Oral Health Bureau
Iowa Dept. of Public Health

2009 Head Start Oral Health Survey Report

The Iowa Department of Public Health (IDPH) coordinated an open-mouth survey of children enrolled in the state Head Start[1] program during the spring of 2009. This report describes the process for conducting the oral health survey and the results.

Objective

National data shows an increase in tooth decay experience for children ages 2 through 5 (from 24% from 1988-1994 to 28% from 1998-2004[2]). In order to learn more about the oral health status of Iowa children younger than age 5, the IDPH Oral Health Bureau (OHB) has begun developing an oral health surveillance system, with the assistance of federal grant funding. The surveillance system will allow OHB to routinely study the oral health status of children in different settings. Results will assist OHB in program and policy planning as well as evaluation of current public health initiatives.

Methods

IDPH staff worked with the director of the Iowa Head Start State Collaboration Office to determine the sample size. In 2007, there were 7,930 Iowa children enrolled in Head Start. IDPH staff selected a target of 800 children (10%) for the survey. A computerized random sample of 48 classrooms was chosen, based upon the location of 24 Title V child health centers in Iowa. Two classrooms were included per Title V service region.

Open mouth surveillance was to be completed by dental hygienists. Oral health status indicators collected were the presence or absence of filled (restored) teeth, demineralization (initial tooth decay), and/or cavitated lesions (untreated tooth decay). Consent form information also included questions regarding the ability of families to access care, when the child's last dental visit occurred, and if the child has a payment source for dental care.

Calibration training was developed using information from existing OHB training materials and the University of Iowa College of Dentistry. The training was held via the Iowa Communications Network (ICN), a videoconferencing system, in January 2009. The training was mandatory for dental hygienists who would conduct the surveys. The ICN training was recorded, and the recording was provided to three hygienists unable to participate the day of the training.

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[1] Head Start provides education, health, nutrition, and parent involvement services to low-income children and their families.

[2] Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans G, et al. Trends in oral health status: United States, 1988–1994 and 1999–2004. National Center for Health Statistics. Vital Health Stat 11(248). 2007.

Administrators for the state's 18 Head Start grantee organizations were informed of the upcoming survey via email correspondence from the state collaboration office. IDPH then mailed letters to each administrator identifying the selected classrooms and sites within each region. Follow-up phone calls to the administrators were made to finalize locations and participation. Seventeen of the 18 grantee organizations agreed to participate.

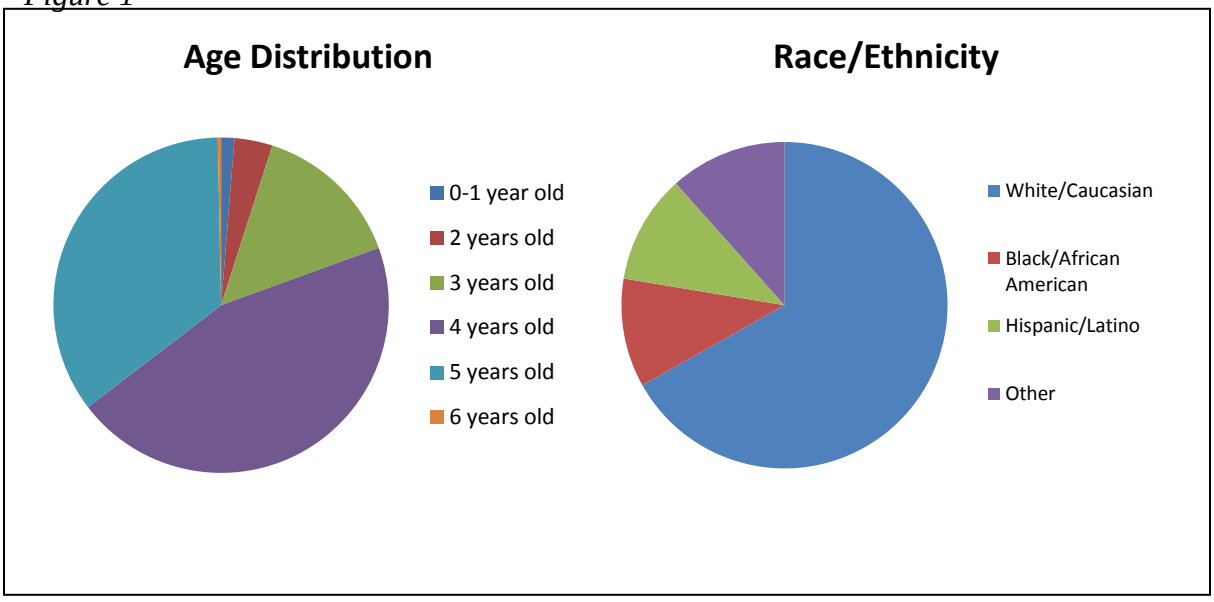
Consent forms were provided to the Head Start centers, which were sent home to parents/guardians and returned to each classroom prior to the day of the survey. Surveyors were provided vinyl gloves, mouth mirrors, and pen lights to conduct the visual screenings. All children in the selected classrooms received toothbrushes, regardless of participation. Hygienists were also instructed to use the brushes to retract tongue and cheeks and to clean the teeth if necessary.

Oral health status indicators and consent form information were entered into Microsoft Excel files and submitted to the OHB. Completed consent forms were also returned to the OHB. IDPH staff analyzed the data by the use of SPSS[3]. Data collected are confidential. Any report or publication of this information requires permission from the Oral Health Bureau at the IDPH.

Results

The participation rate was 79 percent (631 of 800 potential children). Fifty-seven of the participants (7%) were not enrolled with Head Start (21 were in Early Head Start and 36 were in state-funded or other preschool programs). The majority of children (503) were 4-5 years old. Sixty-seven percent of children were White/Caucasian, 11 percent of the children were Hispanic/Latino, and 11 percent were Black/African American.

Figure 1



[3] SPSS 16.0 Base for Windows. Chicago, SPSS, Inc., 2007.

Fourteen percent of surveyed children had untreated tooth decay, 19.2 percent had at least one filled tooth, 28.5 percent had a history of tooth decay, and 34.9 percent had demineralized enamel. Most of the children had Medicaid as a payment source for dental care (72%).

Table 1- oral health status indicators relative to Healthy Iowans 2010 goals

	Untreated Decay	Filled Tooth	History of Decay[4]	Demineralization
Prevalence	14.1%	19.2%	28.5%	34.9%
Healthy Iowans 2010 Goal	≤ 2% for children age 3-5	NA	≤ 10% for children age 3-5	NA

Consent form responses showed that 66 percent of children had a dental visit within the past six months; 5 percent of the children had never had a dental visit. Thirty-eight percent of parents/guardians rated the ability to get dental care for their child as excellent, 28 percent as very good, 8 percent as fair and just 4 percent as poor.

Parents/guardians were mostly satisfied with the quality of the dental care their child has received (89%). However, of the children with untreated decay, 11 percent of parents were not satisfied with the quality of dental care the child has received, compared to just 5 percent of parents whose children did not have untreated decay.

Seventy-four percent of the children with untreated decay had seen a dentist within the past 6 months. Seven percent with untreated decay had never seen a dentist. Hispanic/Latino children were more likely to have untreated decay, a filled tooth, or demineralization, compared to White/Caucasian and Black/African American children.

Table 2- oral health status indicators relative to race/ethnicity

		Untreated Decay	Filled Tooth	Demineralization
Race/ Ethnicity	White/Caucasian	13.3%	17.8%	36.5%
	Black/African American	11.8%	19.1%	17.6%
	Hispanic/Latino	16.2%	25.0%	39.7%

[4] History of decay includes untreated decay and filled teeth.

Discussion

This year's survey information will serve as baseline data for children in Iowa's Head Start program. The survey results parallel national data regarding the percent of children between ages 2 and 5 with a history of tooth decay. However, it is important to note that the Head Start population, due to socioeconomic level, is at a higher risk of tooth decay than all children in the same age group. Therefore, the rate of all Iowa children in that age range with a history of decay may actually be lower.

Approximately one in every seven children was found to have untreated decay, a much higher frequency than the Healthy Iowans 2010 goal of just one in every 50 children. Also, approximately one of every 3.5 children has a history of decay, also higher than the Healthy Iowans 2010 goal of one in ten. Over one-third of children had demineralized enamel, which is an initial stage of tooth decay. Although it is reversible through use of topical fluoride, the large number of Head Start children with demineralization indicates the importance of early prevention and intervention within public health programs.

There is an obvious need to increase efforts at preventing tooth decay for at-risk children. The I-Smile™ dental home initiative, implemented through Iowa's Title V child health program, has begun increasing that access. I-Smile™ Coordinators and Head Start administrators have built strong working relationships, and more Head Start children are receiving preventive services through the I-Smile™ program. Working with Early Head Start will be even more critical, to prevent disease as soon as teeth erupt.

Although just 11 percent of children surveyed were Hispanic/Latino, these children experienced poorer oral health than those who were White/Caucasian or Black/African American. There may be many factors that contribute to this including feeding practices, home care, or fluoride use. Future surveillance and outreach efforts may need greater focus on Iowa's Hispanic/Latino families.

National Head Start Program Performance Standards include several requirements regarding oral health, including determining and ensuring that children are up-to-date according to the state Medicaid dental periodicity schedule. The collaboration between Head Start and I-Smile™ is very beneficial in meeting these standards, and may be reflected in the high percentage (89%) of parents/guardians indicating that their child has seen a dentist within the past 6 months to a year prior to the survey, as well as the high percentage (89%) that are satisfied with the quality of care their children have received.

Not only do the efforts of Head Start staff and I-Smile™ staff appear to be making a difference, but dentists may be more willing to work with Head Start than the overall Medicaid-enrolled population (in 2008, just 45% of Medicaid-enrolled children age 1-5 received a dental service from a dentist or Title V child health professional). The Head Start collaborative model may be one to replicate to improve access for all Medicaid-enrolled and underserved children.

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