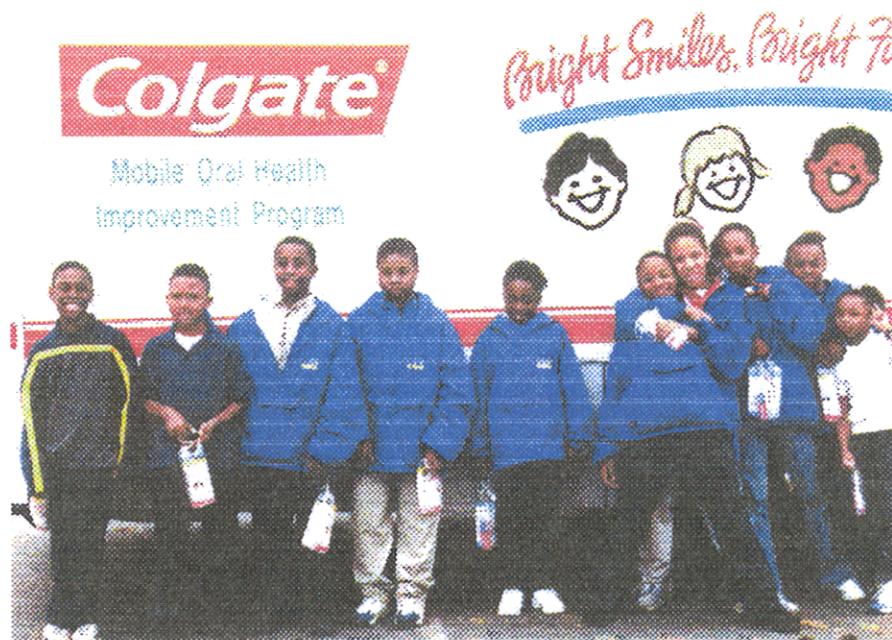


2001 Dental Screening Report



The Dental Health Action Team:

**University of Arkansas for Medical Sciences Head Start
University of Arkansas Little Rock - Share America
Arkansas Department of Health,
Arkansas Children's Hospital
Arkansas Department of Human Services,
Little Rock School District,
Arkansas State Dental Association,
St. Vincent's Health System,
Arkansas Minority Health Commission
community volunteers,
with corporate support from Colgate-Palmolive.**

**report prepared by;
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Note of Appreciation

A special thank you goes out to all who volunteered their time and expertise to make this project a success. Those individuals that brought this project to fruition were:

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Artie Blackmon	UAMS Dental Hygiene Student	Debbie Milam	Little Rock School District
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Cheryl Chapman	UALR Share America	Tom Nosal	UAMS-Pediatrics
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Joy Davison	Wakefield Elementary	Lucia Perry	Wilson Elementary
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Rozlyn Gorski	UALR Share America	LaValeria Smith	St. Vincent's Clinic East
Mary Golston	Badgett Elementary	Jill Southard	UAMS Dental Hygiene Student
Mary Gupton	UAMS ECCO HeadStart	Tommy Sproles	Arkansas Minority Health Commission
Shannon Hannon	Baseline Elementary	Julie Staten	UAMS Dental Hygiene Student
Jane Harkey	Chicot Elementary	Chara Stewart	UALR Share America
Neshaja Harriott	Parent	Margo Swanson	Little Rock School District
Doug Harrison	Chicot Elementary	Billy Tarpley	Arkansas State Dental Association
Kim Hayman	Baseline Elementary	Les Taylor	Wakefield Elementary
Clayton Henderson	Colgate Bright Smiles, Bright Futures	Beth Toland	Bale Elementary
Erica Hughes	Wakefield Elementary	Kristen Tyler	UAMS Dental Hygiene Student
Cheryl Johnson	Franklin Elementary	Suellen Vann	Little Rock School District
Debra Johnson	Mitchell Elementary	Jennifer Vega	UAMS Dental Hygiene Student
Lisa Jones	UAMS Dental Hygiene Student	Amanda Walton	Baseline Elementary
Beverly Jones	Wilson Elementary	Katie Warren	UAMS Dental Hygiene Clinic
Ruth Jordan	Baseline Elementary	Elgie Williams	Arkansas Minority Health Commission
Teresa Knapp	Little Rock School District	Margaret Williams	Stephens Elementary
Dr. James Koonce	Arkansas Children's Hospital	Kim Young	UAMS ECCO HeadStart
Kenna Lewis	Arkansas Children's Hospital	Dr. Mark Zoeller	UAMS Dental Hygiene Clinic
Dr. Jon Lofton	Colgate Bright Smiles, Bright Futures		
Edie Mauldin	Arkansas State Dental Association		

Purpose

The organizations and agencies comprising the Dental Health Action Team confront children's dental health needs on a daily basis. Anecdotal evidence for years has pointed to a serious problem with access to adequate dental care for many children in the Little Rock, Arkansas School District. The Action Team was formed in 2000 to address these concerns.

The ultimate goal of the Action Team is to ensure that all children in Arkansas enjoy optimal health through improving oral health outcomes and reducing disparities among children. To that end, the Action Team undertook an ambitious project to identify the children with oral health needs and help the children and their family's access quality dental care.

It is hoped that information from the dental screenings will help convince parents, policy makers, legislators, and advocates of the need for increased access to dental care. Without optimum oral health, children cannot succeed in school, perform basic daily activities because of dental pain, nor show a healthy, happy smile to the world.

One of the national performance measures in Healthy People 2010 is the percent of third-grade children who have received protective sealants on at least one permanent molar tooth. Dental caries (tooth decay) affects two-thirds of children by the time they are 15 years of age. Developmental irregularities, called pits and fissures, are the sites for 80-90% of childhood caries. Dental sealants selectively protect these vulnerable sites, which are found mostly in permanent molar teeth. Targeting dental sealants to those children at greatest risk for caries has been shown to increase their cost effectiveness. Although dental sealants in conjunction with community water fluoridation have the potential to prevent virtually all childhood tooth decay, sealants have been underutilized.

Methods

Sealant utilization and assessment of oral health requires primary data collection or screening of a representative sample of school children. During 2000, the Dental Health Action Team developed a plan to collect data on oral health and sealant utilization. A series of dental screenings conducted in late 2000 involved more than 1200 children in UAMS Head Start Centers and in the UALR Share America program. The Little Rock School District survey conducted in early 2001 included data on decayed, missing and filled primary and permanent teeth; caries rates; and untreated caries along with sealant data.

Eleven elementary schools in the Little Rock School District were selected for the study and included those schools with low socio-economic status as indicated by the percentage of children on the free lunch and reduced-cost lunch program. Additional schools were targeted because they had students who participate in the UALR Share America and UAMS Head Start programs.

UALR Share America staff contacted the schools, worked with PTA's, arranged for logistical and volunteer support and provided parental permission forms for each student. (See Attachment 1 - Permission Form) Only students whose parents or guardians signed and returned the permission form were screened.

The 2001 screenings were conducted by dentist members of the Action Team, other local volunteer dentists, dental hygienists from the UAMS Dental Hygiene program, and UAMS dental hygiene students working under the personal supervision of licensed dentists. Examiner #1 screened 430 children, examiner #2 screened 65 children; #3 = 1228 children; #4 = 345 children; #5 = 107 children; and 97 screened by the dental hygiene students. Individual examiners contributed from one to seven days for the project.

The dental screenings were conducted in the common areas of each school utilizing appropriate lighting and tongue depressors. Many laypersons

may think tooth decay can only be determined by use of a dental explorer, the pointed instrument common in almost every dental procedure. However, it has long been known, and recently reaffirmed by the National Institute of Dental and Craniofacial Research's Conference on Caries Management Throughout the Life Cycle, that visual observation under proper conditions is as accurate as using an explorer.

The schools were asked to involve parent volunteers and nurses to help coordinate the activities and move students from the classrooms to the screening areas. In addition, Action Team organizations provided staff to enter data as it was collected. A newly created recording form allowed for easy data entry by non-dental personnel. (See Attachment 2 – Data Entry Form)

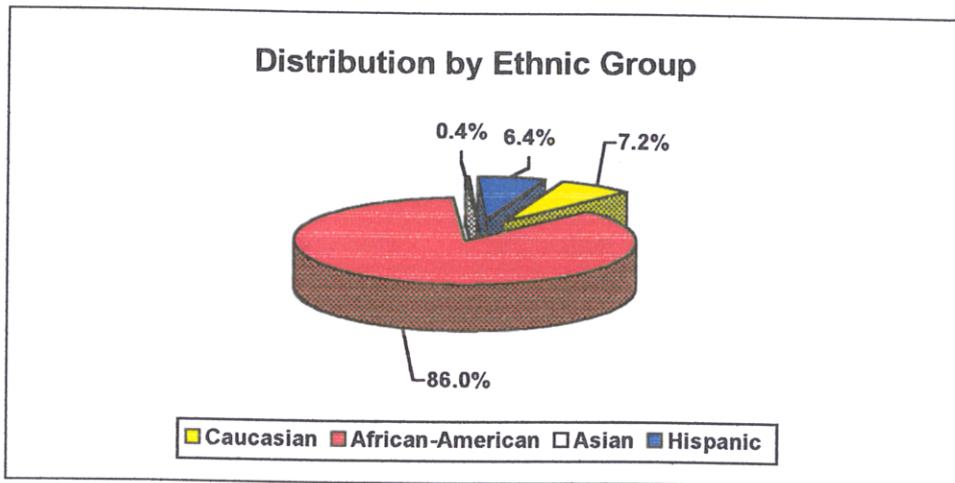
Following the examinations, each student was provided with a referral form to take home. (See Attachment 3 – Referral Form) The form stated that school-based screenings do not take the place of regular dental examinations in a dental office, but are conducted to collect data on a large population. The form allowed the examiner to indicate to the parents that oral health conditions were adequate, minor dental problems existed that needed attention when convenient, moderate dental problems were found that needed attention, or that conditions existed that needed immediate attention. Referrals in the most serious category indicated that the child had apparent pulpal involvement (decay having reached the pulp of the tooth), the child already experienced tooth pain or, in the examiner's clinical judgment, the conditions would soon cause abscess or pain. Referrals in the second or third categories were not made if, in the examiner's opinion, carious primary (baby) teeth would be lost before more adverse conditions presented.

Colgate-Palmolive's Bright Smile Bright Future's Program served as the corporate partner. The mobile dental van was in Little Rock January-February to support the project. They provided each student with a dental health kit containing a toothbrush, toothpaste, floss, and oral health information.

Findings (See Attachment 4 – Data Set)

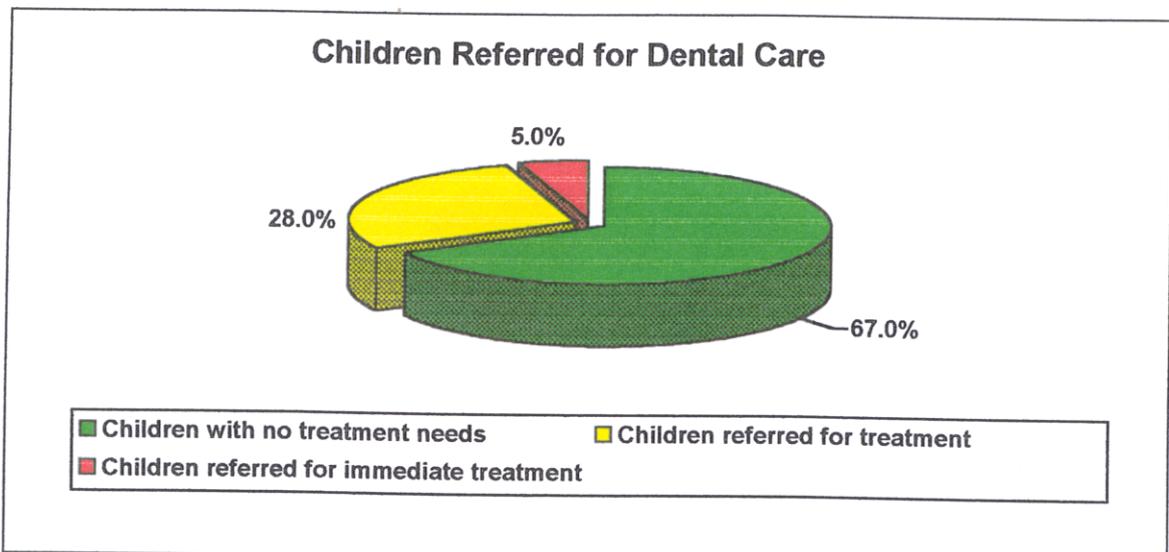
Survey Subjects:

- A total of 2,272 children were examined.
- Of the 2,272 children participating, 1,954 were African-American, 164 were Caucasian, 146 were Hispanic, and 8 were of Asian or Pacific Islander heritage.



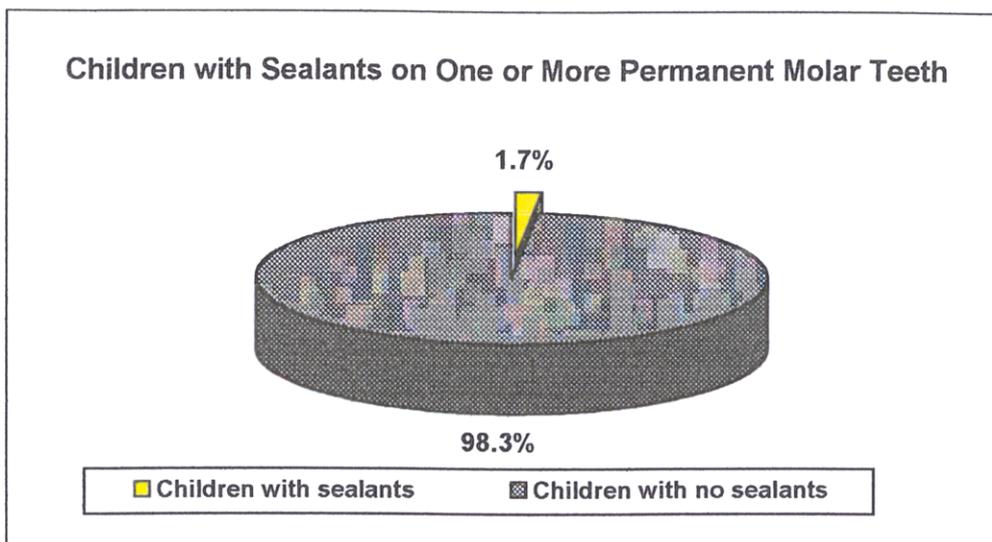
Referrals:

- 636 children (28.0%) were referred for dental care, either referral category two or three, with an additional 114 (5.0%) referred for immediate attention, referral category four.

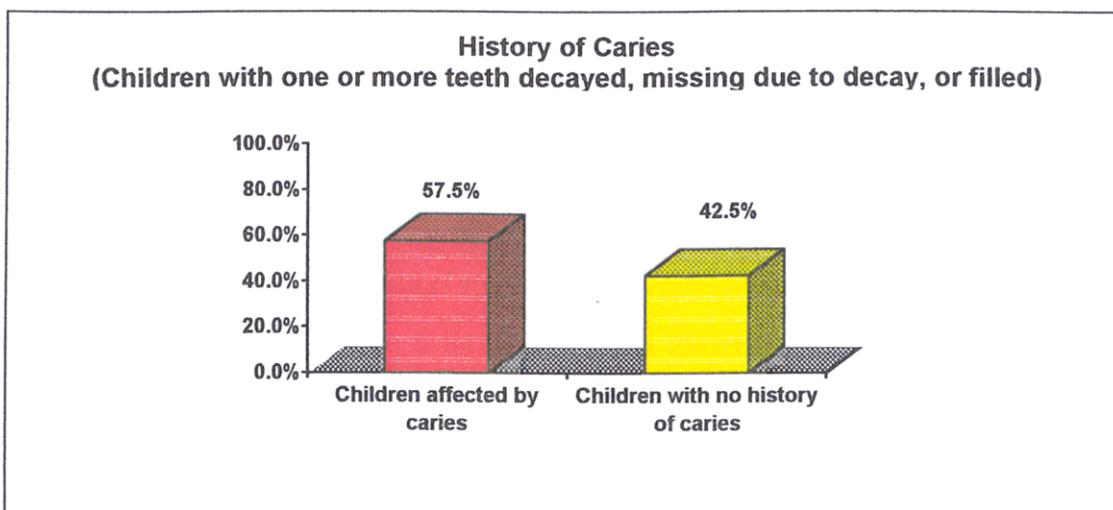


Sealant and Caries Rates:

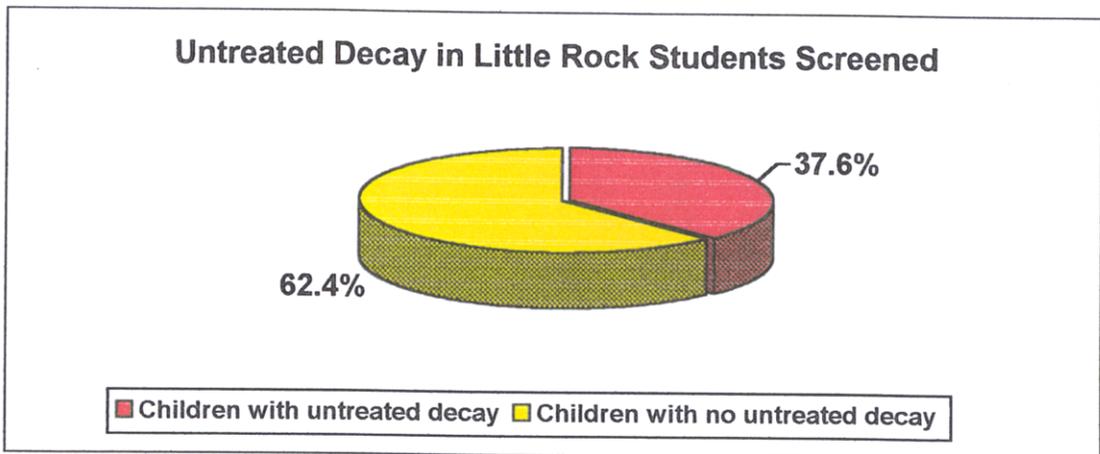
- Only 1.7% of children examined, third grade and older, had at least one dental sealant. Individual schools had a sealant rate of from 0.0% to 4.8%.



- The 2,272 children examined had 5,311 teeth that had been affected by decay, meaning that the tooth was decayed, had already been filled, or had been lost prematurely due to decay. This results in a DMF (decayed, missing or filled) rate of 2.34, meaning that on the average, each student in the survey has approximately two teeth that are decayed, or have been decayed.
- Of the children examined, 1,307 children or 57.5% had teeth affected by caries.



- Of the children examined, 854 children or 37.6% had untreated dental caries.



Socio-economic Indicators:

- 90% of the children screened participate or are eligible for the free or reduced cost lunch program in their schools. The rate of eligibility in the individual schools ranged from a low of 86% to a high of 98%.

Discussion

According to the National Institutes of Health, the placement of sealants is a highly effective means of preventing pit and fissure caries. Sealants are safe and placed easily and painlessly. Sealants are currently underused in both private and public dental care delivery systems. Sealant usage in Little Rock is abysmally lower than the national rate, 1.7% compared to 23.0% from NHANES III, and only one-tenth of the Arkansas statewide rate of 17.3% (Arkansas Department of Health's 2001 Statewide Dental Needs Assessment Survey). Little Rock's sealant rate is even more disastrous when viewed in light of the Healthy People 2010 objective 9.9a, which calls for increasing the proportion of children who have received dental sealants on their first permanent molars to 50%.

31.6% statewide. This data shows that Little Rock lags seriously behind the Healthy People 2010 goal of 16% of 6-8 year olds with untreated caries on primary and permanent teeth. However, this comparison only underscores the problems with access to care for Little Rock children. The statewide data is from a random sample of schools across Arkansas, some with no dental services available locally. The Greater Little Rock metropolitan area by contrast has almost one-third (381) of the dentists in the entire state.

Also confounding the caries rate among the children screened is that Little Rock, Arkansas has been fluoridated since 1951. All children living in the Little Rock area, that use the Little Rock water supply as their primary source of drinking water, receive the benefits of this proven public health measure. Because fluoridated communities continue to show a 40-60% decrease in dental caries over non-fluoridated areas, the lack of access to dental care is even more serious in this population. Even the positive affects of fluoridation can not overcome the lack of access to care and preventive services that should be afforded these children.

During discussions with the children, the examiners discovered that many children with mild to severe dental problems either had no regular dentist or had never seen a dentist. The problem of access to dental care will only increase in the coming years as the number of dentists licensed in Arkansas decreases.

The reasons for the underutilization of sealants are complex, but are affected in great part by the personal preferences of local dentists and their auxiliaries. Intensive efforts should be undertaken to increase sealant use through professional and lay education. Expanding the use of sealants would substantially reduce the occurrence of dental caries in this population, assuming that health policy changes afforded these children access to any dental care.

substantially reduce the occurrence of dental caries in this population, assuming that health policy changes afforded these children access to any dental care.

The 1960's era of "Look mom, no cavities" has not yet arrived in Little Rock's disadvantaged populations. Seven out of ten children are still affected by dental caries.

Summary:

The Year 2001 Little Rock School District Dental Screening Project shows that only 1.7% of children surveyed had one or more dental sealants on permanent molars compared to the national Healthy People 2010 goal of 50%. The majority (57.5%) of all children surveyed had been affected by dental disease with an average of almost three decayed teeth per child (DMF = 2.34). Access to dental care is unattainable for many children, evidenced by the high number of children with untreated dental decay (37.6%). Efforts and resources must be targeted to increase the use of dental sealants and assure that specific preventive and restorative dental services be provided to those children at greatest risk of oral disease.

Recommendations

Results of the Little Rock Area Dental Screening Project have led project organizers to recommend the following actions to address problems of lack of access to dental care among the children screened:

1. The Action Team will prepare and present programs to the PTA/PTO groups at the involved schools to inform parents, teachers and administrators about the findings of the project and to seek input about possible solutions.

2. The Action Team will create fact sheets that parents can use to contact legislators about the project findings and to elicit their support for corrective actions.
3. The Action Team will design and implement a dental sealant program to provide sealants in a school based setting beginning with the five schools participating in the UALR Share America Program. These schools include Franklin, Stephens, Wilson, Wakefield, and Bale Elementary Schools.
4. The Action Team will plan to replicate the screening during the 2001-2002 school year with the support of Colgate.
5. The Action Team will work with churches and neighborhood groups to coordinate additional screenings by scheduling such opportunities in conjunction with community or faith-based activities.
6. The Action Team will develop an action plan to present to policy makers in advance of the 2003 session of the Arkansas General Assembly.

Attachments:

- Survey data set
- Parental permission slip
- Data entry form
- Referral form

For information about the Dental Health Action Team or copies of this report, contact:

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