

## EXECUTIVE SUMMARY

“An Analysis of Oral Health Screening Data Collected by the Kansas Department of Health and Environment for School Year 2008-2009 on Children K-12 in Kansas”

A Practicum Report by Caron Shipley RDH, BSDH

It has been shown that poor oral health has a significant impact on overall general health. Children who suffer from dental-related illness may have trouble focusing and learning in school. Children may have frequent absences from school, failure to thrive physically, reduced self-esteem, and speech development problems due to dental decay, infection, and tooth loss. Information collected from school oral health screenings yields valuable information revealing rates of untreated dental needs, urgent care needs, previous treatment received and whether sealants have been placed on a child's teeth.

The purpose of this practicum was to analyze the 2008-09 school oral health screening data collected from a convenience sample of 51 counties in Kansas. The results of the screenings were sent to the Kansas Department of Health and Environment (KDHE). Upon completion of a descriptive analysis of the data was completed.

Calibration of screeners was mandated and standardized screening forms were used by all screeners participating in this initiative. Screening results were sent to the KDHE via email, fax, or direct mail. The results were immediately entered into an Access data base at the Bureau of Oral Health (BOH). Data was analyzed with descriptive statistics and Pearson's correlation coefficient between free and reduced lunch status and oral health status using SAS 9.1 software. Graphing was performed using Microsoft Excel 2007 software.

247 schools in 51 counties participated in school oral health screenings with 55,532 children screened. Of the 51 counties screened only 22 (43 percent) met the HP 2010 goal of untreated decay rates at or below 21 percent. Nine of the 10 counties with the highest rates of untreated decay were found to be in the southern part of the state. Six of the top 10 counties with untreated decay border Oklahoma. The southwest and southeast region of Kansas had the overall highest rates of untreated decay with the southwest portion of the state presenting with the highest urgent care needs overall. The overall highest rates of treated decay were found in rural counties at 42.3 percent. Highest urgent care needs were found in counties designated as densely-settled rural and frontier.

A weak, but significant ( $< 0.05$  percent) relationship between free and reduced lunch status (lower SES status) and untreated decay was found in the overall analysis of all counties screened in Kansas.

This study was inconclusive in finding a relationship between communities with fluoridated water and decay rates. Schools may receive water from more than one source (it could be a mix of fluoridated and non-fluoridated water entering the school), so it is difficult to determine the exact level of fluoridated water a child consumes. Tracking water sources from which a child receives drinking water is extremely difficult to accomplish. Children may live in a fluoridated community and drink bottled water or well water that is non-fluoridated.

Children in grades 3 to 12 were included in sealant analysis. Only five of the 51 counties screened have met the HP 2010 objective of having 50 percent of the children sealed.

Screening children in a school setting is a convenient means to obtaining a snapshot picture of the overall dental health of children. Future and continued convenient and randomized studies are recommended in the future to expand the data collected. Medicaid has only limited access and services available to children receiving benefits. Increasing the dental workforce to include more dentists accepting Medicaid reimbursement along with developing more safety net clinics offering dental care on a sliding fee scale to those with no insurance is recommended. School-based programs using ECP hygienists either working individually or with a “hub and spoke” model are recommended in school settings. Expanding the use of school-based preventive programs may reduce the occurrence of dental caries in the population beyond that already achieved by fluorides and other preventive measures.

It is hypothesized that expanding school-based programs which offer preventive services and dental referrals will begin to reveal less untreated decay and urgent care needs in the future. These programs should include prophylaxis, assessments, fluoride varnish applications, sealants, referrals for treatment as indicated, and oral health education. The rate of treated decay should initially increase and then level off as children are referred to a dental provider and higher rates of school based preventive care and sealants are realized. Continuous screenings and data analysis are needed to ensure prevention services move in this direction.

**If you have questions, please contact: Caron Shipley RDH, MPH  
at 785-291-3683 or BOH@kdheks.gov.**