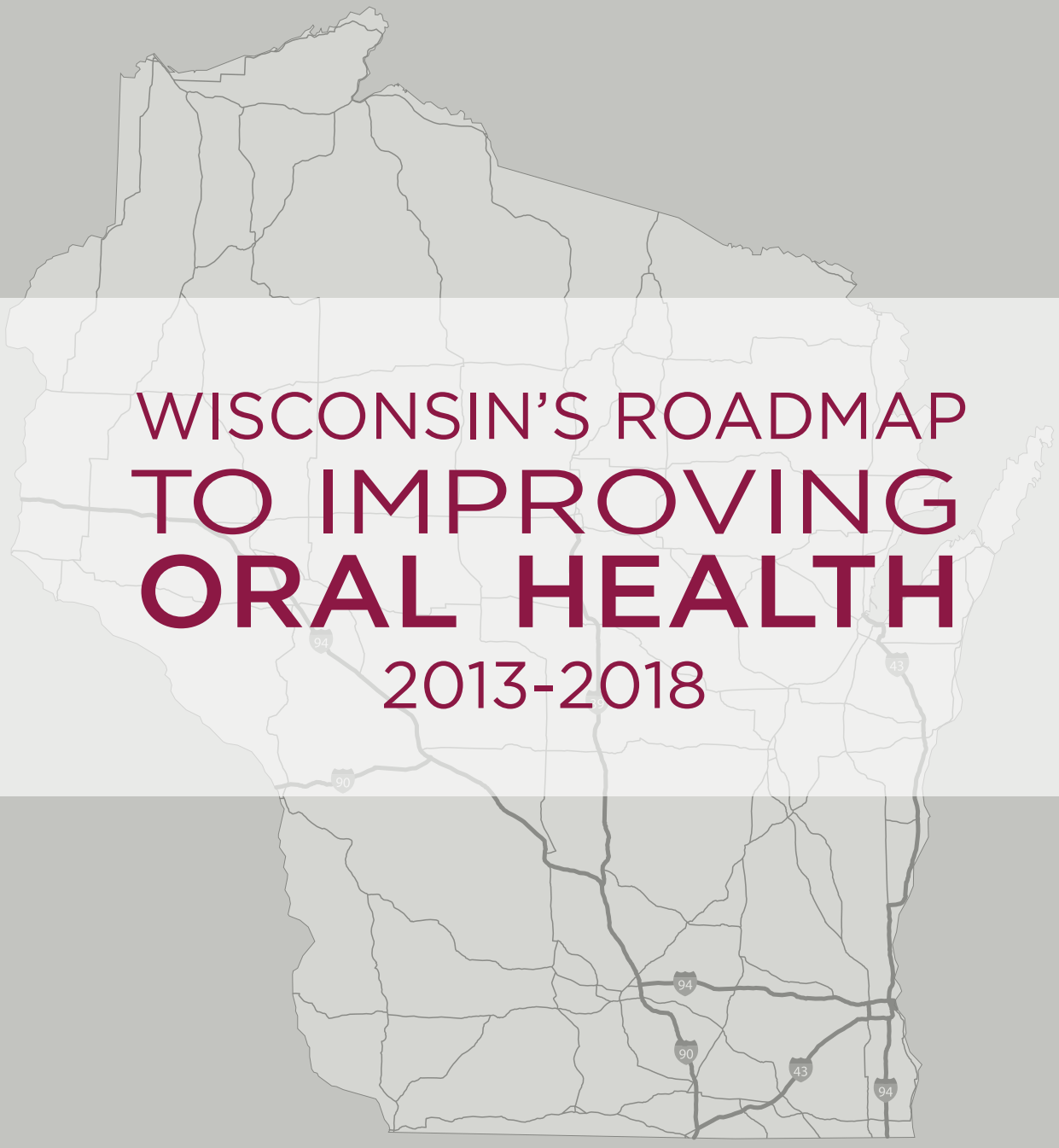

WISCONSIN'S ROADMAP TO IMPROVING ORAL HEALTH 2013-2018

Table of Contents

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Acronyms

Dental Health Professional Shortage Area (DHPSA)

Department of Health Services (DHS)

Department of Health Services Oral Health Program (DHS-OHP)

Division of Health Care Access and Accountability (DHCAA)

Federally Qualified Health Center (FQHC)

Free and reduced meal program (FRM)

Health Maintenance Organization (HMO)

Medicaid/BadgerCare Plus (MA/BC+)

State fiscal year (SFY)

Wisconsin Oral Health Coalition (WOHC)

Introduction

In the 2000 report, *Oral Health in America*, former Surgeon General David Satcher referred to a "silent epidemic" of oral disease restricting activities in school, work and home and often diminishing the quality of life. The report noted those who suffer the worst oral health are found among the poor of all ages, with poor children and poor older Americans particularly vulnerable. The report further detailed how oral health is promoted, how oral diseases and conditions are prevented and managed, and what needs and opportunities exist to enhance oral health. Water fluoridation and dental sealants were noted as two interventions that have reduced dental decay. The report highlighted the ongoing need to reduce oral health disparities. In the U.S., 25 percent of children and adolescents experience 80 percent of all dental decay occurring in permanent teeth.[1] Five to 10 percent of preschool-age children have early childhood caries. This rate is higher among families with low incomes and some racial/ethnic minorities.[2]

The mouth is vital to everyday life. It serves to nourish our bodies as we take in water and nutrients. It is how we communicate. Oral health is an essential and integral component of overall health. Oral health includes more than just healthy teeth. It includes the entire mouth: teeth, gums, hard and soft palate, lining of the mouth and throat, tongue, lips, salivary glands, chewing muscles, and upper and lower jaws. Oral health is more than being free of tooth decay and gum disease. It also means being free of chronic oral pain, oral cancer and other conditions that affect the mouth and throat. Good oral health includes the surgical correction and treatment of birth defects, such as cleft lip and palate. Oral health includes the ability to carry on the most basic human functions such as chewing, swallowing, speaking, smiling, kissing and singing. The mouth is an integral part of the human anatomy and oral health is intimately related to the health of the rest of the body. For example, mounting evidence suggests infections in the mouth such as periodontal (gum) disease may increase the risk for heart disease and premature delivery in pregnant women, and has been shown to complicate controlling blood sugar for diabetics. Furthermore, changes in the mouth are often early indicators of problems elsewhere in the body, such as infectious diseases, immune disorders, nutritional deficiencies and cancer.

Vision for Oral Health Care in Wisconsin

Vision for Wisconsin: *Everyone has access to quality oral health care across their lifespan.*

To improve the oral health of all Wisconsin residents, it is important to promote sustainable concepts and strategies that accomplish the following:

- Identify and eliminate barriers that contribute to oral health disparities;
- Promote disease prevention in the personal, community and professional settings;
- Promote the delivery of oral health services in a variety of settings;
- Develop and support a diverse and competent workforce that is adequately compensated, qualified and authorized to provide evidence-based care;
- Promote collaborative and multidisciplinary teams working across the health care spectrum; and
- Encourage continuous improvement and innovation.

Roadmap Development

The overall goal of *Wisconsin's Roadmap to Improving Oral Health* is to reduce the prevalence of oral disease and reduce disparities in oral health status among populations. The vision of access to quality oral health care across the lifespan is the driving force in the development of the roadmap. Many Wisconsin residents do not enjoy the benefit of good oral health, yet oral health is integral and essential to overall health. Furthermore, there are segments of the population bearing an uneven distribution of the burden of disease and have difficulty accessing oral health services. Public health surveillance is important for the purpose of identifying areas of greatest need, and to target limited resources where needed most. For the purpose of this report, background and surveillance information was compiled using a variety of available sources.

In order to address the areas of greatest need, the roadmap focuses on four strategic areas: Infrastructure; Prevention and health promotion; Access; and Workforce.

The *Strategic Areas and Goals* have been developed by a group of key stakeholders convened by the Wisconsin Oral Health Coalition (WOHC), with additional input from members of the public health and dental communities. Multiple goals are listed under each strategic area. These goals align with the work of *Healthy People 2020* and *Healthiest Wisconsin 2020* (p. 6-10). Strategies for each goal were not developed by this working group but the WOHC encourages groups to develop strategies to help achieve roadmap goals. In addition, WOHC will work to develop a separate document focusing on strategies for prioritized goals.

Organizations should see page 36 for guidance on how to use the roadmap to develop their individual strategies to address the four focus areas. A partnership alignment chart will be developed to assist organization in partnering with others who identify similar goals to address.

The final has been approved by the WOHC steering committee and will be available on the WOHC website. If you have questions about the document, contact Lexi Lozinak, WOHC coordinator at 414-292-4003 or alozinak@chw.org.

Healthy People 2020

Healthy People 2020 Oral Health Indicators, Target Levels and Current Status in the U.S. and Wisconsin

Healthy People 2020 Objective [Objective Number and Description]	Target (%)	National (%)	Wisconsin (%)
Oral Health of Children and Adolescents			
OH-1: Dental caries (tooth decay) experience			
OH-1.1: Young children, aged 3-5 years	30.0	33.3	35.7[a]
OH-1.2: Children, aged 6-9 years	49.0	54.4	54.7[b]
OH-1.3: Adolescents, aged 13-15 years	48.3	53.7	DNC
OH-2: Untreated dental decay in children and adolescents			
OH-2.1: Young children, aged 3-5 years	21.4	23.8	26.4[a]
OH-2.2: Children, aged 6-9 years	25.9	28.8	20.1[b]
OH-2.3: Adolescents, aged 13-15 years	15.3	17.0	DNC
Oral Health of Adults			
OH-3: Untreated dental decay in adults			
OH-3.1: Adults, aged 35-44	25.0	27.8	CIP
OH-3.2: Adults, aged 65-74	15.4	17.1	CIP
OH-3.3: Adults, aged 75 and older	34.1	37.9	CIP
OH-4: No permanent tooth loss			
OH-4.1: Adults, aged 45-64 ever had tooth extracted	68.8	76.4	43.2[c]
OH-4.2: Adults, aged 65-74 lost all natural teeth	21.6	24.0	13.5[c]
OH-5: Destructive periodontal disease			
OH-5: Adults, aged 45-74 moderate or severe periodontitis	11.4	12.7	DNC
OH-6: Early detection of oral and pharyngeal cancers			
OH-6: Oral and pharyngeal cancers detected early	34.8	32.5	36.7[d]
Access to Preventive Services			
OH-7: Use of oral health care system			
OH-7: Children adolescents, and adults who used oral health care system in past 12 months	49.0	44.5	72.6[e]
OH-8: Dental services for low-income children and adolescents			
OH-8: Low-income children and adolescents who received any preventive service during past year	29.4	26.7	DNC

Healthy People 2020 Objective [Objective Number and Description]	Target (%)	National (%)	Wisconsin (%)
Oral Health of Children and Adolescents			
OH-9: School-based centers with an oral health component			
OH-9.1: School-based health centers with an oral health component that includes dental	26.5	24.1	NA
OH-9.2: School-based health centers with an oral health component that includes dental care	11.1	10.1	NA
OH-9.3: School-based health centers with an oral health component that includes topical fluoride	32.1	29.2	NA
OH-10: Health centers with an oral health component			
OH-10.1: Federally Qualified Health Centers with an oral health care program	83.0	75.0	88.0[f]
OH-10.2: Local health departments that have oral health prevention or care programs	28.4	25.8	55.9[g]
OH-11: Receipt of oral health services at health centers			
OH-11: Patients who receive oral health services at Federally Qualified Health Centers each year	33.3	17.5	37.0[f]
Oral Health Interventions			
OH-12: Dental sealants			
OH-12.1: Children aged 3 to 5 received dental sealants on one or more primary molars	1.5	1.4	DNC
OH-12.2: Children aged 6 to 9 who have dental sealants on one or more permanent fist molar teeth	28.1	25.5	50.8[b]
OH-12.3: Adolescents aged 13 to 15 who have sealants on one or more first or second permanent	21.9	19.9	DNC
OH-13: Community water fluoridation			
OH-13: Population served by community water systems with optimally fluoridated water	79.6	72.4	90.0[h]
OH-14: Preventive dental screening and counseling			
OH-14.1: Adults who received information from dentist/dental hygienist focusing on reducing tobacco use or smoking cessation			DNC
OH-14.2: Adults who received an oral and pharyngeal cancer screening from dentist/dental			DNC
OH-14.3: Adults who are tested or referred for glycemic control from dentist/hygienist			DNC

Healthy People 2020 Objective [Objective Number and Description]	Target (%)	National (%)	Wisconsin (%)
Monitoring, Surveillance Systems			
OH-15: Systems that record cleft lip or palate and referrals			
OH-15.1: States that have a system for recording cleft lips and palates			Yes
OH-15.2: States that have a system for referral of cleft lips and cleft palates to rehabilitative teams			Yes
OH-16: Oral and craniofacial state-based health surveillance system			
OH-16: States with an oral and craniofacial health surveillance system	51	32	Yes
Public Health Infrastructure			
OH-17: Health agencies with a dental professional directing their dental program			
OH-17.1: States and local health agencies that serve jurisdictions of 250,000 or more with a dental public health program	27.7	23.4	25.0[g]
OH-17.2: Indian Health Service Areas and Tribal health programs that serve jurisdictions of 30,000 or more with a dental public health program	12	11	NA

Notes: DNC = Data not collected, CIP = Collection in progress, and NA = Not applicable.

Sources:

[a] Wisconsin Department of Health Services, Division of Public Health. *Healthy Smiles for a Healthy Head Start, 2009,* Madison, WI.

[b] Wisconsin Department of Health Services, Division of Public Health, *Make Your Smile Count, 2008,* Madison, WI.

[c] Wisconsin Behavioral Risk Factor Survey 2010, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

[d] Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics. Wisconsin Interactive Statistics on Health (WISH) data query system. Available at: http://dhs.wisconsin.gov/wish/.

[e] Wisconsin Family Health Survey 2009, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

[f] U.S. Department of Health and Human Services, Health Resources and Services Administration, Health Center Data. Available at: http://bphc.hrsa.gov/uds/view.aspx?year=2010&state=WI.

[g] Association of State and Territorial Dental Directors, *Synopses of State and Territorial Dental Public Health Programs 2012.*

[h] Wisconsin Department of Health Services, Division of Public Health, *Wisconsin Public Water Supply Fluoridation Census 2011,* Madison, WI. Available at: http://dhs.wisconsin.gov/publications/P0/P00103.pdf.

Healthiest Wisconsin 2020

Healthiest Wisconsin 2020 identified 23 focus areas to be addressed by public health system partners and Wisconsin communities from 2010 to 2020. These focus areas are listed and briefly described in the *Healthiest Wisconsin 2020* document, and include two overarching focus areas, nine infrastructure focus areas and 12 health focus areas.

For each focus area, a team of experts met several times in 2009, to identify each area's key objectives for the decade. Focus Area Strategic Teams identified two or three objectives, representing the most important policy change, system alignment or program action to be achieved by 2020 that will improve health across the lifespan and achieve health equity. The objectives from the oral health focus area profile are below.

Objective 1: By 2020, assure access to ongoing oral health education and comprehensive prevention, screening and early intervention, and treatment of dental disease in order to promote healthy behaviors and improve and maintain oral health.

Objective 1 Indicators

- Percent of third-graders with dental sealants and untreated decay (school survey).
- Percent of Head Start children with untreated decay.
- Percent of adults with self-reported oral health problems (Behavioral Risk Factor Survey).

Objective 1 Rationale

The oral disease burden in Wisconsin can be reduced through early education and preventive services. In addition, access to preventive and treatment services would reduce morbidity and mortality, and reduce the severity of oral disease, leading to better overall health. Improved overall health status would result in better nutrition, improved school/work attendance and performance, and enhanced interpersonal relationships. It also would facilitate the search for, and attainment of, work.

Objective 2: By 2020, assure appropriate access to effective and adequate oral health delivery systems, utilizing a diverse and adequate workforce, for populations of differing races, ethnicities, sexual identities and orientations, gender identities, and educational or economic status and those with disabilities.

Objective 2 Indicators

- Proportion of Medicaid/BadgerCare Plus (MA/BC+) enrollees with at least one dental claim in a year.
- Number of oral health related emergency room visits by population group (indicator to be developed).

- Percent of schools with school-based dental screening/sealant programs.
- Number of dental providers by type of provider by demographics and location.

Objective 2 Rationale

Certain populations in Wisconsin disproportionately bear the burden of oral disease. The oral disease burden can be reduced through early education and preventive services. In addition, access to preventive and treatment services would reduce morbidity and mortality, and reduce the severity of oral disease, leading to better overall health. Improved overall health status would result in better nutrition, improved school/work attendance and performance, and enhanced interpersonal relationships. It also would facilitate the search for, and attainment of, work. However, in order to address these disparities, adequate and accessible infrastructure must be maintained and services delivered by a culturally-competent and diverse workforce.

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Burden of Oral Disease in Wisconsin

Introduction

The following information is part of the *Burden of Oral Disease in Wisconsin* report published in 2010, supplemented with other available resources. It is hoped that this information will help raise awareness of the need for monitoring the oral disease burden in Wisconsin, guide efforts to prevent and treat oral diseases and enhance the quality of life of Wisconsin residents. While Wisconsin has made significant progress in improving the oral health status of Wisconsinites, oral disease continues to be a key health concern for the state. The full *Burden of Oral Disease in Wisconsin* report is available at http://www.dhs.wisconsin.gov/health/Oral_Health/reports.htm.

Burden of Oral Diseases

Wisconsin conducted a statewide Basic Screening Survey of Head Start children during the 2008-09 school year. Wisconsin did not meet the *Healthy People 2010* objectives for this population. The objective for untreated decay was 9 percent, and approximately 26 percent of Wisconsin's Head Start children have untreated decay, compared to 19 percent nationally.

A Basic Screening Survey also was conducted among third grade students in Wisconsin public schools during the 2007-08 school year. While the decay experience objective was not met, Wisconsin did meet the 2010 objective for untreated decay. However, it is important to note that racial/ethnic and socioeconomic disparities still exist, where African-American, Hispanic and Asian children are all twice as likely as white children to have untreated decay.

Disparities in oral health status exist throughout Wisconsin by race/ethnicity, gender geographic location, education and insurance status. In addition, there are many special populations in the state with an increased disease burden that needs to be addressed, including: people with disabilities, long-term care residents, individuals with HIV/AIDS and those in the corrections system.

Risk and Protective Factors Affecting Oral Diseases

Community water fluoridation is not only effective in preventing dental caries, but also generates cost savings. Wisconsin has had great success in the area of community water fluoridation and surpassed the *Healthy People 2010* objective of 75 percent of the population on community water systems receiving optimally fluoridated water. In Wisconsin, nearly 90 percent of the population on community water systems has access to optimally fluoridated water.[6]

Dental sealants placed on permanent molars in children are an effective way to prevent tooth decay in pits and fissures of molar teeth. The Wisconsin Seal-A-Smile program started in 2000 and more than 20,000 children received dental sealants through the program in the 2011-12 school year.[7] Wisconsin met the *Healthy People 2010* objective for dental sealants, where 51 percent of third grade students have sealants.

Use of tobacco products is a major risk factor for oral disease, including periodontal disease and oral and pharyngeal cancers. Tobacco use is still common in Wisconsin and throughout the U.S. Approximately 20 percent of Wisconsin adults are current smokers and 16 percent use chewing tobacco, snuff or snus.

Provision of Dental Services

According to the Wisconsin Department of Safety and Professional Services, in 2012 there were an estimated 3,496 licensed dentists and 4,739 dental hygienists in Wisconsin. Overall, Wisconsin's oral health workforce is similar to the U.S. Wisconsin has 43 low-income population dental health professional shortage areas (DHPSA) and 33 facility DHPSAs.

During state fiscal year (SFY) 2009, only 25 percent of MA/BC+ members received at least one dental service and rates have remained the same for the past five years. Of the active, licensed dentists in 2009, only 32 percent had at least one paid Medicaid claim and 11 percent had claims of $10,000 or more.[3]

Wisconsin has one dental school, Marquette University School of Dentistry (MUSOD), which admits 100 new students annually. Fifty of the new students are Wisconsin residents and receive a tuition subsidy. Historically the percentage of students that remain in Wisconsin is greater than 50 percent. Approximately 80 percent of the Wisconsin residents stay in the state immediately upon graduation. The remaining 20 percent typically return after they complete military service commitments or residency programs. Additionally, a minimum of 15 percent of the non-resident graduates practice in Wisconsin immediately after graduation.

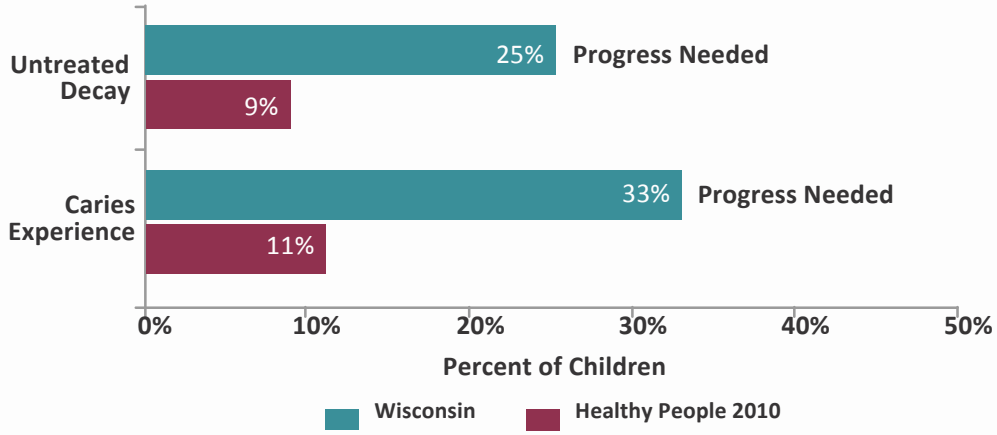
Nine Wisconsin technical colleges offer dental hygiene programs. In addition, five technical college campuses offer a one-year dental assisting program and seven offer a short-term technical diploma in dental assisting.

Prevalence of Disease and Unmet Needs Among Children

According to 2008-09 surveys, 33 percent of Wisconsin Head Start children and 55 percent of third grade children had caries experience. Also, 25 percent of Head Start children and 20 percent of third grade children had untreated decay at the time of the surveys.

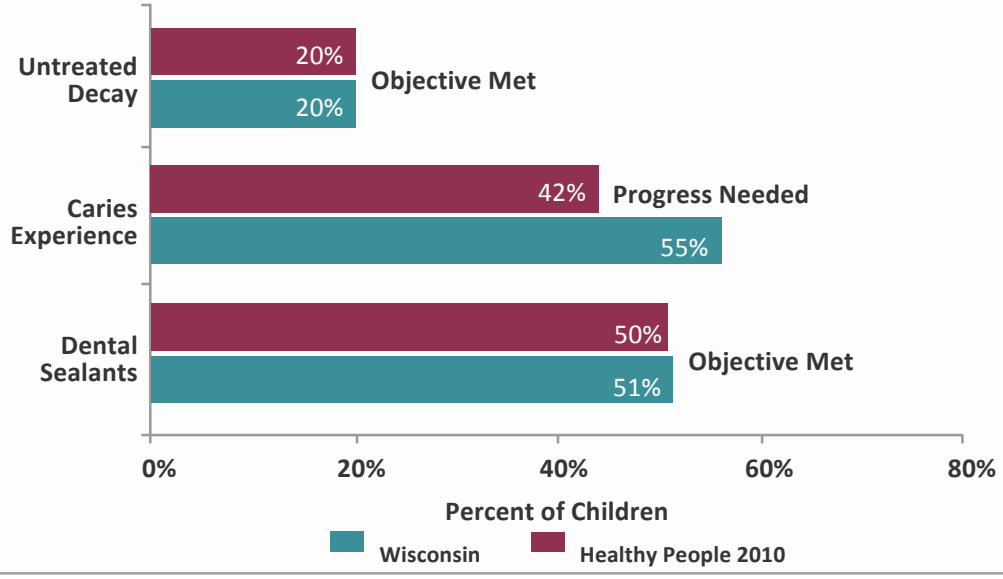
In addition to monitoring untreated decay and caries experience, treatment need also is identified. In Wisconsin, 27 percent of Head Start children and 20 percent of third grade children had either early or urgent treatment needs at the time of screening. Wisconsin met the untreated decay and dental sealant *Healthy People 2010* objectives for children ages 6 to 8-years-old. However, the two objectives for children ages 2 to 4 and the objective for caries experience for children ages 6 to 8 (Figures I and II) were not achieved.

Figure I: Oral Health of Wisconsin's Head Start Children Compared to Healthy People 2010 Objectives*



* The Healthy People objective is for children ages 2 to 4, while the Wisconsin data only includes children ages 3 and 4.
Source: Wisconsin Department of Health Services, *Healthy Smiles for a Healthy Head Start,* 2009.

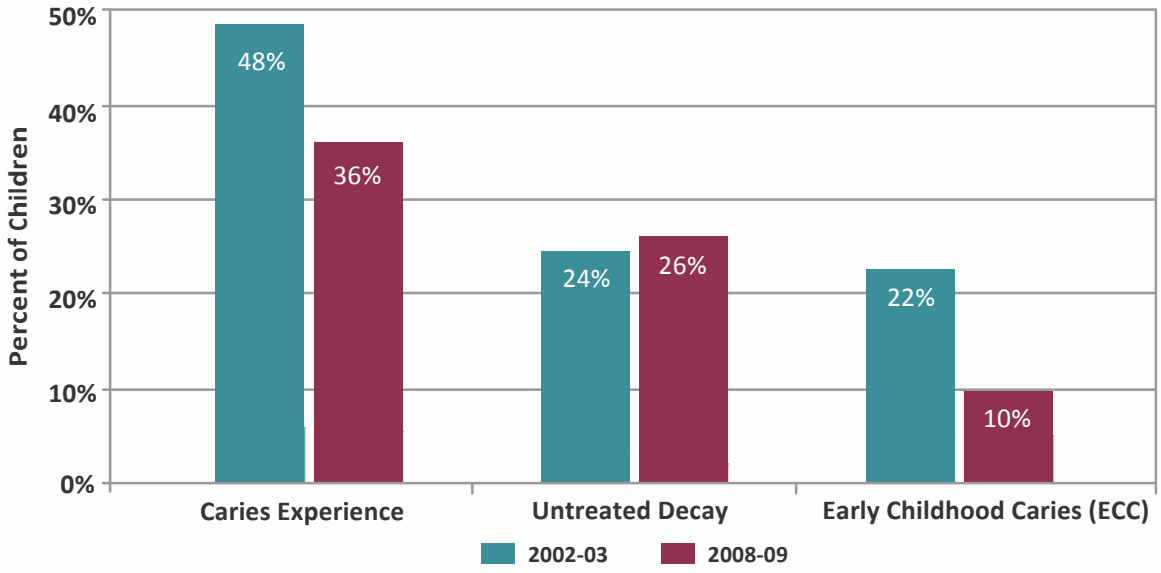
Figure II: Oral Health of Wisconsin's Third Grade Children Compared to Healthy People 2010 Objectives



Source: Wisconsin Department of Health Services, *Make Your Smile Count,* 2008.

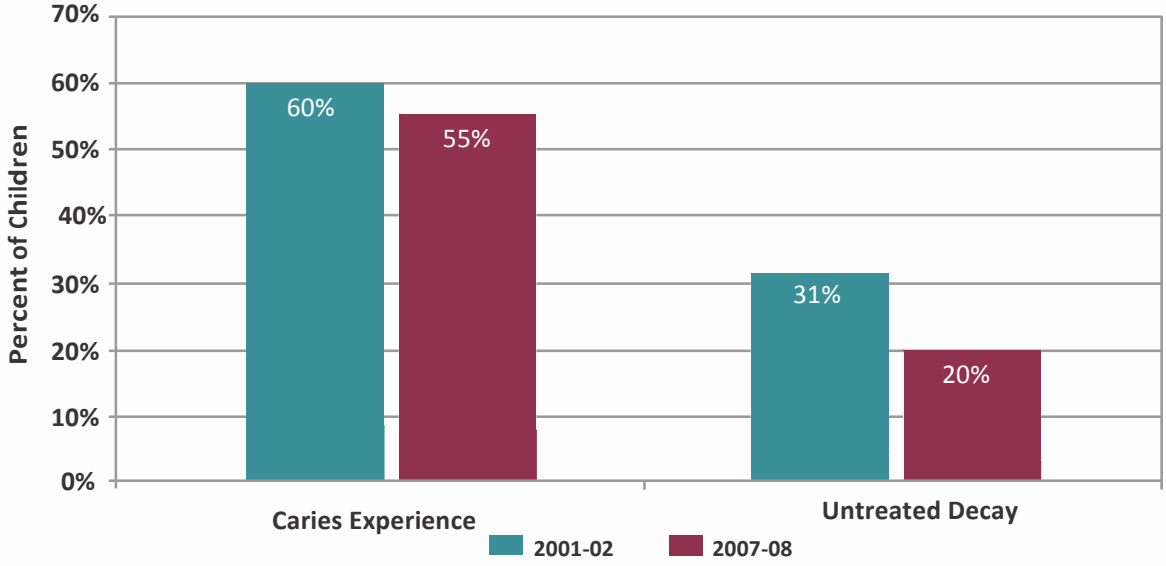
Wisconsin first conducted a survey of third-grade students during the 2001-02 school year and in 2002-03 for Head Start children. Much improvement was made from the baseline among Head Start children for caries experience (48 to 36 percent) and early childhood caries (22 to 10 percent), while untreated decay remained unchanged (Figure III). Likewise, progress was made among third grade students, with a small decrease in caries experience and a significant decrease in untreated decay from 31 to 20 percent (Figure IV).

Figure III: Percent of Wisconsin's Head Start Children with Caries Experience, Untreated Decay and Early Childhood Caries 2002-03 and 2008-09



Source: Wisconsin Department of Health Services, *Healthy Smiles for a Healthy Head Start,* 2009.

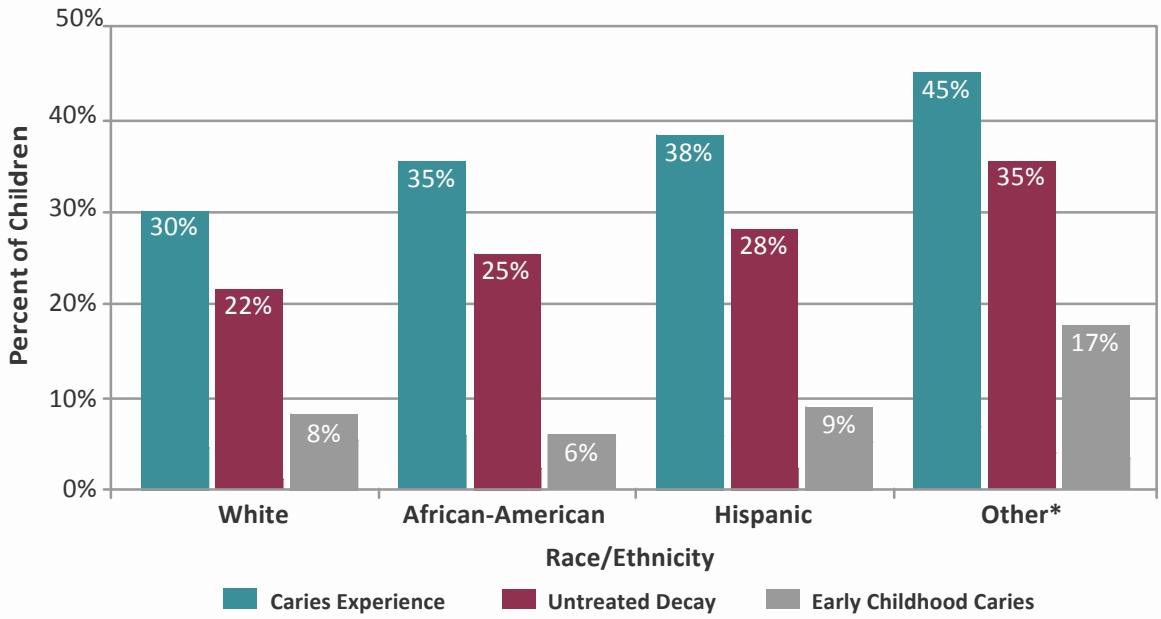
Figure IV: Percent of Wisconsin's Third Grade Children with Caries Experience and Untreated Decay 2001-02 and 2007-08



Source: Wisconsin Department of Health Services, *Make Your Smile Count,* 2008.

Dental caries is not uniformly distributed in the U.S. or in Wisconsin. Some groups are more likely to experience the disease and less likely to receive treatment. Wisconsin conducted a Basic Screening Survey of Head Start children during the 2008-09 school year. Although all of the children included in the sample came from low-income families, racial/ethnic disparities were still found. African-American and Hispanic children were more likely to have caries experience and untreated decay, compared to white children (Figure V). Due to small numbers, children from all other racial/ethnic groups were grouped together into another category. The children in the other group were much more likely to have caries experience, untreated decay and early childhood caries compared to white children.

Figure V: Percent of Wisconsin's Head Start Children with Caries Experience, Untreated Decay and Early Childhood Caries by Race/Ethnicity, 2008-09

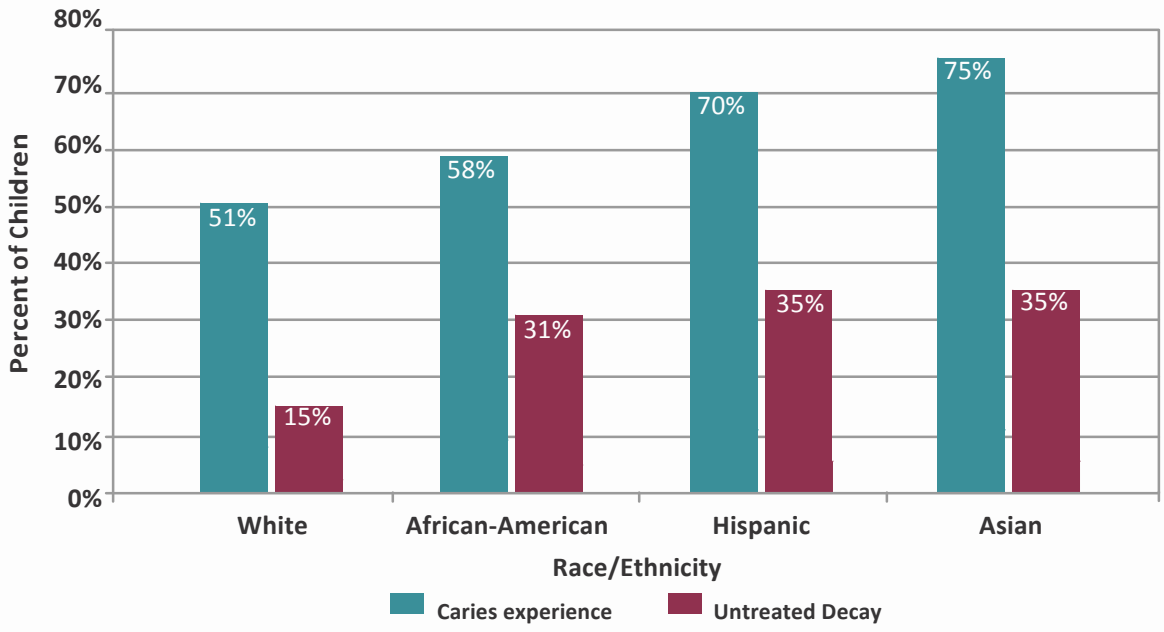


* Other includes: American Indian/Alaska Native, Native Hawaiian/Pacific Islander, multi-racial and missing/unknown.

Source: Wisconsin Department of Health Services, *Healthy Smiles for a Healthy Head Start,* 2009.

Significant racial/ethnic disparities also were found among third-grade students in Wisconsin public schools. Among Asian children, 75 percent had caries experience compared to 51 percent of white children (Figure VI). In addition, 70 percent of Hispanic students had caries experience and African-American, Hispanic and Asian students were all much more likely to have untreated decay compared to white students.

Figure VI: Percent of Wisconsin's Third Grade Children with Caries Experience and Untreated Decay by Race/Ethnicity 2007-08



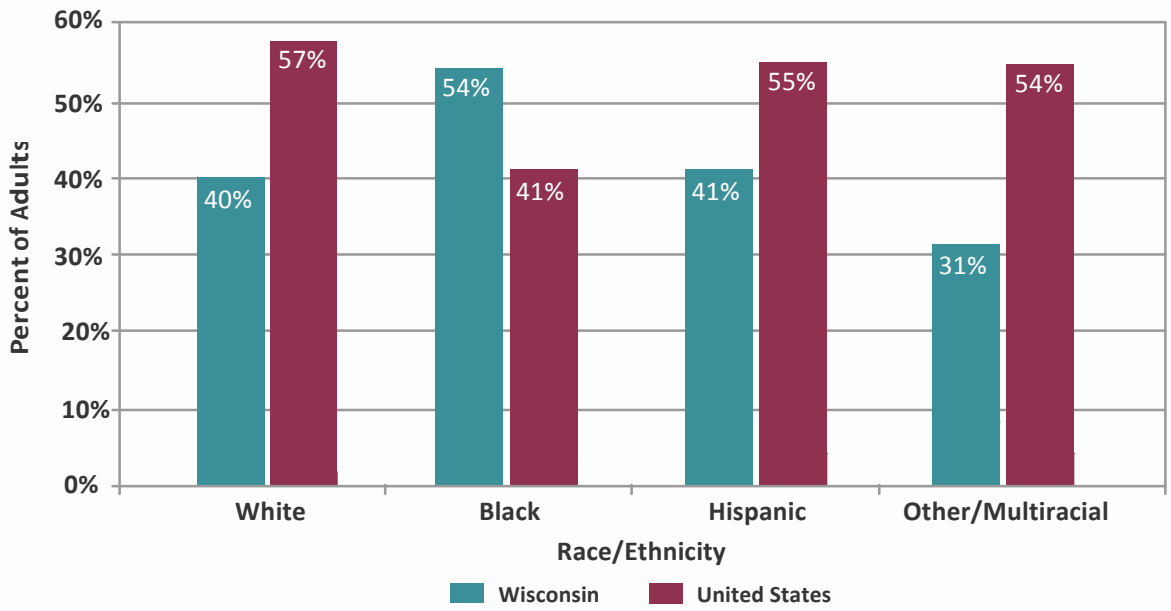
Source: Wisconsin Department of Health Services, *Make Your Smile Count,* 2008.

Burden of Disease Among Adults

Tooth Loss

In Wisconsin, 75 percent of adults between the ages of 35 and 44 have not lost a tooth due to decay or gum disease, which was well above the *Healthy People 2010* objective of 42 percent. Wisconsin also met the objective for edentulous older adults, where 15 percent of adults between the ages of 65 and 74 are toothless compared to the *Healthy People 2010* objective of 20 percent. Despite an overall trend in reduction of tooth loss, not all groups have benefited to the same extent in Wisconsin (Figure VII).

Figure VII: Percent of Adults with at Least One Tooth Extracted Due to Decay/Gum Disease, Wisconsin vs. United States, by Race/Ethnicity BRFSS 2004, 2006 and 2008



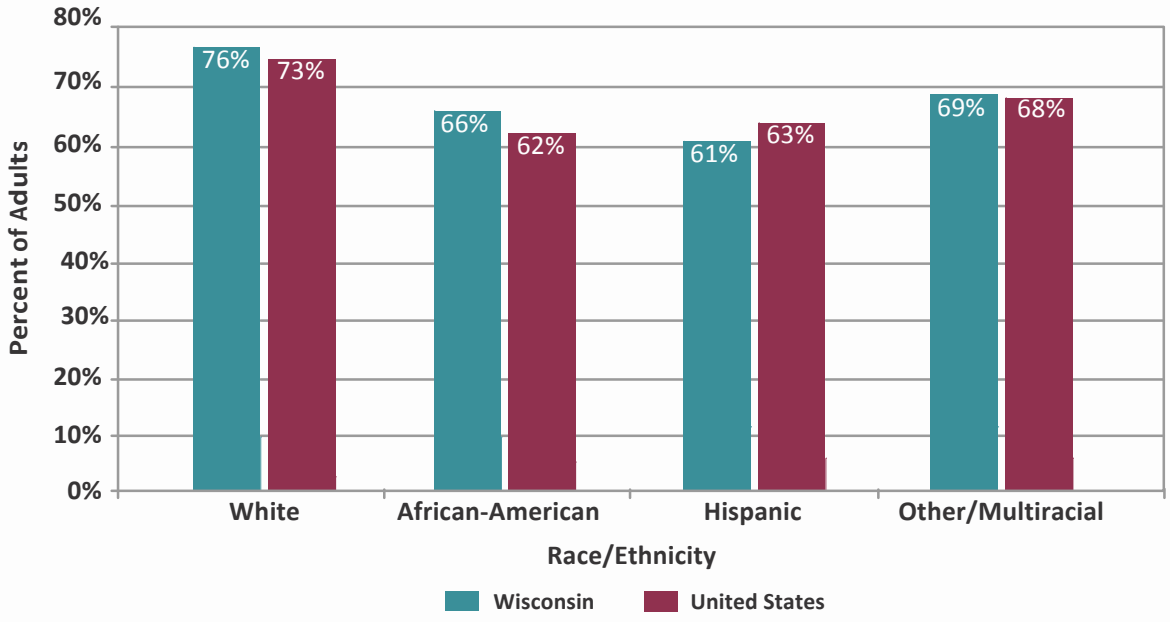
Sources: Wisconsin Department of Health Services, Behavioral Risk Factor Surveillance System (BRFSS) and CDC Behavioral Risk Factor Surveillance System.

Note: Due to small numbers three years of BRFSS data were combined.

Dental Visits

Regular dental visits are important to achieving optimal oral health. In 2008, 73 percent of Wisconsin adults reported a dental visit in the past 12 months, which was slightly higher than the national average of 71 percent. A similar pattern of racial/ethnic disparities are seen both in Wisconsin and the U.S., where white adults are more likely to report a dental visit in the past year compared to adults who are black, Hispanic and other/multiracial (Figure VIII).

Figure VIII: Percent of Adults with a Dental Visit in the Past Year, Wisconsin vs. United States, by Race/Ethnicity BRFSS 2004, 2006 and 2008



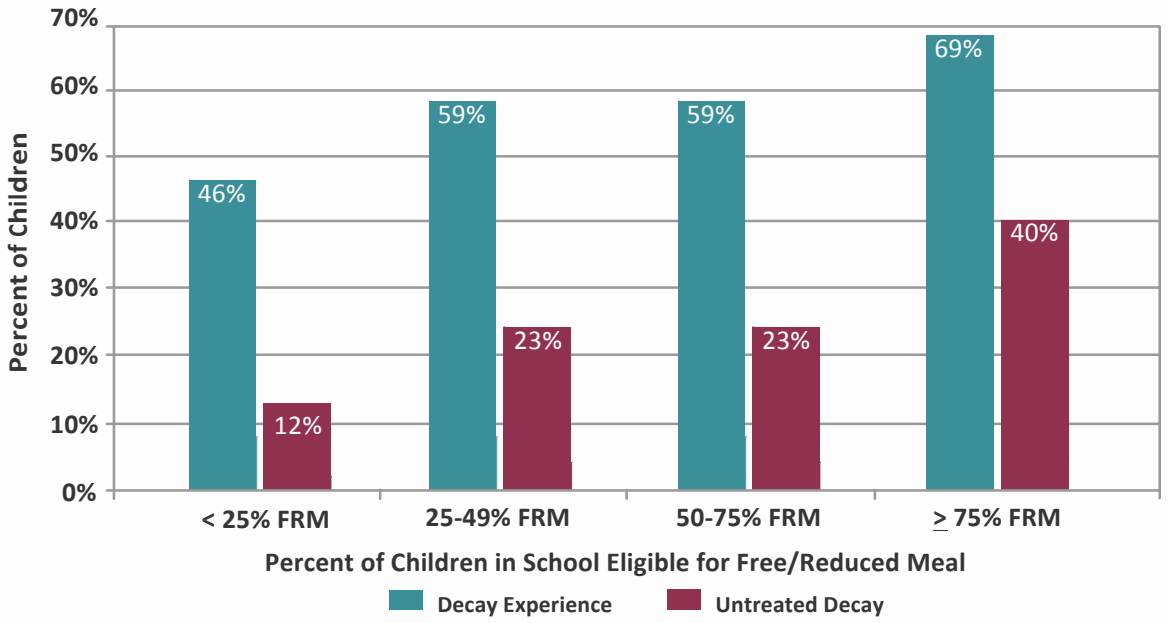
Sources: Wisconsin Department of Health Services, Behavioral Risk Factor Surveillance System (BRFSS) and CDC Behavioral Risk Factor Surveillance System.

Note: Due to small numbers three years of BRFSS data were combined.

Socioeconomic Disparities

People living in low-income families bear a disproportionate burden from oral diseases and conditions. In Wisconsin, children who attend schools with a higher percentage of students eligible for the free and reduced meal (FRM) program are more likely to have decay experience and untreated decay (Figure IX).

Figure IX: Percent of Wisconsin's Third Grade Children with Decay Experience and Untreated Decay, by Free/Reduced Meal (FRM) Status, 2007-08



Source: Wisconsin Department of Health Services, *Make Your Smile Count,* 2008.

Risk and Protective Factors Affecting Oral Diseases

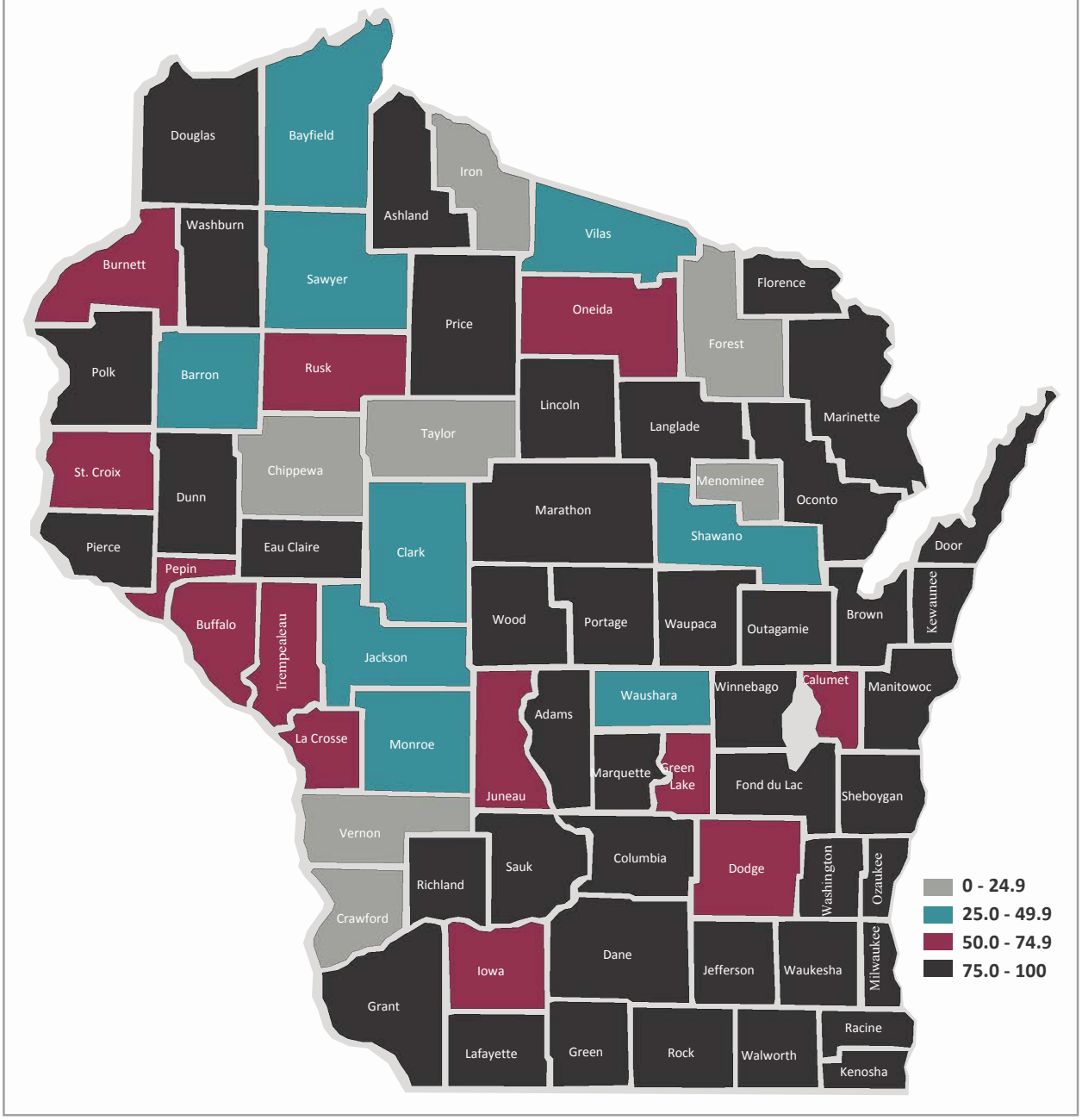
The most common oral diseases and conditions can be prevented. Safe and effective measures are available to reduce the incidence of oral disease, reduce disparities and increase quality of life.

Community Water Fluoridation

Community water fluoridation is the process of adjusting the natural fluoride concentration of a community's water supply to the optimal level for preventing dental caries. In the U.S., community water fluoridation has been the basis for the primary prevention of dental caries since 1945 and has been recognized by the Centers for Disease Control and Prevention as one of 10 great public health achievements of the 20th century. It is an ideal public health method because it is effective, eminently safe, inexpensive and does not depend on access or availability of professional services. Water fluoridation has the potential to be equally effective in preventing dental caries among different socioeconomic, racial and ethnic groups. Fluoridation helps to lower the cost of dental care and helps residents retain their teeth throughout life.[4]

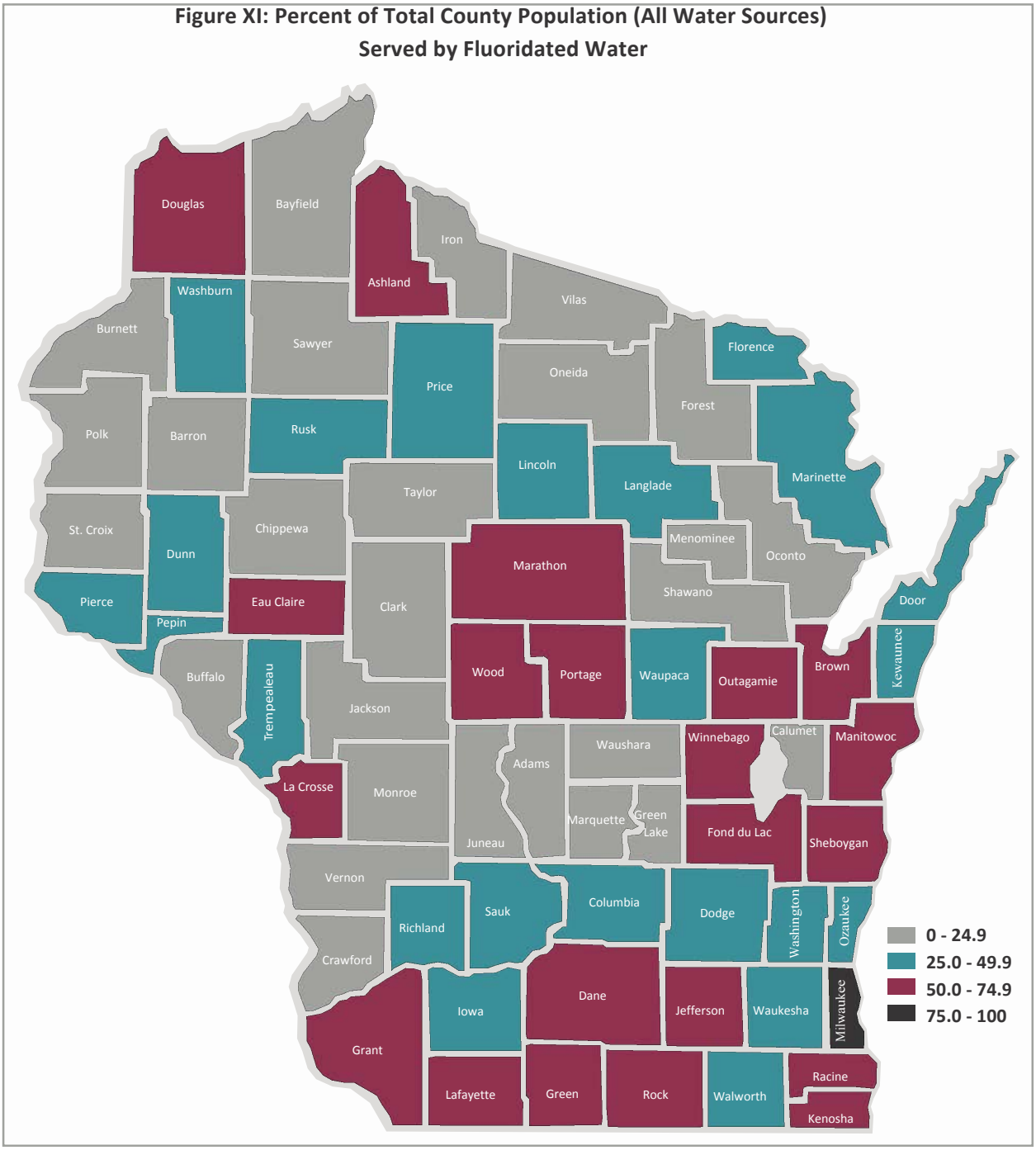
Recognizing the importance of community water fluoridation, *Healthy People 2010* objective 21-9 was to "Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water to 75 percent." In the U.S., during 2006, approximately 184 million individuals (69 percent of the population served by public water systems) received optimally fluoridated water.[5] Wisconsin met the *Healthy People 2010* objective, where approximately 90 percent of the population on community water systems have access to optimally fluoridated water.[6] In addition, 43 of Wisconsin's 72 counties have met the *Healthy People 2010* objective of 75 percent (Figure X). Figure XI shows the percent of the total county population, including all water supplies, served by fluoridated water. Because the northern half of Wisconsin is more rural, with more people on well water, most of the counties have lower percentages.

Figure X: Percent of Population on Community Water Systems with Access to Optimally Fluoridated Water



Source: CDC Water Fluoridation Reporting System.

Figure XI: Percent of Total County Population (All Water Sources) Served by Fluoridated Water



Source: CDC Water Fluoridation Reporting System.

Dental Sealants

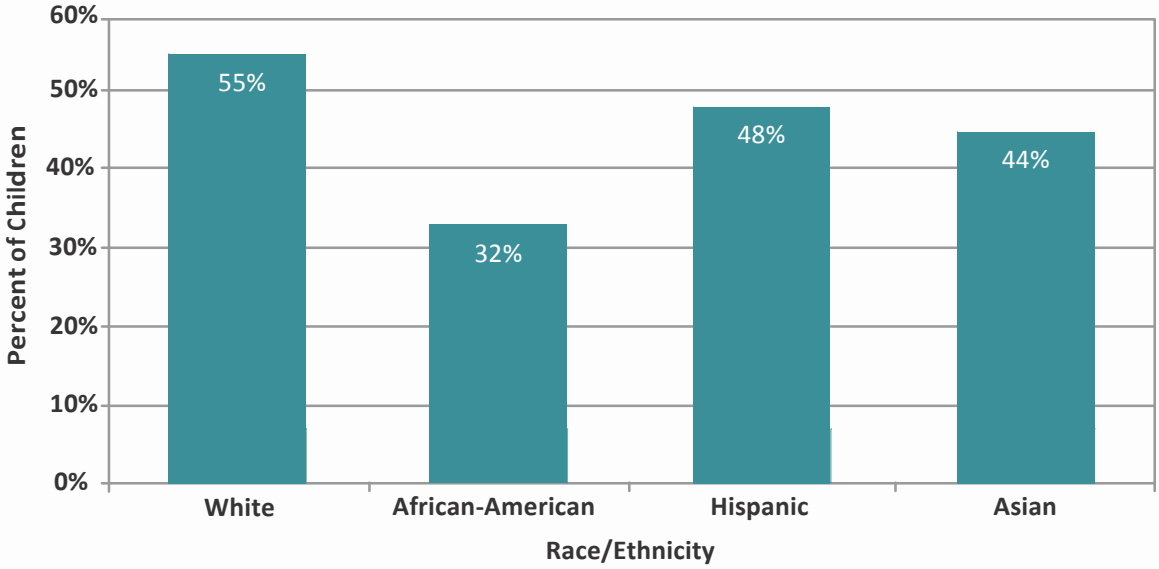
Since the early 1970s, the incidence of childhood dental caries on smooth tooth surfaces (those without pits and fissures) has declined markedly because of widespread exposure to fluorides. Most decay among school-age children now occurs on tooth surfaces with pits and fissures, particularly the molar teeth. First permanent molars erupt into the mouth at about 6 years of age.

Pit-and-fissure dental sealants—plastic coatings bonded to susceptible tooth surfaces—have been approved for use for many years and have been recommended by professional health associations and public health agencies.

The *Healthy People 2010* target for dental sealants on first permanent molars was 50 percent for 8-year-olds and 14-year-olds. In Wisconsin, 51 percent of third-grade students have dental sealants on their first molars (Figure II). However, African-Americans, Hispanic and Asian students are less likely than whites to have sealants (Figure XII). The prevalence of sealants also varies by the education level of the head of household.

The Wisconsin Seal-A-Smile program began in 2000. During the 2011-12 school year, more than 30,000 children were screened and more than 20,000 of those children received dental sealants.[7]

Figure XII: Percent of Wisconsin's Third Grade Children with Dental Sealants, by Race/Ethnicity, 2007-08



Source: Wisconsin Department of Health Services, *Make Your Smile Count,* 2008.

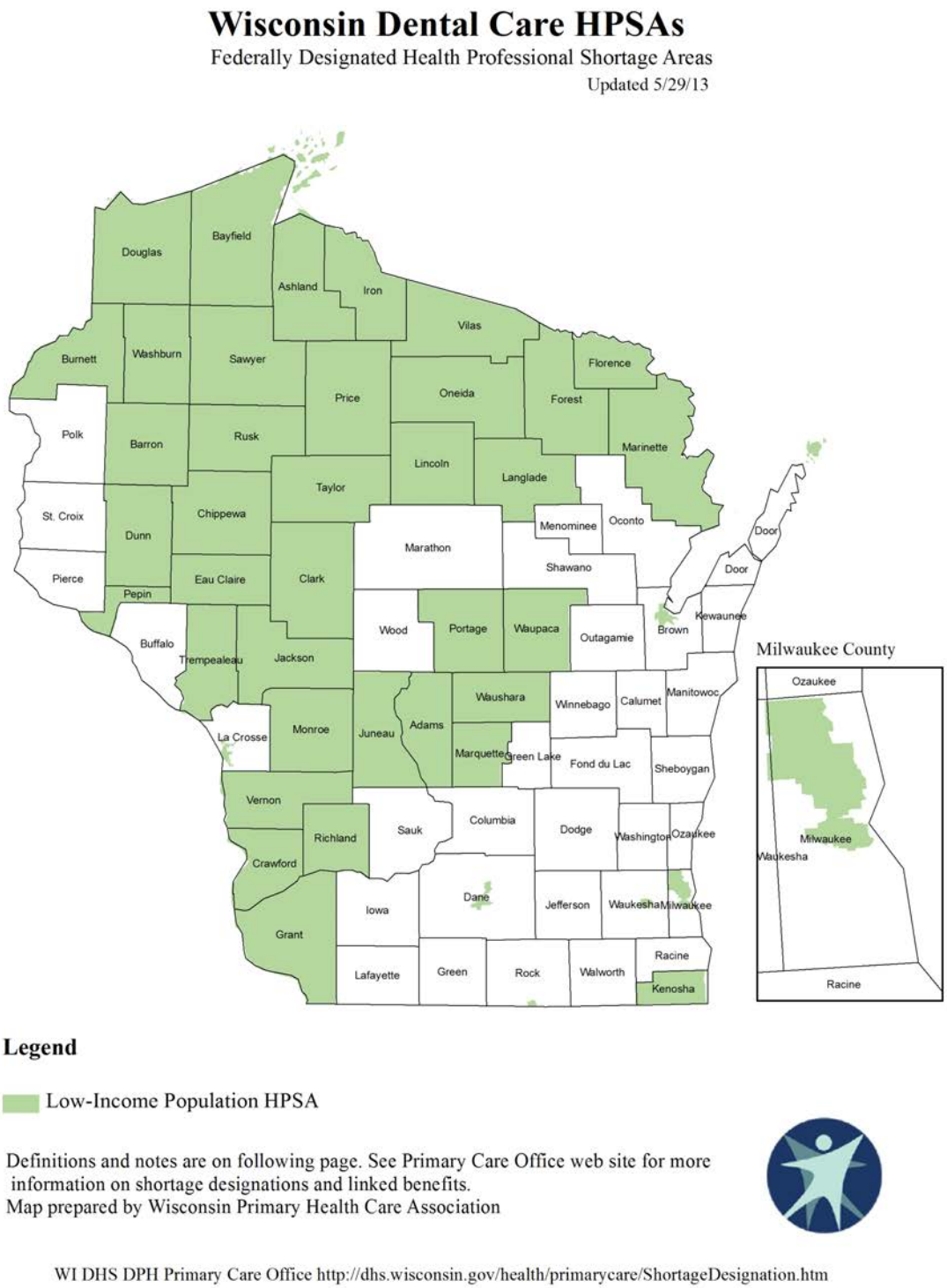
Provision of Dental Services

Dental Workforce and Capacity

The oral health care workforce is critical to society ’s ability to deliver high- quality dental care in the U.S. Effective health policies intended to expand access, improve quality or constrain costs must take into consideration the supply, distribution, preparation and utilization of the health care workforce.

As of May 2013, Wisconsin had 44 low-income population dental HPSAs (Figure XIII) and 48 facility dental HPSAs, which include 20 community health centers, 13 tribal health centers and 15 correctional facilities.[8] These dental HPSAs represent service areas that requested a HPSA in order to be eligible for the HPSA-linked benefits and meet federal dental low-income population HPSA requirements. Dental HPSAs have a significant shortage of dentists providing care to low- income populations for their service areas (a low-income population to dentist providing care ratio of 4,000:1 dentist or higher). They are service areas where at least 30 percent of the area’s population is below 200 percent of the federal poverty level. Wisconsin does not have the detailed dentist workforce data necessary to calculate whole-population to dentist ratios, and has not had capacity to review all other areas to see if they meet federal HPSA requirements. Wisconsin also had 33 facility dental HPSAs, which are automatic safety net facility dental HPSAs (community and tribal health centers that serve all patients regardless of their ability to pay for services). HPSA designations are reviewed and redesignated every four years.[8]

Figure XIII: Wisconsin Dental HPSAs



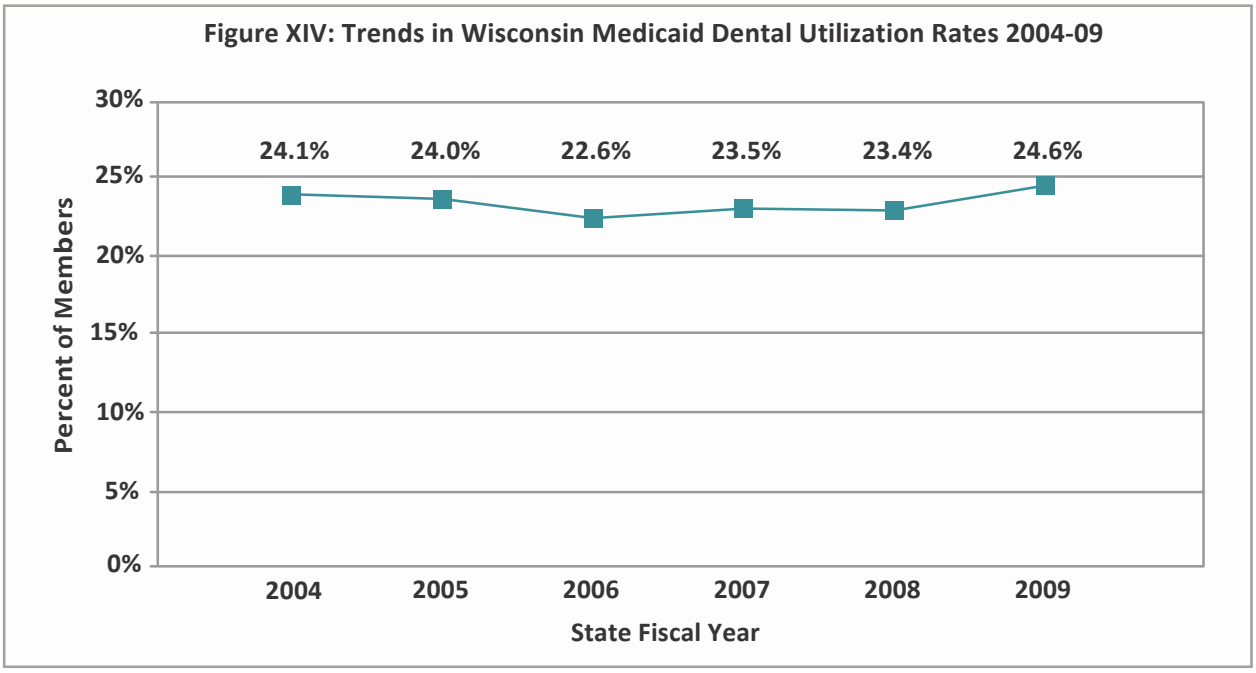
Dental Medicaid and State Children's Health Insurance Programs

Medicaid is the primary source of health care for low-income families, the elderly and disabled people in the U.S. This program became law in 1965 and is jointly funded by the federal and state governments (including the District of Columbia and the Territories) to assist states in providing medical, dental and long-term care assistance to people who meet certain eligibility criteria. People who are not U.S. citizens can receive Medicaid only to treat a life-threatening medical emergency. Eligibility is determined on the basis of state and national criteria. Dental services are a required service for most Medicaid-eligible individuals younger than 21 years of age, as a required component of the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit. Services must include, at a minimum, relief of pain and infections, restoration of teeth and maintenance of dental health. Dental services may not be limited to emergency services for EPSDT recipients.

Nationally, federal Medicaid expenditures for dental services totaled $6.0 billion in 2008, or 6 percent of the total $101.2 billion spent on dental services.[9]

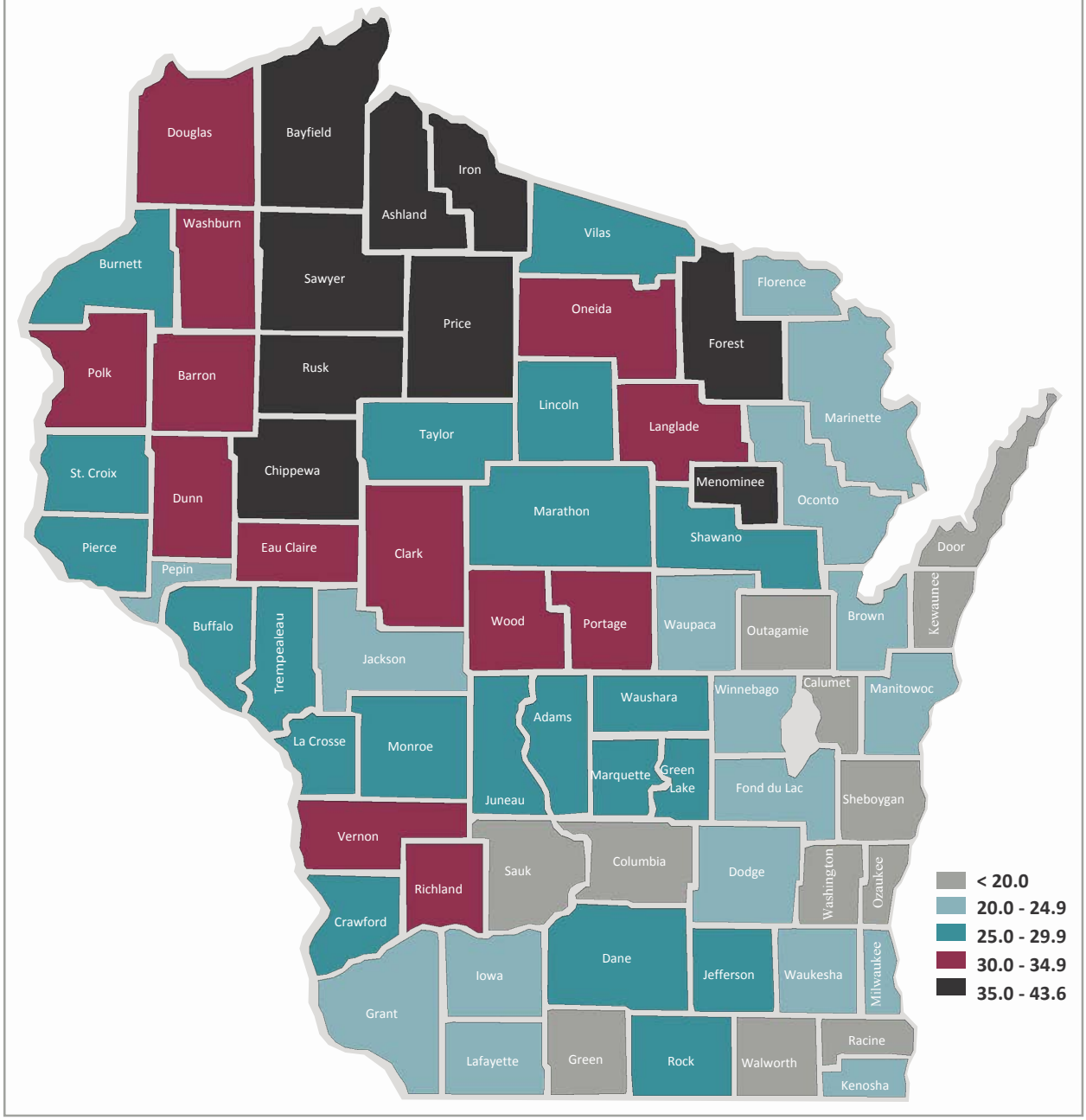
In Wisconsin, comprehensive dental benefits are available to all children enrolled in the state MA/BC+ program, for all pregnant women and women 60 days post-partum. For 66 of the 72 counties in Wisconsin, dental benefits are fee-for-service and the six remaining counties, which are in the southeast region of the state, have dental benefits administered through managed care organizations. Dental utilization rates are lower among these managed care counties.[10]

During SFY 2009, 25 percent of MA/BC+ members received at least one dental service. Utilization rates have remained unchanged for the past six years (Figure XIV); however, both the number of eligible members and the number of members receiving a service has increased during that timeframe. There is variation in utilization rates by county with higher rates in the northwestern part of the state and lower rates in the southeast (Figure XV). Of the 3,142 active licensed dentists, 32 percent had at least one paid Medicaid claim in SFY 2009. Also, during SFY 2009, only 11 percent of active dentists had paid claims of $10,000 or more and only 8 percent saw 50 or more beneficiaries younger than 21 years of age.[3]



Source: Forward Health Dental Utilization Tables.

Figure XV: Percent of Medicaid Members Receiving a Dental Service, SFY2009

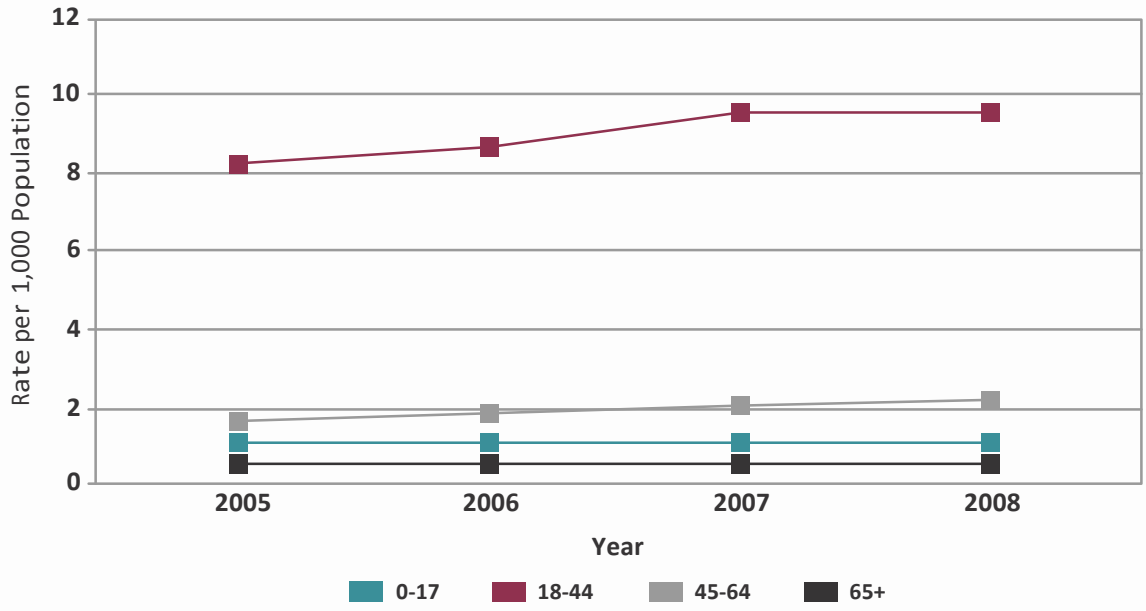


Source: Wisconsin Department of Health Services, Division of Health Care Access and Accountability.

Hospital Emergency Departments

Visits to hospital emergency departments for non-traumatic dental complaints have increased over the past several decades throughout the U.S.[11] Nationally, Medicaid members and uninsured individuals have a more difficult time obtaining dental services compared to medical services.[12] Many of the individuals who are unable to obtain dental care end up in emergency departments. In 2008, there were a total of 25,187 visits to emergency departments for non-traumatic dental complaints in Wisconsin. Thirty-nine percent of the visits had a primary payer of Medicaid and 33 percent had a primary payer listed as self-pay. Adults between the ages of 18 and 44 are the most likely age group to end up in the emergency department for non-traumatic dental complaints. From 2005 to 2008, the rate per 1,000 population for adults 18 to 44 increased from 8.2 to 9.5 (Figure XVI). Rates among children and older adults remained stable between 2008-12.

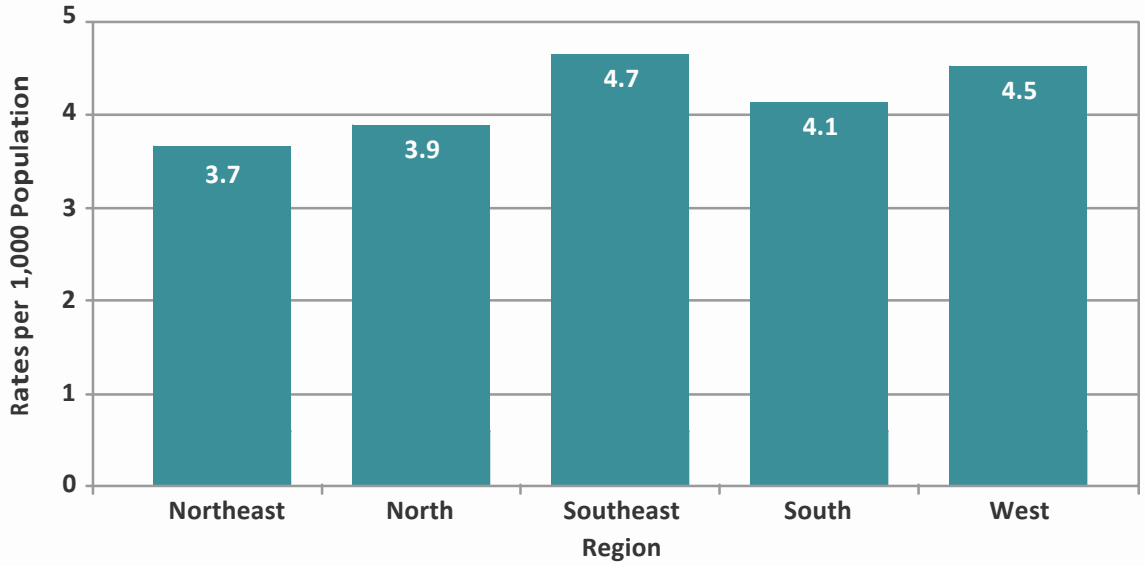
Figure XVI: Wisconsin Trends in Emergency Department Visits for Non-traumatic Dental Complaints by Age (2005-08) Rates per 1,000 Population



Source: Wisconsin Department of Health Services, Emergency Department Data.

Some disparities exist by region for use of the emergency department for non-traumatic dental complaints (Figure XVII). The southeastern (4.7 per 1,000) and western (4.5 per 1,000) regions have higher rates of emergency department visits compared to the other regions. Due to the large urban population, 40 percent of all emergency department visits for non-traumatic dental complaints in 2008 occurred in the southeast region.

Figure XVII: Wisconsin Emergency Department Visits for Non-traumatic Dental Complaints, by Region (2008) Rates per 1,000 Population



Source: Wisconsin Department of Health Services, Emergency Department Data.

Strategic Areas and Goals

The following section includes high-level strategic areas and goals identified by a working group convened by the Wisconsin Oral Health Coalition. These goals are not meant to be comprehensive, but a starting point to improve the oral health of Wisconsin residents. The goals are not arranged in any particular order or ranking and were created specifically with this vision in mind:

Everyone has access to quality oral health care across their lifespan.

To improve the oral health of all Wisconsin residents, it is important to promote sustainable concepts and strategies that accomplish the following:

- *Identify and eliminate barriers that contribute to oral health disparities;*
- *Promote disease prevention in the personal, community and professional settings;*
- *Promote the delivery of oral health services in a variety of settings;*
- *Develop and support a diverse and competent workforce that is adequately compensated, qualified and authorized to provide evidence-based care;*
- *Promote collaborative and multidisciplinary teams working across the health care spectrum; and*
- *Encourage continuous improvement and innovation.*

STRATEGIC AREA I: INFRASTRUCTURE

STRATEGIC AREA 2: PREVENTION AND HEALTH PROMOTION

STRATEGIC AREA 3: ACCESS

STRATEGIC AREA 4: WORKFORCE

STRATEGIC AREA I: INFRASTRUCTURE

Goal I.I: Increase funding to provide Wisconsin residents with needed preventive and restorative services.

Goal I.2: Expand the role of communities and local health departments in the education, prevention and treatment of dental disease.

Goal I.3: Expand the use of proven technology to facilitate oral health education and delivery of services.

Goal I.4: Increase the number of providers and clinics providing oral health care to the underserved.

Goal I.5: Maintain and improve the oral health surveillance system to provide comprehensive and timely reporting of oral health needs, outcomes and disparities.

Goal I.6: Develop systems to support the evaluation of oral health programs and policies across the state.

Goal I.7: Promote and support oral health research.

Goal I.8: Maintain, expand and support the Wisconsin Department of Health Services' Oral Health Program.

Goal I.9: Maintain, expand and support the Wisconsin Oral Health Coalition.

STRATEGIC AREA 2: PREVENTION AND HEALTH PROMOTION

Goal 2.I: Maintain and expand fluoridation in community water systems.

Goal 2.2: Increase the number of children receiving sealants.

Goal 2.3: Increase the use of evidence-based preventive measures, such as oral cancer screenings, sealants, tobacco cessation education and fluoride.

Goal 2.4: Educate the public on evidence-based oral health prevention measures.

Goal 2.5: Develop culturally-sensitive/competent patient education materials.

Goal 2.6: Increase engagement of the general public in oral health-related initiatives.

Goal 2.7: Develop and share evidence-based and consistent oral health messages with community-based organizations, policymakers, health professionals and educators.

Goal 2.8: Increase awareness of the connection between oral health and overall health.

Goal 2.9: Improve oral health literacy.

Goal 2.10: Promote the impact of personal behavior and self-care on the prevention of oral disease.

STRATEGIC AREA 3: ACCESS

Goal 3.I: Expand access to early oral health interventions.

Goal 3.2: Improve the accessibility to oral health care services for individuals from vulnerable populations.

Goal 3.3: Promote available and affordable options for dental care for all Wisconsin residents.

Goal 3.4: Increase the availability of dental services for underserved populations.

Goal 3.5: Promote adequate and sustainable funding for publicly-financed dental coverage.

Goal 3.6: Support and expand school and community-based oral health programs.

Goal 3.7: Reduce oral health-related emergency department visits.

STRATEGIC AREA 4: WORKFORCE

Goal 4.1: Identify gaps in the oral health workforce and develop strategies to address them.

Goal 4.2: Increase interdisciplinary clinical and professional collaboration.

Goal 4.3: Promote lifelong learning related to oral health disciplines.

Goal 4.4: Improve and increase recruitment and educational support for students interested in oral health professions.

Goal 4.5: Promote the education and utilization of public health principles within the oral health community.

How This Roadmap Should Be Used

Wisconsin's Roadmap to Improving Oral Health is meant to be a guide for partners and organizations to use to promote the vision of access to quality oral health care across the lifespan. The roadmap has identified key issues and priorities across the state, and should be used as a starting point to drive the conversation around oral health. WOHC recognizes that not all of the strategic areas and goals will be priorities for every stakeholder. Individuals and organizations can choose to prioritize pieces of the roadmap, while still supporting the overall statewide vision. Furthermore, by collaborating on specific goals partners can maximize their impact.

Comprehensive strategies to achieve the roadmap's goals are important to develop actionable change, though these strategies were not developed by the working group. However, WOHC will use the roadmap as a foundation for their own strategic planning and encourage others to as well. An example of this strategic planning is as follows:

STRATEGIC AREA I: INFRASTRUCTURE

Goal: Maintain, expand and support the Wisconsin Oral Health Coalition.

WOHC Strategies:

- Utilize the Centers for Disease Control and Prevention framework and other recognized coalition resources.
- Maintain monthly newsletter for coalition members.
- Increase membership participation in workgroups.

STRATEGIC AREA II: PREVENTION AND HEALTH PROMOTION

Goal: Maintain and expand fluoridation in community water systems.

WOHC Strategies:

- Support the work of the Wisconsin Alliance for Fluoridation.
- Apply for project funding to support WOHC's fluoridation education campaign.
- Increase collaboration between stakeholders, including Water Works Association, Department of Natural Resources, Department of Health Services, WOHC.

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Bad River Health and Wellness Center – Dental Clinic
Boys and Girls Clubs of Greater Milwaukee
Brown County Health Department
Brown County Oral Health Partnership
Burnett County Department of Health & Human Services
CAP Services, Inc.
Catholic Charities-Archdiocese of Milwaukee
Child Protection Center
Children's Health Alliance of Wisconsin
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Children's Hospital of Wisconsin - Community Services
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City of Milwaukee Health Department
Columbia County Seal-A-Smile
Compassionate Mothers
Community Action Program, Stevens Point
Community Integration Initiative, SE Region
Delta Dental of Wisconsin
Dental Associates, Ltd.
DentaQuest
Dunn County Health and Human Services
Eau Claire City-County Health Department
Florence County Health Department
Fond du Lac County Health Department
Forest County Health Department
Gundersen-Lutheran Clinic
Health Care Network, Inc.
Healthiest Manitowoc County
Healthy People Wood County
Healthy Smiles for Portage County
Ho-Chunk Health Care Center
Hughes Dental Clinic
Interfaith Conference of Greater Milwaukee
Juneau County Health Department
La Crosse County Health Department
Langlade Memorial Hospital
Latino Health Organization
Madison Metropolitan School District
Manitowoc County Health Department
Marquette University School of Dentistry
Marshfield Clinic-Family Health Center
Mental Health Center of Dane County
Meriter Hospital - Max Pohle Dental Clinic
Milwaukee Public Schools
Milwaukee Public Schools Head Start Program
Ministry Door County Medical Center Dental Clinic
N.E.W. Paradigm LLC, Green Bay
North Lakes Community Dental
Northland Pines School District
Northwoods Dental Project
Oneida Community Health Center
Padre Pio Clinic at St. Anthony School
Parents Plus of Wisconsin
Partners of WHA, Community Health Education
Pierce County Department of Human Services
Pierce County Health Department
Prairies States Enterprises
Price County Public Health
Public Health, Madison & Dane County
Reedsburg Area Medical Center
Rural Health Dental Clinic, CESA #11
Rural Wisconsin Health Cooperative
Sauk County Health Department
Scenic Bluffs Community Health Centers
Sheboygan County Health and Human Services
Social Development Commission, Milwaukee
Southwest Wisconsin Community Action Program
Springer Memorial Free Clinic
St. Croix County Public Health Department
St. Croix Tribal Health
St. Elizabeth Ann Seton Dental Clinic
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St. Michael's Hospital, Stevens Point
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United Way of Brown County
University of Wisconsin Hospital and Clinics
University of Wisconsin Medical School
Valley View Manor Nursing Home
Vilas County Health Department
Walker's Point Clinic
Walworth County Public Health Department
Waupaca County Department of Health and Human Services
Waushara County Health Department
West Allis Health Department
Wisconsin Alliance for Women's Health
Wisconsin Council on Developmental Disabilities
Wisconsin Association of Pediatric Nurse Practitioners
Wisconsin Dental Association
Wisconsin Dental Hygienists' Association
Wisconsin Department of Public Instruction
Wisconsin Department of Health Services
Wisconsin Division of Health Care Financing
Wisconsin Health and Hospital Association
Wisconsin Office of Rural Health
Wisconsin Primary Health Care Association
Wisconsin Society of Pediatric Dentists
Wood County Public Health Department

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