigan's severely strained budget poses a major barrier to expanding this successful program.

It is estimated that $25 million in state funds is needed to expand Healthy Kids Dental to children across Michigan. Any new source of revenue must be dedicated to the expansion of Healthy Kids Dental, which would make the program's expansion possible and increase access to and utilization of dental services by families across the state.

2 Advocate the inclusion of dental care as a mandatory service for Medicaid coverage. Services covered by Medicaid are divided into those that states are required to cover and those they have the option to cover. When the economy is strong, states tend to cover more of the optional services; when budgets tighten, coverage of optional services declines. Despite the overwhelming evidence that oral health is essential to a person's overall well-being and productivity, oral health care is currently considered an optional service for adults covered by state Medicaid plans. In July of 2009, Michigan stopped providing coverage for routine adult dental services under Medicaid.

It is of the utmost importance that all of Michigan's residents have access to oral health care. Discontinuing coverage of oral health services may save money in the short term, but it certainly will lead to rising costs in the long run. The organizations represented in the Michigan Access to Oral Health Care Work Group will work with their national counterparts to move Medicaid dental services to mandatory status at the federal level.

3 Mandate an oral health division in the Michigan Department of Community Health. The oral health program that currently exists within the MDCH is not legislatively mandated, which can, at best, limit its capacity for improving oral health and, at worst, make its existence precarious. Without a legislative mandate, state oral health programs are more likely to face reduced funding during budget cuts. The current program office is completely grant funded.

The organizations represented by the Michigan Access to Oral Health Work Group should urge the legislature to mandate a state oral health program or division, ideally led by a dental director, within the Michigan Department of Community Health. With a legislative mandate, legislators and state health officials are more likely to support oral health programs to ensure they are successful.

Prevention and Early Diagnosis and Treatment

4 Include oral screening in Michigan Quality Improvement Consortium (MQIC) guidelines for physicians. Most physicians do not routinely screen their patients for oral health problems. Even children are not regularly screened, although the American Academy of Pediatrics Bright Futures Periodicity Table includes oral screening and referral by age one.

MQIC's participating organizations consist of several Michigan health plans, the Michigan State Medical Society, the Michigan Osteopathic Association, and the University of Michigan Health System. MQIC develops and disseminates guidelines that comprise an expected standard of practice. Leaders from the MDA and Michigan Dental Hygienists' Association should work with physicians and others involved in the development of medical guidelines to incorporate oral screening and referral, which will lead to improved oral health for patients.

5 Educate and train physicians, nurses, physician assistants, and nurse practitioners to do oral screenings as defined by the American Academy of Pediatrics (AAP) for children and the American Academy of Family Physicians (AAFP) for adults; educate parents about oral health and the importance of having a dental home for the family. Even if guidelines suggest that medical providers conduct oral screenings for children and adults, these providers may not have the required knowledge. The AAP and the AAFP have each developed a definition of an oral screening for the populations they serve. Training should be offered to medical providers to enable them to conduct oral screenings and make referrals as appropriate. Other states that have implemented training programs have found that providers prefer in-person training, which allows for a hands-on approach (NASHP, February 2010). Training in some cases is led by the state Medicaid program, but often is led by non-Medicaid entities such as universities, health plans, or local chapters of medical or dental trade associations. Trainings generally include how and when to apply fluoride varnish, reimbursable services, Medicaid billing guidelines, and information to support making referrals to dentists when appropriate.

6 Support and facilitate expansion of the American Academy of Pediatric Dentistry (AAPD)/Head Start dental home initiative. Children from low-income families are among those who are least likely to have regular dental visits, and research has demonstrated that the earlier children have a first dental visit, the lower their total costs for oral health treatment. Establishing a dental home for children at an early age will ensure that children's oral health needs are addressed over the course of their childhood and will lower overall oral health care costs.

Dentist leaders have been identified in nearly all of the 26 local dental societies to engage local Head Start program administrators to help facilitate the creation and identification of dental homes for Head Start children. By developing a network of pediatric and general dentists who will provide quality dental homes for children in Head Start and Early Head Start, this partnership between the AAPD and Head Start will improve the oral health of many children who otherwise may have limited access to oral health services. The success of this initiative would be significantly bolstered by the expansion of Healthy Kids Dental to all 83 counties in Michigan.

Because of the important role parents play in their children's oral health care, this and other initiatives designed to improve access for children will need to include strategies to achieve buy-in and support from parents. In pediatrics, the concept of a family-centered medical home that promotes a partnership between the family and the provider has arisen as a complement to the patient-centered medical home. A family-centered dental home may serve to increase parents' understanding of the importance of oral health care.

7 Support the state's Community Water Fluoridation Advisory Committee in its efforts

to educate and promote the value of community water fluoridation to professionals and the public. Almost all people served by community water systems in Michigan receive fluoridated water through those systems. The effectiveness of community water fluoridation, however, is limited by a few factors. First, there are many populations in Michigan who are not currently served by community water systems at all. Second, in those communities that are served by fluoridated water systems, the infrastructure through which this water is delivered is crumbling. And, finally, the popularity of bottled water has led to fewer people drinking fluoridated tap water.

The Community Water Fluoridation Advisory Committee comprises water plant engineers, consumers, educators, dental professionals, physicians, and many other stakeholders from across the state. The committee often works with local communities to support decisions to install and maintain water fluoridation systems, and distributes fact sheets and other materials through its correspondence with stakeholder groups. Organizations represented by members of the Michigan Access to Oral Health Work Group should assist the committee in disseminating information on the value of community water fluoridation, by including information and materials on their respective websites and in publications and other communications with their constituents.

Partnerships Between the Medical and Oral Health Communities

8 Develop an oral health curriculum for health professional education and residency programs, as well as continuing education on oral health for all health care professionals. Medical and oral health professionals provide care through two separate systems of care. The evidence of a strong link between oral and systemic health suggests, however, that increased knowledge among health professionals of the signs of oral disease and how that can impact the rest of a person's health, is essential.

The MDA and MDHA should work with the leadership of Michigan's medical schools to develop an oral health curriculum that will better prepare medical professionals to assess the oral health of their patients and to make a referral to an oral health professional when necessary. These organizations will also collaborate to develop continuing education on oral health for all health care professionals.

9 Clarify, through guidelines issued by state health professional boards and professional associations and societies, physician responsibilities in oral health. Due to the current separation of oral and systemic health care, it is often not clear whether and how medical professionals should address the oral health of their patients. State health professional boards and professional associations and societies can play a role in clarifying physician responsibilities. Boards issue guidelines, for example, on proper prescription of controlled substances. The boards of medicine and dentistry could potentially issue joint guidelines to outline the role of physicians in oral health. This would also serve to support the inclusion of oral screenings in MQIC guidelines.

10 Review current state law to identify potential opportunities for interdisciplinary management of oral health care among all health professionals. Health professionals in the medical community clearly have a role to play in the management of oral health care, and oral health professionals clearly can help identify systemic health problems given the links between oral and systemic health. Interdisciplinary management of care for patients is gaining increased attention as a way to provide comprehensive and cost-effective health care. A careful review of the public health code and state regulations that govern the practice of medicine and dentistry may assist in the identification of ways in which the two systems of care can work more closely together to meet the oral health care needs of patients.

11 Support and facilitate the expansion of the Points of Light program, which encourages and trains nurses and physicians to apply fluoride varnish and to link children and families to a dental home. While children are often without a dental home, they do generally have a medical home, where they receive immunizations and have regular well-child visits. As described in the section of this report on promising practices, the Points of Light program engages pediatricians in the oral health care of children by providing them with the information they need to screen and refer their patients to a pediatric or general dentist.

Children aged 2 to 3 are far less likely than children in older age cohorts to have an annual dental visit (Eklund, April 28, 2008). Points of Light will not only increase the likelihood of pediatricians engaging in preventive oral health care, but it will also likely increase dental visits in the youngest age groups. Where it has been implemented, the Points of Light program has been highly successful. Pediatricians are able to receive reimbursement for conducting oral screenings and applying fluoride varnish, and children are more likely to obtain care from a dentist and establish a dental home.

New Models of Care and Workforce Scope of Practice

12 Authorize dental assistants to assist dental hygienists in the application of dental sealants in PA 161 programs and in health departments, schools, and community health centers. Through PA 161, dental hygienists provide preventive oral health care to underserved populations in a variety of settings under the supervision of a dentist. Often, hygienists are accompanied by dental assistants, who are currently not authorized to apply dental sealants in these settings despite having the necessary training and skill. Authorizing dental assistants to assist in the application of dental sealants under the supervision of dental hygienists should improve the effectiveness of sealants, as some evidence suggests that four-handed delivery leads to improved retention of sealants (Griffin et al., 2008).

13 Establish model volunteer dental programs, such as the Calhoun Dental Access Initiative, VINA, and others. Several promising practices and proven models exist for expanding access to oral health care. These programs, including the CDAI and VINA, which are described in the promising practices section of this report, should be replicated across Michigan in areas where there are large numbers of uninsured and underserved residents. The MDA should work with component dental societies to share information about these programs and identify the appropriate model(s) to establish in each community.

14 Study the effects of "alternative" dental providers, including PA 161 hygienists, on the provision of oral health care and the status of oral health in Michigan. Some organizations have called for the authorization of new dental providers, often referred to as alternative dental providers, as a method for increasing access to preventive care among the underserved. These providers include advanced practice dental hygienists, community dental health coordinators, and dental therapists, among others. To date, Michigan has not opted to authorize an alternative dental provider, although it has authorized expanded practice for dental hygienists through PA 161. While it is possible that the addition of these providers would expand access to care, that remains untested. As an example, PA 161 has been in place since 2005, but a study of its effects has not been conducted. The MDA and MDHA are working together with the MDCH to collect the data necessary to determine the effectiveness of PA 161.

If the authorization of alternative dental providers is to be considered in Michigan, studies of their impact on the oral health of the underserved in other states will prove useful. Michigan can learn from the results of other states that have already authorized alternative providers.

Education on the Value of Oral Health Care

15 Educate pregnant women and parents about the importance of their own oral health habits as a model for their children. In the early years of life, children's oral health habits are essentially dictated by their parents. Children visit the dentist if their parents take them there, and they engage in oral hygiene such as tooth brushing and flossing if their parents demonstrate and help teach them these skills. If this foundation is laid, children are likely to develop good oral health seeking behavior as adults. Thus, it is essential that parents understand the role that they play in ensuring the long-term oral health of their children.

Childbirth classes, WIC (Women, Infants, and Children supplemental nutrition program), and the Maternal Infant Health Program can be used to reach low-income pregnant women and children with information about the importance of maintaining good oral health. These women and families can be provided with the skills they need to engage in good oral hygiene.

16 Educate the public and policymakers on the serious consequences (including death) related to lack of access to oral health care, demonstrating the link between systemic and oral health. As has been described in this report, good oral health is critical to good overall health. Science is increasingly demonstrating this inextricable connection, yet the general public and policymakers have limited knowledge and understanding of how oral health influences the health of the rest of the body.

The organizations represented on the Michigan Access to Oral Health Care Work Group should work in concert to shape the information that is shared with the public and policymakers to ensure that they are consistently hearing the message that oral health is critical to the health and well-being of the populace.

17 Implement a concentrated social marketing campaign to raise awareness of the importance of oral health care. Utilize tools such as Facebook, YouTube, and Twitter to reach youth and young adults. Social media tools such as Facebook, MySpace, YouTube, and Twitter make it possible to reach a very large audience with targeted messages on a broad variety of topics. While youth and young adults use these sites with greater frequency than older adults, they are gaining in popularity across the age spectrum. The MDA, MDHA, and other groups represented on the Michigan Access to Oral Health Care Work Group should work together to develop a focused campaign to reach younger audiences with information about oral health in a way that promotes good oral hygiene and regular dental visits as the expected "norm."

WORKS CITED

American Academy of Pediatric Dentistry. October 2009. Definition of Dental Home. *Pediatric Dentistry* 31(6): 10.

Barnett, Michael L. 2006. The oral-systemic disease connection: an update for the practicing dentist. *Journal of the American Dental Association* 137 (supplement 2): 5S–6S.

Blumenshine, Stephanie L., William F. Vann Jr., Ziya Gizlice, and Jessica Y. Lee. 2008. *Journal of Public Health Dentistry* 68(2): 82–7.

Centers for Disease Control and Prevention (CDC). May 15, 2009. WONDER, DATA 2010 [Online, accessed 3/8/10.] Available: *http://wonder.cdc.gov/data2010/FOCUS.HTM*.

———. February 4, 2009. National Oral Health Surveillance System. Fluoridation Status. [Online, accessed 3/8/10.] Available: *http://apps.nccd.cdc.gov/nohss/FluoridationV.asp*.

———. 2008. *Synopses of State and Territorial Dental Public Health Programs*, Michigan—2008. [Online, accessed 2/4/10.] Available: *http://apps.nccd.cdc.govsynopses/StateDataV.asp?StateID=MI&Year=2008*.

———. October 28, 2008. National Oral Health Surveillance System. Dental Sealants. [Online, accessed 3/8/10.] Available: *http://apps.nccd.cdc.gov/nohss/IndicatorV.asp?Indicator=I&OrderBy=2*.

———. October 8, 2008. Behavioral Risk Factor Surveillance System, Prevalence and Trends Data, 2008 Michigan data. [Online, accessed 2/18/10.] Available: *http://apps.nccd.cdc.gov/brfss/*.

———. 2005. Surveillance for dental caries, dental sealants, tooth retention, edentulism, and enamel fluorosis—United States, 1988–1994 and 1999–2002. In *MMWR Surveillance Summaries* 54, no. 3 (August 26, 2005): 1–44. [Online, accessed 2/18/10.] Available: *http://www.cdc.gov/mmwr/PDF/ss/ss5403.pdf*.

Crall, James J. 2006. Rethinking prevention. *Pediatric Dentistry* 28(2): 96–101.

Dasanayake, Ananda P., Yufeng Li, K. Kirk, Janet Bronstein, and Noel K. Childers. 2003. Restorative cost savings related to dental sealants in Alabama Medicaid children. *Pediatric Dentistry* 25(6): 572–6.

Delta Dental. July 1, 2008. HKD-Covered Counties. [Online, accessed: 2/24/10.] Available: *http://www.deltadentalmi.com/PublicWeb/ShowBinary/BEA%20Repository/DeltaDental/Coverage/HealthyKidsDental/HKDCounties.pdf*.

Eklund, Stephen A. April 28, 2008. *Michigan's Medicaid "Healthy Kids Dental" Program*, PowerPoint presentation. [Online, accessed 3/2/10]. Available: *http://www.medicaiddental.org/Docs/2008/Eklund.pdf*.

Embree, Rachel, and Woosung Sohn. 2009. E*xploring Incentives Desired by Dentists to Increase Acceptance of Medicaid Patients*, poster. Unpublished.

Farrell, Christine. March 27, 2007. *Insuring Bright Futures: Improving Access to Dental Care and Providing a Healthy Start for Children*. Testimony before the U.S. House Committee on Energy and Commerce Subcommittee on Health. [Online, accessed: 4/30/10.] Available: *http://energycommerce.house.gov/images/stories/Documents/Hearings/PDF/110-he-hrg.032707.Farrell-testimony.pdf*.

Fisher-Owens, Susan A., Stuart A. Gansky, Larry J. Plann, Jane A. Weintraub, Mah-J Soobader, Matthew D. Bramlett, and Paul W. Newacheck. September 2007. Influences on children's oral health: a conceptual model. *Pediatrics* 120(3): e510–20.

Gehshan, Shelly. November 18, 2009. *New Workforce Models: What is in it for Organized Dentistry?* PowerPoint presentation before the Connecticut State Dental Association.

Glassman, P., and C. Miller. 2003. Dental disease prevention and people with special needs. *Journal of the California Dental Association* 31(2):149–60.

Griffin, Susan O., Shellie Kolavic Gray, Dolores M. Malvitz, and Barbara F. Gooch. 2008. Exploring four-handed delivery and retention of resin-based sealants. *Journal of the American Dental Association* 139(3):281–9.

Iida, H., P. Auinger, R. Billings, and M. Weitzman. 2007. Association between infant breastfeeding and early childhood caries in the United States. *Pediatrics* 120(4): e944–52.

Isong, Inyang A., Katharine E. Zuckerman, Sowmya R. Rao, Karen A. Kuhlthau, Jonathan P. Winickoff, and James M. Perrin. 2010. Association between parents' and children's use of oral health services. *Pediatrics* 125(3): 502–8.

Journal of the Michigan Dental Association (JMDA). August 2009. *Donated Dental Services: $10 Million in Care for Our Neediest Citizens*. Okemos, Mich.: Michigan Dental Association.

Kaiser Family Foundation. Kaiser Health Tracking Poll. February 3–12, 2009. [Online, accessed 2/16/10.] Available: *http://www.kff.org/kaiserpolls/upload/7866.pdf* .

Kenney, Mary Kay. 2009. Oral health care in CSHCN: state Medicaid policy considerations, *Pediatrics* 124: S384–91.

Lee, Jessica Y., Thomas J. Bouwens, Matthew F. Savage, and William F. Vann, Jr. 2006. Examining the cost-effectiveness of early dental visits. *Pediatric Dentistry* 28(2):102–105.

Liu, Jihong, Janice C. Probst, Amy B. Martin, Jong-Yi Wang, and Carlow F. Salinas. 2007. Disparities in dental insurance coverage and dental care among US children: the national survey of children's health, *Pediatrics* 119: S12–21.

Manski, R. J., and E. Brown. 2007. *Dental Use, Expenses, Dental Coverage, and Changes, 1996 and 2004*, MEPS Chartbook No. 17. Rockville, Md.: Agency for Healthcare Research and Quality. [Online, accessed 3/1/10.] Available: *http://www.meps.ahrq.gov/mepsweb/data_files/publications/cb17/cb17.pdf*.

Manski, Richard J., Mark D. Macek, and John F. Moeller. 2002. Private dental coverage: who has it and how does it influence dental visits and expenditures? *Journal of the American Dental Association* 133: 1551–9.

Michigan Department of Community Health (MDCH). May 2010. Personal communication with Taggert Doll, Child and Adolescent Health Center Program Coordinator.

———. March 9, 2010. *Draft Oral Health Program Community Water Fluoridation Plan*. Lansing, Mich.: MDCH.

———. February 2010a. Dentist licensure data. Lansing, Mich.: MDCH.

———. February 2010b. Personal communication.

———. January 2010. *2008 Behavioral Risk Factor Survey*. Lansing, Mich.: MDCH.

———. June 2009. *Michigan Day of Oral Health Outreach Final Report*. Lansing, Mich.: MDCH.

———. April 21, 2009. *2008 Behavioral Risk Factor Survey Annual Tables*. [Online, accessed: 2/24/10.] Available: *http://www.michigan.gov/documents/mdch/2008_MiBRFS_Standard_Tables_4.21.09_FINAL_275555_7.pdf*.

———. August 2006. *Count Your Smiles*. Lansing, Mich.: MDCH.

Michigan Department of Community Health (MDCH), Division for Vital Records and Health Statistics (DVRHS). 2009. *Michigan Resident Cancer Incidence File* (Lansing, Mich.: MDCH, DVRHS). Includes cases diagnosed 2002–2006 and processed by the Michigan Department of Community Health, Division for Vital Records and Health Statistics by December 29, 2008.

———. N.d. 2004–2008 *Michigan Resident Death Files*. Lansing, Mich.: MDCH, DVRHS.

Michigan Department of Community Health (MDCH) and Michigan Oral Health Coalition (MOHC). August 2009. *Oral Health Needs Survey 2009*. Lansing, Mich.: MDCH and MOHC.

Michigan Public Health Institute (MPHI), Center for Collaborative Research in Health Outcomes and Policy (CRHOP). August 2006*a*. *State Planning Project for the Uninsured: Michigan Household Health Insurance Survey Report*. Okemos, Mich.: MPHI, CRHOP.

———. August 2006b. *State Planning Project for the Uninsured: Michigan Employer Health Insurance Survey Report*. Okemos, Mich.: MPHI, CRHOP.

National Academy for State Health Policy (NASHP). February 2010. *Reimbursing Medical Providers for Preventive Oral Health Services: State Policy Options*. Washington, D.C.: NASHP.

Pew Center on the States. February 2010. *The Cost of Delay: State Dental Policies Fail One in Five Children*. Washington, D.C.: Pew Center on the States.

Public Sector Consultants (PSC). January 2010a. *Michigan Department of Community Health Survey of Dentists: Survey Findings 2009*. Lansing, Mich.: PSC.

———. January 2010b. *Michigan Department of Community Health 2009 Survey of Dental Hygienists: Survey Findings 2009*. Lansing, Mich.: PSC.

Quinonez, Rocio B., Sally C. Stearns, Bhavna S. Talekar, R. Gary Rozier, Stephen M. Downs. 2006. Simulating cost-effectiveness of fluoride varnish during well-child visits for Medicaid-enrolled children. *Archives of Pediatric and Adolescent Medicin*e 160(2):164–170.

Rohde, F. September 2009. *Dental Expenditures in the 10 Largest States*, MEPS Statistical Brief #263. Rockville, Md.: Agency for Healthcare Research and Quality.

Schneider, D., J. Rossetti, and J. Crall. October 2007. *Assuring comprehensive Dental Services in Medicaid and Head Start Programs: Planning and Implementation Considerations*. Los Angeles, Cal.: National Oral Health Policy Center.

Sohn, Woosung, and Amid Ismail. 2005. Regular dental visits and dental anxiety in an adult dentate population. *Journal of the American Dental Association* 136(1):58–66.

Taichman, L. Susan, Woosung Sohn, Sungwoo Lim, Stephen Eklund, and Amid Ismail. 2009. Assessing patterns of restorative and preventive care among children enrolled in Medicaid, by type of dental care provider. *Journal of the American Dental Association* 140(7):886–894.

Task Force on Community Preventive Services (Task Force). 2002. *Preventing Dental Caries: Community Water Fluoridation*, [Online, accessed 2/17/10.] Available: *http://www.thecommunityguide.org/oral/fluoridation.html*. Page last updated February 10, 2010.

Tinanoff, Norman, and Susan Reisine. 2009. Update on early childhood caries since the surgeon general's report. *Academic Pediatrics* 9(6):396–403.

U.S. Census Bureau. March 2009. *Estimated Population of Counties for April 2000 to July 2008*. Estimates were developed by the Population Division of the U.S. Census Bureau through the Federal-State Cooperative for Population Estimates.

U.S. Department of Health and Human Services (DHHS). January 2006. *Periodontal (Gum) Disease: Causes, Symptoms, and Treatments*. Bethesda, Md.: DHHS, National Institutes of Health, National Institute of Dental and Craniofacial Research. [Online accessed 3/12/10.] Available: *http://www.nidcr.nih.gov/NR/rdonlyres/7B7D24C2-02E5-47C8-B076-27CB580FAF82/0/PeriodontalGum_Eng.pdf*.

———. 2000. *Oral Health in America: A Report of the Surgeon General*. Rockville, Md.: DHHS, National Institutes of Health, National Institute of Dental and Craniofacial Research.

U.S. Department of Health and Human Services (DHHS), Centers for Medicare and Medicaid Services (CMS). February 2010. Medicaid Early & Periodic Screening & Diagnostic Treatment Benefit—State Agency Responsibilities (CMS-416). [Online, accessed 3/12/10.] Available: *http://www.cms.hhs.gov/MedicaidEarlyPeriodicScrn/03_StateAgencyResponsibilities.asp*.

———.2009. *National Health Expenditure Projections, 2009–2019*. [Online, accessed 3/2/10.] Available: *http://www.cms.hhs.gov/NationalHealthExpendData/downloads/proj2009.pdf*.

APPENDIX

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*Work group members' perspectives may not necessarily represent the views of their organizations.