Addressing Mental Health, Behavioral Health, and Social and Emotional Well-Being 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 #2016-90
October 2016

Addressing Mental Health, Behavioral Health, and Social and Emotional Well-Being in Head Start: Insights from the Head Start Health Manager Descriptive Study

OPRE Report 2016-90
October 2016

Lynn A. Karoly and Laurie T. Martin

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: Karoly, Lynn A., and Laurie T. Martin. (2016). *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, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

This report and other reports sponsored by the Office of Planning, Research and Evaluation are available at http://www.acf.hhs.gov/opre.

INTRODUCTION

There is an increasing recognition of the importance of mental health and social and emotional well-being in early childhood (U.S. Department of Health and Human services, 1999; Shonkoff and Phillips, 2000). Estimates indicate that significant mental health issues occur in up to 15 percent of children from ages two to five, including attention deficit hyperactivity disorder (ADHD), conduct disorder, anxiety, depression, and other emotional disorders (Center on the Developing Child, 2013). These issues are even more prevalent for children from low-income families, in part because of high rates of exposure to trauma, loss, and other emotional stressors (Currie and Rossin-Slater, 2015). Evidence has been accumulating over time that documents how positive emotional development in the early years provides an essential foundation for psychosocial health throughout the life course (Shonkoff and Phillips, 2000).

Mental and behavioral health issues extend to parents, as well. The Early Head Start Research and Evaluation Project found that 52 percent of the mothers in Early Head Start (EHS) programs and 18 percent of fathers scored above a clinical cutoff of depressive symptoms at the time of enrollment (Administration for Children and Families, 2006). In other research, children with depressed mothers have been found to be more likely to have behavior problems (O'Connor, Heron, and Glover, 2002), ADHD, and other mental health problems (Cummings and Davies, 1994).

With its focus on serving children from birth to kindergarten entry in families with low income, Head Start has long recognized that the health

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.)

component should support multiple dimensions of health: mental health and social-emotional well-being along with physical and oral health. In identifying the developmental building blocks that support school readiness, the *Head Start Early Learning Outcomes Framework* (Office of Head Start, 2015)—a document designed to guide programs in their curriculum and assessment decisions—includes aspects of child mental health and social and emotional well-being, such as a developmentally appropriate range of emotional expression and the ability to regulate emotions and adapt to new environments.

Likewise, the 1998 Head Start Program Performance Standards detailed more than 100 requirements with respect to the health services area, including those specific to mental health, behavioral health, and social and emotional well-being (Office of Head Start, 2014).[1] For instance, 45 CFR 1304.24 specified requirements regarding child mental health, including working collaboratively with parents to identify child mental health concerns and appropriate courses of action; securing the services of mental health professionals to assist in the timely identification of mental health concerns; and the provision of regular, on-site mental health consultations to assist staff and parents in the support of children and to identify additional community resources, if needed.

In this brief, our primary goal is to place a spotlight on mental health, behavioral health, and social and emotional well-being in Head Start and Early Head Start (HS/EHS), drawing on data from the Head Start Health Manager Descriptive Study (HSHMDS) (see text box) to identify the nature of the health issues programs face, the approach to staffing and the types of supports and services provided, and the community partners that programs work with to address this important aspect of early childhood health.[2] In particular, we focus on the following questions:

- What mental health, behavioral health, and social and emotional well-being issues do HS/EHS programs face?
- What staffing models are used to address this domain of health? How does staff training address mental health, behavioral health, and social and emotional well-being?
- What health programming (e.g., services, activities, education) is in place to address mental health, behavioral health, and social and emotional well-being issues?
- How are programs leveraging the Health Services Advisory Committee (HSAC), health care providers, and other community resources to address mental health, behavioral health, and social and emotional well-being?

While we rely primarily on findings from the Health Manager Survey, we also integrate some of the qualitative findings based on the interviews with health managers and other program staff.

---

[1] 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.

[2] 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, 2016b); oral health (Martin and Karoly, 2016a), and parent engagement in the delivery of the HS/EHS health services component (Auger, Karoly, and Martin, 2016).

Mental Health, Behavioral Health, and Social and Emotional Well-Being Issues Facing HS/EHS Programs

To provide context for understanding the nature of the health services in HS/EHS, 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 EHS/HS program?
- About how much time per week do you and your staff spend managing these health issues and related complications?[3]

The health-related conditions listed on the survey included seven that are specific to mental health and social and emotional well-being for children and another (overlapping) list of eight mental or behavioral health conditions specific to adult family members of HS/EHS children.

Overall, the top-rated health concerns for HS/EHS programs were overweight and obesity (86 percent), tooth decay or cavities (84 percent), asthma or other lung diseases (83 percent), and developmental delays, including language delays (80 percent) (Karoly et al., 2016). Although less prevalent, behavioral health concerns were still prominent, with 47 percent selecting ADHD and attention deficit disorder (ADD) and 43 percent choosing autism spectrum disorders see Table 1). Child neglect or abuse and family violence, conditions that may affect mental health and social and emotional well-being were also relevant for 41 percent and 36 percent of programs, respectively. Other health concerns related to mental health—anxiety, depression, and posttraumatic stress disorder (PTSD)—were less prevalent but still viewed as significant health concerns in as many as one in five programs. For the most part, the health issues cited as major concerns were similar for HS programs and EHS programs, although there are a few differences that correspond to the evolution of health issues as children age. For instance, compared with EHS programs, HS programs were more likely to mention ADHD or ADD (51 percent versus 41 percent).

It is important to note that these figures do not represent the proportion of children in HS/EHS programs who have mental health or social and emotional well-being issues,; rather, the table reports the proportion of programs where the issues in Table 1 are considered to be a significant health concern, as assessed by the health manager.

[3] 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. Program-Reported Major Concerns Regarding Mental Health and Social and Emotional Well-being Concerns for Children in HS/EHS: By Program Type

Health Condition	Percentage of Programs Reporting Health Condition as a Major Concern		
	All HS/EHS Programs	Head Start Programs Only	Early Head Start Programs Only
ADHD or ADD	47.2	50.6	41.0
Autism spectrum disorders	42.6	42.1	43.4
Child neglect or abuse	41.1	39.6	43.7
Family violence	36.2	34.4	39.3
Anxiety (including obsessive-compulsive disorder [OCD])	19.0	19.2	18.7
Depression	15.8	14.1	18.8
PTSD	8.2	8.0	8.5
[Missing]	*5.6*	*5.2*	*6.3*
Number of health manager respondents (core)	1,465	1,264	795
Number of programs (core)	1,902	1,176	726

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 6.1.
NOTES: Response categories have been reordered from highest to lowest prevalence among all HS/EHS programs. Results are weighted to account for survey nonresponse. Percentage distributions are computed for nonmissing cases and might not sum to 100 because of rounding. The percentages of missing cases are shown for reference.

To further gauge the importance of specific health issues, in a supplemental question to the Health Manager Survey, we asked about the time the health manager and staff spend per week managing specific health issues, referencing the same seven mental health and social and emotional well-being issues in Table 1. Health managers were instructed to include "time spent providing medication , developing individual health care plans, including meeting with the family, staff training on the issue, communication with health care providers, paper work, monitoring, etc."

For each health condition, Table 2 shows how all HS/EHS programs are distributed across the levels of time allocation, from no time to more than a day a week. This percentage distribution is calculated excluding cases of nonresponse, as well as those cases where health managers did not know the time involved (a share that ranged from 6 to 31 percent, depending on the health issue). Given the relatively higher rate of missing data for this series and the smaller number of respondents to the supplemental questions, some caution is warranted in the interpretation of these estimates, as those who did not respond may not be a random subset of all respondents.

Table 2. The Time Staff Spend per Week Managing Mental Health and Social and Emotional Well-being Issues: All HS/EHS Programs

Health Condition	Percentage Distribution				
	None, Not an Issue in Program	Less Than Half a Day per Week	Between a Half Day and a Full Day	More Than a Day a Week	*[Missing or Don't Know]*
ADHD or ADD	19.8	47.9	19.9	12.4	*30.2*
Autism spectrum disorders	19.0	41.4	22.8	16.8	*30.1*
Child neglect or abuse	15.3	60.3	17.6	6.9	*29.2*
Family violence	22.6	55.3	14.9	7.2	*34.3*
Anxiety (including OCD)	35.9	40.5	15.5	8.1	*39.8*
Depression	35.0	43.7	11.1	10.2	*37.2*
PTSD	51.4	39.3	4.2	5.1	*43.5*

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 6.3.
NOTES: Based on 376 health manager respondents for 483 programs. Results are weighted to account for survey nonresponse. Percentage distributions are computed for nonmissing cases and might not sum to 100 because of rounding. The percentages of missing or don't know cases are shown for reference.

Despite these caveats, the overall pattern of time requirements is consistent with the health concerns that were viewed as most salient. Notably, the behavioral health conditions most likely to be cited as requiring the highest time commitment were autism spectrum disorders and ADHD/ADD where 39 percent and 32 percent of program health managers, respectively, stated the time requirement was half a day a week or more. For the other conditions listed in Table 2, if any time commitment was required, the modal response was less than half a day a week. As a reference point, a majority of program health managers reported spending a half a day or more on such health issues as tooth decay or cavities (63 percent), developmental delays (63 percent), and overweight and obesity (57 percent).

Health managers were also asked to identify the major health concerns facing the adult family members of enrolled children (see Table 3). For all HS/EHS programs, overweight and obesity remained a top health concern for adult family members, as it was for children (mentioned by 82 percent of programs). Yet, health managers must also contend with additional health concerns of adult family members, ones that would be classified as mental health or behavioral health issues such as alcohol (51 percent), depression (50 percent), and family violence (50 percent). Interestingly, compared with HS programs, the proportion of health managers in EHS programs with a concern about parental depression is higher (58 percent versus 46 percent of programs).[4]

[4] In the interest of parsimony, for the remainder of this brief, we present findings for HS/EHS programs combined. For the most part, the findings are very similar for the two program types. Interested readers will find disaggregated tabulations by program type in Karoly et al. (2016).

Table 3. Program-Reported Mental and Behavioral Health Concerns for Adult Family Members of Children in HS/EHS Programs: By Program Type

Health Condition	Percentage of Programs Reporting Health Condition as a Major Concern		
	All HS/EHS Programs	Head Start Programs Only	Early Head Start Programs Only
Alcohol	51.3	51.6	50.6
Depression	50.2	45.6	58.4
Family violence	49.8	47.7	53.6
Illegal substance/drug dependence	40.7	40.3	41.3
Anxiety (including OCD)	31.3	29.3	34.9
Prescription drug dependence	24.8	24.6	25.2
PTSD	11.5	10.9	12.6
[Missing]	*5.6*	*5.2*	*6.3*
Number of health manager respondents	1,465	1,264	795
Number of programs	1,902	1,176	726

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 6.5.
NOTES: Response categories have been reordered from highest to lowest prevalence among all HS/EHS programs. Results are weighted to account for survey nonresponse. The percentages of missing cases are shown for reference.

STAFFING MODELS AND TRAINING TO ADDRESS MENTAL HEALTH, BEHAVIORAL HEALTH, AND SOCIAL AND EMOTIONAL WELL-BEING

One of the objectives of the HSHMDS was to learn about the approach to staffing the HS/EHS health services are and understanding the professional development supports that health managers and other staff receive. Overall, the study demonstrated that 70 percent of health managers hold another position, in addition to their role as health manager. Among health managers with more than one role, 19 percent reported also serving as the mental health manager/coordinator (Karoly et al., 2016). In addition, the study served to highlight the ways in which most HS/EHS program staff have at least some involvement in the health services area, many with one or more primary responsibilities. We now highlight the findings from the Health Manager Survey pertaining to HS/EHS staffing and professional development that are most relevant for mental health, behavioral health, and social and emotional well-being of HS/EHS children and families.

Staffing Models

The health services area is associated with a multiplicity of tasks, so a supplemental question in the Health Manager Survey inquired about the person with primary responsibility for 30 distinct tasks covering the most-relevant health services area activities. Table 4 reports results for a subset of the tasks, including those most relevant for mental health, behavioral health, and social and emotional well-being. While it was very common for health managers to have primary

responsibility for tasks that pertain to multiple domains of child health (including mental and behavioral health) such as coordinating health-screening activities (88 percent of programs), making or arranging referrals (68 percent), following-up on health services provided (72 percent), and working with direct-service providers to establish partnerships (70 percent), it is far less common for them to provide counseling/therapeutic services for children and families (11 percent). When the health manager did not have primary responsibility for a task, they were asked who did. For counseling/therapeutic services, 21 percent of programs reported that this was the primary responsibility of the HS/EHS mental health coordinator, while another 37 percent of programs indicated the primary responsibility for this task fell to an outside health provider.

Table 4. Responsibilities for General and Specific Health Services Area Tasks Related To Mental Health, Behavioral Health, and Social and Emotional Well-being: All HS/EHS Programs

	Person Primarily Responsible for Task (percentage distribution)			
Specific Task	**Health Manager**	**Someone Else**	**Not Done**	***[Missing]***
Coordinating health-screening activities	87.9	12.1	0.0	*0.6*
Making or arranging referrals for health services	68.1	31.4	0.4	*0.7*
Follow-up on health services provided by others (e.g., case management)	72.1	27.3	0.6	*0.8*
Working with direct-service providers to establish MOUs, formal partnerships or agreements	70.1	28.2	1.8	*0.8*
Providing counseling/therapeutic services for children and families	11.1	78.8	10.1	*1.0*
Developing IHPs	56.5	37.5	6.1	*0.8*

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 4.2.
NOTES: Based on 373 health manager respondents for 486 programs. Results are weighted to account for survey nonresponse. Percentage distributions are computed for nonmissing cases and might not sum to 100 because of rounding. The percentage of missing cases is shown for reference. The first four task areas are for health services in general. The fifth task area is specific to mental health, behavioral health, and social and emotional well-being. IHP = individualized health plan; MOU = memorandum of understanding.

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 5 reports the percentage of HS/EHS programs that rely on specific specialist categories that may be most relevant to mental health, behavioral health, and social and emotional well-being. Overall, HS/EHS programs rely on an array of specialists that can support the these health-services area, and the nature of the relationship—on staff or not, paid or volunteer—varies as well. Social workers are the most common specialists as paid staff (39 percent of programs). The other specialists—psychologists, counselors, early intervention staff, and local education agency special education staff—are more likely to serve as paid or volunteer

consultants or to be employed by a community partner. Depending on the type of specialists, from 15 to 60 percent of programs do not use a given category of specialist.

Despite the involvement of other staff and consultants, a general theme from the HSHMDS is that some health managers feel that they are understaffed or underresourced, especially when addressing multiple domains of child and adult health, i.e., mental health, behavioral health, social and emotional well-being, as well as physical health and oral health. While health managers reported in our follow-up interviews "doing what is needed" to meet basic standards, there was a general sense that they could do more and that the program would be stronger if additional staff were devoted to the health services area.

> *I oversee the health, disabilities, nutrition, and mental health aspects of our program. Sometimes it is overwhelming, and I feel that I manage them all but not as well as I could if I didn't have all of the areas and could concentrate on just a couple of them.* —Health manager

Table 5. Work with Specialists Related to Mental Health, Behavioral Health, and Social and Emotional Well-being: All HS/EHS Programs

	Percentage of HS/EHS Programs Using Specialist in Capacity (more than one may apply)				
Specialist	**Paid Staff**	**Volunteer Staff**	**Paid Consultant/ Community Partner**	**Volunteer Consultant/ Community Partner**	**Do Not Work With, Not Applicable, or Don't Know**
Social workers	39.1	2.5	14.7	20.2	26.1
Psychiatrists	0.7	2.1	18.0	13.9	60.3
Psychologists	10.5	2.2	32.7	19.7	35.5
Counselors	15.0	2.2	31.8	24.5	28.9
Early intervention staff	19.9	2.4	16.3	40.4	21.6
LEA special education staff	17.1	3.4	14.8	47.8	15.3

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 4.5.
NOTES: Based on 373 health manager respondents for 486 programs. Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases is 3.0 percent. LEA = local education agency.

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 health topics including mental health, behavioral health, and social and emotional well-being (9 topics); prevention and wellness (17 topics), and physical and oral health (13 topics). A similar question asked about training offered to staff in the program in the past three years. Results are shown in Table 6 for those topics most relevant for mental health, behavioral health, and social and emotional well-being.

Overall, training in child neglect or abuse was most common, with 92 percent of health managers receiving training in the last three years on the topic and 86 percent of staff having

access to training in the same time frame. Family violence and substance abuse were two other topics that had high prevalence for health manager training and staff training, two of the more prevalent adult mental and behavioral health concerns (see Table 3). Health managers were less likely to have experienced or access to training related to autism spectrum disorders (45 percent), depression (39 percent), ADHD/ADD (37 percent), anxiety (30 percent), and PTSD (25 percent). Other program staff had similar rates of access to training on these topics.

Table 6. Health Manager and Staff Training in the Last Three Years on Mental Health, Behavioral Health, and Social and Emotional Well-being Topics: All HS/EHS Programs

	Percentage of HS/EHS Programs	
Training Topic	**Training Received by Health Manager**	**Training Offered for Other Staff**
ADHD or ADD	37.1	38.6
Autism spectrum disorders	45.1	45.2
Child neglect or abuse	92.4	86.4
Family violence	60.4	61.7
Anxiety	30.0	27.7
Depression	39.0	33.9
PTSD	24.9	21.7
Substance abuse	52.8	49.8
Number of health manager respondents (core/supplement)	1,465	373
Number of programs represented (core/supplement)	1,902	486

SOURCE: Authors' analysis of Head Start Health Manager Descriptive Study, Health Manager Survey as reported in Karoly et al. (2016), Tables 4.7 and 4.11.
NOTES: Results are weighted to the HS/EHS program level and account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases for health manager training ranges from 3.0 percent to 4.6 percent depending on the topic. The percentage of missing cases for staff training is 6.0 percent.

HEALTH PROGRAMMING AND SERVICES TO ADDRESS MENTAL HEALTH, BEHAVIORAL HEALTH, AND SOCIAL AND EMOTIONAL WELL-BEING

As part of the health services area more generally, HS/EHS staff work with families, health care providers, and other community agencies and resources to help ensure that all children enrolled in their programs are up-to-date on a schedule of age-appropriate preventive and primary health care (i.e., medical care, including immunizations, dental care) with any necessary follow-up; have health insurance; receive health and developmental-related screenings; have access to mental health services as needed; and practice a wealth of health-promoting behaviors with children and families, including handwashing, toothbrushing, healthy eating, physical activity, and safety. An array of health-related services is also made available to pregnant women. While the HSHMDS provides a comprehensive picture of the array of health services provided by HS/EHS programs, in this section we focus on those that are most relevant for mental health, behavioral health, and social and emotional well-being.

Health Screenings, Referrals, Services, and Follow-Up

Health managers were asked to indicate, in a supplemental question, the specific health screenings offered by their program on-site and off-site, without charge, to HS/EHS children, selecting from a list of 14 health-related screenings or testing, including those that are explicitly mentioned in the Head Start performance standards (e.g., developmental, hearing, and vision), as well as others that are not explicitly required (e.g., blood pressure screening). Table 7 shows that screening for social-emotional development was almost universally offered, with most provided onsite at the HS/EHS program. Screening for mental or behavioral health was almost as common (95 percent of program), again dominated by provision at the program site.

Table 7. Provision of Free Health Screenings to Children in the Program Related to Mental Health, Behavioral Health, and Social and Emotional Well-being: All HS/EHS Programs

	Percentage Distribution				
Screening Type	**Do Not Provide**	**Provide On-Site**	**Provide Off-Site**	**Provide Both On-Site and Off-Site**	***[Missing or Don't Know]***
Social-emotional development screening	1.1	81.6	3.0	14.3	*7.2*
Mental or behavioral health screening	5.0	73.4	3.9	17.7	*7.0*

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 8.1.
NOTES: Based on 359 health manager respondents for 470 programs. Results are weighted to account for survey nonresponse. Percentage distributions are computed excluding cases for the missing or "don't know" categories and might not sum to 100 because of rounding. The percentages of cases that are missing or unknown is shown for reference.

Going beyond screening, health managers were asked about a list of 11 specific health services that health care providers might provide at the HS/EHS program site, including mental or behavioral health, physical health, oral health, and other health-related services (e.g., nutrition, physical therapy, speech therapy, laboratory services, and general health education). Mental and behavioral health care was one of the top services being offered on site in about two in three programs (Table 8), less common only than speech therapy (82 percent).

Table 8. Delivery of Mental or Behavioral Health Care by Health Providers at the HS/EHS Program Site: All HS/EHS Programs

Type of Health Care that Providers Come to the HS/EHS Program to Deliver On-site	**Percentage of HS/EHS Programs**
Mental or behavioral health care (e.g., counseling, treatment)	66.3
Number of health manager respondents (core)	1,465
Number of programs represented (core)	1,902

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 8.5.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentages of missing cases is 6.3 percent.

Further, health managers were also asked about the provision of health-related services in the home, as some HS/EHS programs offer home-based services with flexibility on the health-related services they provide, based on the needs of the family. Overall, as shown in Table 9, 42 percent of programs reported offering such services, and, among those programs, 42 percent reported the provision of counseling or other mental health services in the home. Thus, among all HS/EHS programs, about 18 percent of programs provide counseling or other mental health services in the home. As a comparison, programs are more likely to offer some other in-home health-related services such as teaching parents about supporting healthy behaviors (37 percent of programs overall), helping families enroll in health insurance (32 percent), providing nutritional services (26 percent), and conducting health screening (25 percent).

Table 9. Delivery of Mental Health Services in the Home: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Program provides health services or health programs in the home	42.0
Among programs offering services in the home, program provides counseling or other mental health services	41.9
Number of health manager respondents (core)	1,465
Number of programs represented (core)	1,902

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 8.7.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentages of missing cases is 6.8 percent.

Finally, health managers were asked about 20 different health-related services provided to pregnant women. Since these services are most relevant for EHS programs, Table 10 provides tabulations for that subset of HSHMDS respondents, specifically for three services that are most relevant for mental and behavioral health. Overall, nearly all EHS programs report providing services for pregnant women and they do so with a variety of supports. Notably, more than 95 percent of programs offer postpartum services, including for postpartum depression. EHS programs are also nearly as likely to offer referrals to various types of health-related supports, such as drug and alcohol cessation (84 percent) and smoking cessation (80 percent).

Karoly et al. (2016) report on the varied and multiple strategies programs use across all health areas to ensure that children receive the required screenings and follow-up with providers where indicated. Interviews with health managers further indicated concerns with capacity in the provision of these health-related services, particularly for mental health and social and emotional well-being. Screening for such issues can take considerable staff time, especially when completing a lengthy, family-based trauma assessment. In some cases, higher-order neuropsychological evaluations were required, which further taxed HS/EHS staff and the broader community-based provider network. In many instances, mental health providers were in short supply, and HS/EHS sites had to wait considerable time for these providers to come to the center to provide on-site services. Further evidence of such shortages comes from geocoded data

assembled as part of the HSHMDS which show that half of all HS/EHS programs are in counties with shortages of health professionals specific to primary care (50 percent) and mental health care (53 percent).

Table 10. Mental and Behavioral Health Services Offered to Pregnant Women: EHS Programs Only

Measure	Percentage of EHS Programs
Program offers services to pregnant women	93.9
Among programs offering services to pregnant women, program provides:	
Postpartum services, including information on postpartum depression	96.5
Referrals for drug and alcohol cessation	84.2
A referral for smoking cessation	79.7
Number of health manager respondents (core)	795
Number of programs represented (core)	726

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 8.9.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentages of missing cases is 8.9 percent.

Prevention and Health Promotion

As part of the survey supplement, health managers were asked to indicate the health topics being addressed with families (and children) in their programs from a list of 22 specific topics, with three topics particularly relevant for mental health, behavioral health, and social and emotional well-being as shown in Table 11.

Table 11. Prevention and Health Promotion Topics Related to Mental Health, Behavioral Health, and Social and Emotional Well-being Being Addressed with Families in the Program: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Health topics being addressed with families in the program	
Mental or behavioral health	78.3
Violence prevention (e.g., bullying, fighting, partner violence)	52.7
Alcohol or other drug use prevention or treatment	50.4
Postpartum health and care (e.g., depression)	78.7[a]
Number of health manager respondents (supplement)	357
Number of programs represented (supplement)	465

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 12.1.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases is 6.9 percent.
[a] Result is specific to EHS programs only.

Overall, 78 percent of HS/EHS programs report addressing mental health or behavioral health topics in one or more areas as part of the prevention and health promotion programming, consistent with the importance of health issues in this domain (first row of Table 11). When we asked about several specific mental and behavioral health topics, health managers in about half of HS/EHS programs reported addressing violence prevention (53 percent of programs) and alcohol or other drug use prevention and treatment (50 percent). Among EHS programs, about 79 percent address postpartum health such as depression. When asked about specific wellness topics covered for HS/EHS program staff (see Table 12), 60 percent reported addressing stress management, while 23 percent mentioned tobacco cessation as a covered topic.

Table 12. Prevention and Health Promotion Topics Related to Mental and Behavioral Health Being Addressed with Staff in the Program: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Wellness activities offered to staff members in the past year	
Stress management	60.4
Tobacco cessation	23.0
Number of health manager respondents (supplement)	376
Number of programs represented (supplement)	483

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 12.2.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases is 9.2 percent.

Using the Health Services Advisory Committee and Community Partners to Address Mental Health, Behavioral Health, and Social and Emotional Well-Being

Through the requirement for an HSAC, the Head Start performance standards recognize the importance of strong ties to health care providers, health experts, and other stakeholders in the local community. Thus, another objective of the HSHMDS study was to understand the nature and strengths of existing community partnerships and other resources that support the Head Start health services area. Information was gathered about community connections through the HSAC, as well as partnerships in the context of specific health services, including mental health, behavioral health, and social and emotional well-being. The study also considered broader partnerships with other community organizations.

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, differentiating between types of program staff and external members from the community. Categories of HSAC members relevant for helping programs address mental and behavioral health issues are included in Table 13. The survey results indicate that nearly three in four programs had one or more mental health staff from the program on the HSAC. Representation of behavioral health providers on the HSAC was somewhat less common (60 percent of programs).

Table 13. Health Services Advisory Committee Membership Related to Mental Health, Behavioral Health, and Social and Emotional Well-being: All HS/EHS Programs

Groups Represented on the HSAC	Percentage of HS/EHS Programs
Mental health staff	73.6
Behavioral health providers	59.5
Number of health manager respondents (core)	1,465
Number of programs represented (core)	1,902

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 5.3.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases is 5.4 percent.

Partnerships to Address Mental and Behavioral Health

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

- 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 about in the context of mental and behavioral health, as well as physical and oral health. We focus here is on findings with respect to the former.

As seen in Table 14, among the programs where the health manager could characterize the nature of their relationship with agencies or other community partners related to mental and behavioral health services, most reported relying on some combination of formal and informal agreements (60 percent) or formal arrangements alone (34 percent). (Note that the health manager in about 7 percent of programs responded "Don't know" to this question.) Health managers with formal mechanisms in place were asked to indicate what features were included in their partnership agreements, with a list of eight options. Where formal mechanisms are in place, those arrangements on average include five features out of the eight listed in the survey. The top feature is the provision of mental or behavioral health services to children and families at

HS/EHS sites (83 percent), followed closely by training for HS/EHS staff (80 percent) and consultation (79 percent). The majority of programs (62 percent) provide mental or behavioral health services for children and families off- site Other features—resources or payments to providers and services for pregnant women—are included in agreements with 40 to 50 percent of providers.

Table 14. Structure of Relationship with Community Partners for Mental and Behavioral Health Services: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Mechanism for coordination of mental and behavioral health services with other agencies or community partners (% distribution)	
Formal agreements or MOUs only	34.2
Informal interactions only	5.9
Both formal agreements and informal interactions	60.0
[Don't know]	*6.6*
[Missing]	*5.5*
For those with formal mechanisms (either alone or combined with informal interactions), features included in partnership agreements with mental or behavioral health care providers	
Average number reported (*N*)	5.0
Percentage for each feature (%)	
Resources or payments to providers	49.0
Training for HS/EHS staff	80.2
Mental and behavioral health services are given to children and families at HS/EHS sites	83.3
Mental and behavioral health services to HS/EHS children and families are given at other health sites/locations	61.7
Mental and behavioral health services are provided for pregnant women	46.5
Joint planning	47.4
Consultation	78.8
Outreach	36.9
[Missing]	*1.5*
Number of health manager respondents (supplement)	359
Number of programs represented (supplement)	470

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 10.1.

NOTES: Results are weighted to account for survey nonresponse. Percentages and percentage distributions are computed for nonmissing cases, and percentage distributions might not sum to 100 because of rounding. The percentage of missing cases is shown for reference.

Health managers were also asked to rate the nature of the relationship with several types of mental or behavioral health providers, using a four-point scale that ranges from no working relationship to a formal partnership or MOU.[5] Overall, as seen in Table 15, relationships with state or local agencies providing mental or behavioral health prevention and treatment services are most likely to be structured as formal partnerships (more than 80 percent in the upper half of the scale). Formal partnerships are also the norm with private, for- and non-profit mental or behavioral health agencies. HS/EHS programs, on average, are least likely to have working relationships with mental or behavioral health providers in hospitals.

Table 15. Structure of Relationship with Specific Service Providers During the Past 12 Months for the Provision of Mental and Behavioral Health Services: All HS/EHS Programs

	Percentage Distribution				
Provider Type	**No Working Relationship [0]**	**[1]**	**[2]**	**Formal MOU/ Partnership [3]**	***[Missing or Not Applicable]***
State or local agency/agencies providing mental or behavioral health prevention and treatment services	4.6	12.8	19.6	63.2	*14.7*
Private, for-profit mental or behavioral health providers	16.0	17.8	19.4	46.6	*17.0*
Mental or behavioral providers in hospitals	47.5	23.7	17.2	11.8	*30.7*
Mental or behavioral health providers in nonprofit agencies	13.3	20.4	28.3	38.0	*20.0*

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 10.2.
NOTES: Based on 359 health manager respondents for 470 programs. Results are weighted to 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. The percentages of cases that are missing or not applicable are shown for reference.

To learn about the adequacy of these partnerships, health managers were asked to rate the ability of their partnerships with mental and behavioral health providers to meet the health needs of the children they serve. The distribution of responses, shown in Table 15, from "very adequate" to "not adequate" is calculated exclusive of missing cases and the small fraction of cases where such relationships are not applicable (no more than 1 percent of cases). Overall, health managers in a majority of HS/EHS programs classified their relationships as "very adequate" (26 percent) or "adequate" (49 percent). A small percentage, 4 percent, provided a "not adequate" rating, but, together with those in the "somewhat adequate" group (21 percent), about one in four programs falls in the less-than-adequate end of the spectrum.

[5] These ratings and the associated percentage distributions are provided only when applicable. The last column in Table 15 shows the percentage of cases with missing data or where the provider type was not applicable. The missing data rate varies from 8 percent to 10 percent, so the remainder is the share of programs where the provider type is not applicable.

Table 16. Ability of Partnerships to Address Mental or Behavioral Health Needs of Children: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Describe ability of partnerships to handle mental or behavioral health needs of children in the program (% distribution)	
Not adequate	3.7
Somewhat adequate	20.5
Adequate	49.1
Very adequate	26.0
[Not Applicable}	*0.7*
[Missing]	*7.1*
Number of health manager respondents (core)	1,465
Number of programs represented (core)	1,902

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Table 10.3.
NOTES: Results are weighted to 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. The percentages of cases that are missing or not applicable are shown for reference.

To learn more about the shortfalls in current partnerships, health managers were asked to identify the health needs that are not currently being met (or met well) by the agencies and organizations that the programs work with. As reported in Table 17, three of the health needs are relevant for mental and behavioral health: behavioral health care, treatment for alcohol or substance use, and programs for smoking cessation. In each case, a sizeable minority of programs (28 to 35 percent) identified a gap in their existing partnerships. At the same time, when asked to identify agencies or organizations that the program is not working with now but would like to work with, just 13 percent indicated such a preference with respect to a community mental or behavioral health center.

Table 17. Gaps in Current Relationships with Partner Agencies and Organizations Related to Mental and Behavioral Health: All HS/EHS Programs

Measure	Percentage of HS/EHS Programs
Health needs not being met (or met well) by agencies and organizations program works with	
Percentage for each health need (%)	
Behavioral health care	28.0
Treatment for alcohol or substance use	30.3
Programs for smoking cessation	34.6
Health-related community partners not working with now but would like to have a relationship with	
Percentage for each partner (%)	
Community mental or behavioral health center	12.9
Number of health manager respondents (core)	1,465
Number of programs represented (core)	1,902

SOURCE: Authors' analysis of the Head Start Health Manager Descriptive Study's Health Manager Survey as reported in Karoly et al. (2016), Tables 13.4 and 13.5.
NOTES: Results are weighted to account for survey nonresponse. Percentages are computed for nonmissing cases. The percentage of missing cases is 19.4 percent.

CONCLUSION

Head Start has long recognized the importance of addressing mental health, behavioral health, and social and emotional well-being as part of its comprehensive approach to healthy child development. The HSHMDS provides important insights regarding the mental health, behavioral health, and social and emotional well-being domain, including the health issues that are most salient, the approach to staffing, the services and programming offered, and the linkages to community partners. As viewed by health managers, prominent issues in this domain that affect children in Head Start include developmental delays, ADHD or ADD, autism spectrum disorders, and child abuse and neglect. Mental and behavioral health issues also feature prominently among the health concerns that are considered most important for adult family members.

The approach HS/EHS programs take for staffing the health services area recognizes the need to address mental health, behavioral health, and social and emotional well-being, as health managers either also serve as the mental health coordinator or share responsibilities for addressing these health needs with the mental health coordinator on staff. Specialists on staff or serving as paid consultants or volunteers, such as social workers, psychologists, counselors, and early intervention experts also provide staff expertise and support service provision. At the same time, the need to address multiple domains of health—including mental health, behavioral health, and social and emotional well-being issues— with limited staff and resources, can leave health managers feeling overburdened. Topics related to mental health, behavioral health, and social and emotional well-being also figure prominently among those covered in training for health managers or program staff more generally. For the most part, the most prevalent training topics align with the mental health, behavioral health, and social and emotional well-being issues that are viewed as the major concerns for children and their adult family members.

HS/EHS programs offer an array of health services related to mental health, behavioral health, and social and emotional well-being consistent with the importance attached to this health domain. Screening for social-emotional development is near universal and mental and behavioral health care is delivered onsite in two out of three HS/EHS programs. Mental and behavioral health services or programs are less often made available in the home, but they are commonly offered to pregnant women in EHS programs, including supports for postpartum depression and referrals for cessation of tobacco, alcohol, and drugs. Prevention and health promotion activities offered by HS/EHS also cover mental health, behavioral health, and social and emotional well-being topics for both families and staff.

Finally, it is also evident from the HSHMDS that HS/EHS programs draw on array of mental and behavioral health experts and service providers in the community, to serve on the HSAC and to operate formal and informal partnerships for direct services, training, program guidance, and other supports. Although the majority of HS/EHS programs view their relationships with mental and behavioral health providers as adequate, there appears to be room to improve those

relationships for a quarter or more of programs. Up to one in three programs also identifies mental and behavioral health needs that are not being met and a small minority of programs would like to partner with a community mental or behavioral health provider. One issue with achieving those partnerships may be capacity constraints for those HS/EHS programs located in communities with shortages of mental and behavioral health providers.

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.

REFERENCES

Administration for Children and Families, *Depression in the Lives of Early Head Start Families*, Washington, D.C.: U.S. Department of Health and Human Services, Research to Practice Brief, 2006. As of October 1, 2016: http://www.acf.hhs.gov/opre/resource/depression-in-the-lives-of-early-head-start-families-research-to-practice

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.

Center on the Developing Child, *Early Childhood Mental Health*, Cambridge, Mass.: Author, 2013. As of October 1, 2016: http://46y5eh11fhgw3ve3ytpwxt9r.wpengine.netdna-cdn.com/wp-content/uploads/2015/05/InBrief-Early-Childhood-Mental-Health-1.pdf

Cummings, E. Mark, and Patrick T. Davies, "Maternal Depression and Child Development," *Journal of Child Psychology and Psychiatry*, Vol. 35, No. 1, 1994, pp. 73–122.

Currie, Janet and Maya Rossin-Slater, "Early-Life Origins of Life-Cycle Well-Being: Research and Policy Implications," *Journal of Public Policy Analysis and Management*, Vol. 34, No. 1, 2015, pp. 208–242.

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, 2016a.

———, *Addressing Overweight and Obesity in Head Start: Insights from the Head Start Health Manager Descriptive Study*, OPRE Report 2016-85, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016b.

O'Connor, Thomas G., Jonathan Heron, and Vivette Glover, "Antenatal Anxiety Predicts Child Behavioral/Emotional Problems Independently of Postnatal Depression," *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 41, No. 12, 2002, pp. 1470–1477.

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 Early Learning Outcomes Framework: Ages Birth to Five*, Washington, D.C.: Administration for Children and Families, U.S. Department of Health and Human

Services, 2015. As of October 1, 2016:
http://eclkc.ohs.acf.hhs.gov/hslc/hs/sr/approach/pdf/ohs-framework.pdf

———, *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

Shonkoff, Jack P., and Deborah A. Phillips., eds., *From Neurons to Neighborhoods: The Science of Early Childhood Development*, Washington, D.C.: National Academies Press, 2000.

U.S. Department of Health and Human Services, *Mental Health: A Report of the Surgeon General*, Rockville, Maryland: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, and National Institutes of Health, National Institute of Mental Health, 1999. As of October 1, 2016:
https://profiles.nlm.nih.gov/ps/access/NNBBHS.pdf