2021 Iowa Head Start Oral Health Survey Report

Bureau of Oral and Health Delivery Systems
September 2021

Iowa Department of Public Health
Protecting and Improving the Health of Iowans

IDPH
IOWA Department of PUBLIC HEALTH

Acknowledgements

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Glossary

Decay: Readily observable breakdown of a tooth's enamel surface (cavitated lesion) or dark pits or fissures of primary (baby) molars.

Demineralization: Tooth enamel, adjacent or close to the soft tissue margin, appearing chalky and white. No clinically visible or irreversible loss of enamel or break in enamel surface is present.

Filled Teeth: The presence of any type of restoration, including a temporary filling, or a tooth that is missing because of extraction as the result of tooth decay.

History of Decay: The presence of decayed and/or filled teeth.

Referral Need (refer to Appendix C):

- **Immediate**: Child has suspected abscess, pain, or large amount of decay;
- **Within 3 Months**: Child does not meet any of the above criteria and (a) has suspected decay or (b) dark pits or fissures on primary (baby) molars;
- **Within 6 Months**: Child does not meet any of the above criteria and has any of the following: (a) demineralization, (b) poor oral hygiene practices, (c) deep tooth pits or fissures, (d) restorations, (e) orthodontia (has braces or tooth irregularities), (f) dry mouth, (g) qualifies for Medicaid or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), or free and reduced lunch, (h) has less than annual dental visits, or (i) has frequent exposure to juice or sugar/carbohydrates;
- **Within 12 Months**: Child does not meet any of the above criteria and has shallow tooth grooves, fluorosis, and no history of decay (no filled or decayed teeth).

Metropolitan: (1) Having at least one urbanized area of 50,000 population or more and (2) may include adjacent counties with a minimum of 25% of workers commuting to the central counties of the metropolitan statistical area. As of 2020 in Iowa, these counties are: Benton, Black Hawk, Boone, Bremer, Dallas, Dubuque, Grundy, Guthrie, Harrison, Jasper, Johnson, Jones, Linn, Madison, Mills, Polk, Pottawattamie, Scott, Story, Warren, Washington and Woodbury.

Micropolitan: (1) Having at least one urban cluster of 10,000 or more but less than 50,000 population and (2) may include adjacent counties with a minimum of 25% of workers commuting to the central counties of micropolitan statistical area. As of 2020 in Iowa, these counties are: Buena Vista, Carroll, Cerro Gordo, Clay, Clinton, Davis, Des Moines, Dickinson, Jefferson, Keokuk, Lee, Mahaska, Marion, Marshall, Muscatine, Wapello, Webster and Worth.

Rural: (1) Not having an urban cluster of 10,000 population or more and (2) having less than 25% of workers commuting to central counties of micropolitan or metropolitan areas. As of 2020 in Iowa, these are the remaining 60 counties not listed in the metropolitan or micropolitan descriptions.

Head Start Participation: Children actively enrolled and attending the Head Start program.

List of Acronyms

IDPH ..... Iowa Department of Public Health

MCAH .....Maternal and Child Health

Report

Introduction

A child's oral health is an important factor in overall health, school readiness, and even self-esteem. In Iowa, the I-Smile™ program works to assure optimal oral health for children by facilitating access to care and providing preventive services for at-risk children and families. An important partner for I-Smile™ is the Head Start program, which provides Head Start programs promote the school readiness of infants, toddlers, and preschool-aged children from low-income families as well as engage parents or other key family members in positive relationships, with a focus on family wellbeing.[1]

The Iowa Department of Public Health (IDPH) coordinated an oral health survey of children enrolled and participating in Iowa's Head Start program from February 1 through May 31, 2021. Participating children were 3-5 years of age. This report describes the importance, survey methods and results of this oral health survey, in addition to the impact of I-Smile™ on children's oral health in Iowa.

Background

Oral health surveys provide an understanding about oral health status and dental disease prevalence among a selected population. Understanding the prevalence of dental decay is crucial, as it is the most common chronic illness among children and affects a child's ability to eat, sleep, learn, and function at their full potential at home and school.[2,3] Dental decay can be painful and is irreversible. Unless properly treated, decay leads to infection of the teeth and gums, ultimately leading to tooth loss or infections in other areas of a child's body. Additionally, the aesthetics of dental decay can negatively affect a child's social development and self-esteem.[3] Furthermore, dental decay can influence a child's school attendance and performance.[4]

The Iowa Department of Public Health (IDPH) manages the I-Smile™ program to assure optimal oral health of Iowa's children, especially those at highest risk for dental disease. As the oral health component of the statewide Maternal, Child, and Adolescent Health (MCAH) program, I-Smile™ connects children and families with dental, medical and community resources to ensure a lifetime of health and wellness. Each of Iowa's 23 local Title V MCAH contractors has a dental hygienist who serves as the I-Smile™ coordinator for designated service areas. The coordinators carry out I-Smile™ strategies, focusing on preventing dental disease, identifying ways to help families receive care from dentists, and promoting the importance of oral health within the communities they serve.

I-Smile™ prioritizes serving children with Medicaid health and dental coverage, those uninsured, or those that are underinsured. Nearly all local I-Smile™ programs provide preventive dental services in Head Start classrooms, due to data that shows a limited number of very young children seeing a dentist.[5]

This is Iowa's third Head Start oral health survey, with the most recent previous survey completed in 2015, and the first Iowa Head Start oral health survey done in 2009, four years after initial implementation of the I-Smile™ program[6,7]. The results from the 2021 Head Start oral health survey allow for comparison across 6 and 11 years and among demographic populations, as well as the ability to consider impact of I-Smile™. Available resources, such as the I-Smile™ infrastructure and

requirements, partnerships, and consistent and meaningful data collection, resulted in minimal additional staff time or funding needed to complete this survey.

Objectives

This oral health survey fulfilled two important goals:

1. To acquire an understanding of dental disease prevalence among children ages 3-5 enrolled and participating in the Iowa Head Start program; and
2. To evaluate dental disease prevalence among Head Start survey participants in comparison with the 2015 and 2009 Head Start oral health surveys and the potential impact of I-Smile™.

Methods

Sample

A convenience sampling methodology was used to complete this survey. Through a survey of Iowa Head Start grantees in October 2020, an estimated 4,465 students were enrolled in Head Start for the 2020-21 school year. Some Head Start locations did not allow outside services due to COVID-19, totaling just 260 students, meaning 4,205 students were enrolled in classrooms allowing outside services. During 2020-21, COVID-19 protocols required smaller Head Start classroom sizes, meaning fewer children attending in-person on the day of the dental screening.[8] I-Smile™ Coordinators were asked to serve all Head Starts within their service areas from February 1, 2021 through May 31, 2021 to obtain a large sample. This convenience sample design allowed for 2,360 children enrolled in Head Start ages 3-5 to be screened, totaling 56% of enrolled Head Start students in classrooms allowing outside services, 53% overall.[8]

Data Collection

During 2020-21, all of the statewide I-Smile™ programs offered dental screenings to Head Start centers, per program protocol and survey sampling guidance. Using program data entry standards, data were entered in the data system in place for MCAH and I-Smile™ (**signify**community). This allowed IDPH staff to access regularly collected data to achieve the survey objectives, thus reducing overall costs for the survey. Contractors are required to serve children at-risk for developing dental disease and therefore often provide dental services at Head Start programs to reduce the potential for invasive dental procedures. 0

To assure consistency among the dental hygienists and registered nurses who provide dental screenings at Head Start classrooms, a calibration webinar training was held in January 2021. Any I-Smile™ registered nurse or dental hygienist who would be providing dental screenings at Head Start was required to participate; participation was confirmed through completion of an online calibration quiz. The quiz also helped to recognize inconsistencies across screeners as explained by the required webinar training.

Dental hygienists and registered nurses provided dental screenings for children enrolled in and participating in Head Start, following regular program protocols. Four screening indicators (decay, filled, history of decay, and demineralization) and two consent form indicators (payment source for child's dental care and child's last dental visit) were the focus for this survey, along with demographic information (race, ethnicity, age, gender and county of service). While screening indicators were collected on the day of screening, consent indicators and race, ethnicity, and gender could be collected up to 12 months prior to the day of screening, following program protocol. Screeners used the I-Smile™

consent form (last updated in May 2020) to collect demographics and consent indicators and the I-Smile™ screening form (last updated in April 2018) to collect screening indicators. These indicators were addressed in the calibration training and required to be collected for every child screened.

Lastly, a newly created data entry dashboard in MCAH **signify**community, along with biweekly emails, allowed contractors to make necessary and timely data entry corrections. This facilitated error correction for both the contractors and IDPH.

Statistical Analyses

Children enrolled and participating in Head Start, ages 3-5 were included in all analyses. Missing responses to pertinent variables were excluded from analyses.

Consent/Demographics

Consent form indicators and demographic information used a multiple-choice format for data collection. Additionally, the consent form indicator "child's last dental visit" was asked as a multiple-choice question with the answer options: within the past 6 months/1 year/3 years/5 years/Never. Fifteen percent of the responses for this indicator are missing, causing unreliability in estimates. Prevalence estimates are displayed, however more detailed analyses of child's last dental visit are not available.

The race and ethnicity questions on the paper consent form have slightly different response options than the **signify**community values. A crosswalk of appropriate signifycommunity values to be entered per consent form value is standard for the I-Smile™ program based on set guidelines. Racial and ethnic categories are condensed due to small numbers. If the ethnicity field on the consent contained "Hispanic/Latino," the child was reported as "Hispanic." If the ethnicity field indicated they were "Not Hispanic/Latino," the child was reported within one of the following race categories. "White" is reported if the only race selected is "White." "Black" is reported if the only race selected is "Black or African American." "Multi-racial" is reported if more than one race is selected (if multiple Asian or Pacific Islander races were selected, they are included in "Other"). Finally, "Other" is reported if the race and ethnicity selected on the consent are something other than described in the above list (i.e. Asian or Pacific Islander, American Indian or Alaska Native). Additionally, 6% of participants did not provide a race or ethnicity and were eliminated from analysis.

Geographical classification is determined based on county of service due to the autofill nature of county of residence. Iowa counties considered "metropolitan" by the U.S. Office of Management and Budget are: Benton, Black Hawk, Boone, Bremer, Dallas, Dubuque, Grundy, Guthrie, Harrison, Jasper, Johnson, Jones, Linn, Madison, Mills, Polk, Pottawattamie, Scott, Story, Warren, Washington and Woodbury. Counties determined "micropolitan" are: Buena Vista, Carroll, Cerro Gordo, Clay, Clinton, Davis, Des Moines, Dickinson, Jefferson, Keokuk, Lee, Mahaska, Marion, Marshall, Muscatine, Wapello, Webster and Worth. The remaining 60 counties are considered "rural" (refer to Appendix C).[9]

Screening

Three of the four primary screening indicators are yes or no questions, "yes" indicating the indicator is present, and "no" that it is not present. History of decay is calculated with "yes" representing that either a filled tooth and/or decay are present, and "no" demonstrating neither a filled tooth nor decay is present in the child's mouth. Referral need illustrates the timeframe in which a child needs to see a dentist for either follow-up or treatment based on a number of factors including oral health status, oral

health access, behaviors, and social determinants of health. This is based on the I-Smile™ Decay Risk Assessment which provides criteria for a child referred for either: “Immediate”, “Within 3 Months”, “Within 6 Months”, or “Within 12 Months” (refer to Glossary or Appendix C). Demineralization has been eliminated from the report due to unreliability as determined by inconsistency across contractors.

Descriptive statistics were calculated for each demographic, consent and screening indicator as well as cross-tabulation rates among screening indicators and demographics. A Pearson chi-square test was used to determine statistically significant associations between screening indicators and demographics. Relationships with p-values greater than 0.05 are not statistically significant and are noted in the corresponding table in Appendix E.

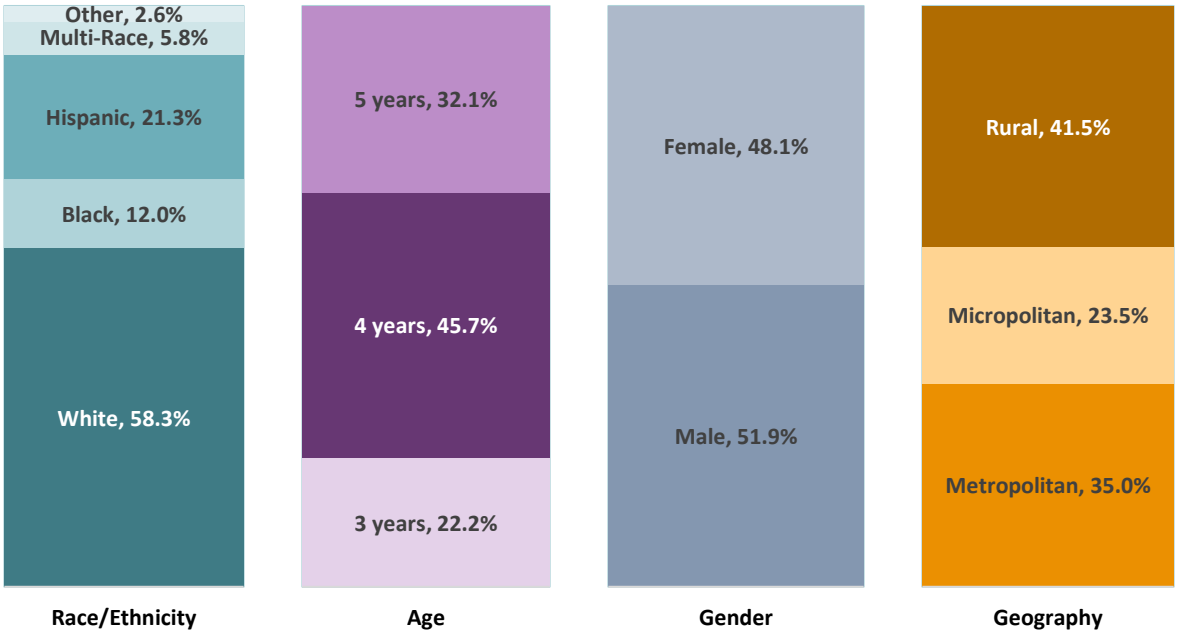
Results

Overall

The sample of children screened is diverse across gender, race and ethnicity, age and geographical classification. Fifty-eight percent of Head Start-enrolled survey participants ages 3 through 5 are reported as White, 21% reported as Hispanic, 12% as Black, 6% reported as more than one race (“Multi-racial”), and 0.5% reported as another (“Other”) race (refer to figure 1).

Males and females were equally represented, with 52% male and 48% female, and most children screened were 4 years-old (46%) (3 years=22%; 5 years=32%). Finally, geographical classification was represented with 35% of children receiving the screening in metropolitan counties, 34% in micropolitan counties, and 41% in rural counties (refer to Figure 1).

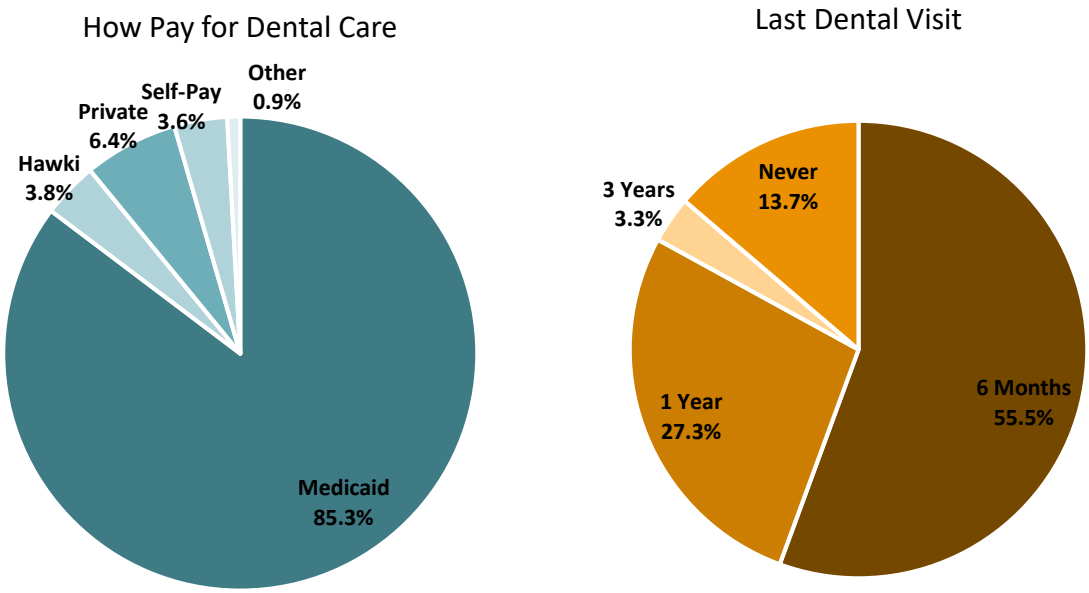
Figure 1: Sample is Diverse across All Demographics (%)



Consent form indicators include “My child’s most recent dental visit was within the past… 6 months/1 year/3 years/5 years/Never” and “How do you pay for your child’s routine dental care?.” More than 85%

of Head Start enrolled survey participants were reported to use Medicaid benefits to pay for their dental care, followed by private dental insurance (6%), Hawki – Iowa's children's health insurance program (4%), out-of-pocket (self-pay, 4%), and other source (0.9%). Of Head Start-enrolled survey participants, 55% reported a previous dental visit within the past 6 months, and an additional 27% within the past 1 year, 3% within the past 3 years, 0.2% within the last 5 years, and 14% reporting they never had a dental visit (refer to Figure 2).

Figure 2: Nearly 1 in 5 Head Start Enrollees have not been to a Dentist in the Past Year



Screening indicators include decay, filled teeth, history of decay and referral need. Sixteen percent of Head Start enrolled survey participants had untreated decay, with an average of 2.9 teeth decayed per child with decay. Only 17% of children had filled teeth, with an average of 4.9 filled teeth per child with filled teeth, a history of decay (decay and/or fillings) was present in 30% of participants, and 7% had an immediate referral need, 14% within 3 months, 78% within 6 months, and 0.3% within 12 months (refer to Table 1; refer to Appendix E, Table 4).

Table 1: Screening Indicators

Decay	Filled	History of Decay	Referral Need
15.5%	17.3%	30.2%	7.4% Immediate 14.0% Within 3 Months 78.2% Within 6 Months 0.3% Within 12 Months

Decay

Disparities exist across race and ethnicity and age of Head Start enrolled survey participants. White children had the lowest decay rate (13%) compared to 17% of children of Hispanic ethnicity, 27% of

children of black race, 21% of children multiple races, and 14% of those of other race (refer to Figure 4). As would be expected, decay rates increase with the age of a child, with decay present in 9% of 3-year-olds, 17% of 4-year-olds, and 18% of 5-year-olds. These relationships are statistically significant (refer to Appendix E, Table 8).

Filled

Disparities exist across race and ethnicity and age of Head Start survey participants. Black children had the lowest filled rate (11%) compared to 16% of white children, 22% of Hispanic children, and 17% of children of multiple races (refer to Figure 4). Rate of filled teeth among children of a race other than those listed is unable to be reported due to instability. Filled rates increase with the age of a child, with filled teeth present in 9% of 3-year-olds, 17% of 4-year-olds, and 24% of 5-year-olds. These relationships are statistically significant (refer to Appendix E, Table 8).

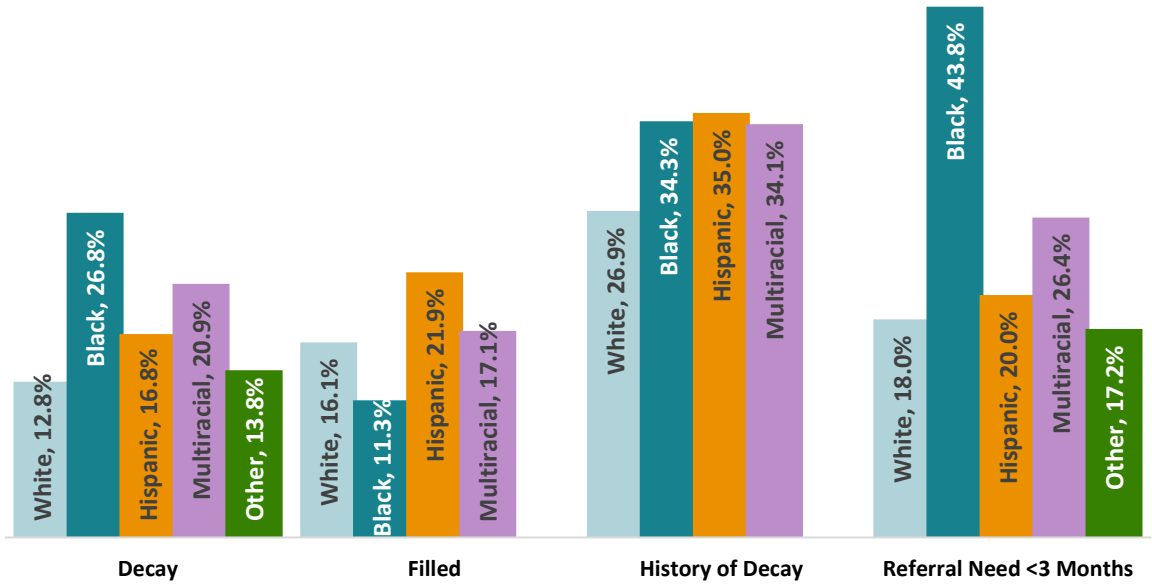
History of Decay

Disparities exist across age among Head Start survey participants. Rates for history of decay increased with age, with 18% of 3-year-olds having a history of decay, 30% of 4-year-olds, and 39% of 5-year-olds (refer to Appendix D, Table 8). While little difference among race and ethnicity, white children have the lowest rate among racial and ethnic groups (27%), followed by children of multiple races (34%), black children (34%), and Hispanic children (35%). The rate of history of decay among children of a race other than those listed is unable to be reported due to instability (refer to Figure 3). These relationships are statistically significant.

Referral Need

The referral need of the child is based upon multiple factors, including oral health status, oral health access, behaviors, and social determinants of health. Of children enrolled in Head Start, 21% of Head Start survey participants had a referral need of within 3 months or sooner, and 79% had a referral need of within 6 months or later. Disparities exist across race and ethnicity, gender, and geographical classification. Black children experienced the highest rate with 44% needing a referral within 3 months or sooner, compared to just 18% of white children. Additionally, 26% of children of multiple races, 20% of Hispanic children, and 17% of children of another race had a referral need of within 3 months or sooner (refer to Figure 4). Male Head Start enrollees are more likely to have a referral need of within 3 months or sooner (24%) compared to females (19%). Finally, Head Start survey participants going to school in metropolitan counties are most likely to have a referral need of within 3 months or sooner (29%) than their micropolitan (18%) and rural (17%) counterparts. These relationships are statistically significant (refer to Appendix E, Table 8).

Figure 3: Black Children Referred to the Dentist in 3 Months or Sooner at Twice the Rate of Whites

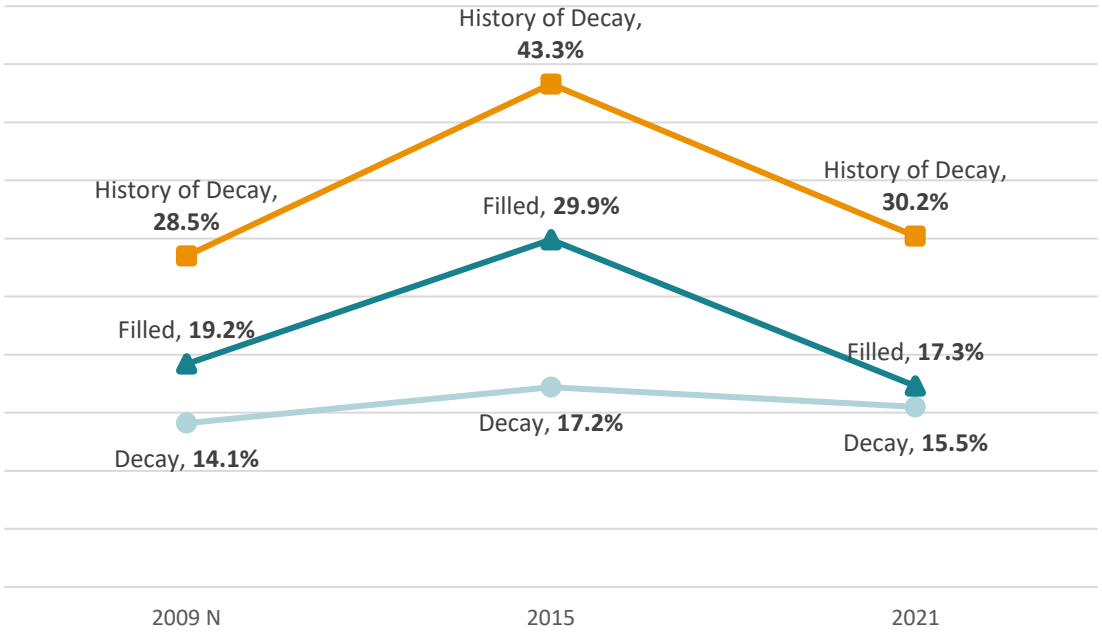


Trend Comparison

Though disparities exist within the indicators, each overall rate has improved since 2015. The 2009 survey included children younger than 3 years of age, influencing the indicators to be lower than may have been otherwise.

- In 2015, 90% of Head Start survey participants had a dental visit in the past year, declining to 83% of Head Start survey participants in 2021.[6]
- Decay rates remain steady, with 16% of Head Start survey participants ages 3-5 having decay in 2021, 17% in 2015, and 14% of Head Start survey participants 5 and younger in 2009[N].[6,7]
- The prevalence of having filled teeth has decreased, where 30% of Head Start survey participants were found to have filled teeth in 2015 compared to 17% in 2021, a 42% decrease.[6] This is considered an improvement, assuming less need for restorations due to decay. Although it may also indicate a reduced availability to restorative care.
- Finally, the prevalence of having a history of decay has improved from 43% among Head Start survey participants in 2015 to 30% in 2021. (refer to Figure 4; refer to Appendix D, Table 10).[6]

Figure 4: Oral Health Status Improved Among Head Start Enrollees Ages 3-5 Since 2015



[N] The 2009 Head Start survey included children ages 5 and younger rather than ages 3-5, likely causing rates to be artificially lower than more recent years.

Discussion

While multiple oral health status indicators for Head Start survey participants improved since 2015, significant disparities exist among race and ethnicity, geographical classification and age. Additionally, more must be done to help get children to a dentist, as rates worsened since 2015.

The statewide infrastructure of the I-Smile™ program, which began in December 2006, is likely related to improvements in all indicators. In 2021, presence of untreated decay remained steady while the presence of restorations or filled teeth decreased by more than 40% (29.9% to 17.3%) from 2015. Much of this may be due, in part, to the preventive services (e.g., fluoride varnish applications) and oral health education provided to children and parents/guardians through I-Smile™ at Head Start centers, WIC clinics, childcare centers, and schools. The follow-up care coordination provided through I-Smile™ also helps families make dental appointments and access regular and restorative care.

Although the overall rate of decay is steady, the average number of teeth with decay – 2.9 – is higher than anticipated. In addition, there are noted disparities across race and ethnicity, with decay present among just 13% of white children, compared to 27% of black children. Similarly, black children were more than twice as likely as white children to need a referral need within 3 months or sooner based on their oral health status, access, behaviors, and other social determinants of health (44% and 18%, respectively). I-Smile™ will continue its work with the Head Start program to research “best practice” strategies in other states that may help not only reduce decay, but also reach more non-white children with early preventive care and education to reduce incidence of dental decay and a need for restorative care.

I-Smile™ serves all areas of Iowa, understanding that barriers to dental care exist across both rural and urban counties. While there are negligible differences across oral health outcomes in Head Start survey participants ages 3-5 years, such as decay and filled teeth, children served at Head Start centers in rural areas (79%) and micropolitan areas (78%) are less likely to have had dental visit in the past year than those in metropolitan areas (91%), potentially leading to poorer oral health outcomes.

The rate of Head Start survey participants receiving a dental visit in the past 12 months has declined from 90% in 2015 to 83% in 2021. With 85% of Head Start survey participants on Medicaid, this decline is likely due to fewer dentists seeing Medicaid-enrolled patients. In 2020, 145 fewer dentists billed Medicaid for services provided to children than in 2015 (950 and 1,095 dentists respectively).[10] As of June 2021, 41 of Iowa's 99 counties do not have a dentist taking new Medicaid patients.[11] While a primary element of the I-Smile™ program plan is to provide preventive services to fill dental care access gaps, the gap may continue to expand as dental service providers for children with Medicaid dental insurance decline.

IDPH will increase focus on screener consistency in future surveys. Although a webinar calibration training and subsequent quiz was required for all nurses and dental hygienists prior to screening children at Head Starts, IDPH will consider different approaches to assure more uniformity for future surveys. For example, reported demineralization rates varied with 100% in one service area to 4% in a comparable service area, and as a result, demineralization rates were not included in final survey results.

Based on this survey evaluation, providing preventive dental services through I-Smile™ at Head Start centers is deemed successful in improving oral health outcomes of Head Start survey participants. Continuing the I-Smile™ and Head Start partnership is important to maintain and improve the health of at-risk Iowa children, and thus support the overall health of Iowans by strengthening opportunities for oral health access.

Bibliography

[1]The Office of Head Start: An Office of the Administration for Children & Families. *Head Start Services.* 3 Nov 2020. https://www.acf.hhs.gov/ohs/about/head-start

[2]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.

[3]The California Society of Pediatric Dentistry & The California Dental Association. *The Consequences of Untreated Dental Disease in Children: Looking Closer at California's Children.* December 2014.

[4]Jackson, S. L., Vann, W. F., Jr, Kotch, J. B., Pahel, B. T., & Lee, J. Y. (2011). Impact of poor oral health on children's school attendance and performance. American journal of public health, 101(10), 1900–1906. doi:10.2105/AJPH.2010.200915

[5]Iowa Department of Public Health, Bureau of Oral and Health Delivery Systems. *Inside* I-Smile™ *2020.* January 2021.

[6]Iowa Department of Public Health, Oral Health Bureau. *2015 Head Start Oral Health Survey Report.*

[7]Iowa Department of Public Health, Oral Health Bureau. *2009 Head Start Oral Health Survey Report.* June 2009.

[8]Iowa Department of Public Health, Bureau of Oral and Health Delivery Systems. *Iowa 2020-2021 Head Start Grantees Survey*. October 2020.

[9]State Library of Iowa (2020). *Metropolitan, Micropolitan, and Combined Statistical Areas.* Institute of Museum and Library Services: The U.S. Office of Management and Budget. https://www.iowadatacenter.org/aboutdata/statisticalareas

[10]Iowa Department of Human Services, Iowa Medicaid Enterprise. Iowa Medicaid Paid Claims – Request via the Iowa Department of Public Health, Bureau of Oral and Health Delivery Systems. November 2015.

[11]Iowa Department of Public Health, Bureau of Oral and Health Delivery Systems. I-Smile™ *Coordinator Bi-annual Dental Referral Survey.* June 2021.

Appendix A – Consent Form (Parent NOT Present)

Consent and Release of Information

Template Screening and 'Other' Service – Parent NOT Present

Child's Name:	Age:	Date of Birth:
Address:	Cell Phone: Other Phone:	

☐ Male ☐ Female	Race: ☐ White ☐ Black/African American	☐ Asian/Pacific Islander ☐ Native American	☐ Other	Ethnicity: ☐ Not Hispanic/Latino ☐ Hispanic/Latino

Child's Physician:	Child's Dentist:
If applicable, child's Medicaid ID number:	

☐ **YES**, I give permission for my child to receive a dental screening and fluoride varnish application.
If positive will be provided, more detailed medical history questions must be added to evaluate a client's risk for bacterial endocarditis or other conditions.

☐ **NO**, I do not give permission for my child to receive a dental screening and fluoride varnish application.

Please answer the following questions:

1. How do you pay for your child's dental care? (please check one)
   ☐ Self ☐ Medicaid/Title XIX ☐ Hawki ☐ Private dental insurance ☐ Other
2. My child's most recent dental visit was within the past: (please check one)
   ☐ 6 months ☐ 1 year ☐ 3 years ☐ 5 years ☐ has never seen a dentist ☐ Unknown
3. Does your child have medical insurance? ☐ Yes ☐ No
4. My child's most recent medical visit for a well-child/adolescent exam was within the past:
   ☐ 3 months ☐ 6 months ☐ 12 months ☐ more than 1 year ☐ unknown
5. Are your child's immunizations up to date? ☐ Yes ☐ No Explain:
6. Is your child currently taking any medications? ☐ Yes ☐ No Explain:
7. Does your child have any allergies? ☐ Yes ☐ No Explain:
8. List any concerns you have about your child's mouth or teeth:

I consent to insert agency name use of email and texting to send me scheduling and child health services information.
☐ Yes ☐ No Email address:

- I was offered a Notice of Privacy Practices.
- I understand that this consent for services is valid for one (1) year unless withdrawn in writing by parent, guardian or client (if of legal age).
- I understand that the services that will be received do not take the place of regular dental checkups at a dental office.
- I understand that these services are provided under the Iowa Department of Public Health, Maternal and Child & Adolescent Health Program.
- I understand records created and maintained as part of this program are the property of the Iowa Department of Public Health.
- I understand that the information from these records may be shared with the Iowa Department of Public Health and its agents and Title V contractors, Iowa Medicaid Enterprise, or designee for audit and quality improvement purposes or other legally authorized purposes.

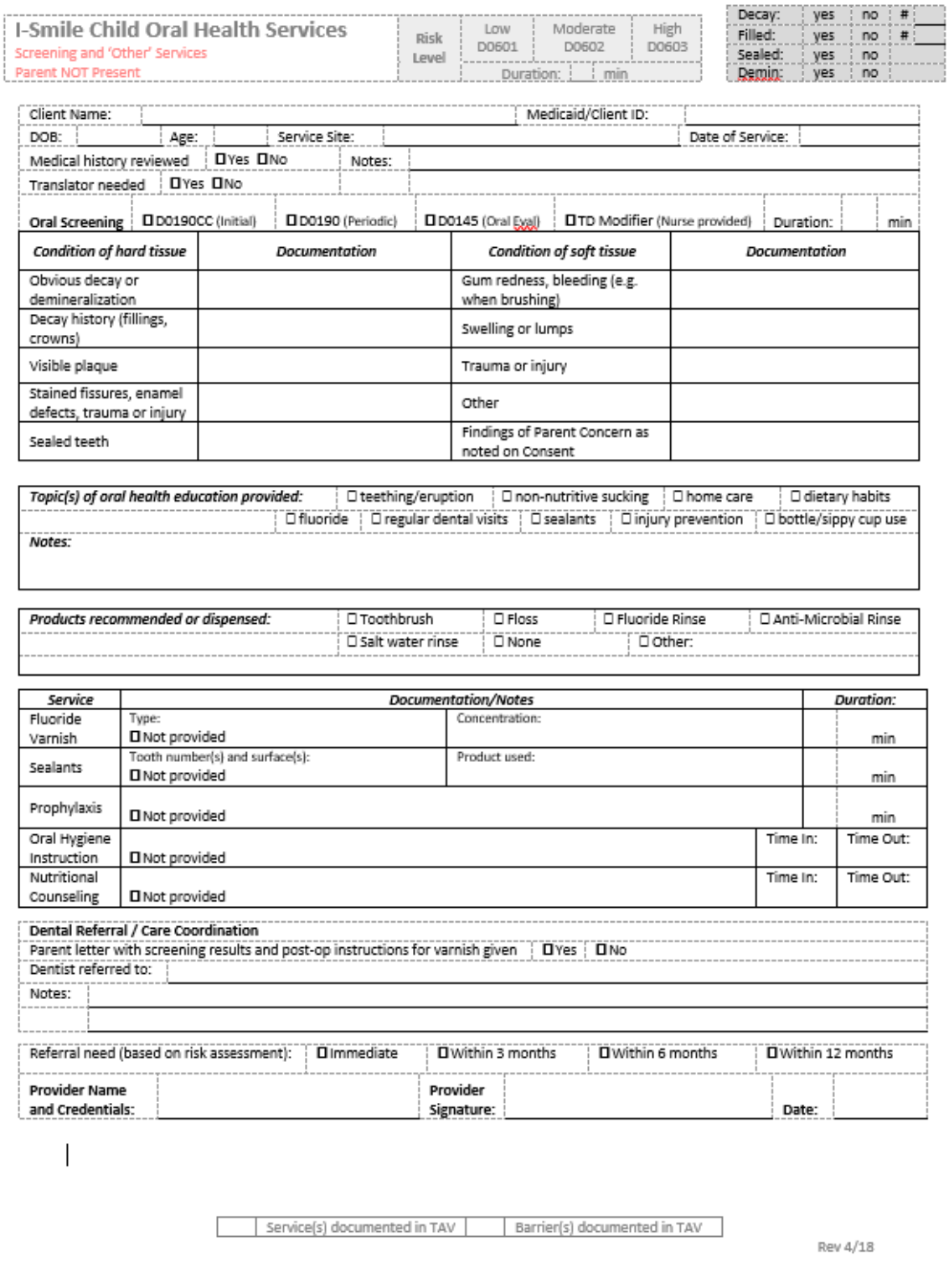
Parent/Guardian Signature Date

I voluntarily authorize Insert your agency name to release, obtain, or exchange information manually and/or via an electronic platform maintained by signifycommunity™ with the following: Title V MCAH agencies, list possibilities here – physicians, dentists, Head Start. This release does not authorize disclosure of material protected by federal and/or state law applicable to substance abuse, mental health and/or AIDS-related information.

Parent/Guardian Signature Date

Rev 5/2020

Appendix B – Screening Form (Parent NOT Present)



I-Smile Child Oral Health Services
Screening and 'Other' Services
Parent NOT Present

Risk Level: Low D0601 | Moderate D0602 | High D0603
Duration: ___ min

Decay: yes no # ___
Filled: yes no # ___
Sealed: yes no
Demin: yes no

Client Name: | Medicaid/Client ID:
DOB: | Age: | Service Site: | Date of Service:
Medical history reviewed ☐Yes ☐No | Notes:
Translator needed ☐Yes ☐No
Oral Screening ☐D0190CC (Initial) ☐D0190 (Periodic) ☐D0145 (Oral Eval) ☐TD Modifier (Nurse provided) Duration: ___ min

Condition of hard tissue	*Documentation*	*Condition of soft tissue*	*Documentation*
Obvious decay or demineralization		Gum redness, bleeding (e.g. when brushing)	
Decay history (fillings, crowns)		Swelling or lumps	
Visible plaque		Trauma or injury	
Stained fissures, enamel defects, trauma or injury		Other	
Sealed teeth		Findings of Parent Concern as noted on Consent	

Topic(s) of oral health education provided: ☐teething/eruption ☐non-nutritive sucking ☐home care ☐dietary habits ☐fluoride ☐regular dental visits ☐sealants ☐injury prevention ☐bottle/sippy cup use
Notes:

Products recommended or dispensed: ☐Toothbrush ☐Floss ☐Fluoride Rinse ☐Anti-Microbial Rinse ☐Salt water rinse ☐None ☐Other:

Service	*Documentation/Notes*		*Duration:*
Fluoride Varnish	Type: ☐Not provided	Concentration:	___ min
Sealants	Tooth number(s) and surface(s): ☐Not provided	Product used:	___ min
Prophylaxis	☐Not provided		___ min
Oral Hygiene Instruction	☐Not provided	Time In:	Time Out:
Nutritional Counseling	☐Not provided	Time In:	Time Out:

Dental Referral / Care Coordination
Parent letter with screening results and post-op instructions for varnish given ☐Yes ☐No
Dentist referred to:
Notes:

Referral need (based on risk assessment): ☐Immediate ☐Within 3 months ☐Within 6 months ☐Within 12 months

Provider Name and Credentials: | **Provider Signature:** | **Date:**

☐ Service(s) documented in TAV ☐ Barrier(s) documented in TAV

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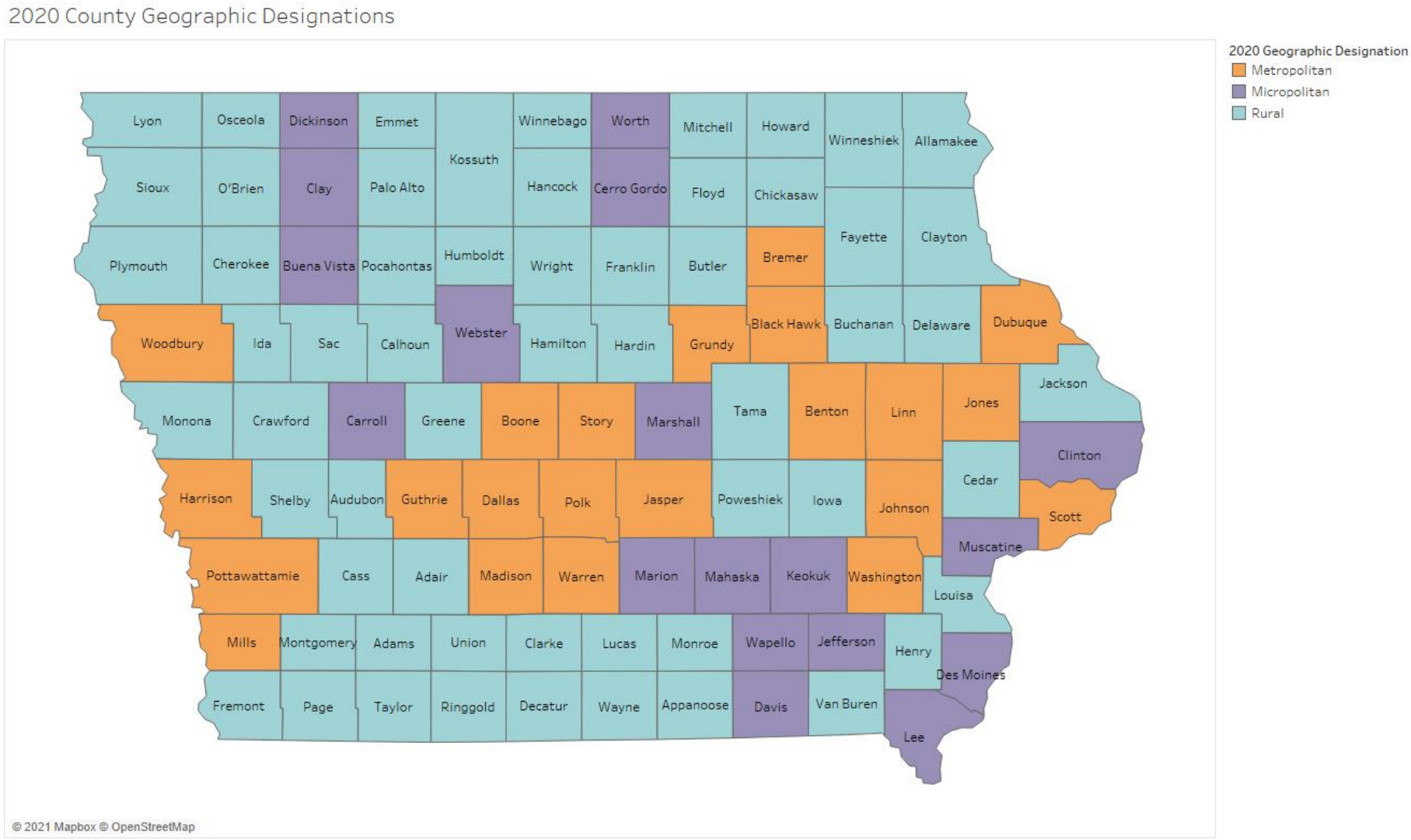
Appendix C – I-Smile™ Decay Risk Assessment

I-SMILE™ DECAY RISK ASSESSMENT FORM

Oral Screening Indicator	Risk Level	Dental Referral	I-Smile™ Follow Up
Abscess, pain, or large decay	High	Immediate	Care coordination Follow up with parent/guardian within 3 months to confirm completion of treatment from a dentist
Untreated decay	High	Within 3 months	
Dark pits/fissures on primary molars	High		
Demineralization (white spot lesions)	Moderate	Within 6 months	Care coordination
Poor oral hygiene	Moderate		
Deep pits/fissures	Moderate		
Restorations	Moderate		
Orthodontia	Moderate		
Dry mouth	Moderate		
Qualify for Medicaid, WIC, or free and reduced lunch	Moderate		
Dental visits – less than annual	Moderate		
Frequent exposure to juice or sugar/carbohydrates	Moderate		
Shallow grooves, fluorosis, and/or no history of decay	Low	Within 12 months	Care coordination, as needed

Assign risk level according to the highest oral screening indicator identified (high→low).

Appendix D – Iowa County Geographic Designations (2020)



Appendix E – Survey Frequencies

Table 2: Demographics

Variable	N	%
Race/Ethnicity		
White	1292	58.3
Black	265	12.0
Hispanic	471	21.3
Multi-racial	129	5.8
Other	58	2.6
Gender		
Male	1226	51.9
Female	1134	48.1
Age		
3 years	524	22.2
4 years	1079	45.7
5 years	757	32.1
Geographical Classification		
Metropolitan	826	35.0
Micropolitan	555	23.5
Rural	979	41.5

Table 3: Consent Indicators

Variable	N	%
Last Dental Visit		
Within 6 Months	1117*	55.5*
Within 1 Year	550*	27.3*
Within 3 Years	66*	3.3*
Within 5 Years	**	**
Never	276*	13.7*
How Do You Pay for Your Child's Dental Care?		
Title XIX/Medicaid	1936	85.3
Hawki	86	3.8
Private	146	6.4
Self	82	3.6
Other	20	0.9

*Interpret with caution (>10% of responses missing)

**Value suppressed due to small size; count of 1-5

Table 4: Screening Indicators

Variable	N	%/Mean
Decay		
Yes	366	15.5
No	1994	84.5
Average Number of Decayed Teeth		2.89
Filled		
Yes	409	17.3
No	1951	82.7
Average Number of Filled Teeth		4.85
History of Decay		
Yes	713	30.2
No	1647	69.8
Referral Need		
Immediate	175	7.4
Within 3 Months	331	14.0
Within 6 Months	1845	78.2
Within 12 Months	8	0.3

Table 5: Decay by Demographics

Variable	N	%	P-Value[T]
Race/Ethnicity			<0.0001
White	166	12.8	
Black	71	26.8	
Hispanic	79	16.8	
Multi-racial	27	20.9	
Other	8	13.8	
Gender			0.0022
Male	217	17.7	
Female	149	13.1	
Age			<0.0001
3 years	49	9.4	
4 years	178	16.5	
5 years	139	18.4	
Geographical Classification			0.2312*
Metropolitan	137	16.6	
Micropolitan	92	16.6	
Rural	137	14.0	

*Interpret with caution (p-value > 0.05)

[T]P-value calculated from a chi-square test

Table 6: Filled Teeth by Demographics

Variable	N	%	P-Value[T]
Race/Ethnicity			<0.0001
White	208	16.1	
Black	30	11.3	
Hispanic	103	21.9	
Multi-racial	22	17.1	
Other	25*	43.1*	
Gender			0.4774*
Male	219	17.9	
Female	190	16.8	
Age			<0.0001
3 years	46	8.8	
4 years	178	16.5	
5 years	185	24.4	
Geographical Classification			0.0689*
Metropolitan	127	15.4	
Micropolitan	112	20.2	
Rural	170	17.4	

*Interpret with caution (p-value > 0.05)

[T]P-value calculated from a chi-square test

Table 7: History of Decay by Demographics

Variable	N	%	P-Value[T]
Race/Ethnicity			<0.0001
White	348	26.9	
Black	91	34.3	
Hispanic	165	35.0	
Multi-racial	44	34.1	
Other	30	51.7	
Gender			0.0216
Male	396	32.3	
Female	317	28.0	
Age			<0.0001
3 years	92	17.6	
4 years	326	30.2	
5 years	295	39.0	
Geographical Classification			0.0345
Metropolitan	235	28.5	
Micropolitan	192	34.6	
Rural	286	29.2	

*Interpret with caution (p-value > 0.05)

[T]P-value calculated from a chi-square test

Table 8: Referral Need Immediate or Within 3 Months by Demographics

Variable	N	%	P-Value[T]
Race/Ethnicity			<0.0001
White	233	18.0	
Black	116	43.8	
Hispanic	94	20.0	
Multi-racial	34	26.4	
Other	10	17.2	
Gender			0.0024
Male	293	23.9	
Female	213	18.8	
Age			0.0891*
3 years	95	18.1	
4 years	236	21.9	
5 years	175	23.1	
Geographical Classification			<0.0001
Metropolitan	240	29.1	
Micropolitan	99	17.8	
Rural	167	17.1	

*Interpret with caution (p-value > 0.05)

[T]P-value calculated from a chi-square test