Addressing Oral Health in Head Start:

Insights from the Head Start Health Manager Descriptive Study

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INTRODUCTION

Tooth decay, sometimes referred to as dental caries or cavities, is one of the most common chronic conditions in the United States, affecting adults and children alike. In 2011–2012, approximately 23 percent of children age two to age five experienced tooth decay and 10 percent had untreated tooth decay, meaning that they had not received appropriate treatment (Dye, Thornton-Evans, Li, and Iafolla, 2015). The national prevalence of tooth decay among young children has declined over the past decade, down from 28 percent with tooth decay and over 20 percent having untreated decay between 1999- 2004 (National Institute of Dental and Craniofacial Research, 2014). Tooth decay can be painful, and if severe, can lead to infection and problems in eating and speaking and can affect a child's growth and quality of life (Sheiham, 2006).

Low-income children are at particularly high risk for tooth decay (Edelstein and Chinn, 2009). In 2004, more than half of children in families living below the federal poverty level experienced tooth decay compared with a third of children in families with incomes at 200 percent of the federal poverty level or above (Edelstein and Chinn, 2009). Children from poor families are also less likely to have had a dental visit and less likely to have treated tooth decay (Edelstein and Chinn, 2009). In serving primarily children in families with income below the federal poverty line, children with tooth decay present a significant health concern among Head Start (HS) and Early Head Start (EHS) programs.

Head Start Health Manager Descriptive Study

From Head Start's origins, a central objective has been a "healthy start," stemming from the recognition that early health provides a critical foundation for school readiness and later school success. Indeed, the health services area is a major aspect of the comprehensive services provided by HS/EHS programs. In order to better understand this important component of Head Start, the Office of Planning, Research, and Evaluation within the Administration for Children and Families, U.S. Department of Health and Human Services, sponsored the 2012–2013 Head Start Health Manager Descriptive Study (HSHMDS) (Karoly, Martin, Chandra, and Setodji, 2016). The overall purpose of the study was to provide a current snapshot of health-related activities and programming within HS/EHS programs, to better understand the context in which the health service area operates and to identify the current needs of health managers and health staff as they work toward improving the health of HS/EHS children, families, and staff. The study also intended to provide information about services currently provided and the challenges that HS/EHS programs face. As a descriptive study, the HSHMDS was not designed to ascertain whether HS/EHS programs are meeting requirements set forth in the health-related Head Start performance standards.

The study designed and fielded a short online survey for HS/EHS program directors and a more in-depth online survey of the HS/EHS health mangers for whom directors provided a referral. All directors of HS/EHS programs in operation during the 2012–2013 program year were invited to complete a survey, including American Indian and Alaska Native (AIAN) and Migrant and Seasonal Head Start (MSHS) programs. In addition, the study team conducted semistructured interviews with a small number of health managers who completed the online survey and a small number of teachers, family service workers, and home visitors. A total of 1,465 health managers participated in the online survey, while 90 health managers and other staff took part in follow-up interviews. (See Appendix A for additional details on the survey methods and the characteristics of the responding health managers.)

As reported by health managers in the Head Start Health Manager Descriptive Study (HSHMDS) (see textbox for more information), one of the major health issues confronting HS/EHS programs is tooth decay. Thus, in this brief, our primary objective is to draw on the quantitative and qualitative data collected for the HSHMDS to obtain insights into the ways in which HS/EHS programs are addressing the issues of tooth decay for the children and families they serve.[1] In particular, we focus on the following questions:

- What is the perceived burden of tooth decay on HS/EHS programs?
- What health programming (e.g., services, activities, education) and policies are currently in place to address tooth decay?
- What staffing models are used to address need? How is staff training addressing tooth decay?
- How are programs leveraging other partners, community resources and the Health Services Advisory Committee (HSAC) to address tooth decay?

PERCEIVED BURDEN OF TOOTH DECAY

Although the prevalence of specific health conditions was not assessed as part of the HSHMDS, health managers were asked to report on the major health concerns facing children and families in their programs. Health managers also reported on the average amount of time per week that they spend managing specific health conditions. Specific questions included the following:

- What do you see as the health concerns facing the children and families served by your HS/EHS program?
- About how much time per week do you and your staff spend managing these health issues and related complications?[2]

Results indicate that tooth decay among children was a major concern for health managers in over 84 percent of all programs (Table 1). Although there was some variability by program type, tooth decay was the second most prevalent health concern reported by health managers in HS and EHS programs, just behind overweight and obesity. It is important to note that these figures do not represent the proportion of children who have tooth decay; rather, the table reports the proportion of programs where tooth decay is considered to be a significant health concern, as assessed by the health manager.

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[1] Comprehensive findings from the HSHMDS are available in Karoly et al. (2016). Other topical briefs based on the HSHMDS focus on overweight and obesity (Martin and Karoly, 2016); mental health, behavioral health, and social and emotional well-being (Karoly and Martin, 2016); and parent engagement in the delivery of the HS/EHS health services component (Auger, Karoly, and Martin, 2016).

[2] The first of these questions was a core survey question, asked of all responding health managers, whereas the second was asked in a supplement administered to about one-fourth of health manager respondents. Responses are weighted to be representative of HS/EHS programs (i.e., grantees and delegate agencies).

Table 1. Reported Health Concerns in HS/EHS Programs by Health Managers: By Program Type

Measure	All Programs	HS Programs Only	EHS Programs Only
Tooth decay or cavities reported as a health issue of major concern for children in the program (%)	84.3	85.7	81.6
Number of health manager respondents (core)	1,465	1,264	795
Number of programs represented (core)	1,902	1,176	726

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs.

For the remainder of the analyses in this brief, programs are classified into two groups: those where health managers felt that tooth decay was a major health concern among children in their program and programs where health managers felt tooth decay was not a major health concern for children.

The average amount of time health managers reported that staff spend per week managing tooth decay in the program is presented in Table 2. Of programs for which tooth decay is considered a significant health concern, health managers in about 66 percent of programs reported that they (the health manager and staff) spend at least half a day a week on these issues (32 percent reported spending between half a day and a full day, and an additional 34 percent reported spending more than a day a week). This is significantly more than programs where tooth decay is not a major health concern.

Table 2. Time HS/EHS Staff Spend per Week Managing Tooth Decay

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Time staff spend per week managing tooth decay (% distribution)*			
More than a day a week	29.7	34.3	7.6
Between a half day and a full day	29.5	31.9	18.7
Less than half a day per week	30.7	26.4	50.8
None, not an issue in the program	4.1	1.9	14.1
Don't know	6.0	10.4	8.8
Number of health manager respondents (supplement)	376	287	61
Number of programs represented (supplement)	483	386	81

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variable.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentage distributions are computed for nonmissing cases might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Whether a health manager reports tooth decay as a major health concern may depend on a number of factors including community characteristics that may influence tooth decay. Table 3 provides information on program and community characteristics in relation to whether or not health managers reported that tooth decay was a concern. Programs where the health manager

considered tooth decay a major concern were more likely to have a higher proportion of children who were white and a lower proportion of children who were black and biracial compared with programs where tooth decay was not considered a major concern. Health managers of larger programs were more likely to report tooth decay as a health concern, compared with smaller programs. The health-related education background of the health manager was not significantly associated with whether she or he reported tooth decay as a major concern. Programs where tooth decay was considered a major concern were more likely to be in mixed (i.e., serving urban and rural areas) or urban settings compared with those where tooth decay was not a concern.

Table 3. HS/EHS Program and Community Characteristics

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Program characteristics (from PIR)			
Race of children in program (% distribution)*			
AIAN	8.1	8.7	3.0
Black	21.5	19.3	33.3
White	45.5	47.5	37.0
Biracial	9.8	9.4	12.6
Other	10.4	10.6	8.3
Unspecified	4.7	4.5	5.8
Program size (% distribution)			
Small (1 to 150 slots)	31.3	30.3	34.1
Medium (151 to 349 slots)	34.0	33.7	37.2
Large (350 slots or more)	34.7	35.9	28.7
Dental access			
Children with dental access at enrollment (%)	75.2	75.0	77.4
Children with dental access at end of enrollment (%)	87.1	87.0	88.9
Health manager health-related education (% distribution)			
No health-related education background	14.2	13.9	15.6
Health-related associate degree or credentials	27.3	27.7	25.3
Health-related bachelor's degree or credentials	58.5	58.5	59.1
Community characteristics[a]			
Rural-urban status (% distribution)*			
Rural	10.2	10.1	8.6
Mixed	35.6	37.0	27.7
Urban	54.3	52.9	63.7
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variables and a t-test for the equality of means for the continuous variables.

[a] For each HS or EHS program (i.e., grantee or delegate agency), county or census tract characteristics were first matched based to the program's centers and then averaged across all centers in the program to obtain the average characteristics for the program. A total of 17 programs could not be matched to county-level data (11 HS programs, 6 EHS programs, and 1 each in Region XI and Region XII).

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey and geocoded data, and 2012–2013 Head Start PIR data.

NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Health Programming and Services to Address Oral Health

Health-Related Performance Standards, Screening, and Policies

The 1998 Head Start Program Performance Standards (45 CFR 1301-1311) detailed more than 100 requirements with respect to the health services area (Office of Head Start, 2014). [3,4] For example, HS/EHS grantee and delegate agencies are required to provide "medical, dental, nutrition, and mental health education programs for program staff, parents, and families" (Office of Head Start, 2014, standard 1304.40(f)) and "promote effective dental hygiene among children in conjunction with meals" (Office of Head Start, 2014, standard 1304.23(b)). Programs are also required to obtain or collect information on whether a child is up-to-date on a schedule of age appropriate preventive and primary health care, which includes oral health (Office of Head Start, 2014, standard 1304.20(a)).

While all programs had to, at a minimum, collect this information, programs are not required to conduct oral health screenings. As a result, programs varied substantially with respect to whether they provided free oral health screenings for children and whether those services were offered on- or off-site (e.g., at a health fair). Differences in offering oral health screening were not significant between programs where tooth decay was and was not a concern (Table 4). Health managers also reported on the types of medical care services provided on-site by health care providers. Two specific services related to tooth decay were oral health prevention and oral health treatment. Both of these services were significantly more likely to be offered by health providers in HS/EHS programs where tooth decay was considered a major health concern.

Curricula and Resources Used for Oral Health

To delve more into the specific prevention and health promotion curricula in use, health managers were asked, in an open-ended item, to list the health curricula (defined by the respondent) currently being used in their programs. Out of more than 1,000 entries, we identified 22 entries that were mentioned by at least ten health managers. Upon closer inspection, we determined that a number of the entries would not meet the definition of a curriculum, in terms of having lesson plans with sequenced learning objectives, stated outcomes desired for participants, training materials for educators, and (ideally) research-based evidence of effectiveness.

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[3] This research and brief are based on the 1998 Head Start Program Performance Standards (Office of Head Start, 2014). The 2016 Head Start Performance Standards are not referenced or included. Please refer to Office of Head Start (2016) for current regulation.

[4] One source (Office of Planning, Research, and Evaluation, 2012) cites 179 performance standards related to health, nutrition, mental health, and safety. Depending on which standards are considered applicable and how standards are counted, the number could be smaller or larger.

Table 4. Provision of Oral Health Screening and Care to Children in the HS/EHS Program

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Provision of oral health screening by HS/EHS program (% distribution)			
Does not provide	20.4	20.1	22.5
Provide on-site	46.5	46.1	48.3
Provide off-site	12.4	11.8	15.8
Provide both on-site and off-site	20.4	21.8	13.4
Don't know	0.2	0.2	0.0
Number of health manager respondents (supplement)	359	290	57
Number of programs represented (supplement)	470	394	74
Types of medical care provided on-site (%)			
Oral health prevention*	60.1	62.6	46.1
Oral health treatment*	35.1	36.8	25.4
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variable and a t-test for the equality of means for the continuous variables.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Table 5 presents the two entries relevant for addressing tooth decay; both were classified as health-related curricula.[5] About 41 percent of programs used at least one curricula. Bright Smiles is used by about one-third of programs and Cavity Free Kids is used by 13 percent of programs overall. No other curricula or resources were cited by more than ten health managers, suggesting that the majority of programs and teachers are using their own materials to teach proper toothbrushing and oral hygiene, which have been developed internally or perhaps obtained by local health departments, pediatricians, or dental providers.

Addressing Oral Health with Families

In addition to addressing tooth decay among children in the program setting, many HS/EHS programs provided related services to families. A series of questions in the Health Manager Survey centered on better understanding these activities. Specific questions included the following:

[5] Two curricula are used most often: (1) Bright Smiles, Bright Futures, published by Colgate and referenced on the Head Start website; (2) Cavity Free Kids, published by the Washington Dental Service Foundation and also referenced on the Head Start website.

Table 5. Oral Health Curricula Used by HS/EHS Programs

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Number of oral health curricula used (% distribution)*			
0	56.0	54.0	68.7
1	41.0	42.7	30.4
2	2.9	3.3	0.9
Health curricula used (%)			
Bright Smiles	33.7	35.0	25.7
Cavity Free Kids	13.2	14.3	6.5
Number of health manager respondents (supplement)	357	276	55
Number of programs (supplement)	465	382	68

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variable and a t-test for the equality of means for the continuous variables.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

- For the following list of health topics and health promotion activities, please say whether you are addressing the topic with families in your HS/EHS program. Oral hygiene was included as a response option.
- What health service or health programs do you conduct in the home? The response options included a list of potential services, one of which was to teach children about healthy behaviors. Another was to teach parents/families about supporting healthy behaviors. Although these questions asked about healthy behaviors in general, examples included proper toothbrushing.

Results indicate that health managers and programs are supporting families in a number of ways (Table 6). According to health manager responses, programs are almost universally addressing with families the topic of oral hygiene, regardless of whether they view tooth decay as a major health concern. Semi-structured interviews with health managers, teachers, and family service workers suggest that this is happening in a variety of ways, including sending home information on proper toothbrushing, the importance of limiting fruit juice and sugary drinks, and the need to ensure that babies do not sleep with a bottle.

Of those programs that offer health-related services in the home, such as through home visits, (about 42 percent of HS/EHS programs overall, see Karoly et al., 2016), between 75 percent and 90 percent of programs taught children and families about healthy behaviors. Through our interviews with program staff, home visitors commonly reported working with families to teach proper toothbrushing. All of these services are more common for programs that view tooth decay as a major health concern.

Table 6. Oral Health Services Provided to Families by HS/EHS Programs

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Health topics program is addressing with families in the program (%)			
Oral hygiene*	95.7	96.5	90.9
Number of health manager respondents (supplement)	357	276	55
Number of programs represented (supplement)	465	382	68
Among programs offering services in the home, which services are conducted in the home (%)[a]			
Teach children about healthy behaviors (e.g., proper toothbrushing)*	76.1	77.3	68.6
Teach parents and families about supporting healthy behaviors*	88.7	91.0	74.2
Number of health manager respondents (core)	600	511	88
Number of programs represented (core)	880	763	116

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a t-test for the equality of means for the continuous variables.
[a] This question was only asked of health managers who reported that home based services were offered in their programs.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Oral Health Services for Pregnant Women

Head Start and Early Head Start programs also offer services to pregnant women. About 94 percent of programs report providing dental referrals for pregnant women (Table 7).

Table 7. Oral Health Services Provided to Pregnant Women by HS/EHS Programs

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Referral to the dentist (% distribution)			
Yes	94.1	94.0	94.6
No	3.2	3.3	2.8
Don't know	2.7	2.7	2.6
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287
Partnership agreements to provide oral health services to pregnant women (%)	53.8	51.8	61.7
Number of health manager respondents (supplement)	357	276	55
Number of programs represented (supplement)	465	382	68

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Additionally, about half of programs (54 percent) have agreements with community partners to provide oral health services to pregnant women. Differences were not statistically significant between programs where tooth decay was and was not considered a major health concern.

Addressing Oral Health with Staff

Although the focus of this brief is on understanding the range of approaches programs employ to address tooth decay among the children and families they serve, the HSHMS also asked about wellness programs and activities offered to staff. About 12 percent of programs offered oral health screening to staff in the past year. Unlike programs and services geared toward children and families, the availability of these supports for staff did not differ significantly by whether or not the health manager felt tooth decay was a major concern among children in the program (Table 8).

Table 8. Oral Health Wellness Activities Provided to Staff by HS/EHS Programs

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Wellness activities offered to staff in the past year (%)			
Oral health screenings	12.1	12.9	7.9
Number of health manager respondents (supplement)	376	287	61
Number of programs represented (supplement)	483	386	81

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

TRAINING AND STAFFING MODELS TO ADDRESS ORAL HEALTH

Training for Health Managers and Other Staff

Health managers were asked in the survey to report on training they received in the last three years for an array of topics pertaining to physical and oral health (13 topics), behavioral health and developmental delay (9 topics), and prevention and wellness (17 topics). A similar question asked about training offered to staff in the program in the past three years. Results are shown in Table 9 for those topics most relevant for tooth decay.

In general, health managers were more likely to obtain training on relevant topics including tooth decay and oral hygiene when they reported tooth decay as a health concern facing the children in the programs (Table 9). While training was also received on "other dental health problems" (e.g., supporting oral health for children with special needs), such training was less common overall. The same pattern holds for training offered to HS/EHS staff. Given that in most programs health managers have oversight over the types of health-related trainings offered to

staff, it is not surprising that more staff from programs where tooth decay is a concern, have had access to tooth decay and oral hygiene training.

Table 9. Oral Health Training for HS/EHS Health Managers and Staff in the Past Three Years

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Training received by the health manager in the past three years (%)			
Tooth decay or cavities*	73.7	76.1	65.1
Oral hygiene*	79.9	81.1	74.7
Other dental health problem*	20.6	21.7	16.7
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287
Training provided for other staff in the past three years (%)			
Tooth decay or cavities*	62.5	67.7	35.9
Oral hygiene*	72.9	77.3	50.3
Other dental health problem	12.2	11.4	16.2
Number of health manager respondents (supplement)	373	291	51
Number of programs represented (supplement)	486	398	64

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a t-test for the equality of means for the continuous variables.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Role of Specialists

With the wide range of expertise required for the tasks associated with the health services area, a supplemental question in the Health Manager Survey inquired about the use of 16 specific types of specialists. Table 10 reports the percentage of HS/EHS programs that rely on specific specialist categories that may be most relevant to tooth decay. Among the specialists listed in Table 10, both dentists and dental hygienists are engaged almost universally, with about a quarter to a third of programs paying for their services as staff or consultants. Differences were not statistically significant.

Table 10. HS/EHS Program Works with Oral Health Specialists

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Dentists (%, more than one may apply)			
Paid staff/consultant	32.0	32.7	36.0
Volunteer staff/consultant	63.7	63.5	59.7
Dental hygienists (%, more than one may apply)			
Paid staff/consultant	26.2	26.9	28.3
Volunteer staff/consultant	59.8	59.2	59.4
Number of health manager respondents (supplement)	373	291	51
Number of programs represented (supplement)	486	398	64

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

USING THE HEALTH SERVICES ADVISORY COMMITTEE AND COMMUNITY PARTNERS TO ADDRESS ORAL HEALTH

Health Services Advisory Committee

The HSAC is one of several key stakeholders in the Head Start health services area and plays several critical roles, including advising the health manager, providing technical expertise, and serving as a linkage to community partners. Although each program is required by the performance standards to have an HSAC, there is a lot of variation in how HSACs are structured and operate across HS/EHS programs. Health managers were asked to indicate which types of professionals were members on their HSAC. Representatives relevant for helping programs to address tooth decay are included in Table 11. While the majority of programs had representatives from these sectors, those programs for which tooth decay was a major health concern were significantly more likely to have oral health care providers as part of their HSAC.

Table 11. Health Services Advisory Committee Membership

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Groups or agencies represented on HSAC (%)			
Oral health care providers*	82.8	84.1	75.2
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a t-test for the equality of means for the continuous variables.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

Partnerships to Address Oral Health

Health managers were asked a series of questions about partnerships they have with organizations in the community to support oral health. Specific questions included:

- What agencies or organizations do you normally work with to address or support the oral health needs of the children and families in the program?
- Which health needs are not being met (or met well) by agencies and organizations your program works with?
- What health-related community partners are you not working with now but would like to have a relationship with?

Each of these questions was asked in the context of oral health, but a parallel series was asked with respect to physical health and behavioral health. The vast majority of programs reported usually working with dentists and dental hygienists in some capacity (Table 12). Programs where tooth decay is not considered a major health concern were more likely to have more formalized partnerships with dentists and dental hygienists. Despite having a range of partnerships, health managers reported that in about 30 percent of programs, services for tooth decay are not being met by their current community partners (Table 13). This suggests that other partners that may provide relevant information and services may be warranted.

CONCLUSION

For four of five HS/EHS programs, health managers view tooth decay as a major health concern for the children and families they serve. To help address this health concern, HS/EHS programs have provided education and services in the classroom and at home, and partnered with a range of professionals, providers, and community organizations that provide on-site or off-site services, serve on the HSAC, and support the programs more broadly. Although those programs for which health managers reported tooth decay as a major health concern were significantly more likely to engage in these programs and services in the classroom and home, they had significantly fewer community partners compared with programs where tooth decay was not a major health concern. Programs where tooth decay was a major health concern were also more likely to report the lack of community partners for oral health as a gap in their ability to fully meet the needs of the children and families they serve. More work is needed to understand what factors are driving tooth decay as a significant oral health concern and effective means for addressing it (e.g., stronger partnership, provider availability).

Table 12. Structure of Relationship with Specific Service Providers During the Past 12 Months for the Provision of Oral Health Services

Provider type	All Programs			Programs Where Tooth Decay is a Concern			Programs Where Tooth Decay is Not a Concern		
	No relationship	Some relationship	Formal Partnership/ MOU	No relationship	Some relationship	Formal Partnership/ MOU	No relationship	Some relationship	Formal Partnership/ MOU
Dentists (% distribution)									
In private practice*	13.6	42.2	44.1	13.6	44.8	41.6	13.8	28.5	57.6
From local/state health departments	32.4	36.5	31.1	32.9	37.1	30.0	29.8	34.2	36.0
In FQHCs	49.7	28.2	22.1	48.7	29.2	22.1	55.4	22.4	22.3
Dental hygienists									
In private practice*	37.4	32.7	29.9	36.9	35.3	27.8	40.0	18.2	41.9
From local/state health departments*	40.1	27.7	32.3	37.6	31.3	31.1	53.0	8.2	38.8
In FQHCs*	56.6	27.0	16.4	54.7	29.2	16.1	69.2	12.5	18.3
Portable/mobile dental practices	33.9	30.1	36.1	34.6	30.3	35.1	29.5	28.3	42.2
Dental schools*	53.6	29.4	16.9	51.1	31.6	17.3	69.9	15.3	14.8
Dental hygiene schools or programs*	56.4	28.4	15.2	54.7	30.7	14.6	68.4	12.4	19.2
Number of health manager respondents (supplement)		357			276			55	
Number of programs represented (supplement)		465			382			68	

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variables.

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.

NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentage distributions are computed excluding cases that are missing or not applicable and might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents. FQHC = federally qualified health center.

Table 13. Partnerships Meeting the Oral Health Needs of HS/EHS Programs

Measure	All Programs	Programs Where Tooth Decay Is a Concern	Programs Where Tooth Decay Is Not a Concern
Ability of partnerships to handle oral health needs (% distribution)*			
Not adequate	4.2	4.6	1.8
Somewhat adequate	19.4	21.0	11.3
Adequate	38.2	38.2	37.8
Very adequate	37.3	35.5	47.1
Not applicable	1.0	0.8	2.0
Health needs not met (or met well) by agencies or organizations the program works with (%)			
Oral health care*	29.3	30.8	20.8
Partners programs would like to have a relationship with, but do not currently (%)			
Safety net dental clinics	17.3	17.8	14.2
Number of health manager respondents (core)	1,465	1,144	224
Number of programs represented (core)	1,902	1,558	287

*Differences between programs where oral health is a concern and is not a concern are statistically significant at $p<0.05$ based on a chi-square test of the equality of the distribution of responses for the categorical variables and a t-test for the equality of means for the continuous variables.
SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs. In a limited number of cases, respondents did not report whether tooth decay was a concern. As a result, the number of respondents for the two subgroups (columns two and three) will not sum to the total number of respondents.

APPENDIX A. HEAD START HEALTH MANAGER DESCRIPTIVE STUDY

As described more fully in Karoly et al. (2016), the HSHMDS was guided by an organizational framework that was shaped by an understanding of the key stakeholders involved in planning for, implementing, and participating in the Head Start health services area, as well as how those stakeholders work together to inform and implement components of the health services area, including health management of children (e.g., administering medication), screening (e.g., vision and hearing), referrals for health services (e.g., referrals to specialists or behavioral health services), prevention and health-promotion activities (e.g., hygiene, safety), staff wellness (e.g., weight management, smoking), and facilitation of community linkages (e.g., with providers). The organizational framework was used in the development of the instruments for primary data collection.

Director and Health Manager Surveys

Based on contact information available in the Head Start Program Information Report (PIR), directors for HS/EHS grantees and delegate agencies as of November 2012—including Region XI AIAN programs and Region XII MSHS programs—were invited to complete the short (15-minute) online Director Survey to obtain basic information about the HS/EHS program and the activities in the health services area. The questions covered the special populations served by the program; the overall budget and budget for the health services area; the director's role with the HSAC; and the director's education, training, and demographic characteristics. The director was also asked to provide the names and contact information (i.e., email address) for the health managers in her or his program. The survey was administered using RAND's Multimode Interviewing Capability (MMIC™) survey system, a computer-assisted data-collection program. Respondents using the MMIC interface were given a unique login and password, so the status of their surveys could be tracked. Respondents were able to begin the survey online, save responses, and return later to the instrument if they were not able to complete the survey in one session.

As directors completed their surveys, the contact information they provided for one or more health managers was used to invite them to complete the online Health Manager Survey. The Health Manager Survey questionnaire took about 45 minutes to complete and covered more-detailed information about the health manager and that role, the role of other HS/EHS staff, management of health conditions among children and families, screening and referral processes, health promotion and disease prevention, staff wellness, and community linkages. The Health Manager Survey instrument included core questions administered to all respondents and a set of supplemental questions, divided into four modules. Respondents were stratified and then

randomly assigned to respond to one of the four supplements, so about one-quarter of the respondents answered each set of supplemental questions.

Responses and Analytic Weights

In total, 2,778 HS/EHS programs (grantee and delegate agencies) active in the 2012–13 program year were eligible for the survey. Based on the PIR for 2011–2012, which was the latest PIR information available in November 2012 when the list of directors was identified, the eligible programs were headed by 1,965 unique directors. Those directors were invited to take the Director Survey. A total of 1,627 directors responded to the online survey and provided a referral to one or more health managers, for an 83 percent response rate among the unique directors. Because some directors were responsible for more than one program (e.g., an HS program and an EHS program), the responding directors represent 84 percent (2,330) of the 2,778 HS/EHS programs active in the 2012–2013 program year.

For the 1,965 health managers invited to take the Health Manager Survey, a partial survey was received for 124 health managers, and 1,341 health managers completed the full online survey. Thus, the response rate for the Health Manager Survey, including the partial respondents, was 73 percent among eligible health managers. Some health managers serve the same program; others serve more than one program (e.g., an HS program and an EHS program administered by the same agency). On balance, the 1,465 responding health managers represented 1,902 programs, or 68 percent of the 2,778 eligible HS/EHS programs.

Although the goal was to obtain as close as possible to a 100 percent response for the online surveys, we anticipated that there would be some degree of nonresponse and that analytic weights would be needed to account for any selectivity in which directors and health managers responded to the survey. With key characteristics of all HS/EHS programs known a priori through information available in the PIR, we constructed nonresponse weights based on a subset of those program characteristics (e.g., program type, size, and region). These weights were used when calculating means or percentage distributions across survey responses. By using weights, we can generalize study findings to all health managers or all HS/EHS programs as follows:

- Weighting with the health manager as the unit of analysis. As noted, a single health manager may have been responding for more than one HS program or EHS program. Analyzing the health manger as the unit of analysis is equivalent to analyzing the health manager workforce as the population of interest, rather than the population of HS/EHS programs.

- Weighting with the program as the unit of analysis. Tabulations in the body of this brief treat the HS/EHS program—grantee or delegate agency—as the relevant unit of analysis. The survey responses are weighted to be representative of all HS/EHS programs.

The weighted tabulations provided in this document are all based on the Health Manager Survey responses and results are reported for HS/EHS programs in all regions combined and, in some cases, separately for HS programs and EHS programs.

Characteristics of HS/EHS Health Managers

As shown in Table A.1, the vast majority of HS/EHS health managers are female, white and speak English at a proficient level. Additionally, the majority (66 percent) of health managers have a bachelor's degree or higher and approximately 70 percent have experience working as a health manager for more than two years. The demographic characteristics are similar across HS/EHS programs in part because there is overlap between the two groups of respondents, as some health managers are responsible for both types of programs.

Table A.1. Demographic and Background Characteristics of HS/ EHS Health Managers: By Program Type

Characteristic	All Programs	HS Programs Only	EHS Programs Only
Female (%)	95.6	95.6	94.2
Race (%, more than one may apply)			
White	78.2	78.9	78.9
Black or African American	16.0	15.3	15.8
American Indian or Alaska Native	5.4	5.5	4.7
Asian or South Asian	2.8	2.6	2.1
Other	0.8	0.9	0.5
Hispanic origin (%)	15.1	15.1	15.0
Speaks English well or very well (%)	98.8	98.7	98.7
Speaks a language other than English at home (%)	18.0	17.0	19.0
Education level (% distribution)			
Up to high school diploma/GED	1.8	2.0	0.9
Some college	13.0	13.7	10.7
Associate degree	19.2	20.2	17.3
Bachelor's degree	36.2	35.6	36.9
Beyond bachelor's degree	29.9	28.6	34.2
Years of experience working as health manager in HS/EHS (%)[a]			
None	3.0	2.8	4.1
Less than 2 years	27.5	26.6	27.3
3 to 5 years	23.3	22.7	25.8
6 to 10 years	17.5	17.9	14.1
11 to 24 years	23.5	24.0	22.6
25 or more years	5.3	6.0	6.2
Child attends/attended HS/EHS (%)	30.0	30.6	25.4
Number of health manager respondents (core)	1,465	1,264	795
Number of health manager respondents (supplement)	376	323	206

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey.
NOTES: Results are weighted to the HS/EHS health manager level and account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases and percentage distributions might not sum to 100 because of rounding. Health managers may serve both HS and EHS programs.
[a] Question in survey supplement.

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