Addressing Overweight and Obesity in Head Start:

Insights from the Head Start Health Manager Descriptive Study

Prepared for Office of Planning, Research, and Evaluation
Administration for Children and Families,
U.S. Department of Health and Human Services

OPRE Report #2016-85
October 2016

Addressing Overweight and Obesity in Head Start: Insights from the Head Start Health Manager Descriptive Study

OPRE Report 2016-85
October 2016

Laurie T. Martin and Lynn A. Karoly

Submitted to:
Laura J. Hoard, Project Officer
Office of Planning, Research and Evaluation
Administration for Children and Families
U.S. Department of Health and Human Services

Contract Number: HHSP23320095649

Project Director: Lynn A. Karoly
RAND Corporation
1200 S. Hayes Street
Arlington, VA 22202

Suggested citation: Martin, Laurie T., and Lynn A. Karoly. (2016). *Addressing Overweight and Obesity in Head Start: Insights from the Head Start Health Manager Descriptive Study,* OPRE Report 2016-85, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

INTRODUCTION

Childhood obesity has been associated with an increased risk for obesity later in life, as well as cardiovascular risk factors, chronic diseases including hypertension and type 2 diabetes, and premature death (Ebbeling, Pawlak, and Ludwig, 2002). Although the prevalence of overweight (a body mass index [BMI] at or above the 85th percentile but below the 95th percentile) and obesity (BMI at the 95th percentile or higher) among children aged 2 to 5 years has decreased significantly (from 13.9 percent in 2003–2004 to 8.4 percent in 2011–2012), it remains a prominent health concern in the United States (Ogden et al., 2014). This is particularly true for low-income children, who did not experience similar reductions in the prevalence of overweight and obesity over the same time period. A study of children eligible for federally funded food and nutrition programs, for example, found that between 2003 and 2010, obesity decreased only slightly from 15.2 percent to 14.9 percent (Pan et al., 2012). Among children enrolled in Head Start programs in the 2012–2013 program year, measurements of height and weight at enrollment reported in the Program Information Report (PIR) indicates that an average of 14 percent of children were overweight, while an average of 15 percent were obese (Karoly et al., 2016).

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 Head Start (HS) and Early Head Start (EHS) programs is overweight and

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.)

obesity both for the children they serve, as well as the children's adult family members. 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 overweight and obesity for the children and families they serve.[1] In particular, we focus on the following questions:

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

PERCEIVED BURDEN OF OVERWEIGHT AND OBESITY

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 overweight and obesity among children was a major concern for health managers in almost 86 percent of programs (Table 1). Similarly, overweight and obesity among adult family members of children in the program was a major concern for health managers in 82 percent of programs. Although there was some variability by program type, overweight and obesity for both children and their adult family members was the top health concern reported by health managers in HS and EHS programs separately and combined (Table 1). It is important to note that these figures do not represent the proportion of children or adults who are actually overweight or obese; rather, the table reports the proportion of programs where overweight and obesity was considered to be a significant health concern, as assessed by the health manager.

---

[1] Comprehensive findings from the HSHMDS are available in Karoly et al. (2016). Other topical briefs based on the HSHMDS focus on mental health, behavioral health, and social and emotional well-being (Karoly and Martin, 2016), oral health (Martin and Karoly, 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
Overweight and obesity reported as a health issue of major concern(%)			
For children in the program	85.7	88.8	80.1
For adult family members of children in the program	81.9	82.0	81.7
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 overweight and obesity was a major health concern among children in their program and programs where health managers felt overweight and obesity was not a major health concern for children.

The average amount of time health managers reported that staff spend per week managing overweight and obesity in the program is presented in Table 2. Of programs for which overweight and obesity is considered a significant health concern, health managers in about 40 percent of programs reported spending at least half a day a week on these issues, and health managers in about 20 percent of programs reported spending more than a day a week addressing this health concern. This is significantly more than programs where overweight and obesity is not reported to be a major health concern. However, even among the programs where overweight and obesity was not considered a major concern, health managers reported that staff spend substantial amounts of time addressing this health issue.

Table 2. Time HS/EHS Staff Spend per Week Managing Overweight and Obesity

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Time staff spend per week managing overweight and obesity (% distribution)*			
More than a day a week	17.4	19.1	7.5
Between a half day and a full day	24.3	26.3	12.9
Less than half a day per week	41.2	42.3	34.4
None, not an issue in the program	5.7	1.9	27.8
Don't know	11.4	10.4	17.4
Number of health manager respondents (supplement)	376	294	54
Number of programs represented (supplement)	483	397	71

*Differences between programs where obesity 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 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 overweight/obesity 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 overweight and obesity as a major health concern may depend on a number of factors, including the proportion of children who are actually overweight or obese, as well as a number of community characteristics that may influence overweight and obesity. Table 3 provides information on the distribution of overweight and obesity within HS programs, as well as other program and community characteristics for HS/EHS programs in relation to whether or not health managers reported that overweight or obesity was a concern.

Based on data from the 2012–2013 PIR, which HS/EHS programs complete each year, the average percent overweight or obese among pre-school age children in HS programs was 29 percent. Programs where health managers reported overweight and obesity as a concern did have a higher proportion of children who were overweight or obese (30 percent) compared with programs where overweight and obesity was not viewed as a major concern (23 percent). Programs where the health manager considered overweight and obesity a major concern were likely to have a higher proportion of children who were white, and a lower proportion of children who were black and bi-racial compared with programs where overweight and obesity was not considered a major concern. Health managers of larger programs were more likely to report overweight and obesity as a health concern, compared with those of smaller programs.

Table 3. HS/EHS Program and Community Characteristics

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Program characteristics (from PIR)			
HS child weight category at enrollment based on BMI (average % distribution)[a]			
Underweight	4.1	4.1	4.4
Healthy weight*	66.6	65.9	71.6
Overweight*	14.0	14.2	12.6
Obese*	15.3	15.8	11.5
Race of children in program (% distribution)*			
AIAN	8.1	7.6	8.9
Black	21.5	20.8	25.7
White	45.5	46.8	40.4
Biracial	9.8	9.5	12.1
Other	10.4	10.4	9.4
Unspecified	4.7	4.9	3.5
Program size (% distribution)*			
Small (1 to 150 slots)	31.3	28.9	43.7
Medium (151 to 349 slots)	34.0	34.8	30.5
Large (350 slots or more)	34.7	36.3	25.9
Health manager health-related education (% distribution)			
No health-related education background	14.2	14.2	13.7
Health-related associate degree or credentials	27.3	25.9	25.9
Health-related bachelor's degree or credentials	58.5	58.3	60.4

Table 3. HS/EHS Program and Community Characteristics, *Continued*

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Community characteristics[b]			
Rural-urban status (% distribution)*			
Rural	10.2	9.8	10.4
Mixed	35.6	36.7	28.9
Urban	54.3	53.5	60.7
Obesity rate for low-income preschool children (%)*	14.2	14.3	13.2
Adult obesity rate (%)	28.6	28.7	28.4
Limited access to healthy foods (%)	6.4	6.4	6.9
Fast food restaurants (% of all restaurants)	47.5	47.5	46.9
Recreational facilities (per 100,000 persons)	9.0	8.9	9.3
Parks (per 100,000 persons)	33.0	33.2	31.3
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 obesity 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] Child weight categories from PIR are for Head Start programs only. Height and weight are not collected for EHS programs.

[b] 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. In a limited number of cases, respondents did not report whether overweight/obesity 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.

The health-related education background of the health manager was not significantly associated with whether she or he reported overweight or obesity was considered a major concern. While programs where overweight and obesity 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 overweight and obesity was not a concern, there were few other differences in community context. For example, there were no significant differences in access to healthy foods, presence of fast foods, or access to recreational facilities or parks between programs where overweight and obesity was and was not considered a major concern.

HEALTH PROGRAMMING AND SERVICES TO ADDRESS OVERWEIGHT AND OBESITY

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 1304.4(f)(1)). Grantee and delegate agencies must also design and implement a nutrition program that meets the nutritional needs of each child (Office of Head Start, 2014, standard 1304.23 (b)) and are also required to obtain or collect information on a child's height and weight (Office of Head Start, 2014, standard 1304.20(a) and 1304.23(a)(1)).

While all programs had to, at a minimum, collect this information, programs varied substantially with respect to whether they offered height and weight measurements for children; these differences were statistically significant (Table 4). Programs where obesity was considered a problem were more likely to offer this measurement and to provide that measurement on-site compared with programs where overweight and obesity was not concern.

Table 4. Measurement of Height and Weight of Children in the HS/EHS Program

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Provision of free height and weight measurement by HS/EHS program (% distribution)*			
Does not provide	5.2	3.9	13.0
Provides on-site	79.9	81.5	70.0
Provides off-site	2.5	2.2	4.3
Provides both on-site and off-site	12.2	12.3	12.1
Don't know	0.2	0.1	0.6
Number of health manager respondents (supplement)	359	299	48
Number of programs represented (supplement)	470	405	63

*Differences between programs where obesity 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 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 overweight/obesity 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.

[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.

While Head Start Program Performance Standards provide guidance as to the types of activities that must be conducted, programs have autonomy to implement policies, activities, and services that meet these standards in a way that best meets the needs of the children and families they serve. With respect to addressing overweight and obesity, many programs have implemented policies related to physical activity. Table 5 summarizes data on whether HS/EHS programs have a policy on physical activity, and if so, the number of minutes per day programs require children to take part in physical activity. Programs where overweight and obesity is reported to be a concern are significantly more likely to have a policy on physical activity (88 percent compared with 76 percent). However, of those that do have a policy, differences in the number of minutes of physical activity per day that is required were marginally significant (p=0.06). In programs where overweight and obesity is considered a major health concern about 45 percent require at least an hour of physical activity. In contrast, only about 34 percent of programs for which obesity is not considered a concern have a policy requiring 60 minutes or more of physical activity.

Table 5. HS/EHS Program Policy on Children's Physical Activity

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Program has policy on physical activity (% distribution)*			
Yes	85.9[1]	87.5	75.8
No	14.1	12.5	24.2
Of those with a policy, minutes per day children should take part in physical activity according to the program's policy (% distribution)			
Less than 15 minutes	0.7	0.8	0.0
15 to 29 minutes	9.8	8.8	17.7
30 to 59 minutes	46.3	45.8	48.5
60 or more minutes per day	43.1	44.6	33.8
Number of health manager respondents (supplement)	373	292	50
Number of programs represented (supplement)	486	399	66

*Differences between programs where obesity 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.
[1] Within HS programs, 89.0 percent has a policy on physical activity compared with 80.4 percent in EHS programs. Between HS and EHS programs with a policy, differences in the amount of physical activity required were not statistically significant.
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 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 overweight/obesity 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.

Curricula Used for Health Topics and Health Activities

To delve more into the specific health prevention and 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. Table 6 presents the responses relevant for addressing overweight and obesity, two of which we classify as health-related curricula and the remaining eight as other types of resources. Programs where overweight and obesity was considered a major concern were significantly more likely to use one of these curricula or resources compared with programs where overweight and obesity were not a concern. (Appendix B provides more information on these curricula and resources, including the publisher and whether the curricula or resource is located on the Head Start National Center on Health website.)

Table 6. Health Curricula and Resources Used by HS/EHS Programs

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Number of curricula and resources used (% distribution)*			
0	30.7	27.5	52.5
1	54.5	56.0	44.1
2	11.7	13.3	1.0
3 or more	3.1	3.2	2.3
Health curricula and resources used (%)			
Curricula			
Color Me Healthy	6.4	7.3	0.0
SPARK	2.3	2.5	0.7
Resources			
5-2-1-0	1.6	1.9	0.0
Chef Combo	2.2	2.2	2.1
Cooking Matters	1.1	1.2	0.6
Eat Well Play Hard	2.1	2.4	0.0
Food Friends	1.0	0.9	2.3
I Am Moving, I Am Learning	64.3	67.5	42.8
Let's Move	1.4	1.3	1.8
MyPlate	5.0	5.3	2.8
Number of health manager respondents(supplement)	357	276	55
Number of programs	465	386	67

*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. Statistical tests were not performed for differences in the use of the specific curricula and resources.
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 overweight/obesity 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.

I Am Moving, I Am Learning (IMIL)—an obesity-prevention approach developed in the Region III Office of the Administration for Children and Families (2006) under the leadership of Amy Requa, MSN, CRNP and Dr. Linda Carson—stands out among all of the entries in Table 5 for having the highest frequency of use (64 percent of programs). It is important to note that the Office of Head Start has provided national training on the IMIL approach, helping to explain its high prevalence. The next most common is Color Me Healthy, with the remaining curricula and resources used by no more than 5 percent of programs. Notably, the use of IMIL is higher among the programs where overweight and obesity is a major concern (68 percent versus 43 percent). Given small sample sizes, we did not test for statistical significance of each curricula or resource individually.

Addressing Overweight and Obesity with Families

In addition to addressing overweight and obesity 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:

- 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. Nutrition and/or healthy eating practices and physical activity and/or fitness were included as response options.
- Do you offer any of the following services to families? The list included potential services, one of which was a weight management program or education.
- 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 provide nutritional services.

Results indicate that health managers and programs are supporting families in a number of ways (Table 7). According to health manager responses, programs are almost universally addressing with families the topics of nutrition and healthy eating practices, and physical activity and fitness, regardless of whether overweight and obesity is considered 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, recipes, or activities that the family can participate in using items found around the house; as well as offering cooking classes, family field trips to the farmers' market, and parent meetings.

Table 7. Services Provided by HS/EHS Programs to Families Related to Overweight and Obesity

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Health topics program is addressing with families in the program (%)			
Nutrition and/or healthy eating practices*	98.1	98.9	93.7
Physical activity and/or fitness*	93.5	94.9	85.7
Number of health manager respondents (supplement)	357	276	55
Number of programs represented (supplement)	465	386	67
Health related services provided to families (%)			
Weight management*	53.9	55.9	41.6
Among programs offering services in the home, which services are conducted in the home (%)[a]			
Nutritional services*	61.4	63.0	53.7
Number of health manager respondents (core)	1,465	1,161	207
Number of programs represented (core)	1,902	1,586	267

*Differences between programs where obesity 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] 61.4 percent of programs reported offering services in the home.
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 overweight/obesity 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.

About half of the programs also provide weight management services to family members (Table 7). Of those programs that offer health-related services in the home, such as through home visits, about 60 percent include some type of nutritional services. Families work with program staff to develop family partnership goals, which may include goals related to health or obesity prevention. Programs then use those goals to guide conversations and home visits, providing, for example, information on shopping for more healthy foods and recipes for healthier meals. For both types of services, the incidence is higher for programs that view overweight and obesity as a major health concern.

Addressing Overweight and Obesity among Staff

Although the focus of this brief is on understanding the range of approaches programs employ to address overweight and obesity among the children and families they serve, HS/EHS health managers reported that overweight and obesity was also a concern among staff. About half of programs offered staff wellness activities relevant to addressing weight concerns. Unlike programs and services geared towards children and families, the availability of these supports for staff did not significantly differ by whether or not the health manager felt overweight or obesity was a major concern among children in the program (Table 8).

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

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Wellness activities offered to staff in the past year (%)			
Physical health screenings	42.6	42.5	42.9
Weight management, nutrition information	51.6	51.7	51.2
Physical activity/fitness	52.9	53.6	48.2
Number of health manager respondents (supplement)	376	294	54
Number of programs represented (supplement)	483	397	71

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 overweight/obesity 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 OVERWEIGHT AND OBESITY

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 overweight and obesity.

In general, health managers who reported overweight and obesity as a health concern facing the children in the programs were more likely to obtain training on relevant topics including overweight and obesity and physical activity. The same pattern holds for training offered to 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 overweight and obesity is a concern, have had access to relevant training.

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 (beyond the usual program staff categories such as teachers, home visitors, and family service workers), either as paid staff or consultants or as volunteer staff or consultants. Table 10 reports the percentage of HS/EHS programs that rely on specific specialist categories that may be most relevant to overweight and obesity. Among the specialists listed in Table 10, both parent education specialists and nutritionists or dieticians are engaged almost universally, with about 80 of programs paying for their services. Differences were not statistically significant.

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

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Training received by the health manager in the past three years (%)			
Overweight and obesity*	68.4	71.3	54.0
General health promotion or wellness	76.1	76.6	74.9
Nutrition or healthy eating practices	82.9	83.3	83.8
Physical activity or fitness*	72.6	73.7	67.9
Number of health manager respondents (core)	1,465	1,161	207
Number of programs represented (core)	1,902	1,586	267
Training provided for other staff in the past three years (%)			
Overweight and obesity*	63.6	67.5	52.3
General health promotion or wellness*	72.1	73.8	56.8
Nutrition or healthy eating practices*	80.5	83.0	73.0
Physical activity or fitness*	71.5	74.9	61.4
Number of health manager respondents (supplement)	373	292	50
Number of programs represented (supplement)	486	399	66

*Differences between programs where obesity 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 overweight/obesity 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 10. HS/EHS Program Works with Health Specialists

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Parent education specialist (%, more than one capacity may apply)			
Paid staff/consultant	82.9	83.3	83.8
Volunteer staff/consultant	72.6	73.7	67.9
Nutritionists and dieticians (%, more than one capacity may apply)			
Paid staff/consultant	80.2	82.4	75.3
Volunteer staff/consultant	24.1	23.0	26.7
Number of health manager respondents (supplement)	373	292	50
Number of programs represented (supplement)	486	399	66

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 overweight/obesity 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 OVERWEIGHT AND OBESITY

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 individuals were members on their HSAC. Representatives relevant for helping programs to address overweight and obesity are included in Table 11. While the majority of programs had representatives from these sectors, those programs for which overweight and obesity was a major health concern were substantially more likely to have medical care providers, nutritionists, public health department representatives, and representatives from WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) and other community food or nutrition services as part of their HSAC.

Table 11. Health Services Advisory Committee Membership

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Groups or agencies represented on HSAC (%)			
Medical care providers*	90.2	91.4	83.9
Nutritionists, nutrition experts*	80.5	82.1	71.8
Public health departments/boards of health*	75.7	77.4	66.1
WIC or other community food or nutrition services*	71.4	73.3	61.9
Number of health manager respondents (core)	1,465	1,161	207
Number of programs represented (core)	1,902	1,586	267

*Differences between programs where obesity 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 overweight/obesity 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 Overweight and Obesity

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

- What agencies or organizations do you normally work with to address or support the 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 physical health, but a parallel series was asked with respect to oral health and behavioral health. Health managers did not, however, report on which partner organizations helped to address which specific health conditions within these broader health categories. Although issues of overweight and obesity might be addressed by a range of organizations (e.g., home visiting programs might discuss nutrition), for the purpose of this brief we limit the findings to food and nutrition agencies as those are the most directly related to the health concern under study.

The vast majority of programs report normally working with food and nutrition agencies (Table 12). Similarly, fewer than 10 percent of programs report a current gap and resultant desire to develop a relationship with a food and nutrition agency. Despite having a range of partnerships, health managers reported that in about 44 percent of programs, services to address overweight and obesity are not being met by their current community partners. This suggests that other partners that may provide relevant information and services, other than food assistance, may be warranted.

Table 12. Partnerships Meeting the Health Needs of HS/EHS Programs

Measure	All Programs	Programs Where Overweight/ Obesity Is a Concern	Programs Where Overweight/ Obesity Is Not a Concern
Agencies or organizations normally work with to address or support the health needs of the children and families in the program (%)			
Food/nutrition agency*	93.2	94.3	86.3
Number of health manager respondents (supplement)	373	292	50
Number of programs represented (supplement)	486	399	66
Health needs not met (or met well) by agencies by agencies or organizations the program works with (%)			
Services for weight control*	44.0	45.6	34.3
Partners programs would like to have a relationship with, but do not currently (%)			
Food/nutrition agency	7.8	7.6	9.2
Number of health manager respondents (core)	1,465	1,161	207
Number of programs represented (core)	1,902	1,586	267

*Differences between programs where obesity 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 overweight/obesity 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 example, while some programs had partnered with a robust range of community partners to address issues of overweight and obesity, including fitness programs (to support children or families in healthy exercise habits), local cooking classes (to learn how to prepare healthy foods), community gardens (to grow healthy food and get exercise), and farmers' markets (to provide both education and access to a range of fruits and vegetables), others did not.

CONCLUSION

For four of five HS/EHS programs, health managers view overweight and obesity as a major health concern for the children and families they serve. To help address this health concern, HS/EHS programs have developed policies, 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. While more work is needed in this area to address overweight and obesity among children, parents, and staff, those programs for which health managers reported overweight and obesity as a major health concern were significantly more likely to engage in these programs, services, and partnerships than those programs where overweight and obesity was not rated as a major health concern. But even in programs where overweight and obesity is not viewed as a significant health issue, the health-related programming often incorporates elements related to nutrition, physical activity, and other supports relevant for addressing this salient health concern.

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 (% distribution)[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.

APPENDIX B. HEALTH CURRICULA AND OTHER RESOURCES NAMED BY HEALTH MANAGERS

Name	Publisher	Health Area Targeted	On Head Start National Center on Health Website[a]
	a. Curricula		
Color Me Healthy	NC Cooperative Extension; NC Division of Public Health	Obesity prevention	No
SPARK: Sports, Play, and Active Recreation for Kids	SPARK	Obesity prevention	No
	b. Resources		
5-2-1-0	Let's Go! Standards adopted from Nutrition and Physical Activity Self-Assessment for Child Care	Obesity prevention	No
Chef Combo	National Dairy Council	Obesity prevention/nutrition	No
Cooking Matters	No Kid Hungry	Obesity prevention/nutrition	No
Eat Well Play Hard	New York State Department of Health	Obesity prevention	No
Food Friends	Colorado State University	Obesity prevention	No
I Am Moving, I Am Learning	Office of Head Start	Obesity prevention	Yes
Let's Move	Michelle Obama's Initiative	Obesity prevention	Yes
MyPlate	U.S. Department of Agriculture	Obesity prevention	Yes

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study's Health Manager Survey and Internet searches regarding the curricula.
NOTES: Includes all curricula and resources named by ten health manager respondents or more. Abbreviations: NC = North Carolina.
[a]As of December 2014. Note that the website for the Head Start National Center on Health became active in August 2013, so it was not available to health managers during much of the period covered by the Health Manager Survey (December 2012 to November 2013).

REFERENCES

Auger, Anamarie, Lynn A. Karoly, and Laurie T. Martin, *Family Engagement in the Delivery of the Health Services Component in Head Start and Early Head Start*, OPRE Report 2016-86, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016.

Ebbeling Cara B., Dorota B. Pawlak, and Davis S. Ludwig, "Childhood Obesity: Public-Health Crisis, Common Sense Cure," *The Lancet*, Vol. 360, 2002, pp. 473–482.

Karoly, Lynn A., and Laurie T. Martin, *Addressing Mental Health, Behavioral Health, and Social and Emotional Health in Head Start: Insights from the Head Start Health Manager Descriptive Study*, OPRE Report 2016-90, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016.

Karoly, Lynn A., Laurie T. Martin, Anita Chandra, and Claude Messan Setodji, *Head Start Health Matters: Findings from the 2012–2013 Head Start Health Manager Descriptive Study for Regions I–XII*, OPRE Report 2016-44, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016.

Martin, Laurie T., and Lynn A. Karoly, *Addressing Oral Health in Head Start: Insights from the Head Start Health Manager Descriptive Study*, OPRE Report 2016-84, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016.

Office of Head Start, *Head Start Program Performance* Standards, 45 CFR Chapter XIII, Washington, D.C.: Administration for Children and Families, U.S. Department of Health and Human Services, 2014.

———, *Head Start Program Performance* Standards, 45 CFR Chapter XIII, Washington, D.C.: Administration for Children and Families, U.S. Department of Health and Human Services, September 6, 2016. As of October 1, 2016: http://eclkc.ohs.acf.hhs.gov/policy/presenting

Office of Planning, Research, and Evaluation, *Advisory Committee on Head Start Research and Evaluation: Final Report*, Washington, D.C.: Administration for Children and Families, U.S. Department of Health and Human Services, 2012. As of October 1, 2016: http://www.acf.hhs.gov/programs/opre/resource/advisory-committee-on-head-start-research-and-evaluation-final-report

Ogden, Cynthia L, Margaret D. Carroll, Brian K. Kit, and Katherine M. Flegal. "Prevalence of Childhood and Adult Obesity in the United States, 2011-2012," *Journal of the American Medical Association*, Vol. 311, 2014, pp. 806–814.

Pan, Liping, Heidi M. Blanck, Bettylou Sherry, Karen Dalenius, and Laurence M. Grummer-Strawn, "Trends in the Prevalence of Extreme Obesity Among US Preschool-Aged Children Living in Low-Income Families, 1998-2010," *Journal of the American Medical Association*, Vol. 308, 2012, pp. 2563–2565.

Region III Office of the Administration for Children and Families, I Am Moving, I Am Learning, *A Proactive Approach for Addressing Childhood Obesity in Head Start Children, Summary Report, The First Two Years*, Washington, D.C., 2006.