Oral Health in Arkansas

Office of Oral Health

"Keeping Your Hometown ^ Smiles Healthy"

Prepared by:

Lynn Douglas Mouden, DDS, MPH
Abby Holt, MPH

July 2011

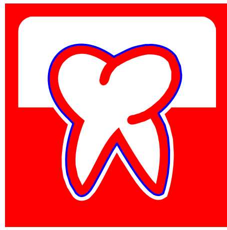


Table of Contents

Executive Summary 3
Overview 4

Current Status 5-6
- Adults 5
- Children/Adolescents 5-6
- Older Adults 6

Oral Cancers 7
Cleft Lip Cleft Palate 8

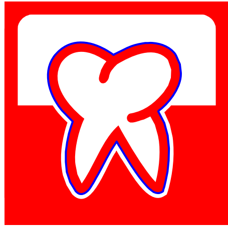
Preventive Care 9-11
- Population Strategies 9
  - Fluoridation 9
  - Sealants 9
- Individual Behaviors 10
  - Routine dental care 10
  - Oral hygiene 11

Tobacco Use 12
Access To Care 13-14
- Training 14

Disparities 15
Policy 16-18
- Fluoridation ordinances 16
- Excise taxes 16
- Adult Medicaid dental benefits 17
- Dental hygiene practice regulations 17
- Clean Indoor Air Act 17

Appendices 18-20
- Data Sources 18
- Definitions 20

Healthy People 2020 Oral Health Goals 21-23
Oral Health Coalition 24



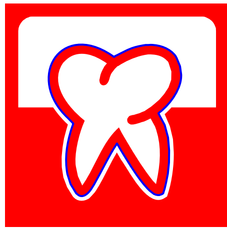
Executive Summary

Oral health is an essential part of optimal health for all Arkansans – and is much more than healthy teeth. *Oral* refers to the whole mouth – the teeth, gums, hard and soft palate, linings of the mouth and throat, tongue, lips, salivary glands, chewing muscles, and upper and lower jaws.[1] Oral health means being free of cavities and gum disease, but it also means being free of chronic oral pain conditions, oral cancers, birth defects such as cleft lip and palate, and other conditions that affect the mouth and throat.

Oral health is an issue for persons of all ages, races, & geographic locations:

- 21.5% of adult Arkansans have lost 6 or more teeth due to decay or gum disease. [3]
- Approximately 3.8% of children (less than 13 years of age) screened during 2010 were referred for urgent dental care.[5]
- 54.0% of oral/pharyngeal cancers identified during 1997- 2008 had spread to nearby tissues or to more distant sites before diagnosis.[14]
- 27.0% of children screened during 2010 had sealants. [5]
- Approximately 26.6% of children screened in 2010 were in need of routine dental care.
- 7.4% of adults currently use smokeless tobacco, compared to 14.6% of high school teens.[3,10]
- 29.7% of white mothers smoke during their 3rd trimester, compared to 11.0% of black mothers, and 4.4% of Hispanic mothers.[11]
- More than 60% of dentists practicing in Arkansas are located in just 8 of 75 counties.[15]
- Only 64.5% of the state's population is served by community water systems receiving fluoridated water.

This report summarizes what is known about oral health among Arkansans, presenting the most current information available. It also addresses racial disparities, and discusses preventive strategies, access to care, and relevant public health policies. Comparisons are made to national data whenever possible, and to Healthy People 2020 goals when appropriate. It is hoped that the information will serve to raise awareness of the need for continued vigilance and intervention in the area of oral health and serve to guide prevention and treatment efforts across the state.



Overview

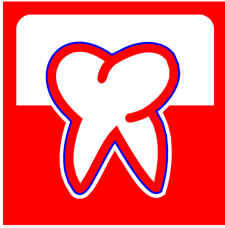
HP 2020 Indicator	US Target	AR Status	Position*
Dental caries experience			
Children	49%	64%	
Adolescents	48%	62%	
Untreated dental decay			
Children	26%	29%	
Adolescents	15%	26%	
Adults	25%	ND	
Adults with no tooth loss	69%	54%	
Edentulous older adults	22%	23%	
Periodontal disease			
Adults	11%	ND	
Oral/pharyngeal cancer detected at earliest stages	36%	38%	
Cancer screening by dentist within the past 12 months	—	ND	
Sealants			
Children	28%	27%	
Adolescents	22%	18%	
Population served by fluoridated water systems	80%	65%	
Visited oral health care system within past 12 months	49%	62% (adults)	
Low-income children and adolescents receiving preventive dental care during past 12 months	57%	ND	
School-based health centers with dental component	11%	1.1%	
Community health centers and local health departments with dental components	83%	41%	
Oral and craniofacial health surveillance system	51 States and (D.C.)	Yes	

* 25% or more above/below indicator in direction of risk

0 to 24% above/below indicator in direction of risk

Above/below indicator in preferred direction

Data not available



Current Status

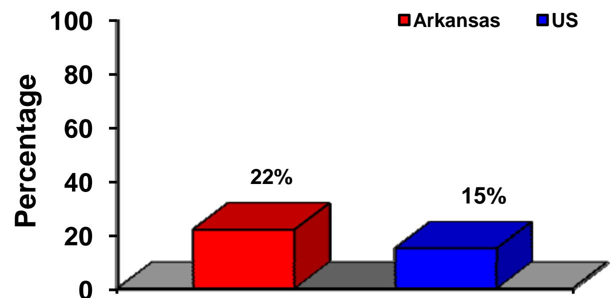
Adults

58% report their teeth are in good to excellent condition.[2]

BUT

22% have lost 6 or more teeth due to decay or gum disease.[3]

Figure 1. Lost 6 or more teeth, adults, Arkansas and US, BRFSS 2008



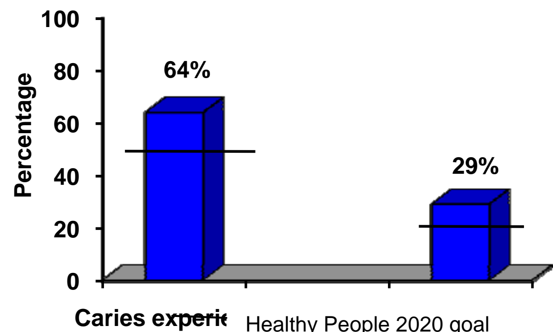
Children/Adolescents

The most comprehensive data on children were collected in 2010, when the Arkansas Department of Health's Office of Oral Health along with its partners screened 4,239 children enrolled in public schools throughout the state.[5]

Results indicated that:

- 64% had evidence of current or past cavities (caries experience);
- 29% had untreated caries (cavities);
- 27% were in need of routine care; and
- 4% needed urgent dental care.

Figure 2. Caries experience and untreated decay among children, Arkansas, 2010



Various screenings that occurred during 2004-2006 showed similar results.[6] Approximately 4300 children were screened during this period, with 57% displaying evidence of current or previous caries and 27% identified as having untreated caries.[4] Likewise, 22% were in need of routine care while an additional 9% were referred for urgent dental care.[6]

In 2008, the Office of Oral Health screened 125 adolescents, the majority of which (79%) were minority.[4] In that group of students:

- 62% had caries experience (current or past);
- 26% had untreated caries (cavities);
- 26% were referred for routine dental care; and
- 2% were referred for immediate attention.

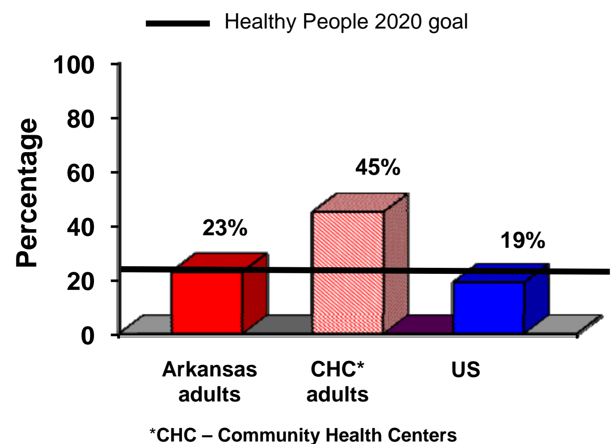
Data analyzed for screening years 2004-2006 displayed similar results, with 491 adolescents screened.[5] Thirty-four percent of adolescents screened during 2004-2006 had untreated caries, while 70% had evidence of previous or current caries.[5] Twenty-four percent of the screened adolescents were referred for routine dental care and an additional 10% were referred for urgent care.[6]

Older Adults

Twenty-three percent (23%) of adults 65 years of age or older reported they had lost all of their natural permanent teeth compared to 19% in the US.[3]

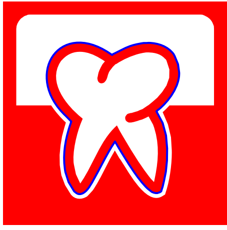
A survey of 700 residents in long-term care facilities was completed in 2002.[7] Among these adults (ages 30 to 102 years):

Figure 3. Complete tooth loss among adults, US and Arkansas, 2008



*CHC – Community Health Centers

- More than half (54%) had lost all their natural permanent teeth.
  - Only 25% of those individuals had dentures.
- Virtually all (99.9%) had a history of dental caries or periodontal disease.
- On average, each resident had 23 teeth that were decayed, missing or filled.
- 35% had untreated dental caries or moderate to severe periodontal disease, or both.
- 24% were referred for routine care.
- An additional 10% were referred for immediate attention.



Oral Cancers

Oral cancer is a serious disease. Only approximately 62.8% of the newly diagnosed cases survive for 5 years after diagnosis. Mortality is nearly twice as high in African-American males compared to white males. Methods used to treat the cancers (surgery, radiation, chemotherapy) are disfiguring and expensive. Avoiding high-risk behaviors – including smoking, using smokeless (spit) tobacco, and excessive alcohol use – are critical to preventing oral cancer. Early detection is the key to successful treatment and reducing the burden associated with oral cancer.

During the years 1997 through 2008, the Arkansas Cancer Registry recorded:

- 4,066 new cases of oral or pharyngeal cancer, or
- 11.5 new cases per 100,000 persons.
- 38% were identified at the earliest stages (*in situ* or localized), while
- The majority (54%) had spread to close tissue or to more distant sites before diagnosis.

Figure 4. Cases of oral/pharyngeal cancer identified at earliest stages, Arkansas, 1997- 2008

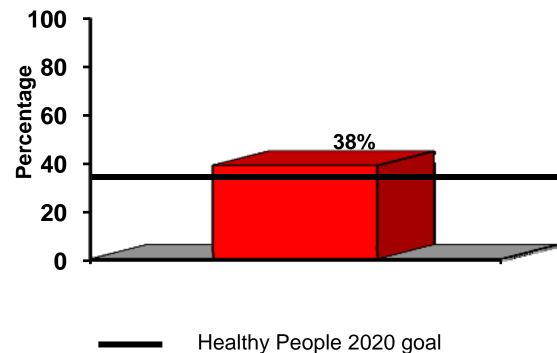
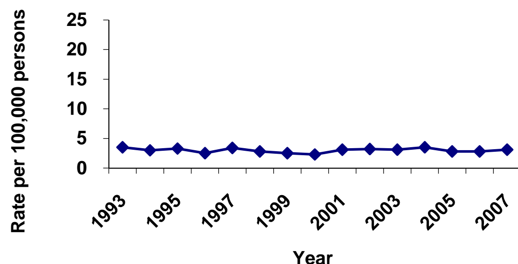
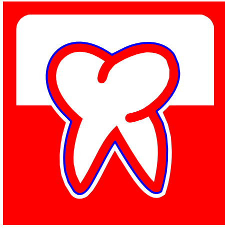


Figure 5. Mortality rates, Arkansas, Oral and Pharyngeal Cancer, 1993-2007



Oral cancer mortality rates

Over the last decade, mortality rates for oral and pharyngeal cancers have remained stable at approximately 3 deaths per 100,000 persons (after accounting for age differences across years).

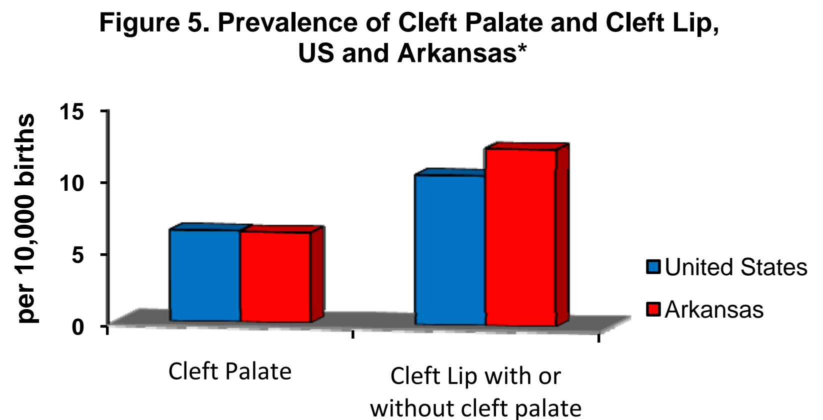


Cleft Lip or Palate

A cleft palate (roof of the mouth) or cleft lip defect occurs early in pregnancy and causes an opening or fissure to occur in the lip or palate. The results of these defects also cause children to have problems speaking, eating, hearing and with their teeth. [17]

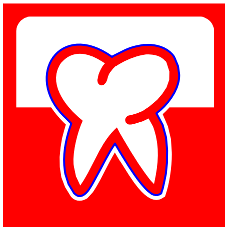
In Arkansas, the birth prevalence of cleft lip with or without a cleft palate is slightly higher, 12.39 per 10,000 births, compared to the United States, 10.47 per 10,000 births, (see Figure 5). However, the prevalence of cleft palate without a cleft lip is essentially the same in Arkansas, 6.33 per 10,000 births, and the United States, 6.39 per 10,000 births.

Figure 5. Prevalence of Cleft Palate and Cleft Lip, US and Arkansas*



*Source: Arkansas Reproductive Health Monitoring System, UAMS, http://www.nbdpn.org/docs/AR_2010_C.pdf
Note: Arkansas estimates based on pooled data from birth years 2002-2006.
U.S. estimates based on pooled data from birth years 1999-2001

Genetic factors, maternal diet, and environmental exposures have traditionally been linked to orofacial defects.[17] Other recent findings suggest women who smoke during pregnancy or women who were diagnosed with diabetes prior to pregnancy have an increased risk of having a child with a cleft palate and/or cleft lip.[17] Therefore, the CDC recommends women who want to become pregnant who smoke or have diabetes should talk to their doctor about improving the odds of having a healthy baby.[17]



Preventive Care

Population Strategies

Fluoridation

The CDC's Water Fluoridation Reporting System (WFRS) indicates that 65% of Arkansans on community water systems enjoy the benefits of water fluoridation. More information about fluoridation across the state can be found in the discussion of policy on the pages that follow.

Figure 6. Percentage of population receiving water from public water systems who receive fluoridated water, US and Arkansas, 2008

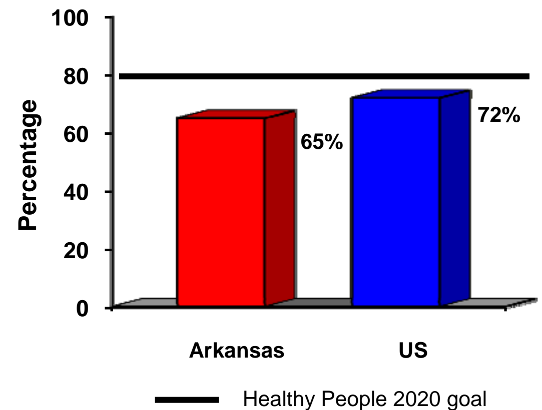


Figure 7. Arkansas children with sealants, Arkansas, 2010

Sealants

A dental sealant is a plastic material that is placed by dental professionals on the chewing surfaces of back teeth to prevent cavities. The sealant provides a physical barrier that prevents cavity-causing bacteria from attacking the surface of the tooth. It is recommended that sealants be placed on permanent molars when they erupt into the mouth at about age 6 and on the second permanent molars when they appear at about age 12. Unfortunately, this highly effective tool is not widely used at this time. Screening activities in Arkansas over the past few years indicated that:

- 27% of the children screened in 2010 had sealants, compared to 17% of children screened during 2008.[4,5]
- 18% of the adolescents screened in 2008 had sealants, while 21% of adolescents screened during 2004-2006 had sealants. [4,6]

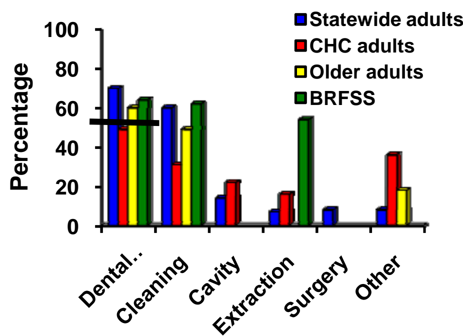
Individual behaviors

There are many opportunities at all ages to prevent tooth decay. Caries experience indicates that opportunities for prevention may have been missed. Effective preventive measures include proper nutrition, good oral hygiene (e.g., brushing with fluoride toothpastes and flossing) and regular dental visits.

Routine dental care

Figure 8. Dental visits and reasons for visits, adult Arkansans

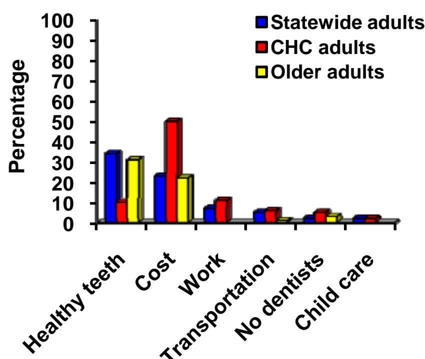
____ Healthy People 2020 goal



Regular contact with a dentist and/or dental hygienist helps to reduce the risk of disease (by removing plaque and other material that can contribute to decay and infection) and increase the chances that emerging infections or cancerous lesions will be detected early, when treatment is most likely to be effective. These visits should be started early in life and maintained throughout adulthood.

Two surveys of Arkansas adults completed in 2002,[2,8] as well as a survey of adults completed in 2006[3] and one of older Arkansans completed in 2005[9] all indicated differences in the percentages of adults receiving care from a dentist within the past year (see Figure 8). Fewer low-income individuals (49%) reported receiving dental care in the period than did other adults (60%).[8] Further, low-income adults were more likely to seek care for more acute procedures – i.e., extracting of teeth (27%, compared to 7%) or filling of cavities (22%, compared to 14%).[8]

Figure 9. Reasons for not visiting a dentist, adult Arkansans, 2002 & 2005



Reasons given for not seeking care also differed between the three groups (see Figure 9). Not unexpectedly, low-income individuals more often cited cost as a reason for not having been to the dentist in the last year.[8] Lack of available dentists and inability to take time from work were also more often mentioned by lower-income adults.[8]

Oral hygiene

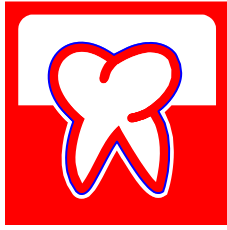
Another important strategy for maintaining oral health is oral hygiene, including daily brushing and flossing. Brushing and flossing remove bacteria that cause infections and cavities. Brushing and flossing should be started as soon as teeth erupt and supervised by a parent until children are old enough to do it well on their own – usually around the age of 6 or 7. Unfortunately, many adults do not routinely engage in these very important and simple behaviors.

In the 2002 survey of Arkansas adults:[2]

- Only two-thirds (64%) reported that they brush daily, and
- Less than one in 10 (8%) reported that they floss daily;

While the 2005 survey of older adults found:[9]

- Nearly two-thirds (63%) reported brushing twice daily.



Tobacco Use

Tobacco use is among the most common risk factors for oral diseases and conditions. The use of smokeless tobacco products as well as cigarette smoking is associated with many types of oral and pharyngeal cancers, and makes it more difficult to treat other conditions such as gingivitis, canker sores, and periodontal disease.

In 2009 and 2010:

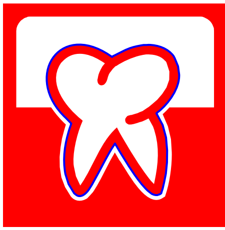
- 22% of Arkansas adults are current cigarette smokers.[3]
- 24% of Arkansas high school teens currently smoke.[10]

Further, according to the 2008 PRAMS:[11]

- 31% of recent mothers smoked before they became pregnant;
- 24% smoked during the last trimester; and
- 57% resumed smoking after delivery.

In addition:

- 7.4% of Arkansas adults reported in 2009 that they use smokeless (spit) tobacco products[3], while
- 14.6% of Arkansas high school teens reported current use of these products in 2010.[10]
- 31% of Arkansas white male high school teens reported current use of these products in 2010.[10]

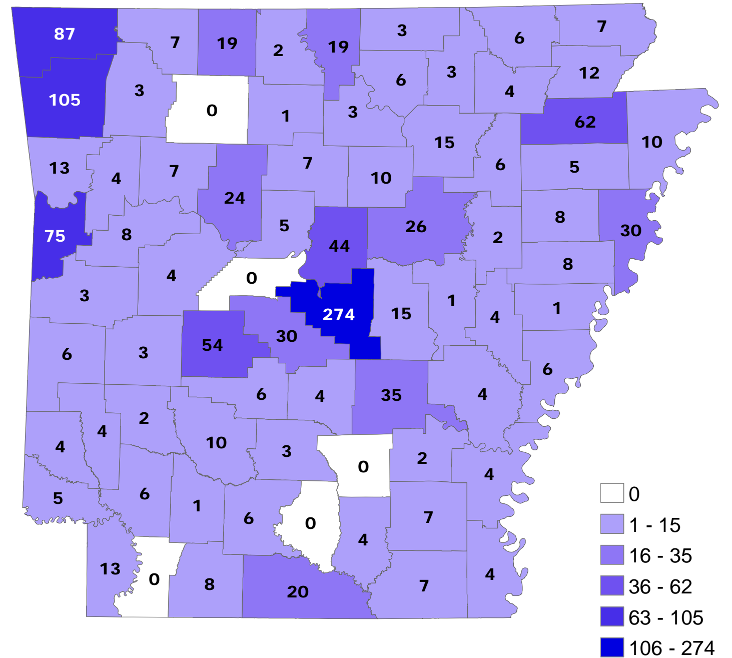


Access to Care

Without adequate access to dentists and dental hygienists, preventive and restorative care is not possible. Unfortunately, data indicate that in Arkansas, many residents have limited access.

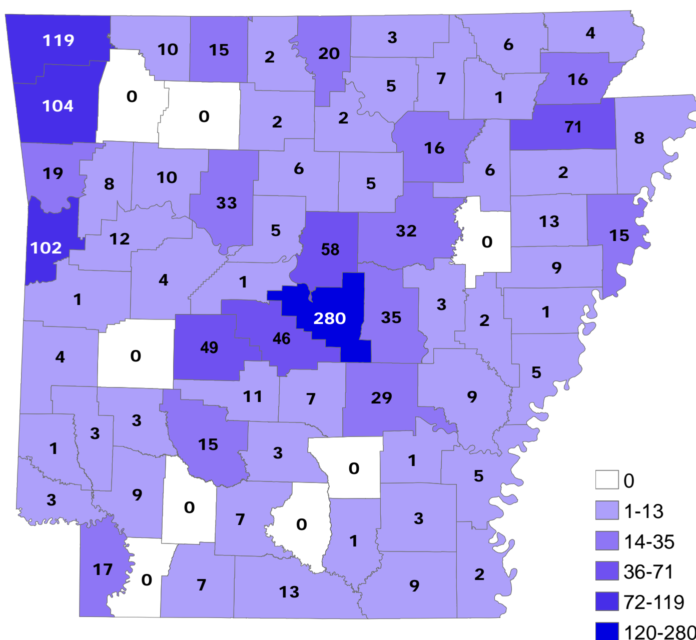
In 2010, the Arkansas State Board of Dental Examiners indicated that there are 1,217 dentists living and practicing in the state. The majority (84%) are practicing general dentistry. The rest of them are specialists, including endodontists (2%), oral surgeons (4%), orthodontists (5%), pediatric dentists (4%), periodontists (2%), as well as prosthodontists (1%) and one oral pathologist. Only about 1/3 of the state's dentists are signed with the Medicaid program (ARKids First programs, Parts A and B).

Figure 10. Number of dentists by county, Arkansas 2010



Source: Arkansas State Board of Dental Examiners

Figure 11. Number of dental hygienists by county, Arkansas 2010



Source: Arkansas State Board of Dental Examiners

These dental practitioners are not, however, equally distributed across the state (see Figure 10). Five counties do not have any dentists at all, and 7 counties have 40 or more dentists. Greater than 60% of the state's dentists practice in just 8 counties. (These 8 counties account for over 43% of the state's population.)

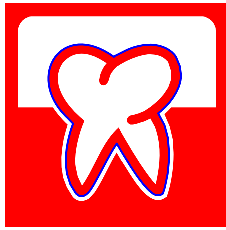
The distribution of dental hygienists is similar (see Figure 11). Not unexpectedly, the 1,335 dental hygienists are more likely to be located in more urban areas.

Other indicators of access to care include:

Community-based low-income dental clinics. 73
School-based dental clinics 1
Health units with a dental program 0

Training

Arkansas does not have a dental school within the state. Arkansas does have two dental hygiene educational programs and two accredited dental assistant programs.

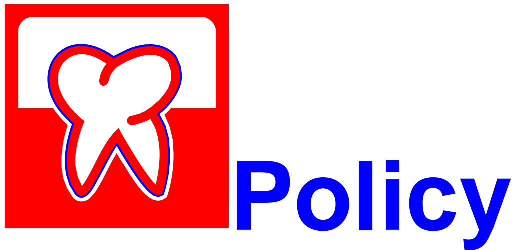


Disparities

Racial and ethnic disparities do exist as shown by data on current oral health status, preventive care, specific risk factors, and access to care. The table below provides current statistics for various oral health indicators by race, with only two racial categories included for data consistency.

Table 1. Oral Health Indicators by Race

	White	Non-white
Current Status		
Untreated Caries		
Children	**26%**	**33%**
Adolescents	**24%**	**27%**
Caries Experience		
Children	**60%**	**69%**
Adolescents	**41%**	**66%**
Routine Care		
Children	**26%**	**28%**
Adolescents	**24%**	**26%**
Urgent Care		
Children	**3%**	**4%**
Adolescents	**0%**	**2%**
Extraction (6/more teeth)		
Adults	**22%**	**20%**
Oral Cancers		
Incidence oral/pharyngeal cancers (1997-2008)	**11.8/100,000**	**9.0/100,000**
Mortality oral/pharyngeal cancers (1997-2007)	**2.8/100,000**	**4.3/100,000**
Preventive Care		
Population Strategies		
Sealants		
Children	**31%**	**20%**
Adolescents	**24%**	**17%**
Individual Behaviors		
Routine dental care	**63%**	**56%**
Oral hygiene (brush twice daily)	**65%**	**47%**
Tobacco Use		
Current Smokers		
Adolescents (high school students)	**27.0%**	**12.2%**
Adults	**21.2%**	**23.4%**
Smokeless Tobacco		
Adolescents (high school students)	**17.7%**	**4.7%**
Adults	**7.5%**	**6.5%**
Smoking 3 months before pregnancy	**39%**	**14%**
Smoking during 3rd trimester	**30%**	**11%**
Smoking after pregnancy	**33%**	**12%**
Access to Care		
Licensed Dentists	**94%**	**6%**
Licensed Dental Hygienists	**98%**	**2%**



Policy

A number of policy interventions can be used to promote oral health among the population. Arkansas' approach to a few of the most common are summarized below.

Fluoridation ordinances

Decisions concerning fluoridation of public water supplies have traditionally been made at the local level. Currently, 52 of Arkansas' 75 counties include fluoridated water supplies, resulting in a total of 65% of the state's population served by community water systems receiving fluoridated water. However, only 88% of the state's population is served by public water systems (the remainder being served by springs or wells). Thus, even if all public water systems were to be fluoridated, a proportion of the state's citizens would still remain unprotected. Presently, there are 23 counties with no fluoridated community water systems.

Fluoridation Legislation

The 2011 Arkansas General Assembly passed SB 359 guaranteeing access to fluoridated water for all persons on water systems serving 5,000 or more customers. Signed into law by Governor Beebe as Act 197 of 2011, the statute will increase the percentage of Arkansans whose water systems are fluoridated from 65% to almost 87 %.

Excise taxes

Excise taxes have been shown to affect smoking rates, particularly among younger smokers. The Arkansas State Legislature in the 2009 session increased the tobacco excise taxes to their current rates:

Cigarettes: $ 1.15 per pack
Other tobacco products: 36% of wholesale price

Adult Medicaid dental benefits

Arkansas Medicaid currently pays for adult dental services only in the case of a life-threatening condition.

Dental hygiene practice regulations

The Arkansas Legislature in the 2011 session passed SB 42, now Act 89 of 2011; an act to authorize dental hygienists to perform dental hygiene procedures for persons in public settings without the supervision of a dentist.

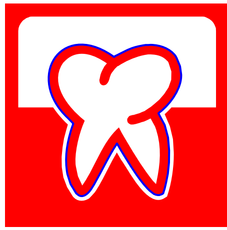
In May 2004, the Arkansas State Board of Dental Examiners approved general supervision regulations, allowing dental hygienists to practice with more autonomy under specific circumstances. This action should help to increase access to care in some of the more underserved areas.

Physician and nurses providing fluoride varnish

The Arkansas Legislature in the 2011 session passed SB 43, now Act 90 of 2011, an act to allow physicians and nurses to provide fluoride varnish to a child's teeth after having received appropriate training on patient risk assessment and fluoride varnish application.

Clean Indoor Air Act

In July 2006, the Clean Indoor Air Act was enacted by the Arkansas legislature to create a smoke-free environment for Arkansans in the workplace and other public places. Smoking has been shown to be associated with periodontal disease in adults, as well as oral cancer. [1]



Appendix: Data Sources

1. US Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General – Executive Summary*. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

2. 2002 Adult Arkansan Oral Health Survey: To assess the oral health of adult Arkansans, a telephone survey was administered to a random sample of Arkansas households. A total of 411 adults completed the survey, which was administered using Computer-Assisted Telephone Interviewing (CATI) technology. A full report of procedures and findings can be obtained from the Office of Oral Health, Arkansas Department of Health (ADH).

3. Behavioral Risk Factor Surveillance Survey (BRFSS), 2008 (Oral Health) 2009 (Tobacco Use): During 2008, Arkansas participated with 53 other states and territories in the BRFSS, a telephone survey of randomly-selected households within the state. National data collection instruments were used, including questions about oral health and dental hygiene behaviors. Interviews were administered using CATI technology and procedures. A complete full of procedures and findings (both state and national) is available on the website maintained by the Centers for Disease Control and Prevention.

4. 2008 Screening: In 2008 at total of 4291 children and 125 adolescents enrolled in 35 public schools in Arkansas were screened for caries experience and sealant utilization. Examinations were completed in classroom settings by dentists under contract to the ADH Office of Oral Health and its partners. A full report of procedures and findings can be obtained from the ADH Office of Oral Health.

5. 2010 Screening: In 2010 at total of 4,239 children 115 public schools in Arkansas were screened for caries experience and sealant utilization. Examinations were completed in classroom settings by dentists under contract to the ADH Office of Oral Health and its partners. A full report of procedures and findings can be obtained from the ADH Office of Oral Health.

6. 2004-2006 Child and Adolescent screening data: Screening data gathered during years 2004-2006 were compiled and analyzed. These data are best described as convenience samples, obtained during various screening efforts that occurred across the state. Child screening data included data from the Dental Health Action Team's annual screening in Pulaski County, Healthy Connections annual screening in Mena, a screening at an annual Special Olympics event, as well as a one-time screening in Craighead County and a one-time screening in Conway Public Schools (Faulkner County). The adolescent data was obtained from an annual screenings at YOU summer camps, Healthy Connections in Mena, and Special Olympics. The child screening dataset included data from 4,376 children, while the adolescent dataset included data from 491 adolescents.

7. 2002 Long-term Care Oral Health Needs Assessment: To assess the oral health needs of adults living in long-term care facilities in Arkansas, the Office of Oral Health in 2002 completed an assessment of this population in 2002. A total of 695 residents in 18 randomly selected nursing homes were screened by dentists from or working under contract to the Office of Oral Health, assisted by a licensed dental hygienist. A full report of procedures and findings can be obtained from the ADH Office of Oral Health.

8. 2002 Community Health Center (CHC) Survey of Oral Health: This survey was designed to gather information from adult clients of community health centers across the state of Arkansas. Professional dental care workers gathered information from 2,399 clients during the summer of 2002. A full report of procedures and findings can be obtained from the ADH Office of Oral Health.

9. 2005 Oral Health Survey of Older Arkansans: The Oral Health Survey of Older Adults was designed to assess the oral health status of community-dwelling Arkansans age 55 years and above. Area Agencies on

Aging and Centers on Aging (including Pulaski County) participated in data collection efforts during April 2005. These organizations were provided a monetary incentive for returning a specified number of completed surveys. A total of 4,933 Arkansans participated in the survey. The Arkansas Division of Health analyzed the survey data to inform decision-makers and to develop recommendations to improve the oral health status of older adults.

10. 2010 Arkansas Youth Tobacco Survey: The Arkansas Youth Tobacco Survey is a school-based survey conducted every other year to assess the prevalence of tobacco-related behaviors among high school students. The survey used a cluster sample design to produce a representative sample of students in grades 6 through 12 at the state level. Participation in the national survey effort is voluntary.

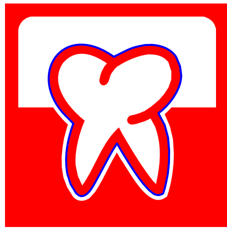
11. 2008 Pregnancy Risk Assessment Monitoring System (PRAMS): PRAMS collects population-based data on maternal attitudes and experiences prior to, during, and immediately following pregnancy. The PRAMS sample of women who have had a recent live birth is drawn from the state's birth certificate file. Approximately 2,421 women were sampled, with 1,826 women responding for a weighted response rate of 75.4%. Selected women are first contacted by mail. If there is no response to repeated mailings, women are contacted and interviewed by telephone. PRAMS data allow CDC and decision-makers in Arkansas to monitor changes in maternal and child health indicators [e.g., unintended pregnancy, prenatal care (including dental care), breastfeeding, smoking, alcohol use, infant health).

14. 2008 Arkansas Central Cancer Registry Query System: is a population-based registry whose goal is to collect timely and complete data on all cancer cases diagnosed in the state.

15. Arkansas State Board of Dental Examiners: The Board is authorized by statute to license dentists and dental hygienists by examination or credentials. The Board issues specialty licenses to dentists who have post graduate training and successfully complete an examination. The Board also registers dental corporations.

16. Arkansas Reproductive Health Monitoring System: ARHMS monitors and collects data on birth defects throughout the state. ARHMS supports the activities of the Arkansas Center for Birth Defects Research and Prevention by serving as an experienced and timely data collecting system and reporting prevalence trends in the state. Inclusion criteria: a child must have a birth defect diagnosed when he or she is less than age two, the case must be ascertained before the child's fifth birthday, and all cases are abstracted from hospital records, and only diagnoses that have been made by a physician are included in ARHMS.

17. CDC Facts about Cleft Lip and Cleft Palate: http://www.cdc.gov/ncbddd/birthdefects/CleftLip.html



Appendix: Definitions

Caries experience: The sum of filled and unfilled cavities, along with any missing teeth resulting from decay.

Cleft lip or palate: A congenital opening or fissure occurring in the lip or palate.

Complete tooth loss: Complete tooth loss (edentulism) is the loss of all natural teeth.

Congenital anomaly: An unusual condition existing at, and usually before, birth.

Craniofacial: Pertaining to the head and face.

Dental caries (dental decay or cavities): An infectious disease that results in de-mineralization and ultimately cavitations of the tooth surface if not controlled or remineralized. Dental cavities may be either treated (filled) or untreated (unfilled).

Early childhood caries (ECC): Dental decay of the primary teeth of infants and young children (aged 1 to 5 years) often characterized by rapid destruction.

Edentulism/edentulous: A condition characterized by not having any natural teeth.

Fluoride: A compound of the element fluorine. Fluorine, the 13th most abundant element in nature, is used in a variety of ways to reduce dental decay.

Fluoridation: The intentional upward adjustment of the natural level of fluoride in the drinking water to that level known to prevent tooth decay. Most water contains some amount of natural fluoride. The recommended amount of fluoride in water systems is 0.7 – 1.2 ppm (parts per million), which is equivalent to 0.7 – 1.2 mg/L (milligrams per liter).

Fluoridation status: Status of a community water system in regards to water fluoridation level.

Gingivitis: An inflammatory condition of the gum tissue, which can appear reddened and swollen and frequently bleeds easily.

Naturally fluoridated water: Water systems are considered to be naturally fluoridated if they contain naturally occurring fluoride at 0.7 ppm or more.

Oral cavity: Mouth.

Periodontal disease: A cluster of diseases caused by bacterial infections and resulting in inflammatory responses and chronic destruction of the soft tissues and bone that support the teeth. Periodontal disease is a broad term encompassing several diseases of the gums and tissues supporting the teeth.

Pharynx: Throat.

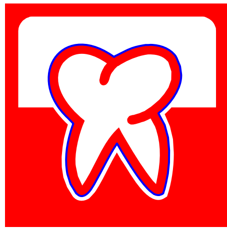
Private water supply: Individual water systems, generally wells or springs, serving one or several residences.

Public Water Supply System (PWS): A public water system provides water for human consumption to the public through piped or other constructed conveyances. A PWS has at least 15 service connections or regularly serves an average of at least 25 individuals daily for at least 60 days out of the year. Ground water sources, surface water sources, or a combination of the two sources may provide water to a PWS. In some cases, one PWS may purchase all or part of its water from another PWS.

Root caries: Dental decay that occurs on the root portion of a tooth. (In younger persons, root surfaces are usually covered by gum [gingival] tissue.)

Sealants: Plastic coatings applied to the surfaces of teeth with developmental pits and grooves (primarily chewing surfaces) to protect the tooth surfaces from collecting food, debris, and bacteria that promote the development of dental decay.

Soft tissue lesion: An abnormality of the soft tissues of the oral cavity or pharynx.



Healthy People 2020

Goal

Prevent and control oral and craniofacial diseases, conditions, and injuries, and improve access to preventive services and dental care.

Oral Health of Children and Adolescents

OH–1: Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth.

- OH–1. Reduce the proportion of young children aged 3 to 5 years with dental caries experience in their primary teeth. Target: 30.0 percent.
- OH–1.2 Reduce the proportion of children aged 6 to 9 years with dental caries experience in their primary and permanent teeth. Target: 49.0 percent.
- OH–1.3 Reduce the proportion of adolescents aged 13 to 15 years with dental caries experience in their permanent teeth. Target: 48.3 percent.

OH–2: Reduce the proportion of children and adolescents with untreated dental decay. OH–2.1 Reduce the proportion of young children aged 3 to 5 years with untreated dental decay in their primary teeth. Target: 21.4 percent

- OH–2.2 Reduce the proportion of children aged 6 to 9 years with untreated dental decay in their primary and permanent teeth. Target: 25.9 percent
- OH–2.3 Reduce the proportion of adolescents aged 13 to 15 years with untreated dental decay in their permanent teeth.

Oral Health of Adults

OH–3: Reduce the proportion of adults with untreated dental decay. OH–3.1 Reduce the proportion of adults aged 35 to 44 years with untreated dental decay. Target: 25.0 percent.

- OH–3.2 Reduce the proportion of older adults aged 65 to 74 years with untreated coronal caries. Target: 15.4 percent.
- OH–3.3 Reduce the proportion of older adults aged 75 years and older with untreated root surface caries. Target: 34.1 percent.

OH–4: Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease.

- OH–4.1 Reduce the proportion of adults aged 45 to 64 years who have ever had a permanent tooth extracted because of dental caries or periodontitis. Target: 68.8 percent.

OH–5: Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis. Target: 11.4 percent.

OH–6: Increase the proportion of oral and pharyngeal cancers detected at the earliest stage. Target: 35.8 percent.

Access to Preventive Services

OH–7: Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year. Target: 49.0 percent.

OH–8: Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year. Target: 29.4 percent.

OH–9: Increase the proportion of school-based health centers with an oral health component.

- OH–9.1 Increase the proportion of school-based health centers with an oral health component that includes dental sealants. Target: 26.5 percent.
- OH–9.2 Increase the proportion of school-based health centers with an oral health component that includes dental care. Target: 11.1 percent.
- OH–9.3 Increase the proportion of school-based health centers with an oral health component that includes topical fluoride. Target: 32.1 percent.

OH–10: Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component.

- OH–10.1 Increase the proportion of Federally Qualified Health Centers that have an oral health care program. Target: 83 percent.
- OH–10.2 Increase the proportion of local health departments that have oral health prevention or care programs. Target: 28.4 percent.

OH–11: Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year. Target: 33.3 percent.

Oral Health Interventions

OH–12: Increase the proportion of children and adolescents who have received dental sealants on their molar teeth.

- OH–12.1 Increase the proportion of children aged 3 to 5 years who have received dental sealants on one or more of their primary molar teeth. Target: 1.5 percent.
- OH–12.2 Increase the proportion of children aged 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth. Target: 28.1 percent.

OH–13: Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water. Target: 79.6 percent.

OH–14: (Developmental) Increase the proportion of adults who receive preventive interventions in dental offices.

- OH– 14.1 (Developmental) Increase the proportion of adults who received information from a dentist or dental hygienist focusing on reducing tobacco use or smoking cessation in the past year.
- OH– 14.2 (Developmental) Increase the proportion of adults who received an oral and pharyngeal cancer screening from a dentist or dental hygienist in the past year.
- OH–14.3 (Developmental) Increase the proportion of adults who are tested or referred for glycemic control from a dentist or dental hygienist in the past year.

Monitoring, Surveillance Systems

OH–15: (Developmental) Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams.

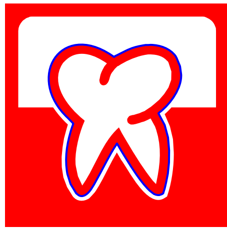
- OH– 15.1 (Developmental) Increase the number of States and the District of Columbia that have a system for recording cleft lips and cleft palates.

OH–16: Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system. Target: 51 (50 States and the District of Columbia).

Public Health Infrastructure

OH–17: Increase health agencies that have a dental public health program directed by a dental professional with public health training.

- OH–17.1 Increase the proportion of States (including the District of Columbia) and local health agencies that serve jurisdictions of 250,000 or more persons with a dental public health program directed by a dental professional with public health training. Target: 25.7 percent.



Oral Health Coalition

The Arkansas Oral Health Coalition began in 2001 as Arkansas' team at the National Governor's Association (NGA) Policy Academy on Improving Oral Health Access for Children. The academy team consisted of seven individuals representing: the office of the Governor, the Arkansas General Assembly, the Office of Oral Health, the Division of Medical Services, the Arkansas State Dental Association, the Arkansas State Dental Hygienists' Association, and BHM International, Inc. The team worked with a faculty of national experts to develop Arkansas oral health goals in access, education, prevention, and policy. To continue the academy efforts, the team invited other interested parties and expanded over the subsequent 3 years to what is now the Arkansas Oral Health Coalition, Inc. The Coalition has adopted and trademarked the slogan "**SMILES: AR, U.S.**"

The Coalition enjoys participation from a diverse set of organizations and agencies from across the state. Members of the Arkansas Oral Health Coalition currently include:

Arkansas Academy of General Dentistry

Arkansas Advocates for Children and Families

Arkansas Center for Health Improvement

Arkansas Chapter – American Academy of Pediatrics

Arkansas Commission on Child Abuse, Rape, and Domestic Violence

Arkansas Dental Assistants Association

Arkansas Department of Education
- Office of Comprehensive Health Education

Arkansas Department of Health
- Connect Care program
- Office of Oral Health
- Office of Rural Health and Primary Care
- Tobacco Prevention and Cessation Program

Arkansas Department of Human Services
- Office of Developmental Disabilities
- Office of Medical Services (Medicaid)

Arkansas Department of Higher Education

Arkansas Head Start Association

Arkansas Health Care Access Foundation

Arkansas Minority Health Commission

Arkansas School Nurses Association

Arkansas State Board of Dental Examiners

Arkansas State Dental Association

Arkansas State Dental Hygienists' Association

Conway Interfaith Clinic

Community Dental Clinic (Fort Smith)

Community Health Centers of Arkansas, Inc.

Delta Dental Plan of Arkansas

Healthy Connections, Inc.

Interfaith Clinic of El Dorado

Partners for Inclusive Communities

Pulaski Technical College
- Dental Assisting Department

University of Arkansas
- Cooperative Extension Service

UAFS Dental Hygiene Program

UALR Children International

UAMS
- Arkansas Cancer Research Center
- College of Health Related Professions
  - Department of Dental Hygiene
- College of Public Health
- Donald W. Reynolds Center on Aging
- UAMS Regional Programs (AHECs)
- Winthrop Rockefeller Cancer Institute