



# Evaluation of the Implementation of the Healthy Start Program: Findings from the 2016 National Healthy Start Program Survey

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Published online: 23 October 2018

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## Abstract

**Objectives** The Healthy Start Program has taken a community-based approach to improving maternal and child health outcomes among underserved populations for 25 years. Although the program has been evaluated in the past, it has not undergone a national evaluation since it was transformed in 2014. The purpose of this study is to present data from an early component of the latest national evaluation—the 2016 National Healthy Start Program Survey, which includes information describing grantees, the risk profile of participants served, and the scope of services offered to meet participant needs. **Methods** Ninety-five grantees completed the survey, and responses are reported at the aggregate level. Study analyses are descriptive. **Results** Grantees reported serving a population with a high-risk profile characterized by chronic medical conditions or risk behaviors. Most grantees conduct comprehensive needs/risk assessments for participants upon program entry, yet service delivery strategies were mixed, with some differences found by geographic region. Grantees provide a core set of services to participants, including case management and health promotion/education, and tend to refer participants to community providers for services that are deemed appropriate during individual risk assessments. While most grantees have protocols in place related to these priority services, participants may not have been universally offered all services across sites. **Conclusions for Practice** Although grantees often highlight their facilitation of service/care coordination with existing resources, findings suggest potential areas on which to focus strategic efforts to ensure that the Healthy Start Program is successfully bridging gaps in access and utilization of services for underserved communities.

**Keywords** Healthy Start · Program implementation · Community health · Evaluation

## Significance

The federal Healthy Start Program is responsible for providing health and social services, and conducting service coordination with community resources and systems of care, for poor and underserved women and children across the United States. Healthy Start recently launched a national evaluation

to assess how evidence-based program practices are meeting the goals of improving maternal health and reducing disparities in perinatal outcomes. This study reports the results of one national evaluation component—the implementation evaluation—designed to describe program components that impact participant outcomes and reveal potential gaps in service delivery for women and child Healthy Start Program participants.

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## Introduction

Persistent disparities underlie the nation's greatest public health challenges, and are driven by differences in pregnancy, perinatal, and child health outcomes (Mathews et al. 2015). Although the etiology of these differences is not well understood, social determinants of health are thought to play a key role in mediating outcomes among groups (Lorch and Enlow 2016). Social determinants of health include factors

such as economic stability, education, community/cultural contexts, and neighborhood characteristics, all of which impact health at an individual and population level (United States Department of Health and Human Services 2010a, b).

The Healthy Start (HS) program takes a community-based, multilevel approach to address social determinants of health. Under the national leadership of the Division of Healthy Start and Perinatal Services (DHSPS) within the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB), the program has expanded from 15 communities to include 100 grantees in 37 states across the United States (U.S.) and Washington, DC (42 U.S. Code § 254c-8). Healthy Start aims to improve maternal health and perinatal outcomes by facilitating access to comprehensive health and social services for high-risk women and children (through the first 2 years of life) in communities with rates of infant mortality at least one and a half times the U.S. national average, and high rates of other adverse perinatal outcomes (e.g., low birthweight, preterm birth, maternal morbidity and mortality). In support of this goal, HS program components are based on five strategic approaches: (1) improving women's health, (2) promoting quality services, (3) strengthening family resilience, (4) achieving collective impact, and (5) increasing accountability through quality improvement, performance monitoring, and evaluation (MCHB 2018).

Past research has found HS programming to be associated with increased healthy behaviors, improved perinatal outcomes, and reductions in average hospital expenditures (August et al. 2015; Caine et al. 2012; Kothari et al. 2014; Kramer et al. 2000; Salihu et al. 2009). These studies have mostly been conducted using community- or regional-level data, with limited ability to draw similar conclusions at the national level. The HS program has twice been nationally evaluated (HRSA 2006; HRSA 2012), yielding findings that informed the 2014 program transformation when combined with evidence from emergent research and quality improvement methodologies. This program transformation necessitated the current evaluation, to build on and fill gaps left by past work, due to data limitations in participant-level information. The goal of the current national evaluation is to examine associations between participant-, community-, and grantee-level characteristics and health and health care outcomes, and assess the impact of program activities on meeting HS objectives.

The 2016 National Healthy Start Program Survey (NHSPS) was one of the earliest components of the current national evaluation (Banks et al. 2017), aimed at collecting data on program implementation across the five key programmatic approaches, and informing the technical assistance needs of grantees. The purpose of this paper is to present findings from the NHSPS to better understand how closely services align with the mission and objectives of the

HS program through the following questions: (1) What are the characteristics of HS grantees and sites? (2) What is the risk profile of the populations being served by HS projects? (3) What services are being offered by HS grantees (either directly or through referrals)?

## Methods

### Survey

The 2016 NHSPS was developed by Mathematica Policy Research, administered as part of a cooperative agreement with John Snow Inc., and approved by the Office of Management and Budget in 2014 (OMB Control No. 0915-0338). The survey instrument was self-administered to grantees through a web-based application (average duration of 2 hours), and was programmed with internal skip patterns and range checks to ensure data accuracy. All 100 HS project directors were emailed a survey link with supporting materials. The survey does not contain questions that yield personally identifiable information, and survey data was reported at the aggregate (grantee) level. Respondents did not receive any incentives for completing the survey. The NHSPS was deemed not to be human subjects research by the HRSA Human Subjects Protection Administrator, and IRB review was not needed.

### Measures and Analysis

The survey questionnaire covered six key domains: (1) Services, Staffing, Outreach, and Retention; (2) Improving Women's Health; (3) Promoting Quality Services; (4) Strengthening Family Resilience; (5) Achieving Collective Impact; and (6) Increasing Accountability through Quality Improvement, Performance Monitoring, and Evaluation. Although many items were specifically developed for the NHSPS, questions were also drawn from existing surveys, including an iteration developed for a previous national evaluation (Brand et al. 2010; Drayton et al. 2015; Health Resources and Services Administration 2006). Study analyses were descriptive and conducted using STATA statistical software (STATA version 12.1, StataCorp, College Station, TX, 2012).

## Results

### Grantee Characteristics

A total of 95 grantees (95% response rate) reported on participants served and services provided through 341 distinct HS site locations (average of approximately three sites per

grantee) across the U.S. Most ( $n = 70$ ) were “urban” grantees (located within a designated urbanized area/cluster), while 20 were “rural” grantees (located within a designated rural area), and five were located within close proximity of the U.S.-Mexico border (i.e., within 62 miles of the U.S./Mexico border). Most were considered Level 1 grantees ( $n = 57$ ), while 22 were Level 2 grantees and 16 were Level 3 grantees. Level 1 grantees are “community-based programs” serving a minimum of 500 program participants, Level 2 grantees are “enhanced services programs” serving a minimum of 800 participants, and Level 3 grantees are “leadership and mentoring programs” serving a minimum of 1000 program participants. Healthy Start Programs primarily operated through community-based organizations (59%), community health centers (38%), or local health departments (37%).

Past work has shown that HS programs employ a diverse staff to best serve the needs of specific populations in each jurisdiction (Brand et al. 2010). Our analyses went further to suggest a differential reliance on full-time staff versus staff who work on a part-time or contractual basis. Grantees reported employing a total of 1010 full-time staff across 95 HS projects, and 520 part-time staff. Level 3 grantees appeared to rely more heavily on full-time staff (comprising 80% of their total employed staff), while part-time staff comprised a greater proportion of those employed by Level 1 and Level 2 grantees (67% and 64%, respectively). Grantees located in border communities also reported greater reliance on full-time staff (83% of their total employed staff).

## Participant Characteristics

Grantees reported providing direct services to 44,219 women during the grant year, which includes women who are pregnant, preconceptional (before pregnancy), or inter-conceptional (between pregnancies). Facilitating access to quality care during these time periods is associated with reduced risk of maternal and infant morbidity and mortality, and is highlighted as a core strategy of the HS program (Badura et al. 2008; Bryant et al. 2006; Johnson et al. 2006; Salihu et al. 2012). The program also served 24,706 children

up to the age of two. Finally, a total of 11,500 men were involved in HS project activities during the grant year, demonstrating a strategic prioritization of paternal involvement and family resilience (Salihu et al. 2014).

Past research has shown that the population of HS participants is primarily comprised of underserved racial/ethnic minorities, and that a large proportion do not have a high school education, have incomes less than 33% of the federal poverty level, and are not married (Meghea et al. 2014; Rosenbach et al. 2010). Table 1 shows results from several NHSPS questions that allowed us to expand on this work to build a profile of participants at risk and with high needs (Healthy Start Epic Center 2016; Meghea et al. 2014; Rosenbach et al. 2010). For example, approximately 70% of grantees reported that up one-quarter of all women participants smoked and/or used tobacco in any form, and/or were using alcohol or other drugs, upon program entry or during program participation. In addition, over half of grantees reported that up to one-quarter of women tested positive for chlamydia, any other STI, and/or HIV/AIDS, upon program entry.

## Services and Referrals

Tables 2 and 3 show the provision of services and referrals by HS programs for participants. Nearly all grantees offered comprehensive needs/risk assessments for participants, which enables HS programs to identify and tailor services that meet individual or family needs. Approximately one-third of grantees reported conducting these needs/risk assessments just once at the time of enrollment for both preconceptional/interconceptional and pregnant participants. An additional 19% of grantees reported conducting assessments for preconceptional/interconceptional participants twice per year, while the same number conducted more frequent assessments for pregnant women (i.e., every 3 months). With regard to content, most grantees reported screening all women for a broad range of risk factors, including chronic diseases (i.e., diabetes, hypertension, depression) and risk behaviors (i.e., substance use, domestic/intimate

**Table 1** Healthy Start participant risk characteristics reported by Healthy Start grantees, 2016 National Healthy Start Program Survey ( $N = 95$  Healthy Start grantees)

	Uninsured at time of program entry	Using tobacco in any form	Using alcohol, drugs, or any substance	Testing positive for HIV/AIDS	Testing positive for chlamydia	Testing positive for any STI
% of participants						
0–24%	76 (80.0)	66 (69.5)	72 (75.8)	76 (80.0)	56 (58.9)	64 (67.3)
25–29%	10 (10.5)	23 (24.2)	14 (14.7)	0	5 (5.3)	6 (6.3)
50–74%	6 (6.3)	3 (3.2)	4 (4.2)	0	1 (1.1)	1 (1.1)
75–100%	2 (2.1)	1 (1.1)	2 (2.1)	0	0	0

Results presented as count and percentage [ $n$  (%)] of grantees responding to survey questions

**Table 2** Healthy Start grantees reporting on services and referrals provided to Healthy Start participants who screen positive for risk factors, 2016 National Healthy Start Program Survey (N=95)

	Grantees <i>providing services</i> for women screening positive for risk factors	Grantees <i>making referrals</i> for women screening positive for risk factors
Risk factors		
Alcohol and drugs	15 (15.8)	84 (88.4)
Depression	40 (42.1)	77 (81.1)
Diabetes	21 (22.1)	71 (74.7)
Intimate partner violence	28 (29.5)	82 (86.3)
Overweight/obesity	29 (30.5)	69 (72.6)
HIV	16 (16.8)	65 (68.4)
Hypertension	19 (20.0)	69 (72.6)
Poor nutrition/physical inactivity	40 (42.1)	61 (64.2)
Smoking	41 (43.2)	75 (79.0)

Results presented as count and percentage [n (%)] of grantees responding to survey questions

**Table 3** Healthy Start grantees reporting on services provided to Healthy Start participants, 2016 National Healthy Start Program Survey (N=95)

	Participants received case management services	Participants received health education and promotion	Pregnant participants received perinatal depression screening	Preconceptional/inter-conceptional participants received perinatal depression screening	Child participants received socio-emotional screenings
% participants					
0–24%	0	2 (2.2)	2 (2.1)	5 (5.3)	29 (30.6)
25–49%	1 (1.1)	1 (1.1)	2 (2.1)	2 (2.1)	11 (11.6)
50–74%	3 (3.2)	1 (1.1)	5 (5.3)	8 (8.4)	14 (14.7)
75–100%	90 (95.7)	89 (95.7)	85 (89.5)	79 (83.2)	38 (40.0)

Results presented as count and percentage [n (%)] of grantees responding to survey questions

partner violence, healthy weight, nutrition/physical activity, smoking).

If participants screened positive for certain risk factors in their assessments, grantees reported that HS staff either offer services directly or refer participants to other providers/resources in the community. Most grantees directly offered services that may be considered the core of HS programming, such as case management services and health education and promotion. For example, 40% of grantees directly provided smoking cessation/education services to participants and 16% directly provided services related to drug/alcohol use, while over 80% referred participants to other community providers for these services. Another example relates to the treatment or management of illness—approximately 20% of grantees directly provided services related to diabetes, hypertension, or sexually transmitted infections (STIs) on site, while nearly 75% reported referring participants to community providers for related health services. When examining the provision of referrals for auxiliary services not directly related to the treatment or management of health conditions or behavioral risks, over one-third of

grantees reported that at least 75% of program participants were provided referrals for breastfeeding support, education services, and WIC/food assistance. When we stratified these results by geographic setting of grantees, we found that a higher proportion of urban grantees were directly providing several services as well as making referrals, compared with grantees located in rural or border regions (particularly services related to diabetes, hypertension, overweight/obesity, nutrition/activity, and smoking cessation/education). Urban grantees also provided referrals for nearly all types of support services to a greater proportion of HS participants, compared with rural or border grantees. Finally, analyses related to mental/behavioral care showed that 40–50% of grantees offered women participants perinatal depression screening at universal rates (either on-site or through a partner agency), and approximately 13% universally offered child participants socio-emotional screenings as well. Notably, women and children were reportedly offered these screenings by nearly all rural and border grantees, whereas the provision of services was more variable among urban grantees. In keeping with the aim of HS programs to promote healthy behavior

and reduce risk behavior, we found that most grantees offer education and counseling on a wide range of topics. Over 90% of grantees reported that case managers or home visitors deliver health education during client interactions, while 84% of grantees provide informational packets to participants at enrollment.

### Case Management and Outreach

Case management is as an important underpinning of many HS programs, particularly in terms of how staff work with participants to conduct periodic risk assessments, provide health education, and facilitate access to services for women and children. Women HS participants receive case management services until 2 years postpartum, and infants/toddlers are offered case management services up to the age of two. Nearly all grantees reported providing case management services to participants, and approximately 70% assign a single case manager to all types of participants, while 13–15% assign a team of case managers, and 30% decide on a case-by-case basis whether to employ a solo versus team approach, depending on participant risk level (Table 3). Nearly all grantees employed several modes of outreach for facilitating case management interactions, such as phone calls, home visits, face to face meetings outside of the home, and text messaging. The frequency with which these modes of outreach were employed did not differ based on geographic region of grantees.

### Service Coordination with Primary Care

Similar to case management, coordination between HS programs and primary care services in communities is a hallmark of most HS programming (Table 4). Nearly all grantees reported having protocols in place to assess whether women and children have a primary care provider (PCP), and if no established relationship exists, to link them with a PCP immediately upon program entry, regardless of perinatal stage. Most HS grantees do not offer primary care services to participants on site (with the notable exception of grantees in border regions—at least 60% of border grantees reported offering these services on site to women and infants), but facilitate service/care coordination through formal and informal partnerships with community providers. Informal partnerships (i.e., not established through a contract or memorandum of understanding) are more common, particularly among border grantees. Many of these “partner” PCPs are considered to be patient-centered medical homes, and reportedly offer a wide range of services through clinical sites (e.g., health centers or physician offices/HMOs). Nearly all grantees reported that partner PCPs offer chronic disease management, routine primary care, referrals for medical specialists, child immunizations, and routine pediatric

care to children, while at least 80% of grantees reported that partner PCPs also offer dental care and mental/behavioral health care. A majority of grantees offer enabling services to facilitate linkages of participants with these PCPs, such as scheduling appointments for participants and offering transportation or stipends for transportation. Having a HS staff member accompany participants to appointments was more commonly reported among rural and urban grantees, compared with border grantees. Although most grantees reported that just a small percentage (0–24%) of HS participants were uninsured upon entering the HS program, 76% of grantees offered assistance with insurance applications, 58% helped participants identify eligibility for public insurance programs, and 41% provided translation/interpreter services to assist with insurance application processes. Grantee tracking methods for HS participants once they are referred to other providers provided further evidence of how the program values the facilitation of community linkages. Nearly all maintain regular communication with participants after an initial service referral is given, and 78% maintain regular communication with the referred agency/facility, typically as part of routine case management.

### Discussion

We analyzed data from the 2016 NHSPS to describe 95 HS grantees, the risk profile of participants served, and the scope of services offered to meet their needs. Although HS is a national program with sites located across the U.S., it is in the unique position of providing targeted programming to high-risk, underserved populations that is tailored to the availability of services and providers in local communities. We found that most HS programs are focused on ensuring participants receive a breadth of health and support services, either directly or through referrals to community partners. Grantees typically provide a core set of services and facilitate linkages to ancillary services where appropriate. This facilitation begins with case management, consisting of a comprehensive needs assessment, development of a service plan, and follow-up between HS staff and participants. Services such as health promotion and education, screening for risk characteristics/behaviors, and care coordination with primary care providers, are conducted during most case management interactions. Although more HS grantees now offer case management to participants than reported in the past, the components of this approach have largely remained the same (Badura et al. 2008; Drayton et al. 2015). Case management continues to be mostly conducted through home visits, yet more evidence is needed to establish the effectiveness of this implementation approach on perinatal outcomes for women (U.S. Department of Health and Human Services 2010a, b).

**Table 4** Healthy Start grantees reporting on service and care coordination provided to Healthy Start participants, 2016 National Healthy Start Program Survey (N=95)

Primary care services are available on site for	
Women	37 (39.0)
Infants	33 (34.7)
% participants who receive linkage to medical home providers	
0–24%	8 (8.6)
25–49%	8 (8.5)
50–74%	6 (6.4)
75–100%	72 (76.6)
% participants receiving linkage to mental/behavioral health services	
0–24%	14 (14.9)
25–49%	18 (19.2)
50–74%	18 (19.2)
75–100%	44 (46.8)
Services offered by formal/informal partner primary care providers to which HS women participants are referred	
Chronic disease management	91 (95.8)
Dental care	76 (80.0)
Emergency services	73 (76.8)
HIV/STI testing	88 (92.6)
Routine primary health care	93 (97.9)
Medical specialists referrals	89 (93.7)
Mental/behavioral health care	82 (86.3)
OB/GYN services	91 (95.8)
Weight management	75 (79.0)
Referrals to social services	28 (29.5)
Services offered by formal/informal partner primary care providers to which HS <i>child</i> participants are referred	
Dental care	76 (80.0)
Emergency services	70 (73.7)
Immunizations	90 (94.7)
Medical specialist referrals	90 (94.7)
Mental/behavioral health care	76 (80.0)
Routine pediatric care	89 (93.7)
Referrals to social services	30 (31.6)
Methods of following participants once referred by HS to another provider <sup>a</sup>	
Chart review/medical record review	42 (44.2)
Case conference/team meeting	48 (50.5)
Regular communication between the participant and HS	93 (97.9)
Regular communication between the referred agency and HS	74 (77.9)

Results presented as count and percentage [n (%)] of grantees responding to survey questions

<sup>a</sup>Other providers include primary care providers, mental health service providers, or social service providers in the community

Healthy Start grantees primarily serve as a hub for community service coordination and systems integration, while providing certain services in a limited capacity. For example, most grantees conducted regular case management and education/counseling for risk behavior, yet referred participants to community providers for services related to cessation or other treatment (urban grantees proved to be an exception for several services). Participant needs for ancillary support services (e.g., employment, child care, transportation) were

referred to community sources at relatively low rates, which may point to gaps in service provision for needs related to the socio-cultural challenges often endemic to HS service populations (Rosenbach et al. 2010). It should be noted that grantee responses to survey questions about the provision of these types of services and referrals could have been community-specific and dependent on the availability of, or need for, services by each HS participant population served. The slight regional differences we found in service

provision could be due to a higher concentration of service providers in or near high-risk urban communities, compared with those in rural or border areas. Similarly, co-location of HS sites with community providers (e.g., community health centers) may explain differences in services and referrals. Our findings on the provision of perinatal depression screenings were mixed. For example, we found that screening for women was not universally conducted by HS programs or partner agencies for 100% of women. The most recent HS program performance goals in 2017 called for 100% of HS women participants to receive depression screening and referrals—a benchmark that may be challenging for some programs to meet based on NHSPS results reported here (Healthy Start Epic Center 2016). Past HS initiatives that focused on increasing the rate of maternal screenings have proven to be effective at identifying women at risk for depression and ensuring high rates of follow-up with referrals and treatment, and could inform best practices across HS sites (Segre et al. 2012). As expected, service/care coordination with PCPs, and the provision of enabling services to facilitate receipt of services, were more universally offered by HS grantees. For example, nearly all grantees reported that most participants were linked to a partner community PCP or medical home immediately upon HS enrollment, regardless of a woman's perinatal stage. These are positive findings in light of past HS evaluation work that showed increased rates of medical home linkages by HS programs to be associated with improved birth outcomes for participants (Drayton et al. 2015).

We must acknowledge several limitations in our study. First, survey data were self-reported by grantees and only available at the aggregate grantee level. Descriptive analyses informed a baseline understanding of how HS programs are functioning, but we could not draw conclusions about the effectiveness of HS in achieving intended maternal and child health outcomes. Similarly, the survey primarily contained questions about program components, with less emphasis on capturing participant characteristics, limiting our ability to fully assess the risk profile of participants or the social determinants of health that may impact this population. Another limitation is that the survey's multiple sections were likely completed by several different sources (e.g., program director and staff), which may introduce response bias if respondents had varying knowledge of program components or service delivery. Finally, the breadth of services offered and referred out by HS programs are impacted by availability and need within each community. Although programmatic priorities may be set at the national level for HS programs, there remains heterogeneity in how individual sites are organized and operate. This programmatic diversity across grantees precludes us from knowing the full scope of community- or population-level differences based on the NHSPS alone (Kotelchuck 2010). In addition, while we have

information on offered services and referrals, we know less about actual service utilization, whether participants followed through with referrals to seek care, or regional differences in proximity and concentration of support resources in HS communities. These are a few reasons why cannot confidently determine how closely services are aligning with HS program objectives based on survey results alone.

Our findings reflect many of the same challenges identified in previous HS evaluations, suggesting that the continued variability of services implemented at the community level may not align with participant needs nor national HS objectives in the most optimal way (Brand et al. 2010; Kotelchuck 2010; Rosenbach et al. 2010). However, the NHSPS is just one component of the current national program evaluation, which builds on prior evaluations conducted at earlier stages of program maturity (Kotelchuck 2010). Although these previous evaluations informed program fidelity (i.e., how well program components were implemented), several factors precluded researchers from evaluating the impact of the national HS program on target outcomes and objectives, including data limitations (e.g., lack of infant vital statistics or comparison groups), lack of longitudinal data on participants, and non-standard or inconsistent collection of program data (Banks et al. 2017). The current evaluation aims to overcome these challenges by collecting objective health and utilization data, in a systematic and longitudinal way, about women at all perinatal stages and children up to the age of two. The HS program is an important component of a complex system of resources and providers that serve high-risk, medically-underserved communities, with the capacity to bridge gaps in access and service delivery for those most in need. The rigorous and methodologic evaluation of this and other safety-net programs will inform efforts to address infant mortality, reduce health and health care disparities, and improve maternal and child health outcomes in a strategic and far-reaching way.

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