FINAL REPORT

Black Infant Health Evaluation

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EXECUTIVE SUMMARY

Black Infant Health Evaluation

Introduction

The California State Legislature passed Senate Bill 165 of the Budget Act of 1989 establishing the Black Infant Health (BIH) Program to reduce health disparities and improve pregnancy and birth outcomes in the African American community. The BIH Program delivers services and supports to pregnant and postpartum women in a culturally competent manner and builds on client strengths to empower women to make productive health decisions for themselves and their children.

There are three local health jurisdictions (referred to as "BIH providers or provider sites" in the report) implementing the BIH Program in Los Angeles County:

1. Long Beach Department of Health
2. Los Angeles County Public Health Department
3. Pasadena Department of Health

In 2010, the BIH Program began to implement a revised BIH Program model. Only Pasadena and Long Beach began implementing the revised model in July 2011. The current study is not an evaluation of the revised model.

Evaluation Purpose and Overarching Questions

There are three primary objectives of the evaluation:

1. To understand the extent to which the BIH Program is achieving the desired goals of improving pregnancy and birth outcomes for African American women and infants;
2. To provide insight into the mechanisms through which positive outcomes are being achieved;
3. To gather the lessons learned about program implementation and sustainability to help shape future planning and implementation processes.

The overarching outcome questions are:

- To what extent do BIH clients have similar pregnancy, birth, and breastfeeding outcomes to comparative populations in Los Angeles County?

- To what extent are disparities in pregnancy, birth, and breastfeeding outcomes among BIH clients reduced in comparison to mothers and infants of other racial groups?
- To what extent have the BIH Program providers improved pregnancy, birth, and breastfeeding outcomes?
- How do the intensive family strengthening strategies of case management, parent education, and home visitation influence program outcomes?[1]

The overarching process questions are:

- Reflecting on the experiences to date of implementing the original BIH model, what factors have facilitated and hindered the delivery of case management, parent education, and home visitation services to the African American community? How are lessons learned from these experiences being translated to inform implementation of the revised model?
- Presently, what have been the experiences of administrators and direct practice staff during this process of transition to the revised BIH model, and what are the lessons learned?
- Looking ahead, what future resources/supports do the sites anticipate needing both internally and from First 5 LA in order to successfully achieve the goals and objectives of the revised BIH model?
- Are BIH clients satisfied with services provided?

Study Methods

Design

The quantitative study of outcomes employed a quasi-experimental design that compares BIH clients to comparative samples in Los Angeles County. The qualitative component of this evaluation included focus groups and interviews to provide a cross-sectional look at BIH Program processes and outcomes from multiple stakeholder perspectives. (For a detailed description of the study methods, see Appendix A in the full report.)

Data Sources and Samples

The primary data source for analyses on BIH clients was the Black Infant Health Management Information System (BIH-MIS). Two sets of population-level data were also analyzed as comparative data sets to compare and contrast findings for the BIH Program. The data sources were the Women, Infant and Children (WIC) Survey (N=1,509) and birth records from Vital

[1] These are three of the four family strengthening strategies included in First 5 LA's FY2009-2015 Strategic Plan.

Statistics (N=173,533). (For a detailed description of each sample, see Appendix A in the full report.)

Focus groups and individual phone interviews with three groups of stakeholders (clients, direct practice staff, and administrators) were conducted in every BIH provider site.[2] Altogether, 29 clients, 14 direct practice staff, and 14 administrators participated in qualitative data collection activities. (See Appendix B in the full report for the focus group and interview protocols).

Summary of Findings

The evaluation was designed to explore key components of the BIH conceptual model. The quantitative findings addressed the main questions about the BIH Program's effects on pregnancy, birth, and breastfeeding outcomes. The qualitative findings identified intermediary outcomes and mechanisms of change, and helped explain the conceptual links between those mechanisms, strategies, and outcomes. The model based on the evaluation findings (see Figure 1-ES) supports and further illuminates the BIH conceptual model. Our model is consistent with the revised BIH conceptual framework in that we found similar intermediary outcomes.[3] In addition, our model describes in further detail the mechanisms of change that appear to influence those outcomes (in the BIH model, these are referred to as "activities"). Another difference is that our model does not address community change – rather, it focuses on practice at the direct service level.

To summarize the evaluation findings, we first present the primary effects of the BIH Program on pregnancy, birth, and breastfeeding outcomes. This is followed by a summary of the intermediary outcomes achieved by the BIH Program; mechanisms at work within the strategies of case management, home visiting, and parent education; facilitating factors and barriers to implementation; and future program sustainability and support.

Program Effects on Pregnancy, Birth, and Breastfeeding Outcomes

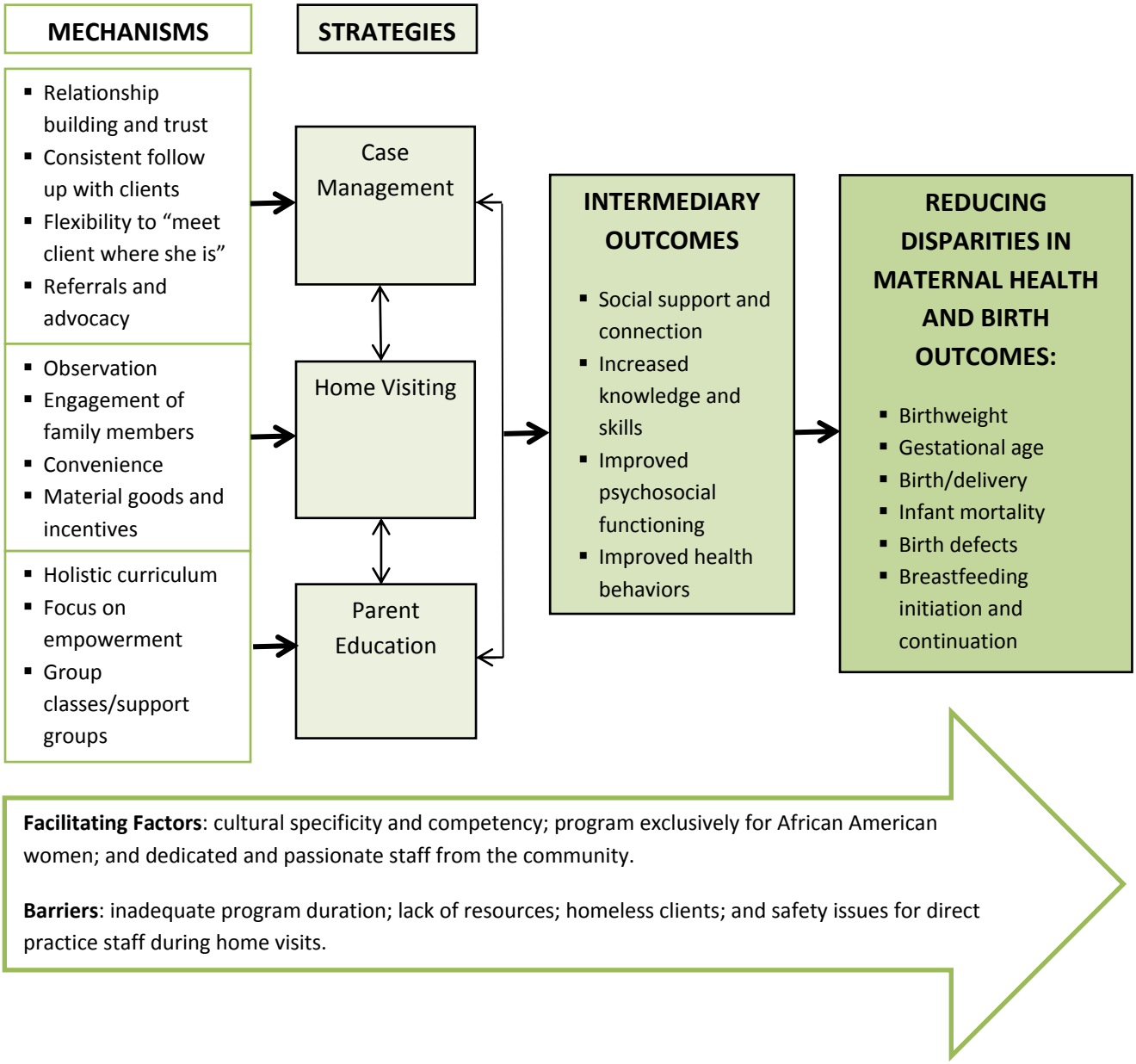
The findings below suggest that the BIH Program is making a positive impact on BIH clients by reducing the disparities in pregnancy, birth, and breastfeeding outcomes for African American

[2] Direct services through BIH are provided by various staff we refer to as "direct practice staff". These staff members comprise multidisciplinary teams that provide outreach, care coordination, health education, and advocacy, but they do not provide clinical services.

[3] (Go to http://www.cdph.ca.gov/programs/bih to access the *BIH Fact Sheet* and the *BIH Conceptual Framework* documents for an overview of the revised model and program activities.)

women and their infants in several outcome areas.[4] The findings for pregnancy, birth, and breastfeeding outcomes – for which data were available for comparative analysis – are summarized in the context of the evidence we have describing BIH clients as being at greater risk for poor pregnancy and birth outcomes.

Figure 1-ES. Evaluation-Generated Findings of Relationships between Program Mechanisms, Strategies, and Outcomes



[4] Note that no statistical analyses were conducted for this evaluation because data for the BIH Program were available only in the form of aggregated reports.

Birth Defects

A larger proportion of BIH clients had babies born without birth defects (96.4%) compared to both the general population of births in Los Angeles County (93.2%) and births by African American mothers in the County (91.1%). The proportions of babies born without birth defects were similar across the BIH providers. Given that a larger proportion of BIH clients reported pregnancy problems, these findings suggest that the BIH Program is effectively helping its clients with health management and access to quality prenatal care through the key strategies of case management, home visiting, and parent education.

Infant Mortality

The infant mortality rate for the BIH sample (.6%) was lower than that of African American mothers in Los Angeles County (1.9%) and nationally (1.3%).[5] The infant mortality rates across the BIH providers ranged from zero to 2%. These findings overall suggest that the BIH Program is effectively educating its clients about Sudden Infant Death Syndrome, for example, and is helping mothers to care for their infants so that they thrive.

Breastfeeding

The breastfeeding initiation rate for the BIH sample (69.1%) fell somewhere between the rates reported for the WIC Survey sample (49.6%) and African American mothers in Los Angeles County (79.4%).[6] At the same time, the rate for the BIH sample was higher than the State rate (66.7%) as well as the national rate (54.4%) for African American mothers.[7] *Overall, the breastfeeding initiation rates for BIH were positive, especially for the Pasadena and Long Beach providers who exceeded these comparative rates. The qualitative findings supported positive change in knowledge and attitude toward breastfeeding*. However, while breastfeeding initiation rates for the BIH sample were generally positive, the rate of breastfeeding continuation for the recommended six months was lower (14.3%) than the national rate for African American mothers (26.6%).[8]

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[5] National Center for Health Statistics (September 2011). MacDorman, M. F. & Matthews, T. J. NCHS Data Brief No. 74. *Understanding racial and ethnic disparities in US infant mortality rates*. US Department of Health and Human Services: Center for Disease Control and Prevention. Atlanta, GA.

[6] Los Angeles County Department of Public Health (April 2011). *Los Angeles Mommy & Baby (LAMB) Project 2007 surveillance report: A survey of the health of mothers and babies in Los Angeles County*. Los Angeles, CA: Maternal, Child, & Adolescent Health Programs.

[7] Centers for Disease Control and Prevention (March 2010). *MMWR: Racial and ethnic differences in breastfeeding initiation and duration, by State – National Immunization Survey, United States, 2004-2008*. US Department of Health and Human Services: Center for Disease Control and Prevention. Atlanta, GA.

[8] Ibid.

Cesarean Births

The proportion of Cesarean births for the BIH sample (42%) was comparable to that of the general population of African American mothers in Los Angeles County (40%) but was higher than the national rate for African Americans (34.4%).[9] *The rates for Long Beach and Los Angeles were comparable to the County rate for African American mothers, but the rate for Pasadena was closer to the overall national rate (32%)*.[10] The proportion of Cesarean births at 42% for BIH clients overall was 10% higher than the national rate. This disparity implies that greater emphasis can be placed on parent education (e.g., information on necessary and unnecessary Cesareans) and case management (e.g., developing birth plans and advocating on behalf of clients), as well as greater engagement and education of health providers to reduce unnecessary Cesarean births.

Preterm Births

The rate of preterm births was lower for BIH clients (13.2%) than African American women in Los Angeles County (16.3%) and nationally (17.5%).[11] However, the preterm birth rate in Long Beach was considerably higher than other providers as well as County and national rates. *Overall, especially given the risk factors of BIH clients (including a larger proportion who reported late initiation of prenatal care), these findings suggest that the BIH Program – in particular the Pasadena and Los Angeles providers – is effective in helping its clients carry their pregnancy to full term*.

Birthweight

The proportions of BIH clients delivering babies with very low birthweight (3.6%) and low birthweight (12.8%) were higher than the rates for African American mothers in Los Angeles County (2.7% for very low birthweight and 9.9% for low birthweight). There was large variation across the BIH provider sites in birthweight (e.g., rates for low birthweight varied as much as 16% across providers). Overall, this finding, at face value, questions whether certain risk factors of BIH clients (i.e., the interplay between pregnancy problems, later initiation of prenatal care, and possibly social isolation and lack of support) present challenges to the BIH Program to achieve normal birthweight at the level of the general population.

[9] National Center for Health Statistics (March 2010). Menacker, F. & Hamilton, B. E. *Recent trends in Cesarean Delivery in the United States*. US Department of Health and Human Services: Center for Disease Control and Prevention. Atlanta, GA.

[10] Ibid.

[11] National Center for Health Statistics (May 2010). Martin, J. A., Osterman, M. J. K., & Sutton, P. D. *Are preterm births on the decline in the United States? Recent data form the National Vital Statistics System*. US Department of Health and Human Services: Center for Disease Control and Prevention. Atlanta, GA.

Intermediary Outcomes, Strategies, and Mechanism of Effective Service Delivery

The qualitative findings supported the BIH theory of change (or conceptual model), which posits that program participation is associated with several important intermediary outcomes. Study participants reported *increased social support and reduced isolation*; *increased mastery of health and parenting knowledge and skills*; *positive psychosocial change*; and *health-promoting behaviors*, such as accessing prenatal care and choosing to breastfeed. These findings were consistent with the BIH theory of change and literature that relates these intermediary outcomes to maternal health and birth outcomes (Braveman et al., 2008).

Within the three direct practice strategies of case management, home visiting, and parent education, several mechanisms were identified by focus group and interview respondents as being instrumental for influencing intermediary outcomes (see Figure 1-ES). Within the strategy of case management, stakeholders stressed the importance of *relationship building and trust, consistent follow up with clients, flexibility to "meet the client where she is",* and *referrals and advocacy. Observation of the home environment, engagement of family members, convenience,* and the *provision of material goods (e.g., diapers, wipes) and incentives* were identified as important mechanisms at work in home visiting. The specific mechanisms of offering *group classes and support groups,* providing a *holistic curriculum,* and *focusing on empowerment* through parent education were also identified.

The strategies of case management, home visiting, and parent education were consistently described as being interlaced in a mutually reinforcing manner. The effectiveness of the braided strategies – versus the impact of any one strategy alone – is an important lesson learned that, according to stakeholders, may have implications for the success of the revised BIH model.

Facilitating Factors and Barriers to Implementation

The clients we spoke with during focus groups were highly satisfied with the BIH Program, in particular its specific focus on and exclusive service to African American women. This *cultural specificity and competency* of the BIH Program figured prominently as a facilitating factor of successful implementation, especially the *employment of paraprofessionals from the community* as direct practice staff. The *passion and dedication* exhibited by these paraprofessional direct practice staff were also identified as important facilitating factors. Some worried that the revised model, with its stronger focus on group facilitation, might change the role of paraprofessionals and their dynamic with BIH clients.

As might be expected, stakeholders identified funding from First 5 LA as a facilitating factor of BIH Program implementation. Stakeholders likewise identified implementation barriers that could be addressed through greater funding support. Among these barriers were *inadequate*

program length and *lack of internal program and external community resources to address mental health issues* that compromise quality care.

Sustainability and Support

Direct practice staff and administrators from the two BIH provider sites that had received training on the revised model from the California Department of Public Health unanimously praised the training. Further, they expressed enthusiasm about the move toward evidence-based practice through standardization of the model across BIH provider sites, and they applauded the comprehensive measurement and evaluation approach. Still, administrators and direct practice staff across all sites expressed reservations that may have important sustainability implications down the road. Specifically, the revised model appears to distance itself from home visiting in favor of group classes. Stakeholders fear this may negatively impact the formation of close bonds between direct practice staff and clients that appear to be important for client satisfaction and retention. The screening process in the revised model also was criticized for its potential to exclude women at the front end. In addition, the mandatory class attendance requirements were criticized for failure to respect client realities (e.g., transportation and time commitment) and the potential to lose clients to attrition over the service delivery period. Finally, direct practice staff and administrators requested further training support and they noted the importance of greater communication between the department and First 5 LA to present a clear and consistent message about goals and expectations for implementing the BIH Program. As the BIH Program continues to transition to the revised model, these lessons learned should be considered to ensure that future practice borrows from the strengths of the past.

Recommendations

Based on these evaluation findings of the BIH Program in Los Angeles County, practice and research recommendations are offered.

Practice Recommendations

- Continue to provide case management, home visiting, and parent education with a focus on the mechanisms that BIH Program stakeholders have reported as being effective at promoting intermediary outcomes to improve pregnancy/birth outcomes such as birthweight.

- Continue to provide breastfeeding education and support to BIH clients, including:
    - Preparing women for the realities of breastfeeding;
    - Encouraging women to breastfeed as long as possible; and
    - Offering tangible support (e.g., breast pumps) and emotional encouragement while women are breastfeeding.
- Continue to focus on cultural competency and appropriateness of the staff, especially by continuing to employ paraprofessionals from the African American community as direct practice staff.
- Train paraprofessional staff on facilitation skills so that they can successfully transition to the revised BIH model given its emphasis on group facilitation.
- Provide ongoing professional development training to direct practice staff in an effort to maintain high quality service and high levels of job satisfaction.
- Continue to train and support BIH direct practice staff and administrators on the revised model, including its MIS system and data collection procedures.
- Explore additional funding sources that will allow the BIH Program to:
    - Lengthen the program to help women and children through 24 months postpartum;
    - Increase the type and amount of mental health services available; and
    - Hire additional staff to enhance quality care and/or increase program reach.
- Share successes and challenges across the BIH jurisdictions/provider sites on a regular basis to promote best practices and peer-learning. The evaluation found differences in outcomes across BIH providers in some areas. The BIH providers could use the cross-site sharing opportunities to discuss the findings and to implement appropriate strategies to improve practice.
- Improve direct communication between First 5 LA and the California Department of Public Health so that there is a clear and unified message about goals and expectations.

Research/Evaluation Recommendations

- Test the relationships between mechanisms, intermediary outcomes, and pregnancy, birth, and breastfeeding outcomes in future studies of the BIH Program. Use mixed methods to gather quantitative and qualitative data that together more fully capture the nuances of program processes, outcomes, and the relationship between processes and outcomes.
- Measure client risk and protective factors, taking into consideration the intermediary outcomes as potential predictors of pregnancy, birth, and breastfeeding outcomes. For example, measure the client's social support and connection over time to examine changes in these outcomes, and test these measures as mediators of maternal health and birth outcomes.

- Establish a memorandum of understanding with the California Department of Public Health to access raw data for the BIH Program sites that First 5 LA is funding. This will ensure that future studies and evaluations of the program are based on client-level data rather than aggregated reports.
- Evaluate the implementation of the revised BIH model to assess the process and progress toward achieving positive birth and maternal health outcomes. As part of an evaluation or quality improvement process, collect ongoing feedback on the experiences of clients, direct practice staff, and administrators with the revised model. Communicate the feedback regularly and expediently to the BIH provider sites. Provide necessary technical assistance and support, including a cross-site forum through which administrators and direct practice staff can share their experiences and lessons learned.

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Introduction

Overview of Black Infant Health Program

For more than 20 years, the Black Infant Health (BIH) Program has operated through the Maternal, Child, and Adolescent Health Division of California's Department of Public Health as the centerpiece of efforts to reduce health disparities and improve pregnancy and birth outcomes in the African American community. This goal is predicated on an abundance of evidence that indicates that a disproportionate number of African American mothers and their infants have poor health and birth outcomes (National Center for Health Statistics, 2011). Although evidence on these disparities is abundant, the evidence *explaining* this disparity is less so. That is, these disparities are typically explained by risk factors such as lack of health knowledge, lack of access to quality health care, poverty, racism, social isolation, and environmental stressors (Braveman et al., 2008; Dubay et al., 2001; Webb et al., 2003). Conversely, protective factors such as social support and health education support are credited with improving pregnancy and birth outcomes (Feldman et al., 2000; Oakley et al., 1990). However, evidence on how these factors interact – and how these factors play out similarly or differently for African American women – is not plentiful (Collins & Butler, 1997; Shinono et al., 1997). For example, the literature points to poverty as a strong predictor of poor pregnancy and birth outcomes and suggests that getting out of poverty improves these outcomes. Yet this interaction is less relevant for African American women (Colen et al., 2006).

The BIH Program operates under a theory of change that is consistent with the literature on risk factors. The complexity of these risk factors requires a comprehensive and integrated programmatic strategy that addresses all levels of the problem, including individual, service system, community, and societal levels. The model, in practice, has prominently featured such activities as providing health education to clients, linking them to needed services, and enhancing their social support and connections to family and community resources (California Department of Public Health, 2010).[1] The BIH Program delivers services and supports to pregnant and postpartum women in a culturally competent manner. It is purposefully designed

[1] Refer to the *Policies and Procedures* document at http://www.cdph.ca.gov/programs/bih for a discussion of the history of the BIH Program, including the models listed above.

to build on client strengths and to empower women to make productive health decisions for themselves and their children. Direct services through BIH are provided by various staff we refer to throughout the report as "direct practice staff". These staff members comprise multidisciplinary teams that provide outreach, care coordination, health education, and advocacy, but they do not provide clinical services.

Throughout its long history, implementation of the BIH Program has remained flexible to local context and needs. In fact, although six separate models were originally envisioned as part of the BIH Program, only one of those models, Prenatal Care Outreach and Care Coordination, has been required as part of implementation of the BIH Program. Other models, such as Comprehensive Case Management and Social Support and Empowerment, have been optional. Sites have been free to implement any number of other locally specific activities at the individual, group, and/or community level as part of their program delivery. Each jurisdiction delivers a slightly distinct set of services based on available local resources to address unique community needs. For example, the Pasadena and Long Beach sites are located within their respective city health departments, whereas the Los Angeles program is delivered through five separate community-based agencies.

Local variation and program flexibility can be important; however, the overall lack of standardized implementation across BIH Program sites over the years has made it difficult to conduct rigorous cross-site evaluations that provide evidence concerning the effectiveness of the model. Therefore, the BIH Program began to implement a single core model in 2010, starting with a few pilot sites across the State. This revised model draws from current knowledge and promising practices to achieve program objectives through a combination of enhanced case management services and group intervention consisting of 10 prenatal and 10 postpartum education classes.[2]

First 5 LA provides funding to three local health jurisdictions implementing the BIH Program: Los Angeles County Public Health Department has five BIH providers, and the Pasadena and Long Beach Departments of Health each implement one BIH Program. (Throughout this report, the terms "BIH provider" and "BIH provider sites" are used interchangeably to refer to the three local health jurisdictions implementing the BIH Program.) Pasadena and Long Beach began implementing the revised BIH model in July 2011. Due to its size and number of BIH provider agencies, Los Angeles has a longer timeline for implementation. It is important to note none of the BIH providers in Los Angeles County implemented the revised model during the timeframe of this evaluation.

[2] (Go to http://www.cdph.ca.gov/programs/bih to access the *BIH Fact Sheet* and the *BIH Conceptual Framework* documents for an overview of the revised model and program activities.)

Evaluation Objectives and Overarching Study Questions

The principal objectives of the BIH evaluation were threefold. First, this evaluation aimed to understand the extent to which the BIH Program is achieving the desired goals of improving pregnancy and birth outcomes for African American women and infants. The evaluation findings are meant to contribute to the knowledge base of pregnancy and birth disparities across racial groups, especially between Caucasian and African American mothers and their infants – for whom the disparities are typically the largest.[3]

Second, the evaluation was meant to provide insight into the mechanisms through which positive outcomes are being achieved in the BIH Program. As part of this objective, there was particular focus on helping to identify successful practices with respect to intensive family strengthening strategies, which represent a central component of First 5 LA's Strategic Framework.[4] The strategies that support intensive family strengthening are case management, parent education, home visitation, and integrated early childhood education with family support. The BIH evaluation specifically explored case management, parent education, and home visitation because the BIH Program implements these practices as part of their model. These three strategies were explored to address *what*, *how*, and *why* specific components within the strategies are successful with African American women.

Third, the evaluation was conducted to capture the lessons learned that can help to shape future planning and implementation processes, especially in the context of changes to the BIH Program model. Because the three BIH providers are transitioning to the revised BIH Program model, the evaluation assessed the supports (within each BIH Program and funded through First 5 LA) that are necessary to implement the revised model. Moreover, the evaluation was meant to help inform sustainability strategies for the BIH Program and its best practices. The evaluation findings and practice recommendations based on the findings identify these strategies.

We conducted a multiple methods evaluation that focused on quantitative outcomes and looked closely, via qualitative methods, at how practices influence outcomes, and the successes and challenges of implementing the BIH Program.

[3] Throughout this report, we use the following descriptors for racial groups: African American, Asian, Caucasian, Hispanic, Pacific Islander, and "other". These are technically racial groups versus ethnic groups (we do not have data broken down by ethnicity). Asian and Pacific Islanders are typically included among "other" races because of their small sample sizes in our analyses.

[4] See First 5 LA's FY2009-2015 Strategic Plan.

Outcome Evaluation

The primary outcomes of the BIH Program that were studied for the evaluation are: [5]

- To reduce the incidence of low birth weight babies
- To reduce the incidence of preterm births
- To reduce infant deaths
- To reduce birth defects
- To improve delivery outcomes (e.g., reduce unnecessary Cesareans)
- To increase breastfeeding initiation and continuation

The purpose of the outcome evaluation was to examine BIH Program outcomes across all three BIH providers funded by First 5 LA. We examined outcomes by: (a) analyzing secondary data to compare population-level outcomes against those of BIH clients, and (b) collecting qualitative data from a range of stakeholders to examine their observations and experiences with respect to program processes and influences.

The overarching outcome questions were:

- To what extent do BIH clients have similar pregnancy, birth, and breastfeeding outcomes to comparative populations in Los Angeles County?
- To what extent are disparities in pregnancy, birth, and breastfeeding outcomes among BIH clients reduced in comparison to mothers and infants of other racial groups?

Qualitative data were gathered to explore additional questions related to BIH Program outcomes and factors that influence the outcomes:

- To what extent have the BIH Program providers improved pregnancy, birth, and breastfeeding outcomes?
- How do the intensive family strengthening strategies of case management, parent education, and home visitation influence program outcomes?

Process Evaluation

The second evaluation component examined implementation processes to reflect on lessons learned from delivering the original BIH model and to inform implementation, improvement, and sustainability of the revised model. We investigated the following overarching research questions using qualitative methods:

[5] Another outcome is to reduce maternal death. There was one death of a client reported. Further analysis of this outcome was not conducted for the evaluation because this information was reported as part of the reason for closing the case. No contextual information about the client death was provided.

- Reflecting on the experiences to date of implementing the original BIH model, what factors have facilitated and hindered the delivery of case management, parent education, and home visitation services to the African American community? How are lessons learned from these experiences being translated to inform implementation of the revised model?
- Presently, what have been the experiences of administrators and direct practice staff during this process of transition to the revised BIH model, and what are the lessons learned?
- Looking ahead, what future resources/supports do the sites anticipate needing both internally and from First 5 LA in order to successfully achieve the goals and objectives of the revised BIH model?
- Are BIH clients satisfied with services provided?

Study Methods

Quantitative Methods

Summary of Methods

This was a retrospective quasi-experimental study using secondary data to compare BIH clients to two comparative samples of mothers and infants in Los Angeles County. The primary data source for analyses on the BIH sample was the Black Infant Health Management Information System (BIH-MIS) aggregated reports. The BIH sample for the outcome evaluation included a total of 2,348 clients across all three providers. The clients represented in the BIH sample participated in the program sometime between 2008 and the first six months of 2011.

The first comparative sample (a total of 1,509 mothers) represented recipients of the Women, Infants and Children (WIC) program who participated in the WIC Survey in 2008. The second comparative sample (a total of 173,533 mothers) from Vital Statistics birth records represented the general population of Los Angeles County. (For more details on the quantitative methods for this evaluation, refer to Appendix A.)

Analytic Assumptions

It is important to note the underlying assumptions for comparing the outcomes between the BIH sample and the comparative samples. Since the population-level data being used for comparisons did not provide a matched sample in terms of risk factors and all relevant demographics (other than education and mother's age), the outcomes were compared in

relative terms. Out of the two comparative samples, WIC clients most closely "resembled" BIH clients in terms of socioeconomic status (low income is the primary eligibility criterion for WIC).[6] Yet WIC clients overall are not at high risk for pregnancy/birth problems, and while low income is a risk factor that is correlated with poorer birth outcomes, it alone is not a sufficient indicator of risk. (A number of the findings in this evaluation further suggest that WIC clients are at lower risk than BIH clients.) Therefore, BIH outcomes that are similar to WIC outcomes would suggest that the BIH Program is *improving* outcomes for its clients. However, if BIH outcomes are worse than WIC outcomes, we would not necessarily conclude that the BIH Program is ineffective. Such a finding is more difficult to interpret since it is unclear whether the outcomes are worse because of the higher risk of BIH clients or because the BIH Program did not improve these outcomes. The same is true for the Vital Statistics sample. Similar outcomes or better outcomes among BIH clients compared to the Vital Statistics sample would suggest even *greater* improvements for BIH clients because this comparative sample is lower risk. Although specific indicators of risk are not available to tease out degree of risk, the Vital Statistics sample represents the general population, which has fewer risk factors than BIH clients as a whole.[7]

Another gauge of the relative improvement of BIH client outcomes in this situation would be other African American women. County, State, and national statistics on African American mothers and their infants provided another basis for comparison. African American women are generally at higher risk for poor pregnancy and birth outcomes. Outcome disparities are particularly pronounced between African American and Caucasian women – even after controlling for education, socioeconomic status, and prenatal care (e.g., Collins & Butler, 1997 and Shinono et al., 1997). Therefore, our analytic assumption in comparing BIH clients to other African American women either in the County, statewide, or nationally is that BIH outcomes that are comparable to or better than those of other African American women indicate improvement because BIH clients are generally at greater risk of factors that may be associated with poor pregnancy and birth outcomes. (See "Sample Characteristics" on page 7 for further discussion of risk level.) County, State, and national statistics are provided throughout this report to help contextualize and interpret BIH Program outcomes.

[6] The BIH sample could overlap with the WIC sample, but we could not determine the extent of this overlap given the nature of the secondary data.

[7] Separate analyses of African American women in the WIC Survey and LACHS samples were not conducted because the sample sizes were too small for meaningful comparison with the BIH sample.

Qualitative Methods

Summary of Methods

Seven focus groups and two group interviews were conducted to provide a cross-sectional look at the processes and outcomes of the BIH Program from multiple stakeholder perspectives. Qualitative data from clients (n=29), direct practice staff (n=14), and BIH administrators (n=14) were gathered across the three BIH provider sites in our study. Altogether, 57 individuals were included in our qualitative sample. (For more details on the qualitative methods for this evaluation, refer to Appendix A.)

Summary of BIH Client Characteristics

This is a summary of BIH client characteristics based on the information available in the aggregated reports. For more details, refer to Appendix A. The BIH sample consisted of African American women with a mix of protective and risk factors that potentially contribute to pregnancy, birth, and breastfeeding outcomes. In general, the BIH clients represented in the total BIH sample were educated and in an intimate relationship (married or otherwise), but they were young and of low socioeconomic status. Significant proportions of them relied on public assistance and were in need of housing at the time of program intake.

While reports of cigarette, substance, and alcohol use among BIH clients indicated low usage, these factors are viewed against some potential risk factors. Specifically, a smaller proportion of BIH clients started prenatal care during the first trimester. This could be explained by the fact that many BIH clients were young, which is associated with lower rates of prenatal care utilization (Greg et al., 2002). The rate of prenatal care initiation for the BIH sample is lower than that of African American women in our comparative sample of the general population. Also, most pregnancies (81%) for BIH clients were unplanned, which could explain why a relatively large percentage of BIH clients started prenatal care in the second and even third trimester.

Although studies have shown that access to prenatal care alone does not explain racial disparities in birth outcomes for poor mothers, it is deemed necessary but not sufficient in ensuring healthy pregnancies and births (Dubay et al., 2007). The literature suggests that typical risk factors such as socioeconomic status have not been measured in the ways that could explain disparities in outcomes for poor African American women. Since BIH clients are generally educated but poor, it indicates that they face barriers toward upward mobility, which is associated with better birth outcomes (Colen et al., 2006). Findings from our qualitative study also suggest that BIH clients are at higher risk of social isolation and lack of support from family

and friends (see qualitative findings on page 18). Moreover, general reports on pregnancy problems suggest that BIH clients have more pregnancy problems than their comparative samples.

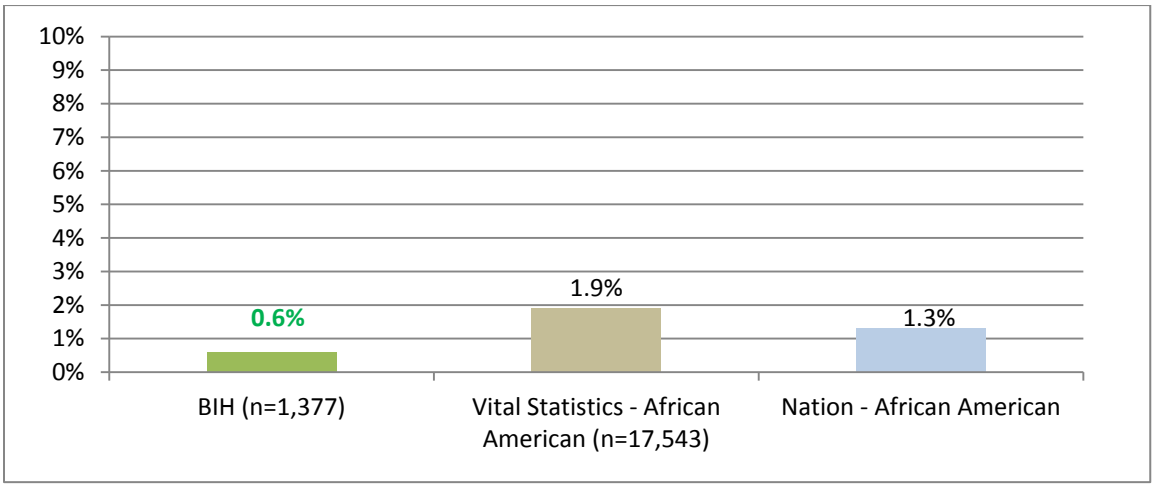
Together, these factors describe BIH clients as a higher-risk population of women who are getting pregnant, giving birth, and caring for their children.

Pregnancy and Birth Outcomes

Infant Mortality

For the BIH sample, there were a total of 1,355 live births out of 1,363 births recorded. Within these live births were .6% neonatal deaths and no post neonatal deaths (see Figure 1 and Table 1).[8] We estimated the rate of infant deaths in Vital Statistics to be .5% of live births in the sample. This rate was comparable to that of the BIH sample (.6%). However, infant deaths for African American women in Los Angeles County as estimated in the Vital Statistics sample was 1.9%, which is triple the rate of .6% for the BIH sample. This infant mortality rate of .6% was half the national rate of 1.3% for African American women (National Center for Health Statistics, 2011). There was some variation in the infant mortality rates across the BIH providers. ***Therefore, the infant mortality rate as recorded for the BIH sample was lower than that of African American mothers in Los Angeles County and nationally.***

Figure 1: Infant Mortality



[8] Neonatal death is defined as an infant death occurring within the first 28 days of life and post neonatal death is defined as an infant death occurring between 28 and 365 days of life.

Table 1. Pregnancy Outcomes					
Pregnancy Outcomes	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**	**Vital Statistics**
Live Birth	137 (100.0%)	98 (98.0%)	1,120 (99.5%)	1,355 (99.4%)	366,677
*Infant Death**	0 (0.0%)	2 (2.0%)	6 (0.5%)	8 (0.6%)	1,955 (0.5%)**
Total	137	100	1,126	1,363	173,533

* Infant death includes neonatal death and post neonatal death. Reports on both categories of death were available for the BIH sample only; the Vital Statistics data set did not define infant death into these categories.
** This is an estimate of live births now deceased. The estimate is based on 366,677 live births (mother's current and historical births).

Type of Delivery

Cesarean births are intended to be performed out of medical necessity, but they have become a common type of delivery not associated with medical necessity. This has been attributed to several factors, including low priority to enhance women's own ability to give birth and fear of malpractice claims (Taffel et al., 1987; McCourt, 2007). The procedure does pose risks such as maternal mortality, and recovery for the mother from a Cesarean birth is longer than for vaginal birth.

A slightly higher proportion of the BIH sample (42%) had Cesarean births compared to African American women in the Vital Statistics sample (40%) (see Figure 2). Both these rates were higher than the national rate (32%), as well as the national rate for African American women (34.4%), which was among the highest comparing racial groups (National Center for Health Statistics, 2010). The rates of Cesarean births for Long Beach and Los Angeles were over 40%, but the rate for Pasadena was 33%, which is closer to the national rate (see Table 2). ***Altogether, the proportion of Cesarean births for BIH clients was comparable to that of African American mothers in Los Angeles County but was higher than the national rate for African Americans.***

Figure 2: Cesarean Births

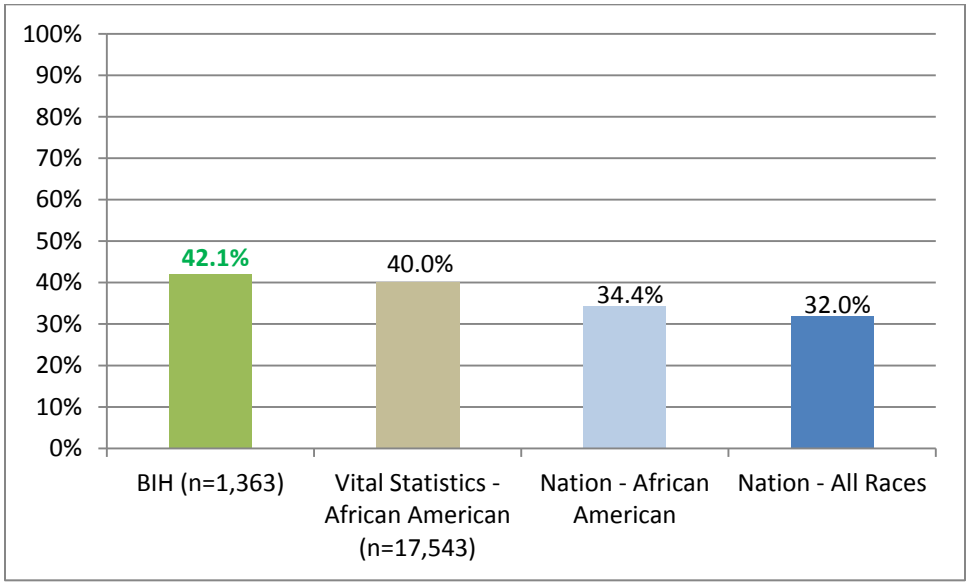


Table 2. Type of Delivery for BIH Only				
Type of Delivery	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**
Vaginal	99 (66.9%)	52 (53.6%)	630 (56.4%)	781 (57.3%)
Vaginal Birth After Cesarean	0 (0.0%)	2 (2.1%)	5 (0.4%)	7 (0.5%)
Cesarean Birth	49 (33.1%)	43 (44.3%)	482 (43.1%)	574 (42.1%)
Unknown	0 (0.0%)	0 (0.0%)	1 (0.1%)	1 (0.1%)
Total	148	97	1,118	1,363

Birthweight

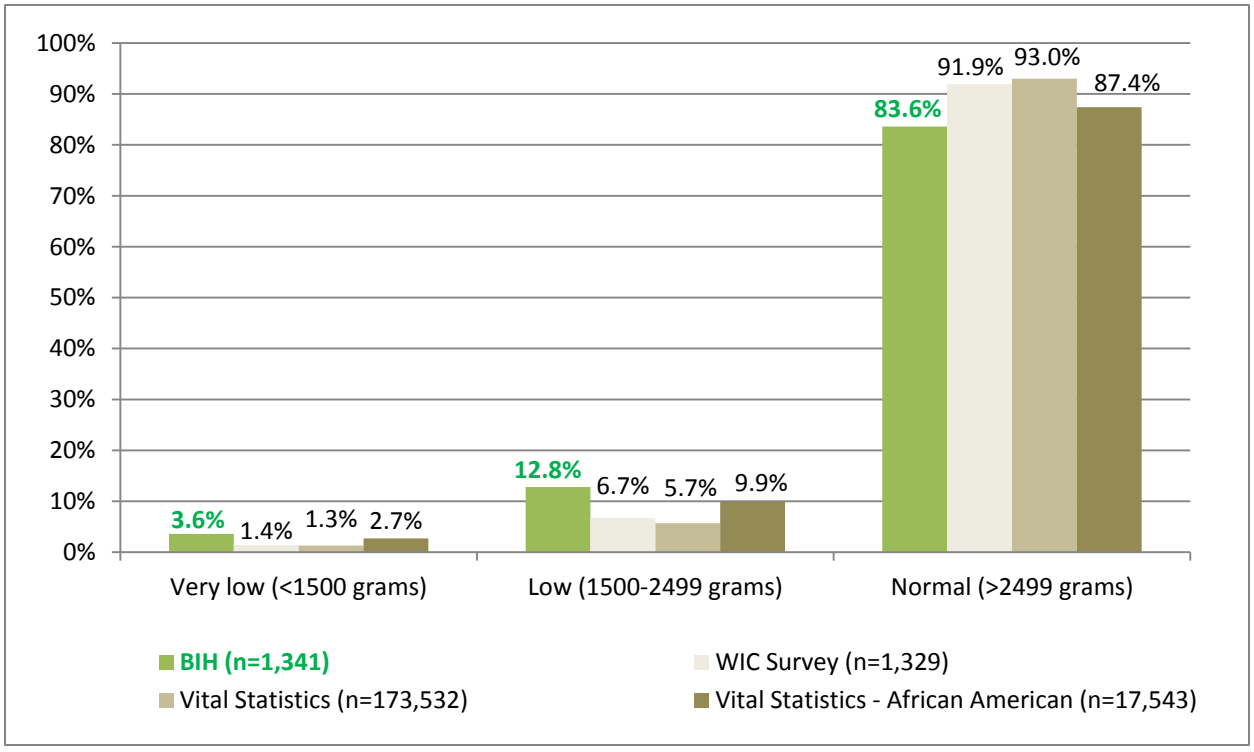
Birthweight is categorized as very low (less than 1,500 grams), low (between 1,500 and 2,499 grams), and normal (greater than 2,499 grams) in the BIH-MIS reports. Birth weights for comparative samples were categorized in the same way for analysis across samples.

The BIH sample had the highest proportion of very low birthweight babies at 3.6% compared to 1.4% for the WIC Survey sample, 1.3% for the Vital Statistics sample, and 2.7% for African American women in the Vital Statistics sample (see Figure 3). A similar trend was seen for *low birthweight*: the BIH sample had the highest proportion at 12.8% compared to 6.7% for the WIC Survey sample, 5.7% for the Vital Statistics sample, and 9.9% for African American women in

the Vital Statistics sample. Statewide and national estimates for African American mothers are similar to rates in our Vital Statistics sample (National Center for Health Statistics, 2010). For example, the State rate of very low birthweight is 2.6% and the national rate is 2.9%.

Overall, the proportions of BIH clients delivering babies with very low birthweight and low birthweight were higher than their comparative samples, as well as State and national rates for African American mothers. However, there were relatively large proportional differences in birthweight across the three BIH providers (see Table 3). Specifically, Pasadena's reports showed a trend toward more normal birthweight babies (even more so than their comparative samples), while Long Beach's reports showed considerably high rates of very low birthweight and low birthweight babies and Los Angeles' reports showed relatively high rates of low birthweight babies.[9]

Figure 3: Birthweight Categories



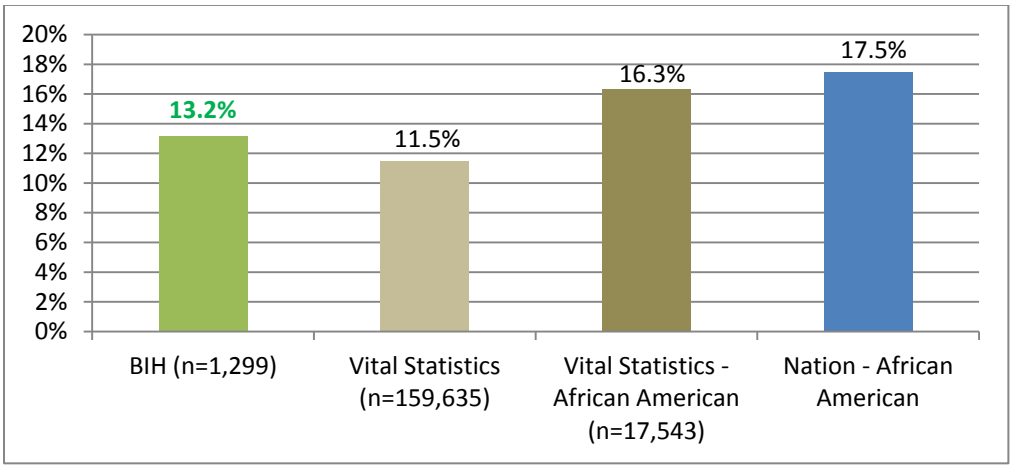
[9] Both Long Beach and Los Angeles had multiple births (with very low and low birthweight) per client, which would increase the proportions of very low and low birthweight.

Table 3. Birthweight for BIH Only				
Birthweight	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**
Very low (<1500 grams)	1 (0.7%)	10 (10.9%)	37 (3.3%)	48 (3.6%)
Low (1500–2499 grams)	7 (5.1%)	10 (10.9%)	155 (13.9%)	172 (12.8%)
Normal (>2499 grams)	129 (94.2%)	71 (78.3%)	920 (82.7%)	1,121 (83.6%)
Total	137	91	1,112	1,341

Gestational Age

The gestational age of newborns in the BIH sample varied from its comparative samples (see Figure 4).[10] For example, the BIH sample had 13.2% preterm births compared to 11.5% for the Vital Statistics sample, 16.3% for African American women in the Vital Statistics sample, and 17.5% for a national sample of African American mothers (National Center for Health Statistics, 2010).[11] ***Therefore, the BIH sample had more preterm births than the general population in Los Angeles County but less preterm births than African American mothers in the County and nationally***. However, it is with caution that this conclusion is made given the large proportional differences in preterm birth rates across the three BIH providers (see Table 4). The proportion of preterm births ranged from 6.7% for Pasadena, 12.8% for Los Angeles, and 26.7% for Long Beach.

Figure 4: Preterm Births



[10] Gestation of 36 weeks or less is considered preterm birth and gestation of 37 weeks or greater is considered full term birth.

[11] Comparative findings from the WIC Survey were not reported here because estimates for gestational age (overall and by racial groups) were unexplainably lower than national, State, and County statistics.

Table 4. Gestational Age for BIH Only				
Gestation in Weeks	Pasadena	Long Beach	Los Angeles	Total BIH
36 weeks or less	9 (6.7%)	24 (26.7%)	138 (12.8%)	171 (13.2%)
37 weeks or greater	125 (93.3%)	66 (73.3%)	937 (87.2%)	1,128 (86.8%)
Total	134	90	1,075	1,299

Birth Defects

The BIH-MIS report on birth defects categorizes birth defects generally as "minor" or "major". Conversely, there are 29 types of birth defects listed in the Vital Statistics birth records. Because the definitions of "minor" and "major" are unknown, the two sets of data could not be merged; therefore, our analysis focused on the absence of birth defects.

The BIH sample had a slightly larger percentage (96.4%) of babies born without birth defects compared to the Vital Statistics sample (93.2%) and African American mothers in the Vital Statistics sample (91.1%) (see Figure 5). The proportions of babies born without birth defects were similar across the BIH providers (see Table 5). ***Therefore, the proportion of babies born without birth defects was higher for the BIH sample than the general population in Los Angeles as well as of African American mothers in the County.***

Figure 5: Babies Born without Birth Defects

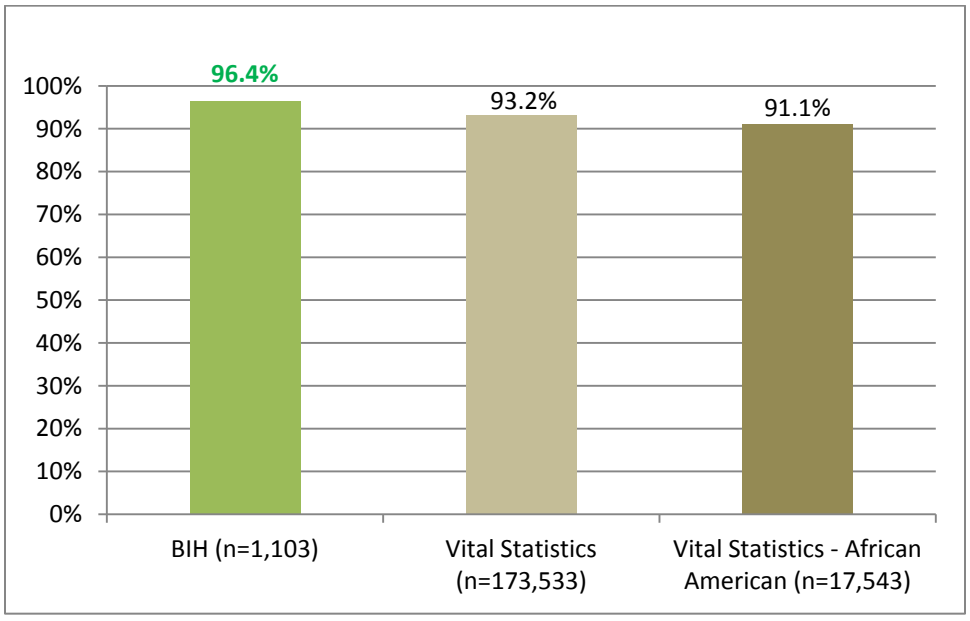


Table 5. Birth Defects					
Birth Defects	Pasadena	Long Beach	Los Angeles	Total BIH	Vital Statistics
None	132 (97.8%)	76 (96.2%)	855 (96.2%)	1,063 (96.4%)	161,776 (93.2%)
Minor	2 (1.5%)	3 (3.8%)	17 (1.9%)	22 (2.0%)	N/A
Major	1 (0.7%)	0 (0.0%)	12 (1.3%)	13 (1.2%)	N/A
Unknown	0 (0.0%)	0 (0.0%)	5 (0.6%)	5 (0.5%)	N/A
Total	134	79	889	1,103	173,533

Breastfeeding Outcomes

Breastfeeding Initiation

Altogether, 69.1% of the BIH sample initiated breastfeeding (see Figure 6). In comparison, 49.6% of a small sample of mothers in the WIC Survey sample reported that they initiated breastfeeding. While more BIH clients initiated breastfeeding than mothers in the WIC Survey sample, the BIH sample rate of 69.1% was lower than the estimated rate of 79.4% for African American mothers in Los Angeles County (Los Angeles County Department of Public Health, 2011).[12] Yet the breastfeeding initiation rate for the BIH sample was marginally higher than the rate of 66.7% among African American mothers statewide and 54.4% among African American mothers nationwide (Centers for Disease Control and Prevention, 2010). Furthermore, breastfeeding initiation rates varied across the BIH providers (see Table 6). Both Pasadena and Long Beach reported that over 80% of their clients initiated breastfeeding, while Los Angeles reported that 66% of their clients did so. It is important to note that breastfeeding is not a primary objective of the BIH Program. Higher rates of breastfeeding initiation for Pasadena and Long Beach might be explained by the breastfeeding resources and support provided to BIH mothers within their respective health departments.

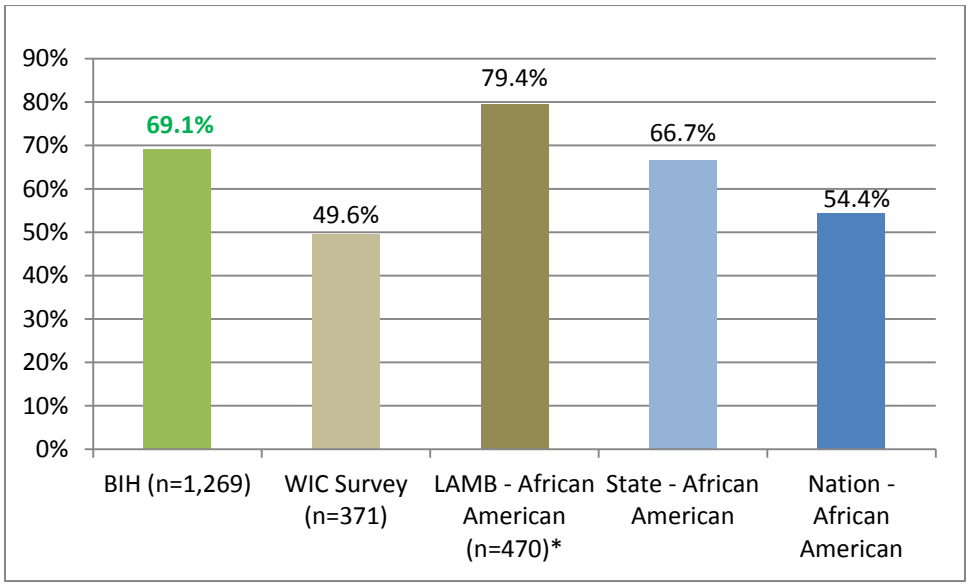
In summary, the breastfeeding initiation rate for the BIH sample fell somewhere between the rates reported for the WIC Survey sample and the LAMB sample of African American mothers. At the same time, the rate for the BIH sample was higher than the State rate, as well as the national rate for African American mothers. Overall, the breastfeeding initiation rates for BIH were positive, especially for the Pasadena and Long Beach providers who exceeded these comparative rates.

Among the reasons for not breastfeeding, the most common response reported for BIH clients (55.6% of all reasons) was that they preferred bottle feeding (see Table 6). The second most

[12] This estimate comes from the Los Angeles Mommy & Baby (LAMB) project report (April, 2011).

common reason for not breastfeeding was medical or physical difficulties of the mother (17.6%). This same reason was the most common response for the WIC Survey sample (36%).

Figure 6: Breastfeeding Initiation



* Sample size by race was not available in the Los Angeles Mommy & Babies (LAMB) project report; however, we estimated that approximately 470 African American mothers comprised the sample based on the number of "eligible respondents".

Table 6. Breastfeeding Outcomes

	Pasadena	Long Beach	Los Angeles	Total BIH	WIC Survey
Breastfeeding Initiation					
Yes	117 (85.4%)	68 (81.0%)	692 (66.0%)	877 (69.1%)	184 (49.6%)
No	20 (14.6%)	16 (19.0%)	356 (34.0%)	392 (30.9%)	187 (50.4%)
Total	137	84	948	1,269	371
Reasons for not breastfeeding*					
Don't Know How	1 (5.0%)	0 (0.0%)	2 (0.6%)	3 (0.8%)	N/A
Job/Scheduling Difficulties	0 (0.0%)	1 (6.3%)	4 (1.1%)	5 (1.3%)	208 (7.5%)
Mother's Medical/Physical Difficulties	0 (0.0%)	4 (20.0%)	56 (15.7%)	60 (15.3%)	987 (36%)
Infant's Medical/Physical Difficulties	2 (10.0%)	2 (12.5%)	13 (3.7%)	17 (4.3%)	142 (5%)
Preferred Bottle Feeding	9 (45.0%)	3 (18.8%)	177 (49.7%)	189 (48.2%)	N/A
Other	3 (15.0%)	3 (18.8%)	54 (15.2%)	60 (15.2%)	N/A
Declined To Respond	1 (5.0%)	0 (0.0%)	5 (1.4%)	6 (1.5%)	N/A
Difficulty Nursing	N/A	N/A	N/A	N/A	273 (10%)
Does Not Satisfy	N/A	N/A	N/A	N/A	534 (19.4%)
Time to stop breastfeeding	N/A	N/A	N/A	N/A	508 (18.5%)
Encouraged by Others to Stop	N/A	N/A	N/A	N/A	97 (3.5%)
Total	16	13	311	340	1,107-1,118**

* These answer options are not mutually exclusive for all data sources. Also, reasons included within "mother's medical/physical difficulties" are nipple problems, mother's illness, and insufficient milk, and reasons "infant's medical/physical difficulties" include the infant being underweight.

** The range in sample size reflects variation in responses to each question.

Breastfeeding Follow-Up

The American Academy of Pediatrics recommends mothers to exclusively breastfeed their children for up to six months and to continue breastfeeding for up to one year. For BIH clients who had a 12 month follow-up report, only 14.3% (a total of 46 clients) reported breastfeeding until the recommended six months (see Table 7). This rate is lower than the national rate of 26.6% for African American mothers who breastfed until the infant was six months old (Centers for Disease Control and Prevention, 2010). ***Therefore, the rate of breastfeeding for six months among BIH clients was below the recommended guidelines and was comparatively lower than the rate for African American women in the general population.*** However, this assessment is made with caution due to the small sample size for BIH (n=321 for 12-month follow-up), which limited analysis of ongoing breastfeeding beyond six months. Moreover, exclusive breastfeeding rates were not available in the BIH-MIS reports, and average length of breastfeeding could not be estimated based on the reports.

Table 7. Breastfeeding Follow-up Outcomes: Infant Age When Client Stopped Breastfeeding			
	Pasadena	**Los Angeles**	**Total BIH***
6-Month Follow-Up			
Never breastfed	11 (19.6%)	186 (41.9%)	198 (39.2%)
Less than 1 week	2 (3.6%)	36 (8.1%)	38 (7.5%)
Between 1 and 5 weeks	21 (37.5%)	99 (22.3%)	123 (24.4%)
Between 6 and 15 weeks	18 (32.1%)	69 (15.5%)	87 (17.2%)
Between 16 and 23 weeks	3 (5.4%)	41 (9.2%)	45 (8.9%)
Unknown	1 (1.8%)	13 (2.9%)	14 (2.8%)
Total	56	444	505
12- Month Follow-Up			
Never breastfed	14 (25.5%)	110 (41.8%)	125 (38.9%)
Less than 1 week	3 (5.5%)	9 (3.4%)	12 (3.7%)
Between 1 and 5 weeks	14 (25.5%)	46 (17.5%)	62 (19.3%)
Between 6 and 15 weeks	13 (23.6%)	42 (16.0%)	55 (17.1%)
Between 16 and 23 weeks	6 (10.9%)	40 (15.2%)	46 (14.3%)
Between 24 and 51 weeks	3 (5.5%)	11 (4.2%)	14 (4.4%)
Unknown	2 (3.6%)	5 (1.9%)	7 (2.2%)
Total	55	263	321

* Data on breastfeeding follow-up were not available for Long Beach.

Intermediary Outcomes: Benefits of Program Participation

In the sections that follow, four major themes from the qualitative data are presented that address the overarching research questions. The themes include findings that illuminate the intermediary outcomes reported by BIH stakeholders, the mechanisms of effective service delivery, stakeholder perceptions of factors that facilitate and hinder program implementation, and sustainability.

When asked to describe the ways and extent to which the BIH Program had influenced client outcomes, focus group participants did not answer in terms of pregnancy and birth outcomes as defined in the quantitative portion of this study. That is, they typically did not discuss birthweight, Cesarean birth rates, infant mortality, or the like. Rather, the BIH clients, direct practice staff, and administrators described several *intermediary outcomes* associated with participation in the BIH Program. The strongest emergent themes in this area were increased social support and connection; improved knowledge and skills related to pregnancy, parenting, and health; and positive psychosocial change (such as reduced stress, improved self-esteem,

and sense of empowerment). These intermediary outcomes were identified consistently across all client, direct practice staff, and administrator focus groups. Another robust theme was the health-promoting behaviors exhibited by BIH clients, such as opting to breastfeed. Each of these is discussed in more detail below.

Social Support and Connection

The BIH clients often described themselves – and were described by direct practice staff – as being socially isolated and lacking support from family and friends prior to entering the BIH Program. The most frequently cited benefit of the BIH Program was the social support and connection that clients received through participation in the program. Some stakeholders portrayed BIH as offering "a sense of community". Others took it farther, characterizing BIH as family. Direct practice staff was often referred to as being like mothers, and the classes and support groups like "a sisterhood". Indeed, the specific language that clients and staff frequently chose to describe the relationships cultivated through the BIH Program reference important symbols of support and encouragement in our culture – from mother, sister, and best friend to cheerleader and coach. Clients explained the importance of feeling – sometimes for the first time in a long time – that "I'm not by myself".

The quote below illustrates the powerful connections that clients across the BIH sites report having made as a result of the BIH Program. Women who are socially isolated and feel emotionally alone and often scared form important relationships through the program.

> *"Resources? I don't have any family here besides me and my three sons, so coming [to BIH] is as connected as I've been in the six years I've been in California. Otherwise, I go to work and I go home. I have a very small inner circle. [BIH] is a sense of community. …To feel like somebody – even if it's an entity like BIH – has my back. I know I have… something as simple as someone to talk me through it. It's always helped to know that you're not alone. That's what they are for me. They're my cheerleaders; they have my back*." – Client

Increased Knowledge and Skills

In general, clients described themselves – and were described by BIH direct practice staff – as lacking knowledge and skills for healthy pregnancy and parenting strategies. Due in part, perhaps, to the fact that the baseline for knowledge and awareness among clients is so low to begin with, stakeholders across provider sites uniformly identified the increase in client knowledge and skills related to pregnancy and parenting as a strong and important benefit of the BIH Program. As one administrator surmised:

> *"I think the clients are coming to the classes, and [there are] things that they are not learning at home that they are getting through this program. We did a CPR class this year, and SIDS. And we had a perinatal class also. There are a lot of things in life that these clients have no knowledge of – they are not getting this information at home. So we are in a position to educate them, and I think it means that they are having healthy babies because they are now knowledgeable about those things."* – Administrator

Clients reported learning about numerous topics through the BIH Program. This includes information that, if applied, could lead not only to healthier pregnancies and births, but also to more healthy and effective ways to parent and practice self-care throughout the lifespan. For example, clients reported learning about the importance of prenatal care, including proper nutrition and avoiding substance use during pregnancy. They received information about how to safely care for their infants, such as learning about Sudden Infant Death Syndrome (SIDS), cardiopulmonary resuscitation (CPR), and the safe installation and use of car seats. One client commented:

> *"I was putting my baby in the car seat the wrong way. If I didn't have the [car seat training] class, I wouldn't have known."* – Client

Clients appreciated the classes on parenting and alternative ways of disciplining older children. The Mood Management class and the general focus on self-care, self-esteem, and empowerment were identified by many clients as having an important psychosocial effect (as described in more detail below).

Improved Psychosocial Functioning

A third factor identified in the focus groups with both direct practice staff and clients across all BIH provider sites was improvement in clients' psychosocial functioning. The Social Support and Empowerment (SSE) classes, in particular, were credited with helping clients tap into their own personal strengths. Many clients and direct practice staff talked about experiencing or observing elevated mood, higher levels of self-esteem, and lower levels of stress due to their involvement in the BIH Program. As one client explained,

> *"All my stress leaves through the door when I walk in here [support group]. This program is my getting away."* – Client

Another client discussed how her "self-esteem is through the roof right now". She credited the SSE class with giving her the ability "to stand on my own two feet" and affording her the confidence to believe "my son and I are going to be OK". Many similar examples were shared,

including the one below, that illuminate the sense of strength and empowerment clients can experience as a result of participation in the BIH Program.

> *"One of the best things I learned from that class was a statement that said, 'Take me for how I am, or leave me how you found me doing just fine.' That's my new motto in life. My boyfriend and I are going through it right now, and he gonna leave me with four kids. But I know that 4 kids, 5 kids, or 10 kids, I'm gonna be just fine without him. … Just to be able to have that confidence and know hands down that I'm going to be OK with or without him. I don't think I would have that [confidence] otherwise without knowing so many women [in BIH] back me up. Just the things that we learn and the things that they teach you. It's a wonderful class."* – Client

Health-Promoting Behaviors

Direct practice staff, administrators, and clients in two out of the three BIH provider sites credited participation in the BIH Program with increased health-promoting behavior changes and choices. In large part, these client behaviors – such as choosing to breastfeed – can be seen as the *action* that results from the fact that clients feel supported, knowledgeable, and empowered. A handful of such healthy behavior choices ranging from seeking prenatal care to leaving domestic violence situations were described by focus group participants; however, the most common responses in this category pertained to clients' decisions to breastfeed.

There are a number of BIH women who have initiated breastfeeding, though breastfeeding *continuation* rates for the sample appear lower than the general population (refer to Table 6). Evidence from client and direct practice staff focus groups suggests that changes are being made to clients' breastfeeding knowledge, attitudes, and behaviors on an individual basis. Several clients and direct practice staff offered examples of how education provided through the BIH Program on the benefits of breastfeeding has influenced the choices that some clients make about breastfeeding their babies. This is seen as particularly striking, given what is perceived as the prevailing attitude in the African American community that "African American women don't breastfeed their babies". According to one participant in a direct practice staff focus group:

> *"We get [clients] and some of them just come in and are absolutely dead set against breastfeeding. [They say] 'I'm not gonna do it; it's nasty.' And we give them the education and the information and the knowledge, and a lot of those mothers actually become the ones that are the long-term breast feeders."* – Direct practice staff

The following quote illustrates both the stigma attached to breastfeeding in the African American community as well as the knowledgeable and empowered behavioral choice made by a BIH client:

> *"We had one client whose significant other told her, 'If you breastfeed, I'm leaving you because that's nasty. That's sexual – breasts are for men.' And she was like, 'Pssh, bye. I'm breastfeeding my baby. It's the best thing for my baby, and if you don't understand that, I'm going to do what's best for my baby.'"* – Direct practice staff

A handful of clients who had children prior to receiving BIH services explained how they made different breastfeeding choices with their new infants in comparison with their first child(ren) (e.g., choosing to breastfeed as long as possible versus breastfeeding for 2-3 weeks only). They credited the fact that the information provided by the BIH Program helped not only to convince them that breastfeeding was the healthiest choice for their baby but also to mentally prepare them and offer support for the reality of breastfeeding.

Still other clients talked about the critical nature of the guidance and support offered by direct service staff that allowed them to keep breastfeeding when they otherwise might have given up:

> *"My mom used to work for the WIC program, and she breastfed. So she tried to teach me, but it hurt and weren't working. When I talked to [my case manager], she said, 'Sit down and just try it. Don't force it, don't make him do it.' I did that, and it worked. The guidance from them was good… They were giving me advice on what to do. So my breastfeeding experience was a good one."* – Client

Intermediary outcomes such as those discussed above have been identified as key "social determinants of health" in the literature (Braveman et al., 2008). The support and connection experienced by BIH clients (derived from the one-on-one relationships they formed with direct practice staff, as well as from opportunities to develop and enhance peer friendships and networks through SSE classes and support groups) are important protective factors for pregnant and parenting women and their families. In fact, some evidence in the literature suggests that "social support during pregnancy can act directly as a protective factor and/or buffer the effects of stress on a woman's health and birth outcomes" (Braveman et al., 2008, p. 49). Indeed, BIH clients pointed to stress relief as a benefit of BIH Program participation. As well, BIH clients reported increased mastery of health-related knowledge and a greater sense of empowerment, both of which have been tied to increased health-promoting behaviors. Altogether, these program benefits are in line with what has been observed in studies of

similarly focused social programs, and they support the theory of change that supports the BIH Program model.

Mechanisms of Effective Service Delivery

The family strengthening strategies of case management, home visiting, and parent education are integral to First 5 LA's Strategic Framework. A First 5 LA objective for this evaluation was to better understand the mechanisms of how these three service delivery strategies act to influence program outcomes. Evaluation participants were asked to describe specific components or mechanisms of these service delivery strategies they believe influence positive client outcomes. As respondents talked specifically about each individual parent strengthening strategy, several themes emerged. These themes provide insights into the specific mechanisms that contribute to or support effective case management, home visiting, and parent education services.

Case Management

Relationship Building and Trust

Stakeholders in every focus group and interview agreed that relationship building and the establishment of trust and rapport was an essential element of outreach and case management. It is the foundation on which much of the success of the BIH Program appears to be built. As direct practice staff explained, establishing a trusting connection with clients opens clients up to being more receptive to the referrals, education, and support provided by the BIH Program and can help facilitate access into the home.

> *"Yes, giving information is important and valuable, but [clients] need to be in a mindset where they can receive it, and so it's important knowing that they can trust you if they give you their personal information." – Direct practice staff*

Another direct practice staff added, "It takes a lot of relationship building before you get to that point of a home visit." According to the stakeholders we spoke with, trust is considered especially important for BIH clients given the African American community's tendency to distrust the system/government and their reticence to access voluntary services in the community. One administrator underscored the pivotal responsibility that direct practice staff has of ensuring clients that BIH "is not a place that is going to take your child".

Consistent Follow-up with Clients

Clients and direct practice staff across the BIH providers agreed that the actions of consistently checking in and following up with clients (e.g., reminding them to go to their prenatal visits or checking in to see how their recent doctor visit went) was an effective case management mechanism. Clients remarked that they appreciated their case manager's concern and that they could rely on the fact that "they follow up when they say they're going to follow up". Direct practice staff at every site emphasized the following:

> *"It's very important to keep in contact with our clients constantly. If you don't, you will lose them. You will have a hard time retaining those clients that you don't have the regular contact with."* – Direct practice staff

In addition to helping ensure that clients stay on track with their prenatal care and other referrals, the constant check-ins further engender and enhance the client-worker bond and the sense of support clients receive from the BIH Program. The remark below typifies how clients across all BIH provider sites characterized the strength of case managers' commitment to and follow through with their clients:

> *"They care about me…They make it so that it's not like their job. Even on weekends, sometimes, they call me [to say], 'I know your kids have been sick the past couple days. How are they doing?' They made me family. I'm not just a name or file, not just a number. I am someone important to them. They engage me in their family lives and we engage them in ours. They go above and beyond – anything and everything for you. Even when your kid does turn 2 and you're no longer in the program – they still call, they still check in, they still give you all the resources that they can. They make you family, not just a client."* – Client

Flexibility and Willingness to "Meet the Client Where She Is"

Direct practice staff and administrators at each BIH provider site felt that direct practice staff must exhibit flexibility to "meet the client where she is". They explained that effective case management practice gives the client an individualized care plan based on her particular needs and goals. Likewise, staff and administrators tended to agree that case managers who are effective recognize the need sometimes to put down the BIH curriculum or materials, to set that agenda aside, and to attend to the reality of whatever crisis a woman may be experiencing at the time – whether it is domestic violence issues or homelessness and trying to find housing. The flexibility of direct practice staff that is able to serve her client in that way is a critical component of BIH. As discussed in every client focus group, it is important to clients that they are not treated "like a case" or "just a file" and that direct practice staff are not solely

interested in "just checking things off the list" of what they need to do for their jobs. Rather, case management is most effective from a client standpoint when staff recognizes and responds to the material realities of the client.

Referrals and Advocacy

Clients across all BIH providers explained that the referrals they received from their case managers, as well as the advocacy provided on their behalf (e.g. with doctors and other service providers), helped clients access the services and supports that they would otherwise likely not have received. As one client remarked:

> *"If you need help finding a place to live – anything like that – they have the resources for you, and they'll guide you in the right direction."* – Client

Direct practice staff and administrators discussed how BIH workers strive to strike a balance between *advocating for* a client and *empowering* her to navigate the system and effectively advocate for herself.

Home Visiting

Opportunity to Observe

Direct practice staff across the BIH providers and administrators at two sites stressed the importance of home visits for providing the opportunity to observe a client's environment, identify issues and needs that may remain unarticulated by the client, and offer targeted education and referrals accordingly. As one direct practice staff suggested, home visits allow workers to answer questions through observation such as "did the mother receive and implement the information that she was taught?" For example, home visits allow staff to check whether the baby's sleeping area is SIDS prevention compliant and "to look around the house and see where there are possible hazards" to point out to clients. Direct practice staff also described home visits as being helpful for observing whether clients are depressed and/or how they are managing their stress. Based on observations and insights from home visits, direct practice staff feel strongly that they are better able to serve their clients by, for example, providing more effective psychosocial support and relevant linkages to services.

Opportunity to Engage Family Members

Clients from all three BIH providers, as well as administrators and direct practice staff from one site, identified the opportunity to engage family members in discussions about pregnancy, child rearing, and health during home visits as an important element of what makes home visiting a

powerful strategy for improving client outcomes. Home visits that include family members (e.g., fathers of the baby, grandmothers) in activities and discussions can serve important purposes such as increasing client satisfaction, thereby helping to ensure that the client remains in the program. Several clients, for example, explained how much it meant to them that their case manager "interacts well with my other kids". To many clients, this sent a message that says the direct practice staff is truly invested in the success of the woman and her family. One client explained, "That makes me feel good, because it's not just coming here, doing your job, and then leaving." Other benefits include enhancing the family support system and addressing larger family issues that might impact the client's stress levels and/or behavior. For example, one client explained "they worked with me and my baby-daddy because we have the worst fights. They helped patch up my family."

Convenience for Clients

Client focus group participants across all BIH provider sites reported that the convenience of home visiting made a difference to them because they are not always able to make it to group classes or office visits due to transportation, child care, schedule, and sometimes even depression. Because home visiting is convenient for clients, it may act as a mechanism to increase client satisfaction and help retain clients in the BIH Program. This is critical, because when clients drop out of the BIH program, they might be less likely to follow up with their individual plans or access the services that they need to promote a healthier pregnancy and birth. Dropping out also might mean losing important social connections and support.

Material Goods and Incentives

The importance of providing material goods and incentives was mentioned consistently across client and direct practice staff focus groups. Clients talked about how much they needed and appreciated the material goods provided by the program – everything from diapers and wipes to nursing bras and holiday gift baskets. Direct practice staff reported that offering material incentives is an important means of recruiting and retaining participants in the program. Material goods and incentives are often delivered to clients during home visits.

Parent Education

Holistic Curriculum and Focus on Empowerment

Administrators, direct practice staff, and clients across all BIH provider sites agreed that the Social Support and Empowerment (SSE) classes and curriculum offer a wide array of information and topics for BIH participants. One client observed the following, "We cover a lot…from [domestic violence] to how to raise a baby, to weight gain, to housing." Clients further

praised the relevance of the information. One stated, “Things I learned, I actually applied and they worked.”

Clients within each of the three focus groups also discussed their particular appreciation for the fact that the BIH program focuses on the woman – on self-care, self-improvement, and empowerment – not just on the baby. Clients reported believing that the self-care aspect of the program was important because “the healthier you are as a mother, the healthier your baby will be” and “if you love yourself, you child is going to learn to love themselves.”

Group Classes and Support Groups

Equally important, the SSE classes and support groups are described as the main mechanism that introduces and connects clients with peers. The power and importance of the peer education and learning that happens in these forums was not lost on clients, including the sense of satisfaction women get from being able to help their peers.

> *“We all learn from one another. I can give my advice to somebody else. Someone can use my advice.”* – Client

> *“We’re really learning from each other. We’re getting resources from each other.”* – Client

Inter-relationships among Case Management, Home Visiting, and Parent Education

Importantly, the strategies of case management, home visitation, and parent education were described by evaluation participants as interwoven and intertwined in a manner such that one positively reinforces the other. Therefore, we refer to them as “braided strategies”. According to direct practice staff and administrators, the three braided strategies work synergistically, typically through the medium of the direct practice staff that was referred to as the “glue that holds things together”. Several direct practice staff and administrators who participated in focus groups explained that identifying the most important component of BIH or the one element or service strategy that has the greatest influence on client outcomes would be difficult. One administrator insisted, “I don’t see any one component of our program working without the other.” A direct practice staff member agreed:

> *“All those different elements work together… I don’t think you can take something away and expect the same outcomes.”* – Direct practice staff

For example, during outreach and case management, direct practice staff works to establish a foundation of trust that strengthens and grows over time. The bond is often so intense that, as

discussed above, the direct practice staff is viewed as a friend or like family. Many times, this affords the direct practice staff deeper access into both the physical world of the client (home visits) as well as her emotional and mental state and needs. In turn, the direct practice staff is able to tailor education materials to the client and make more appropriate referrals and linkages to services and supports in the community. The resulting social support and connection, along with the information and education provided, can positively influence client attitudes and behaviors (e.g., to eat healthier, go to prenatal visits, attend social support and parent education workshops, practice more self-care, and even to leave abusive relationships). The strategies are perceived to positively reinforce one another in a way that optimizes program influences and effects. The effectiveness of the braided strategies – versus the impact of any one strategy alone – is an important lesson learned that, according to stakeholders, may have implications for the success of the revised BIH model.

Implementation: Facilitating Factors and Barriers

Facilitating Factors

The discussions among BIH administrators, direct practice staff, and clients revealed insights into several factors that facilitate outreach to African American clients as well as the delivery of family strengthening strategies such as case management, parent education, and home visitation. Among the many voices and varying experiences, common themes emerged. Without exception, respondents across stakeholder groups discussed the importance of cultural relevancy and culturally competent outreach and practice. First, administrators and direct practice staff emphasized that what works for BIH is the use of paraprofessionals from the community because this facilitates access to and buy-in from clients. As one staff member put it:

> *"You've got the exact faces that are going out to reach the exact population that we want to target and serve… We get opportunities to get invited into homes where others may not."* – Direct practice staff

Also under this theme, respondents underscored the importance of the fact that the BIH Program is specifically tailored to African American women and therefore:

> *"It's a safe place to come and talk about cultural norms – to talk about stuff that no other culture is dealing with but our culture*." – Direct practice staff

Equally important, the BIH Program is *exclusively* for African American women, and many stakeholders found this to be both a rare and desirable experience. Clients said that although they think there might be similar services available in the county, they believe that such programs are for Hispanic women only – or that they are dominated by Hispanic women. BIH participants valued the ability to be in a room where they all "look the same" and "don't feel threatened". They said they felt like they could be themselves in the BIH classes and support groups and others in the room don't "look at me like I'm crazy … versus in a room full of other people, be it Hispanic or White or Asian". Several clients appreciated learning health statistics specific to African Americans and learning more about African American history. Many reported that the cultural specificity of the BIH Program was a factor in their decision to join or stay in the program.

The individual characteristics – in particular the passion and dedication – of direct practice staff also appear to facilitate the implementation and successes of the BIH Program (in particular, case management, home visiting, and parent education). As discussed previously, one of the most important tasks for direct practice staff is to develop rapport with their clients and to earn their trust. The ability to do so is not necessarily something that can be taught. Administrators and clients alike described the commitment and dedication of case managers with example after example of how they "go above and beyond" to help their clients – making clients "feel like family, not like a case or a job". Direct practice staff agreed that those intangible personal qualities are necessary to facilitate successful outcomes for clients:

> *"This is a labor of love, because you have to have the heart for it. You have to have the drive for it. You are in the trenches, and you have to care about people's lives… We are dealing with women's lives and children's lives, and it's a big deal. If you don't have the heart for it, our clients know that you don't. They see that you don't. …There's gotta be some level of passion…because if there is no passion, you are not gonna last, and it's not gonna work, and you are not gonna reach the women."* – Direct practice staff

Administrators and direct practice staff in two of the three BIH Program sites contend that engaging and partnering with community service providers for referrals has been an efficient and successful way to reach and enroll clients. An administrator at one of these sites said their client caseload increased by as much as 70% as a result of this strategy. A worker at a second site added that the strategy of partnership and collaboration:

> *"…has helped us get another set of eyes and hands and feet, and it's just awesome how we've worked together. We don't have to go out as often [to recruit]. It comes to us."* – Direct practice staff

Lastly, administrators from all BIH provider sites were unanimous that the funding provided by First 5 LA has been a critical facilitating factor overall. Related to funding, workers across sites mentioned that the use of incentives facilitated client outreach, client retention, and success getting clients to access services.

Barriers

Stakeholders also described specific barriers to and gaps in in implementing family strengthening strategies in the context of the BIH Program. Common across stakeholder groups was the complaint that the program length (12 months after a child's birth) is too short. One client aptly articulated an argument for lengthening the program based on her knowledge of child development:

> *"I wish [BIH] could have been longer…I think [the program should cover] the first five years, because the first five years are the most important years of the baby's life. They develop the fastest mentally, emotionally, and physically. If [moms] keep going to these meetings, that will enhance the mental, emotional, and physical health of the mother and the babies. We'd be a lot better off."* – Client

Direct practice staff and administrators explained that the BIH Program model had changed over the years and that it had once provided services to women for 24 months after a child's birth. A common sentiment among staff was that they "would like to see [BIH] bring that old model back, because one year is really not enough".

Depression and other mental health issues were noted consistently by both direct practice staff and clients throughout the focus groups, as was the lack of resources to address these mental health needs. Direct practice staff expressed frustration that they often did not feel equipped to adequately address a client's mental health needs on their own, and that they did not have adequate resources to which they could refer her. In one worker's words:

> *"Everything we do is extremely important, but one thing that's absolutely missing from our program is the mental health model. We don't have a real mental health professional, and sometimes the layers of issues are beyond our scope. We really need a mental health professional to deal with some of the things that our clients have faced and that they are facing."* – Direct practice staff

When asked to talk specifically about what hinders effective case management and home visiting, staff and administrators mentioned high caseloads compromising quality case management and said that safety concerns and homeless issues with some clients were barriers to home visiting. A case manager talked about case overload, saying:

> *"My caseload is suffering. I have 40 clients. I do the best that I can, you know, but I feel really bad because I can't call [the client] as much. I can't keep up with them…We have to input data, we are doing everything, and it's really, really – I'm not going to say it's hard, but it's lacking. I have to say that because there is so much that we have to do that it's not all getting done in a very effective way. It's not getting done the way that it should be, and the clients are definitely the ones who are on the losing end."* – Direct practice staff

Given the high intensity of the services that direct practice staff and clients described, it seemed remarkable that direct practice staff expressed so few complaints about burnout and that they truly seemed to have a high level of job satisfaction. Finding a way to continue supporting staff members so that they remain dedicated to their work and satisfied with their jobs seems important for sustainability.

Few challenges were cited specific to parent education; however, administrators from one site discussed the concern of high dropout rates for the SSE classes.

Sustainability and Future Support from First 5 LA

Evaluation participants from Long Beach and Pasadena (the two BIH Program sites in Los Angeles County that were transitioning to the revised model at the time of data collection) discussed perceived strengths of the revised model. Both administrators and direct practice staff in these two sites reported being excited that the revised BIH model is "a lot more comprehensive" and "standardized" than the previous model. Stakeholders at these two sites recognized that "moving more toward an evidence-based model" could contribute to greater funding opportunities in the future. They credited excellent training and open communication from the California Department of Public Health as helping with the transition to the revised model and suggested that flexibility and understanding on the part of First 5 LA – especially around reporting – will be necessary to ease the transition to the revised model in the first year.

Stakeholders in Long Beach and Pasadena also associated the new measurement and evaluation approach attached to the model with sustainability. Specifically, they perceived that the mixed methods approach (i.e., capturing both quantitative and qualitative data) to documenting the program will capture a breadth and depth of information about and successes of the BIH Program that have been missed previously. In addition, the enhanced ability to demonstrate program success, including the ability to impact a larger number of people

through standardized practice, can be instrumental in helping to achieve program sustainability through funding.

Administrators and staff from Long Beach and Pasadena shared enthusiasm about the revised model's prospects as described above. However, administrators and staff in all three provider sites – regardless of whether or not they received training for the transition to the revised model – expressed several strong reservations and concerns about the revised model. For instance, many of the direct practice staff and some of the administrators we spoke with raised questions about the rationale for moving to the revised model. In particular, these stakeholders had trouble understanding the reasons for the apparent move away from home visiting in favor of a greater emphasis on the group model. In addition to being concerned that reducing or eliminating home visits means "we can't go in and continue to build trust in [the client's] environment" (something that has been experienced as a great strength of the BIH Program to date), stakeholders wondered "how [clients] really would get all of what they need from us" without such visits. Some of these stakeholders even cited information or research that the old model was effective; therefore, they did not understand why a program that "works" was being abandoned. For example:

> *"I went to a SIDS training, and when the doctor spoke, he said [for] home visits conducted with African Americans, the birth outcome is healthier and better."* – Direct practice staff

Some respondents said they "totally agree that some things need to be revamped and done differently", but they simply questioned why home visiting would be excluded from the program when it "made BIH what it was to begin with". Others felt that a move towards offering primarily group sessions was not culturally appropriate or sensitive, because African American women "don't herd". In the words of one staff member:

> *"Everyone doesn't fit into groups. …The individual [home visit] is where some of the clients succeed more than they do in a group."* – Direct practice staff

A second robust theme that emerged was concern about screening and enrollment for the revised model. Direct practice staff and administrators across all BIH provider sites expressed fears that the revised screening procedures – perceived by many as too stringent – will leave needy, high-risk women out of the program.

> *"The new model actually puts up fences against a lot of Black moms that won't make it into the program."* – Direct practice staff

Likewise, the strict guidelines on mandatory class session attendance were perceived as likely to result in reduced enrollment up front followed by difficulty retaining clients on the back end. The expectation that BIH clients will be able to honor the commitment asked of them by the revised model seemed unrealistic to some:

> *"I put myself in the situation of what the new model is asking of a mother. I think of myself. I don't commit to ten weeks of going the gym, I don't commit to ten weeks of getting my nails done and my hair done. If I can't be consistent with something like that, [how can we] put the expectation on the moms that we're serving to say, okay, you're mandated to come and do this…? And this is before the trust is built!"* – Direct practice staff

Administrators and direct practice staff fully expect that the number of women served will decrease – at least initially – as a result of the transition to the revised model. In fact, they've been told as much based on the experience of several pilot sites across the state that began implementing the revised model more than a year ago. One administrator predicted:

> *"We are going to have to do a lot more outreach and make sure we do a whole lot more recruitment."* – Administrator

Other concerns mentioned by fewer respondents deserve note. First, workers and administrators from the two sites that have received training on the revised model expressed worries about documentation and data collection for the revised model. Though these stakeholders, overall, expressed support for the new documentation strategy, they anticipate that data collection and entry will be a more intensive and time consuming process than with the old model and are specifically concerned about the fact that the MIS system is not up and running. Some also questioned why so much data need to be collected "if we can't do anything with that information" (i.e., collecting information outside the scope of BIH services). These respondents were concerned that the approach of collecting so much personal, detailed information "is just segueing into breaking the confidentiality that we have with our women – and this program really prides ourselves on confidentiality". Lastly, both staff and administrators from Los Angeles (the site that has not begun to transition to the revised model) expressed anxiety about the job security of paraprofessional staff. This concern was based on a perception that the revised model will require group facilitation skills that their current staff may not possess. According to one administrator:

> *"A lot of [staff] are afraid…they won't have a job. It takes a different skill set to facilitate the revised model… My staff is afraid of losing their jobs because [the revised model] won't do home visitation any more. So why would we need them? That's what they think."* – Administrator

The concerns identified by BIH Program staff and administrators have obvious implications for sustainability of the BIH Program. First, if agencies are unable to successfully recruit and retain clients, then the program will be in jeopardy simply due to lack of client participation and program reach. In addition, because home visiting has been perceived by stakeholders as such a vital element within the braided strategy of case management, home visiting, and parent education services, then it logically follows that if home visiting is abandoned there is a possibility that BIH will be less influential on client outcomes. Next, if staff is not able to consistently enter data of high quality into the MIS system – for example, if they feel overwhelmed/burdened by the volume of it, or if it is complicated and they have not been adequately trained – then attempts to measure program effectiveness and move toward the evidence-based model that BIH strives for could be jeopardized. Lastly, if BIH Program administrators and direct practice staff have misperceptions and/or misinformation about the intent and direction of the revised model, then it may not be implemented with fidelity. Administrators and direct practice staff identified needed support during the transition to the revised model in the form of continued dialogue and training on the revised model, including data collection, from the California Department of Public Health. As well, they noted the importance of greater communication between the department and First 5 LA to present a clear and consistent message about goals and expectations for implementing the BIH Program.

Study Limitations

Relying on existing data means we were limited to the data elements that were available in the data sources, and the reliability and validity of measures in the secondary data could not be determined as part of this evaluation. Therefore, it was challenging to match samples given the different ways that variables were measured and defined in different data sets. Also, the outcome measures for the BIH Program were not perfectly matched with the data sources for the comparative samples.

Because the outcome evaluation relied on aggregated reports, there were many limitations to what we could do with the data in terms of within group (BIH clients per program) and across groups (BIH clients across provider sites and comparative samples) analyses. At the same time, program fidelity across the BIH provider sites was not examined in this evaluation; and since each BIH provider offered different combinations of the practice models, the findings from one provider may be noticeably different from another for certain outcomes.

With the aggregated reports we were limited to descriptive analyses only, and we could not verify why sample sizes and responses did not line up from variable to variable. It is our

understanding that clients were not duplicated in the reports; that is, data captured for 2008 were for the clients whose information was collected and reported for that year and not duplicated in 2009 even if the client was still participating in the program. However, there was no way to verify this information. The aggregated reports did not indicate at what point BIH clients represented in the sample entered and ended the program.

On a related theme, the sample size for each BIH provider was based on the number of enrolled clients in the demographics reports. However, it is unclear whether it was a "true" size that captured all the BIH clients we analyzed for the evaluation. Each report appeared to have a different sample size that often deviated dramatically from the number of enrolled clients in the demographics reports. Some discrepancy was expected because the reports included current clients who had not completed the BIH Program. But many reports were missing more than 50 percent of the expected data given the reported number of enrolled clients. For BIH reports that had no comparative data and were missing substantial number of clients, the findings were not reported in this evaluation (e.g., child immunization status and six-month follow-ups for maternal and infant health).

The comparative samples did not represent an "identical twin" sample for BIH clients. Based on eligibility criteria and sampling criteria for the comparative data sets, BIH clients were a higher risk population. The comparative samples provided a useful comparison when BIH outcomes were similar to the outcomes of comparative samples. However, when BIH outcomes deviated from those of the comparative samples – particularly in the direction of negative findings – it was difficult to interpret the outcomes because the samples were dissimilar in risk-level characteristics that could have implications for outcomes. Therefore, it was important to interpret the outcome findings within the context of risk factors, as well as other findings that contextualize the outcomes.

Finally, there were limitations to the qualitative component of this evaluation. First, timeline for recruitment of clients into focus groups was short. It is likely that BIH coordinators and direct practice staff were most easily able to recruit clients they have close relationships with and/or those who would be most able and willing to attend the focus group. Such clients are likely to be those who have good feelings about and have had positive experiences with the BIH Program. The sample of focus group and interview respondents did not include clients who dropped out of the BIH Program – or even those who had a particularly negative experience. Consequently, an important perspective with respect to what works or does not work pertaining to BIH service delivery was potentially missed. Second, the study might have been strengthened had there been sufficient time to conduct formal member checks with stakeholder groups. Member checking is the process by which researchers share their preliminary categories from coding and analysis, along with initial interpretations of the data,

with stakeholders to ensure they are adequately representing the experiences of those stakeholders. The timeline for this evaluation was not sufficient to accommodate this quality assurance process. Select program stakeholders were given the opportunity to review and provide comments on draft evaluation findings. Nevertheless, the multiple methods and data sources utilized in this evaluation of the BIH Program helps to address limitations such as those described here.

Conclusion

The evaluation was designed to explore key components of the BIH conceptual model. The quantitative findings addressed the main questions about the BIH Program's effects on pregnancy, birth, and breastfeeding outcomes. The qualitative findings identified intermediary outcomes and mechanisms of change, and they helped to explain the conceptual links between mechanisms, strategies, and outcomes. The model based on the evaluation findings (see Figure 7) supports and further illuminates the BIH conceptual model. Our model is consistent with the revised BIH conceptual framework in that we found similar intermediary outcomes. In addition, our model describes in further detail the mechanisms of change that appear to influence those outcomes (in the BIH model, these are referred to as "activities"). Another difference is that our model does not address community change – rather, it focuses on practice at the direct service level.

There were a number of limitations to the evaluation, in particular the nature of the outcome data based on aggregated reports. However, we addressed the data limitations to the extent possible through our study design using mixed methods and comparative data from multiple sources. Overall, the study findings suggest that the BIH Program is demonstrating effective practices that lead to several positive intermediary and ultimate outcomes.

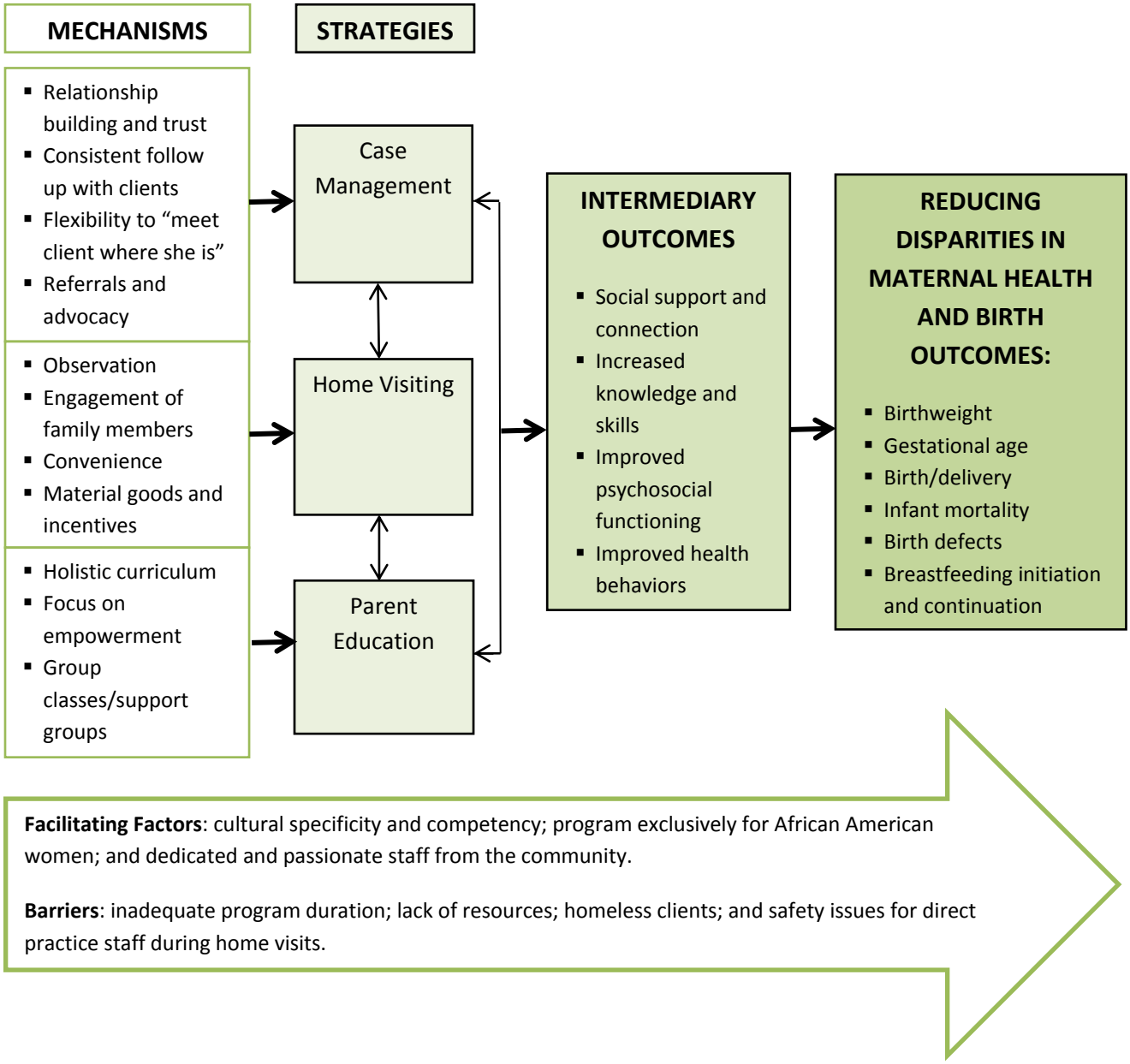
Throughout the remaining pages, we summarize the evaluation findings. We first present the primary effects of the BIH Program on pregnancy, birth, and breastfeeding outcomes, followed by a summary of the intermediary outcomes achieved by the BIH Program. A summary of the mechanisms at work within the strategies of case management, home visiting, and parent education concludes this report.

Program Effects on Pregnancy, Birth, and Breastfeeding Outcomes

The quantitative findings for pregnancy, birth, and breastfeeding outcomes – for which data were available for comparative analysis – are summarized in the context of the evidence we

have on risk factors for BIH clients. We first present findings that suggest that the BIH Program is making a positive impact on BIH clients in terms of disparities reduction in pregnancy, birth, and breastfeeding for African American women and their infants.

Figure 7: Evaluation-Generated Findings of Relationships between Program Mechanisms, Strategies, and Outcomes



Birth Defects

A larger proportion of BIH clients had babies born without birth defects (96.4%) compared to both the general population of births in Los Angeles County (93.2%) and births by African American mothers in the County (91.1%). The proportions of babies born without birth defects were similar across the BIH providers. Given that a larger proportion of BIH clients reported pregnancy problems, these findings suggest that the BIH Program is effectively helping its clients with health management and access to quality prenatal care through the key strategies of case management, home visiting, and parent education.

Infant Mortality

The infant mortality rate for the BIH sample (.6%) was lower than that of African American mothers in Los Angeles County (1.9%) and nationally (1.3%). The infant mortality rates across the BIH providers ranged from zero to 2%. These findings overall suggest that the BIH Program is effectively educating its clients about Sudden Infant Death Syndrome, for example, and is helping mothers to care for their infants so that they thrive.

Breastfeeding

The breastfeeding initiation rate for the BIH sample (69.1%) fell somewhere between the rates reported for the WIC Survey sample (49.6%) and African American mothers in Los Angeles County (79.4%).[13] At the same time, the rate for the BIH sample was higher than the State rate (66.7%) as well as the national rate (54.4%) for African American mothers. *Overall, the breastfeeding initiation rates for BIH were positive, especially for the Pasadena and Long Beach providers who exceeded these comparative rates. The qualitative findings supported positive change in knowledge and attitude toward breastfeeding*. However, while breastfeeding initiation rates for the BIH sample were generally positive, the rate of breastfeeding continuation for the recommended six months was lower (14.3%) than the national rate for African American mothers (26.6%).

Cesarean Births

The proportion of Cesarean births for the BIH sample (42%) was comparable to that of the general population of African American mothers in Los Angeles County (40%) but was higher than the national rate for African Americans (34.4%). The rates for Long Beach and Los Angeles were comparable to the County rate for African American mothers, but the rate for Pasadena was closer to the overall national rate (32%). The proportion of Cesarean births at 42% for BIH clients overall was 10% higher than the national rate. This disparity implies that greater

[13] This estimate comes from the Los Angeles County Department of Public Health Los Angeles Mommy & Baby (LAMB) project report (April, 2011).

emphasis can be placed on parent education (e.g., information on necessary and unnecessary Cesareans) and case management (e.g., developing birth plans and advocating on behalf of clients), as well as greater engagement and education of health providers to reduce unnecessary Cesarean births.

Preterm Births

The rate of preterm births was lower for BIH clients (13.2%) than African American women in Los Angeles County (16.3%) and nationally (17.5%). However, the preterm birth rate in Long Beach was considerably higher than other providers as well as County and national rates. *Overall, especially given the risk factors of BIH clients (including a larger proportion who reported late initiation of prenatal care), these findings suggest that the BIH Program – in particular the Pasadena and Los Angeles providers – is effective in helping its clients carry their pregnancy to full term*.

Birthweight

The proportions of BIH clients delivering babies with very low birthweight (3.6%) and low birthweight (12.8%) were higher than the rates for African American mothers in Los Angeles County (2.7% for very low birthweight and 9.9% for low birthweight). There was large variation across the BIH provider sites in birthweight (e.g., rates for low birthweight varied as much as 16% across providers). Overall, this finding, at face value, questions whether certain risk factors of BIH clients (that is, the interplay between pregnancy problems, later initiation of prenatal care, and possibly social isolation and lack of support) present challenges to the BIH Program to achieve normal birthweight at the level of the general population.

Intermediary Outcomes, Strategies, and Mechanism of Effective Service Delivery

The qualitative findings supported the BIH theory of change (or conceptual model), which posits that program participation is associated with several important intermediary outcomes. Study participants reported *increased social support and reduced isolation*; *increased mastery of health and parenting knowledge and skills*; *positive psychosocial change*; and *health-promoting behaviors*, such as accessing prenatal care and choosing to breastfeed. These findings were consistent with the BIH theory of change and literature that relates these intermediary outcomes to maternal health and birth outcomes (Braveman et al., 2008).

Within the three direct practice strategies of case management, home visiting, and parent education, several mechanisms were identified by focus group and interview respondents as being instrumental for influencing intermediary outcomes (see Figure 7). Within the strategy of case management, these stakeholders stressed the importance of *relationship building and*

trust, consistent follow up with clients, flexibility to "meet the client where she is", and *referrals and advocacy. Observation of the home environment, engagement of family members, convenience,* and the *provision of material goods and incentives* were identified as important mechanisms at work in home visiting. The specific mechanisms of offering *group classes and support groups,* providing a *holistic curriculum,* and *focusing on empowerment* through parent education were also identified.

The strategies of case management, home visiting, and parent education were consistently described as being interlaced in a mutually reinforcing manner. The effectiveness of the braided strategies – versus the impact of any one strategy alone – is an important lesson learned that, according to stakeholders, may have implications for the success of the revised BIH model.

Recommendations

Based on these evaluation findings of the BIH Program in Los Angeles County, practice and research recommendations are offered.

Practice Recommendations

- Continue to provide case management, home visiting, and parent education with a focus on the mechanisms that BIH Program stakeholders have reported as being effective at promoting intermediary outcomes to improve pregnancy/birth outcomes such as birthweight.
- Continue to provide breastfeeding education and support to BIH clients, including:
    - Preparing women for the realities of breastfeeding;
    - Encouraging women to breastfeed as long as possible; and
    - Offering tangible support (e.g., breast pumps) and emotional encouragement while women are breastfeeding.
- Continue to focus on cultural competency and appropriateness of the staff, especially by continuing to employ paraprofessionals from the African American community as direct practice staff.
- Train paraprofessional staff on facilitation skills so that they can successfully transition to the revised BIH model given its emphasis on group facilitation.
- Provide ongoing professional development training to direct practice staff in an effort to maintain high quality service and high levels of job satisfaction.
- Continue to train and support BIH direct practice staff and administrators on the revised model, including its MIS system and data collection procedures.

- Explore additional funding sources that will allow the BIH Program to:
    - Lengthen the program to help women and children through 24 months postpartum;
    - Increase the type and amount of mental health services available; and
    - Hire additional staff to enhance quality care and/or increase program reach.
- Share successes and challenges across the BIH jurisdictions/provider sites on a regular basis to promote best practices and peer-learning. The evaluation found differences in outcomes across BIH providers in some areas. The BIH providers could use the cross-site sharing opportunities to discuss the findings and to implement appropriate strategies to improve practice.
- Improve direct communication between First 5 LA and the California Department of Public Health so that there is a clear and unified message about goals and expectations.

Research/Evaluation Recommendations

- Test the relationships between mechanisms, intermediary outcomes, and pregnancy, birth, and breastfeeding outcomes in future studies of the BIH Program. Use mixed methods to gather quantitative and qualitative data that together more fully capture the nuances of program processes, outcomes, and the relationship between processes and outcomes.
- Measure client risk and protective factors, taking into consideration the intermediary outcomes as potential predictors of pregnancy, birth, and breastfeeding outcomes. For example, measure the client's social support and connection over time to examine changes in these outcomes, and test these measures as mediators of maternal health and birth outcomes.
- Establish a memorandum of understanding with the California Department of Public Health to access raw data for the BIH Program sites that First 5 LA is funding. This will ensure that future studies and evaluations of the program are based on client-level data rather than aggregated reports.
- Evaluate the implementation of the revised BIH model to assess the process and progress toward achieving positive birth and maternal health outcomes. As part of an evaluation or quality improvement process, collect ongoing feedback on the experiences of clients, direct practice staff, and administrators with the revised model. Communicate the feedback regularly and expediently to the BIH provider sites. Provide necessary technical assistance and support, including a cross-site forum through which administrators and direct practice staff can share their experiences and lessons learned.

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Appendix A (See Attachment)
Appendix B (See Attachment)

Study Methods

Quantitative Methods

Design

The outcome evaluation employed a retrospective quasi-experimental design that compared BIH clients to comparative samples of mothers and infants in Los Angeles County. The overall quasi-experimental design was a post-test design with non-equivalent groups; however, depending on the data and measures, there also was longitudinal measurement. We improved upon this basic design by using multiple controls such as location of service/residence (zip code), mother's education level, age, and race to match the samples (Shadish, Cook & Campbell, 2002).[1] The data for the quantitative portion of the evaluation were all secondary.

Data Sources and Sampling

The primary data source for analyses on BIH clients was the Black Infant Health Management Information System (BIH-MIS). Two sets of population-level data were also analyzed as comparative data sets to compare and contrast findings for the BIH Program. Each of these data sources is described below.

Black Infant Health Management Information System (BIH-MIS)

The BIH-MIS was developed by the California Department of Public Health for the purpose of tracking data on the BIH Programs across the State. All of the BIH providers in Los Angeles County collect data on program outcomes and other information and enter them into the BIH-MIS. Data that are entered in the BIH-MIS go directly to the State, and BIH Program providers use the system to generate aggregate reports. The aggregate reports contain data on demographics, services tracking, pregnancy/birth outcomes, and breastfeeding outcomes. (Only reports on demographics and pregnancy/birth and breastfeeding outcomes were analyzed for the evaluation. We created an electronic data file of these reports for our analysis.)

For analytic purposes, the reports were aggregated meaning that percentages were averaged across seven providers (one for Pasadena, one for Long Beach and five for Los

[1] Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton-Mifflin. (See pages 116 and 123 for similar examples of quasi-experimental designs.)

Angeles) to constitute the BIH sample. However, data from the reports were presented separately in tables for each provider (Pasadena, Long Beach, and Los Angeles) to show similarities and differences across the providers.

The aggregate reports included data collected from 2008 through the first six months of 2011. The sampling criterion for the aggregate reports was the timeframe of 2008-to-current in order to begin analyzing BIH reports in 2008 when First 5 LA began funding BIH. The aggregate reports from Pasadena and Los Angeles covered fiscal years 2008-09 through 2010-11, while Long Beach covered calendar years 2008 through April 2011. Therefore, the timeframes for all three providers overlapped with the exception of the first six months of 2008 for Long Beach. The slightly different reporting periods for each provider were due to how each provider generated the aggregate reports and the time at which the reports were actually generated for this evaluation.

Women, Infants and Children (WIC) Survey

The Women, Infants and Children (WIC) Survey of 2008 contains data on a sample of WIC participants in Los Angeles County.[2] The year of the survey (2008) corresponds with the first year of BIH programming under First 5 LA funding. One of the sampling criteria for the comparative data sets was that children in the sample had to be younger than a year old (to match the BIH sample). But because the WIC Survey is a retrospective account of the respondents' children when they were infants in the WIC program, we did not apply this sampling criterion to the WIC Survey sample. The WIC Survey data set contained 4,998 individual records of WIC clients.

In order to draw a comparable sample to the BIH sample, the WIC Survey sample was first selected using two criteria: zip code and mother's age. Therefore, the first layer of sampling included WIC recipients who resided in the same zip codes as those of BIH clients across all three providers. It also included WIC recipients whose age ranged from 18 to 34 years. Mother's age was chosen as a sampling criterion to match the age range of mothers that is similar to most BIH clients. The minimum age requirement for the BIH Program is 18 years. The average age for BIH clients was 25 years. Using the criterion of 25 years, we selected the maximum age that would not deviate more than one standard deviation from the mean of 25 years. This maximum age was 34 years. Using the

[2] The WIC Administrative Data contains pregnancy and breastfeeding information on all WIC participants in California. The WIC Administrative Data for Los Angeles can be queried through the Healthy City platform. However, we did not have access to the raw data as we did for the WIC Survey.

selection criteria of zip code and mother's age, the remaining sample of WIC clients totaled 2,815.

To further refine the sample to reflect BIH clients, we stratified the WIC client sample by education level to reflect the education level of BIH clients. The BIH-MIS reports from all three providers indicated that the majority of BIH clients (62%) had a high school education or less. In the sample of 2,815 WIC recipients, 79.3% (2,211) had a high school degree or less, 20.7% (577) had a college degree or higher and 1% (27) was missing education data. To retrieve a sample that more closely resembled BIH clients in terms of education level, we randomly selected 43% from the sample of 2,211 WIC recipients with a high school degree or less. The percentage of clients randomly selected (in this case 43%) was based on the goal of having a final WIC sample that approximated 62% of recipients with a high school degree or less (to match the BIH sample). The final WIC sample for our analysis included 1,509 WIC recipients.

Birth Statistical Master File from Vital Statistics

The Birth Statistical Master File from the State of California Vital Statistics compiles a census of birth records throughout the State. The Los Angeles Department of Public Health downloaded these birth records from 2008 through 2009, including fetal death data, for our evaluation purposes. A total of 308,789 records were included in this data file. In order to select our sample for comparison to BIH clients, we used the same criteria of zip code and mother's age (18 to 34 years) used for sampling WIC recipients. This yielded 173,533 birth records. Of these records, 61.3% of mothers reported having a high school degree or less. Since this proportion was similar to the education level of BIH clients (62%), no further stratification was necessary.

Income is another demographic variable that is commonly used as a "control" in sampling. We did not have data on income for BIH or the two comparative samples. Although Medi-Cal (as the primary source of health insurance) is often used as a proxy measure of income, we did not stratify the comparative samples using information on Medi-Cal. The BIH Program targets high risk African American women, and we have data in our evaluation to support this. However, we had limited *comparative* data to unequivocally demonstrate risk levels across the samples. Therefore, our analytic assumptions are based on evidence that the BIH sample is higher risk. If we would have attempted to equalize the samples using the comparative data that were available (and which were limited to demographic information), then we would not have samples that

differ on risk levels. We purposely did not separate Medi-Cal versus non-Medi-Cal recipients out of the Vital Statistics sample in order to maintain a lower risk comparative sample by virtue of higher income, which is a protective factor for pregnancy and birth outcomes.

It is important to keep in mind that the Vital Statistics data set represents the general population of births in Los Angeles County; therefore, the sample size is very large. The difference in sample sizes across the data sets is expected because each data set is unique to the population it represents. Variations in sample sizes do not affect the comparative analyses because we are examining proportional rates.

Data Analysis

Because the data from the BIH-MIS are aggregated (i.e., no raw data were available), data analysis for the outcome evaluation was limited to descriptive statistics (e.g., frequencies, percentages, and means). For example, descriptive statistics were used to describe the outcomes (e.g., low birthweight) as averages across the BIH providers. These results were analyzed against those of the comparative samples. No statistical tests were conducted.

Qualitative Methods

Design

Qualitative data are critical for gaining a more complete and rich understanding of how the BIH Program operates and how it affects the clients it serves. Focus groups and interviews were conducted to provide a cross-sectional look at BIH Program processes from multiple stakeholder perspectives. These data captured information on implementation processes, including strengths and challenges, as well as stakeholder perceptions about program effects.

Sample and Response

Focus groups and individual phone interviews with three stakeholder groups including clients, direct practice staff, and administrators were conducted for all three BIH providers. In total, 57 clients, direct practice staff, and administrators participated in qualitative data collection activities. The recruiting procedures and samples of participants are described below.

Clients

A purposeful sampling strategy was used to secure a mix of clients from each agency who possessed a range of time and experience with the BIH program. Our recruitment guidelines included clients who had completed the program, were current prenatal enrollees, or were current postpartum enrollees. One BIH coordinator from each of the three sites served as a liaison to the evaluation team. Using the recruiting criteria outlined above, each coordinator engaged direct practice staff to help recruit clients to participate in the focus group for their respective agency.

Four focus groups were conducted with BIH clients. The focus groups took place at the provider agencies; a total of 29 past and present clients participated. Two focus groups were conducted with clients from Los Angeles BIH agencies (n=11), one focus group was conducted with Long Beach BIH clients (n=9), and one focus group was conducted with clients in the Pasadena BIH Program (n=9). All client focus group participants were African American women over the age of 18, including a combination of BIH Program "graduates" and current prenatal and postpartum participants.[3]

Direct Practice Staff

The BIH coordinators from each of the three sites helped to recruit a purposeful sample of direct practice staff that combined veteran staff and newer hires. Two BIH direct practice staff focus groups were conducted with a combined total of 14 participants. One focus group with Los Angeles direct practice staff (n=8) was conducted at the First 5 LA office. A joint focus group with Long Beach and Pasadena direct practice staff (n=6) was conducted at the Health Department in Long Beach. The number of years that focus group participants had worked for the BIH Program ranged from 1.75 years to 12.5 years. The average number of years with the BIH Program was 6.5.

Administrators

In order to capture the experiences and perspectives of administrators, phone interviews and focus groups were conducted. Altogether, we collected data from 14 BIH administrators from across all three providers via one group phone interview with Long Beach administrators (n=3), one group phone interview with administrators from

[3] An exact count of current and past BIH clients was not conducted per focus group.

Pasadena (n=2), and one focus group with Los Angeles administrators (n=9) that was held at the First 5 LA office.

Data Collection Procedures

Separate semi-structured focus group and interview protocols were developed for all stakeholder groups, each with approximately 10 items organized around the outcome and implementation questions. Focus group and interview protocols were designed to achieve consistent information within and across groups. At the same time, the semi-structured guides offered flexibility to explore in greater or lesser depth individual questions or topics according to the experiences and perspectives of each particular group of participants. (See Appendix B for the focus group and interview protocols.)

Protocols for the client focus groups explored perceptions of whether and how the BIH Program influenced client knowledge, attitudes, behaviors, and pregnancy/birth outcomes; client experiences and overall satisfaction with program services (including service delivery mechanisms such as case management, parent education, and home visiting); and client suggestions for program improvement.

The direct practice staff focus group protocol consisted of a series of questions about staff experiences delivering services in the African American community using the BIH Program model, in particular the opportunities and limitations of using case management, parent education, and home visiting practices in order to improve pregnancy, birth, and breastfeeding outcomes. Direct practice staff was also asked to describe their current experiences planning and preparing to implement the revised BIH Program model and to discuss the resources and supports they anticipate needing in the future to successfully deliver BIH services.

The protocol for administrators included questions about the experience of administrating programs that provide outreach, case management, home visiting, and parent education services to the African American community in Los Angeles County. Administrators were asked to discuss the opportunities and challenges of delivering these to the African American community through the BIH Program, as well as program sustainability in light of the revised BIH Program model that is being rolled out across the County and State.

All focus groups and interviews were conducted by a senior member of the research team and one research assistant to lend support and take notes. At the beginning of each focus group and interview, the researcher reiterated the voluntary nature of the data collection activity, described confidentiality, and answered questions from participants. Focus groups lasted

approximately two hours; joint phone interviews lasted approximately 90 minutes. All focus groups and interviews were audio recorded with the permission of participants. Supplemental notes were typed during the focus groups and during most phone interviews by a research assistant.

Clients who completed a focus group were given a $25 gift card to Target in appreciation for their time and to offset travel expenses. Direct practice staff and administrators were not compensated for their participation. Light refreshments were provided at each focus group, and child care was provided during client focus groups as needed.

Data Analysis

Interview and focus group recordings were transcribed verbatim. The seven focus groups and two phone interviews yielded 163 pages of transcript used as the basis for analysis. The foundation of the qualitative analysis was built on thematic content analysis (Boyatzis, 1998) to identify and categorize patterns and themes in the data. The evaluators also borrowed from grounded theory methods developed by Strauss and Corbin (1998) in order to help establish connections and draw linkages among themes in the data. The first step in analysis was to utilize open coding procedures which “fracture” or “segment” the data into concepts and then categories. We used both a priori codes based on the evaluation questions of interest, as well as grounded codes that emerged from the data. To increase the reliability of the analysis, two members of the evaluation team independently performed open coding on a subset of transcripts (i.e., one transcript from each stakeholder group). The evaluators compared and discussed their coding schemes and determined a mutual definition of codes. The remainder of transcripts was analyzed by the first evaluator using the agreed upon coding scheme. The second evaluator reviewed all coded transcripts and noted areas of agreement and disagreement. The two evaluators then discussed areas of disagreement and came to consensus. Next, axial coding (Strauss and Corbin, 1998) was performed by the first evaluator to develop main categories and their connection to subcategories. The two evaluators then engaged in a similar process of review and consensus that was implemented during the open coding phase.

Institutional Review Board (IRB)

Human Subjects Protection

An exemption determination letter for the evaluation was received from the Western Institutional Review Board (WIRB), which is a commercial Institutional Review Board for medical

and social science research. The WIRB is a national IRB based in Olympia, Washington. Although the evaluation was exempted from a full IRB review, we had to obtain IRB approval to access the Vital Statistics data. We obtained IRB approval from the California Health and Human Services Agency Committee for the Protection of Human Subjects (CPHS) prior to requesting the data from the LACDPH.

Data Storage, Data Security Measures, and Confidentiality

As part of obtaining IRB approval CPHS, we had to ensure that data security measures were in place for the evaluation. All of our data are stored in two computers and back-up drives that are located in two separate physically secured offices. In order to access the offices, two sets of locked doors have to be entered with a key that is not available to anyone but the data persons whose computers store the data. The data are password protected on two computers that are not connected to any network. There are only two authorized researchers with the ability to access the computers. Data contained on secured servers do *not* have personal identifiers. Users of the public internet have no access to resources in the server.

Qualitative data (digital and/or tape recordings and transcriptions of focus groups) are stored in the same fashion. There is no identifying information in the transcriptions.

All focus group and interview participants were informed of the voluntary nature of data collection, as well as confidentiality procedures, in the qualitative study. Information about human subjects protection was discussed and verbal consent was obtained by participants at the beginning of the focus groups and interviews (see Appendix B).

Sample Characteristics

Demographics

Across the three BIH providers, there were an estimated total of 2,348 clients that participated in the BIH Program between January 2008 and June 2011. This is an estimate based on the reported number of enrolled clients in the BIH-MIS demographics reports (see Table 1-A). Because most of the other reports did not systematically match the reported number of clients enrolled, we present this sample size as an estimate. The majority of BIH clients represented in this sample (1,957 or 83%) were from Los Angeles, which has five subcontractors that provide BIH services in the Los Angeles area. A total of 215 clients (or 9%) were served in Long Beach and 176 clients (or 7%) were served in Pasadena.

Race

A total of 111 mothers in the WIC Survey sample (7.5%) were African American (see Table 1-A). In the Vital Statistics sample, 17,543 or 10.2% were African American.

Maternal Age

The client age range across all three BIH providers was 18 to 47 years, with an average age of 25 years (see Table 1-A). Our sampling procedures yielded the age range of 18-34 for the two comparative samples from the WIC Survey and Vital Statistics. The average age for these comparative samples was slightly higher than that of the total BIH sample. The WIC Survey sample was, on average, 27 years of age, and the Vital Statistics sample was, on average, 26 years of age.

Education Level

Close to 50% of BIH clients from Pasadena and Long Beach had some education beyond high school (i.e., vocational, college or higher), while this was the case for about one-third of BIH clients from Los Angeles (see Table 1-A). The BIH sample as a whole was educated, with approximately 38% having enrolled in higher education including vocational training, college, or a graduate program. Our sampling procedures yielded similar distributions in education level for the WIC Survey and Vital Statistics samples (about 38% had either vocational training, college or higher and 62% had a high school education or less).

Marital Status

Information on marital status of samples was available for BIH only (see Table 2-A). Approximately 85% of the BIH sample was reported as married and 12% were reported as single. These reports for the BIH sample were inconsistent with census data that showed that over 50% of African American women were *not* married by the age of 35 (National Center for Health Statistics, 2009). The discrepancy in reporting might be explained by how BIH clients defined “married” as living together (including marriage by common law) and being in a long-term, intimate relationship.

Table 1-A. Race, Age, and Education Level						
	Pasadena	**Long Beach**	**Los Angeles**	**Total BIH**	**WIC Survey**	**Vital Statistics**
Race						
African American	176 (100%)	215 (100%)	1,957 (100%)	2,348 (100%)	111 (7.5%)	17,543 (10.2%)
Caucasian	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	39 (2.6%)	21,927 (12.7%)
Latino	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1,303 (87.7%)	117,802 (68.2%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	32 (2.2%)	15,349 (8.9%)
Total	176	215	1,957	2,348	1,485	172,621
Age (in years)						
Range	18-44	18-44	18-47	18-47	18-34	18-34
Average	23.3	24.6	25.2	25.0	27.0	26.3
Total	N/A	N/A	N/A	N/A	1,509	173,533
Education Level*						
High School or less	93 (53.7%)	87 (51.8%)	986 (63.9%)	1,166 (61.8%)	932 (61.7%)	106,429 (61.3%)
Vocational, college or higher	80 (46.2%)	81 (48.2%)	550 (35.6%)	711 (37.7%)	577 (38.2%)	63,297 (36.5%)
Unknown	0 (0.0%)	0 (0.0%)	8 (0.5%)	8 (0.4%)	0 (0.0%)	3,807 (2.2%)
Total	173	168	1,544	1,885	1,509	173,533

* Education level was collapsed into two categories for the purpose of sampling. Analyses by various education levels could not be conducted because the aggregate reports for BIH do not allow for such analyses.

Table 2-A. Marital Status				
	Pasadena	**Long Beach**	**Los Angeles**	**Total BIH**
Marital Status				
Single	14 (8.1%)	25 (14.7%)	188 (12.2%)	227 (12.0%)
Married	154 (89.5%)	137 (80.6%)	1320 (85.5%)	1,611 (85.4%)
Divorced	4 (2.3%)	8 (4.7%)	32 (2.1%)	44 (2.3%)
Unknown	0 (0.0%)	0 (0.0%)	4 (0.3%)	4 (0.2%)
Total	172	170	1,544	1,886

Socioeconomic Status

The BIH-MIS reports showed that 78.7% of clients were not employed, while 8.8% were employed full time and 11.1% were employed part time (see Table 3-A). The primary income source for BIH clients was the California Work Opportunity and Responsibility to Kids (CalWORKs) program (formerly known as Aid to Families with Dependent Children or AFDC) at 38.8%. Seventeen percent (17%) were reported as relying on employment as the primary income source. Almost an equal proportion (14%) reported having no income source. Another 27% of BIH clients were reported as having "other" income with no explanation of the types of sources included within this category. There was no information on employment status and primary income source for the comparative samples.

Table 3-A. Employment Status and Primary Income Source

	Pasadena	Long Beach	Los Angeles	Total BIH
Employment Status				
Not employed	127 (73.8%)	126 (74.1%)	1,203 (79.8%)	1,456 (78.7%)
Part Time	31 (18.0%)	20 (11.8%)	155 (10.3%)	206 (11.1%)
Full Time	13 (7.6%)	22 (12.9%)	128 (8.5%)	163 (8.8%)
Unknown	1 (0.6%)	2 (1.2%)	21 (1.4%)	24 (1.3%)
Total	172	170	1,507	1,849
Primary Income Source				
Employed	40 (23.3%)	29 (16.8%)	233 (16.4%)	302 (17.1%)
Partners/Parents	4 (2.3%)	15 (8.7%)	23 (1.6%)	42 (2.4%)
CalWORKs/AFDC	41 (23.8%)	77 (44.5%)	568 (39.9%)	686 (38.8%)
*Other**	48 (27.9%)	43 (24.9%)	397 (27.9%)	488 (27.6%)
None	39 (22.7%)	9 (5.2%)	201 (14.1%)	249 (14.1%)
Total	172	173	1,422	1,767

* This category includes unknown source of income.

Medi-Cal was the primary source of health care payment for 85% of the BIH sample. In contrast, 63.2% of the Vital Statistics sample used Medi-Cal as the primary source of payment for delivery (see Table 4-A).

Both sets of findings on primary income and health care payment source indicate that the BIH sample represents a population of mothers with greater risk factors for poor pregnancy and birth outcomes. Medi-Cal benefits are based on low income, and low income is a socioeconomic factor associated with low birthweight (National Center for Health Statistics,

2011). The higher proportion of BIH clients on Medi-Cal (compared to the Vital Statistics sample) was consistent with the primary income sources reported in BIH-MIS, weighing more heavily on income assistance through government programs for low income individuals and households.

Table 4-A. Primary Health Care Payment Source

Primary Health Care Payment Source	Pasadena	Long Beach	Los Angeles	Total BIH	Vital Statistics*
*Medi-Cal***	159 (91.9%)	166 (88.3%)	1,352 (84.1%)	1,677 (85.2%)	109,052 (63.2%)
Other	14 (8.1%)	22 (11.7%)	256 (15.9%)	292 (14.8%)	63,499 (36.8%)
Total	173	188	1,608	1,969	172,551

*For the Vital Statistics data set, this variable is the primary source of payment for delivery.
** For Vital Statistics, this category includes other government programs (1.8%).

The socioeconomic factor of low income is a risk factor associated with other risk factors for poor pregnancy and birth outcomes (National Center for Health Statistics, 2011). A relatively high proportion of BIH clients (44.2%) reported needing housing immediately or sometime in the near future (see Table 5-A). The relative prevalence of homelessness among pregnant or parenting women has not been widely studied; however, one study in Philadelphia found that African American women had the highest prevalence rate of homelessness either three years prior or four years following a birth (20% compared to, for example, 4.8% for Hispanic women who had the second highest prevalence rate of homelessness) (Webb et al., 2003). While "housing need" is not the same measure as having been homeless, the relatively large proportion of BIH clients reporting housing need suggests a high level of risk for homelessness.

Table 5-A. Housing Needs

Housing Needs	Pasadena	Long Beach	Los Angeles	Total BIH
Not Required	92 (53.2%)	82 (49.7%)	704 (46.7%)	878 (47.6%)
Now through 2 weeks	38 (22.0%)	35 (21.2%)	345 (22.9%)	418 (22.7%)
Required within 60 days	11 (6.4%)	20 (12.1%)	131 (8.7%)	162 (8.8%)
Required within 120 days	14 (8.1%)	25 (15.2%)	195 (12.9%)	234 (12.7%)
Unknown	18 (10.4%)	3 (1.8%)	131 (8.7%)	152 (8.2%)
Total	173	165	1,506	1,844

Cigarette, Substance, and Alcohol Use

The use of cigarettes, substances, and alcohol was reported for BIH clients at entry into the BIH Program. Most of the BIH sample (83%) reported never smoking cigarettes whereas 5.6% of the BIH sample reported using tobacco during pregnancy (see Table 6-A). This proportion of 5.6% is lower than the County estimate of 8.2% for African American mothers (Los Angeles County Department of Public Health, 2011)[4] and the estimated national average of 10% for African American mothers (National Center for Health Statistics, 2010). For those BIH clients who had smoked cigarettes, a small proportion (2.2%) quit before conception and a slightly larger proportion (8.9%) quit during pregnancy.

Table 6-A. Cigarette Use

Cigarette Use	Pasadena	Long Beach	Los Angeles	Total BIH
Never	130 (77.8%)	117 (78.5%)	1,283 (84.0%)	1,530 (83.0%)
Quit Before Conception	6 (3.6%)	6 (4.0%)	28 (1.8%)	40 (2.2%)
Quit During Pregnancy	21 (13.6%)	19 (12.8%)	124 (8.1%)	164 (8.9%)
Smokes (tobacco user)	10 (6.0%)	7 (4.7%)	86 (5.6%)	103 (5.6%)
Other	0 (0.0%)	0 (0.0%)	7 (0.5%)	7 (0.4%)
Total	167	149	1,528	1,844

The reported use of substances (including cocaine, marijuana, and other drugs) among BIH clients was low overall at 5.1% (see Table 7-A). This proportion is comparable to the County estimate of 5.2% for African American mothers in Los Angeles (Los Angeles County Department of Public Health, 2011) but is less than the national estimate of 8% for African American women who were pregnant (Substance Abuse and Mental Health Services Administration, 2005).

[4] Data from the Los Angeles County Department of Public Health are from the Los Angeles Mommy & Baby (LAMB) project report (April, 2011).

Table 7-A. Substance Use				
Current Substance Use	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**
Never/No Current Use	153 (91.6%)	131 (91.0%)	1,438 (95.7%)	1,722 (94.9%)
Cocaine	1 (0.6%)	0 (0.0%)	6 (0.4%)	7 (0.4%)
Marijuana	13 (7.8%)	12 (8.3%)	56 (3.7%)	81 (4.5%)
Other Drug	0 (0.0%)	1 (0.7%)	2 (0.1%)	3 (0.2%)
Use denied but suspected	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Declined to respond	0 (0.0%)	0 (0.0%)	1 (0.1%)	1 (0.1%)
Total	167	144	1,503	1,814

Current alcohol use by BIH clients was also low at only 1.2% (see Table 8-A). This proportion is substantially lower than the countywide estimate of 12.1% for African American mothers who were pregnant (Los Angeles County Department of Public Health, 2011) and the national estimate of 10% of pregnant women (across racial groups) reporting alcohol use (Substance Abuse and Mental Health Services Administration, 2011). The BIH reports appear to underestimate alcohol use. In fact, these self-reports appear to underestimate cigarette, substance, and alcohol use overall for an otherwise higher risk population for risky health behaviors, although very high rates of alcohol and substance use would be unlikely for the BIH sample because heavy users/abusers would have been referred to another program. This under-reporting might be due to the timing of the assessment (at intake into the program prior to any relationship building between the client and direct practice staff) and how the data are captured in the aggregate reports (e.g., “never” and “no current use” for substance use are collapsed into one variable).

Table 8-A. Alcohol Use				
Alcohol Use	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**
Never/None	130 (76.4%)	128 (89%)	1,368 (89.7%)	1626 (88.4%)
Quit Before Conception	17 (10%)	8 (5.5%)	53 (3.5%)	78 (4.2%)
Quit During Pregnancy	21 (12.3%)	8 (5.5%)	86 (5.6%)	115 (6.2%)
Drinks	2 (1.2%)	0 (0.0%)	18 (1.2%)	20 (1.2%)
Total	170	144	1,525	1,839

Trimester of BIH Entry

A total of 1,497 BIH clients (or 73% of the sample of 2,047) entered the BIH Program during pregnancy. About 26% started the program during the first trimester of pregnancy (see Table 9-A). Another 41.3% started during the second trimester. A sizable proportion (32.6%) started during the third trimester. There was some variation across the BIH provider sites in terms of the trimester of BIH entry. A larger proportion of BIH clients in Pasadena (35.1%) entered the program during the first trimester. This higher proportion might be explained by the referrals that come directly from the clinic within the city health department. Prospective clients are detected earlier on because of their contact with health department services.

Table 9-A. Trimester of BIH Entry

Trimester of BIH entry	Pasadena	Long Beach	Los Angeles	Total BIH
First Trimester (<14 weeks)	59 (35.1%)	39 (28.5%)	292 (24.5%)	390 (26.1%)
Second Trimester (15–27 weeks)	73 (43.5%)	56 (40.9%)	490 (41.1%)	619 (41.3%)
Third Trimester (>28 weeks)	36 (21.4%)	42 (30.6%)	410 (34.4%)	488 (32.6%)
Postpartum (n=550)	6 (1.1%)	40 (7.3%)	504 (91.6%)	550 (100%)
Total	174	177	I,696	2,047

Prenatal Care Initiation

For the BIH sample, 68.7% started prenatal care in the first trimester compared to 79.5% of African American women in the Vital Statistics sample (see Figure 1-A). In other words, 31.3% of BIH clients started prenatal care *after* the first trimester. Within this proportion, 11.3% of BIH clients started prenatal care in the third trimester compared to 3.2% of African American mothers in the Vital Statistics sample. The disparities in prenatal care initiation were most pronounced between BIH clients and Caucasian women in the Vital Statistics sample. For example, 68.7% of BIH clients compared to 89.5% of Caucasian women in the Vital Statistics sample started prenatal care initiation during the first trimester.

Data on prenatal care initiation for Long Beach were missing for almost a quarter of the sample (see Table 10-A). Their reporting of 88% for prenatal care initiation in the first trimester is substantially higher than Pasadena and Los Angeles (64% and 67%, respectively). If the missing reports for Long Beach are more similar to those of Pasadena and Los Angeles, the disparity in prenatal care initiation time would be even greater for BIH clients.

Figure 1-A: Prenatal Care Initiation by Sample and Race

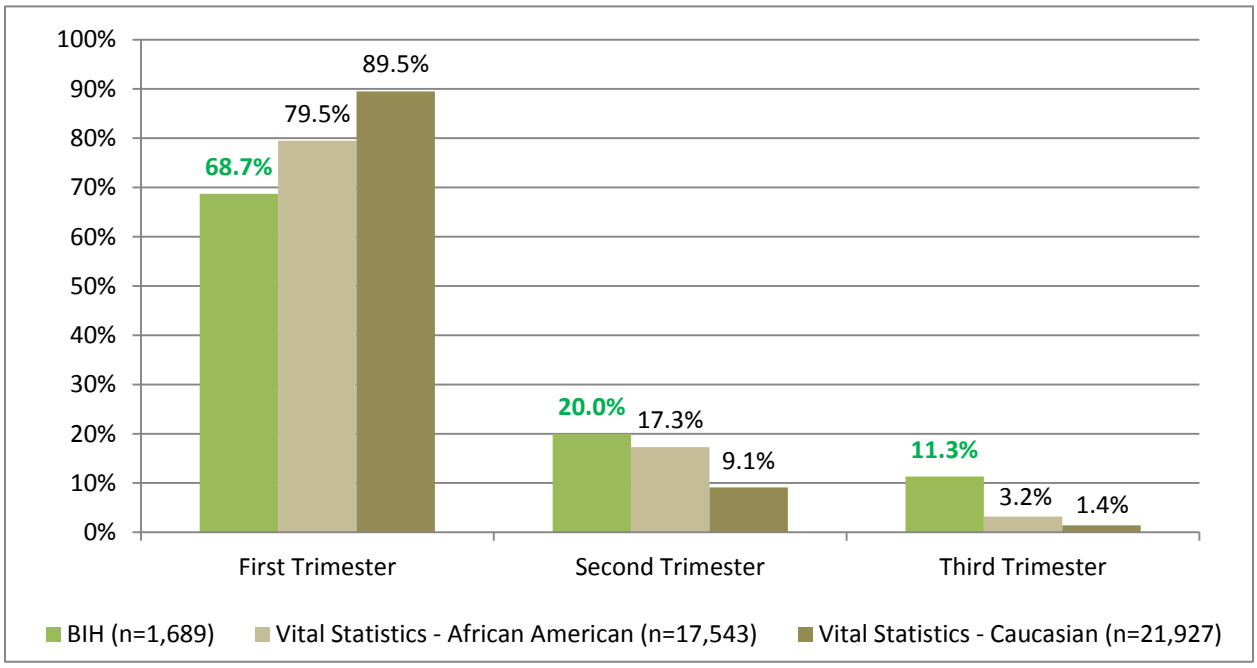

Table 10-A. Prenatal Care Initiation

Prenatal Care Initiation	Pasadena	Long Beach	Los Angeles	Total BIH
First Trimester (<14 weeks)	121 (64.0%)	124 (88.6%)	915 (67.3%)	1,160 (68.7%)
Second Trimester (15–27 weeks)	61 (32.3%)	12 (8.6%)	265 (19.5%)	338 (20.0%)
Third Trimester (>28 weeks)	7 (3.7%)	4 (2.9%)	180 (13.2%)	191 (11.3%)
Total	189	140	1,360	1,689

Planned Pregnancy

There was a large difference between the BIH sample and the WIC Survey sample in terms of whether or not the pregnancy was planned. Most of the BIH sample (81%) reported having an unplanned pregnancy, whereas 40% of the women in the WIC sample reported having an unplanned pregnancy (see Table 11-A). The proportion for the BIH sample also was higher than an estimate of 64.4% for African American mothers in Los Angeles County whose pregnancy was "unwanted/mistimed" (Los Angeles County Department of Public Health, 2011).

Table 11-A. Planned Pregnancy					
Pregnancy Planned	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**	**WIC Survey**
Yes	28 (18.3%)	25 (18.9%)	267 (19.1%)	320 (19.0%)	901 (60.0%)
No	125 (81.7%)	107 (81.1%)	1,132 (80.9%)	1,364 (81.0%)	600 (40.0%)
Total	153	132	1,399	1,684	1,501

Pregnancy Problems

Both the BIH-MIS reports and birth records from Vital Statistics contained information on pregnancy problems (see Table 12-A). Because mothers could have more than one pregnancy problem, the conditions listed in Table 12-A are not mutually exclusive; therefore, the percentages are based on the total number of pregnancy problems rather than the total sample size. Before an analysis of these data is presented, it should be noted that there is significant variation in reported pregnancy problems across the three BIH providers. Missing data could explain why relatively few BIH clients reported certain pregnancy problems such as gestational diabetes (1.5%) for which diagnosis rates are highest among African Americans (National Diabetes Statistics, 2011). (A countywide estimate reported that 10% of African American mothers had gestational diabetes during pregnancy [Los Angeles County Department of Public Health, 2011].) Nonetheless, in general, a smaller proportion of the BIH sample (33%) reported having no pregnancy problems compared to the Vital Statistics sample (56%), suggesting that the BIH sample was at higher risk for poor pregnancy and birth outcomes.

Table 12-A. Current Pregnancy Problems					
Current Pregnancy Problems*	**Pasadena**	**Long Beach**	**Los Angeles**	**Total BIH**	**Vital Statistics**
None	112 (63.6%)	12 (5.6%)	645 (33.0%)	769 (32.8%)	97,448 (56.2%)
Anemia	12 (6.8%)	11 (5.1%)	204 (10.4%)	227 (9.7%)	N/A
Gestational Diabetes	3 (1.7%)	2 (0.9%)	31 (1.6%)	36 (1.5%)	3,132 (1.8%)
Pregnancy Induced Hypertension	1 (0.6%)	3 (1.4%)	34 (1.7%)	38 (1.6%)	2,724 (1.6%)
Placenta Previa	3 (1.7%)	1 (0.5%)	7 (0.4%)	11 (0.5%)	N/A
Premature Labor	0 (0.0%)	8 (3.7%)	25 (1.3%)	33 (1.4%)	N/A
Pyelonephritis	0 (0.0%)	1 (0.5%)	0 (0.0%)	1 (0.0%)	N/A
Rh Negative	1 (0.6%)	1 (0.5%)	10 (0.5%)	12 (0.5%)	N/A
Urinary Tract Infection	5 (2.8%)	3 (1.4%)	58 (3.0%)	66 (2.8%)	N/A
Other	12 (6.8%)	18 (8.4%)	114 (5.8%)	144 (6.1%)	N/A
Unknown	4 (2.3%)	0 (0.0%)	37 (1.9%)	41 (1.7%)	N/A
Total	176	215	1,957	2,348	173,533

*Because BIH clients could have one or more of these pregnancy problems, the answer options are not mutually exclusive.

BIH Parent Focus Group Protocol

Script to Introduce Evaluation and to Address Human Subject Protections

Welcome, everyone, and thank you for agreeing to participate in this focus group. Today's focus group is part of the Black Infant Health Program evaluation, which is funded by First 5 LA. We expect the focus group to take approximately 2.0 hours.

You were chosen to be a part of the focus group because you either currently receive services from the Black Infant Health Program or you have received services from this program in the past. The purpose of the focus group is to gather information about your experience with the Black Infant Health Program. Your input is valuable; it will help First 5 LA and the Black Infant Health Program understand what things about the program have been useful and what things could be improved.

As a participant in the focus group, you should know the following information and that you have protections:

Voluntary Participation – Participation is completely voluntary. You have the right to refuse to answer any question(s) for any reason, without penalty. You also have the right to withdraw from this focus group without penalty. Your decision whether or not to participate in this research study will in no way affect your future relationship with First 5 LA or the Black Infant Health Program.

Confidentiality – Any information provided in the focus group that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. The last names of participants will not be shared, and the focus group will not discuss or disclose confidential information about the participants. As evaluators, we pledge to keep the information shared in the focus group confidential, and we ask that every focus group participant do the same. But because we cannot guarantee this for each participant, we ask that you participate at your own level of comfort. For reporting purposes, individual responses will be kept confidential. Any findings from the focus group will be reported in aggregate (group) form with no identifying information.

Risk – There are no foreseeable risks to you. You have the right to not answer any questions during the focus group that may make you uncomfortable.

Benefit – The benefit of participation is that each focus group participant has the opportunity to provide information that can help the Black Infant Health program improve services. Ultimately, there is potential to improve services and supports to women and infants participating in the Black Infant Health Program.

Recording the Focus Group – We will be recording today's focus group. The purpose of the recording is so that if we miss something important as we take notes, we can go back to hear exactly what was said. Only members of the research team will have access to the recording, and it will be destroyed upon completion of this project.

Payment for Participation – To thank you for your participation, you will receive a $25 gift card.

Alternatives – Your alternative is to not be in this study. If you have questions about anything you've heard so far, please ask. If you do not want to participate, you are free to leave at this time.

Questions – If you have any questions, concerns or complaints or would like additional information about the study or focus group, please contact Dr. Jane Yoo at 626-791-5861.

Facilitator note: *Before you begin asking questions, ask participants to help you brainstorm a list of ground rules for the focus group (e.g., one person talks at a time, no side conversations, respect everyone's opinions, turn off cell phones, etc.)*

1. Let's quickly go around the room and have everyone tell us their first name (*emphasize just first name*) and how long they have been involved with this program.

2. How did you become aware of the Black Infant Health (BIH) Program, and what made you decide to try it out?

3. ***Facilitator note:*** *Ask this question if it doesn't come up naturally as part of Q2*

   Were you more likely to start the BIH Program and continue participating in the program because it is for African American women and children? If so, why is it is important that the BIH Program addresses the opportunities and challenges of the African American community?

4. You were selected to be in this focus group because you completed the BIH Program or because you are currently participating in the program.

    a. What is it about the program that made you decide to stay in it and/or complete it?
        i. *(Probe) Your case manager? The SSE group facilitator or classes? The support of other women in the group classes? Home visits? Incentives? etc.*

5. What services and supports did you receive from BIH?

   Facilitator note: *These terms may not resonate with participants. You may have to use concrete examples as probes.*

    a. *(Probe) Case Management*
    b. *(Probe) Home Visitation*
    c. *(Probe) Social Support and Empowerment Classes*

   d. *(Probe) Support for breastfeeding*

6. Do you think your or your child's life has been affected by BIH? If so, how? If not, why not?
   a. *(Probe) How, if at all, have your knowledge, attitudes, and/or behaviors about taking care of yourself and your baby changed as a result of receiving information and support through BIH?*
      i. *E.g., knowledge of SIDS/infant mortality*
   b. *(Probe) How, if at all, have your feelings about yourself and/or your control over your life changed? Do you think that's because of what you have learned in the BIH Program?*
      i. *E.g., level of self-esteem, level of stress*
   c. *(Probe) What things have you done or will you do differently based on what you learned in this program? Please provide a specific example if you can.*
      i. *E.g. achievement of vocational/employment goals*
   d. *(Probe) Do you think your child is or will be healthier and/or will have a better chance in life because you received information and services from the BIH Program? If so, why do you think so? If not, why not?*

7. If you had not been made aware of the BIH program or received services through it, do you think you would have found them somewhere else or received the same kind of help in a different way? Why or why not?
   a. *(Probe) If several participants feel they would have found similar services elsewhere, ask them for specifics regarding where and from whom.*
   b. *(Probe) If participants are able to name other similar services, ask them whether or not they receive(d) any of these services in addition to services from BIH.*

8. What was it like to work with your case manager?
   a. *(Probe) What was the best part?*
   b. *(Probe) Was there anything you didn't like about it?*
   c. *(Probe) Were you comfortable with your case manager? Why or why not?*
   d. *(Probe) Did you feel respected by your case manager? Why or why not?*

9. What did you think about the Social Support and Empowerment classes?
   a. *(Probe) What was the best part?*
   b. *(Probe) What didn't you like about the SSE group classes?*
   c. *(Probe) What is the most important thing that you've learned from your SSE classes that you will keep with you as a woman and/or as a mother?*

10. Did the services/supports you received from BIH meet your needs, or did you need additional support? If so, what did you need that you didn't receive?

11. Thank you so much for your time today. Before we end, is there anything we haven't asked that you'd like us to know about your experiences with this program, or any other feedback you would like us to pass on to the BIH Program?

THANK YOU FOR YOUR TIME TODAY!!

BIH Line Staff Focus Group Protocol

Script to Introduce Evaluation and to Address Human Subject Protections

Welcome, everyone, and thank you for agreeing to participate in this focus group. Today's focus group is part of the Black Infant Health Program evaluation, which is funded by First 5 LA. We expect the focus group to take approximately 2.0 hours, and we really appreciate your time.

The current evaluation will investigate the outcomes of the Black Infant Health Program and examine issues related to the ongoing implementation of the initiative. This evaluation aims to understand the extent to which the Black Infant Health Program is achieving the desired goals of improving pregnancy and birth outcomes for African American women. In addition, the evaluation will provide insight into the mechanisms through which positive outcomes are being achieved. As part of this objective, there will be particular focus on helping to identify successful practices with respect to intensive family strengthening strategies, which represent a central component of First 5 LA's Strategies Framework.

As line staff responsible for delivering services to Black Infant Health Program clients, we are particularly interested in your opinions and experiences with the program. Your input is critical, and we appreciate your active participation and candid responses during this process.

As a participant in the focus group, you should know the following information and that you have protections:

Voluntary Participation – Participation is completely voluntary. You have the right to refuse to answer any question(s) for any reason, without penalty. You also have the right to withdraw from this focus group without penalty. Your decision whether or not to participate in this research study will in no way affect your future relationship with First 5 LA or the Black Infant Health Program

Confidentiality – Any information provided in the focus group that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. The last names of participants will not be shared, and the focus group will not discuss or disclose confidential information about the participants. As evaluators, we pledge to keep the information shared in the focus group confidential, and we ask that every focus group participant do the same. But because we cannot guarantee this for each participant, we ask that you participate at your own level of comfort. For reporting purposes, individual responses

will be kept confidential. Any findings from the focus group will be reported in aggregate (group) form with no identifying information.

Risk – There are no foreseeable risks to you. You have the right to not answer any questions during the focus group that may make you uncomfortable.

Benefit – The benefit of participation is that each focus group participant has the opportunity to provide information that can help improve and sustain the Black Infant Health Program.

Recording the Focus Group – We will be recording today's focus group. The purpose of the recording is so that if we miss something important as we take notes, we can go back to hear exactly what was said. Only members of the research team will have access to the recording, and it will be destroyed upon completion of this project.

Alternatives – Your alternative is to not be in this study. If you have questions about anything you've heard so far, please ask. If you do not want to participate, you are free to leave at this time.

Questions – If you have any questions, concerns or complaints or would like additional information about the study or focus group, please contact Dr. Jane Yoo at 626-791-5861.

Facilitator note: *Before you begin asking questions, ask participants to help you brainstorm a list of ground rules for the focus group (e.g., one person talks at a time, no side conversations, respect everyone's opinions, turn off cell phones, etc.)*

1. Let's go around the room quickly and have everyone state their first name and the length of time they have worked as line staff for the BIH Program.

2. Please reflect on your experiences to date with delivering intensive family strengthening strategies (i.e., case management, parent education, and home visiting) in the African American community through the BIH Program:

   Facilitator note: *These AREN'T probes! Please ask all questions.*

   a. What works in terms of **outreach** to African American families and what doesn't?
   b. What works in terms of *case management* with African American families and what doesn't?
   c. What works in terms of **parent education** with African American families and what doesn't?
   d. What works in terms of **home visiting** with African American families and what doesn't?

3. Do you think that the BIH Program has achieved positive pregnancy and birth outcomes for African American women? Why or why not?

   Facilitator note: *Some feedback we received suggested that participants may not understand the term "birth outcomes" (e.g., healthy weight, full term, etc.). Case managers and other line staff should know, but if there seems to be any confusion, please clarify.*

4. More specifically, which of the BIH model elements do you think have been the most impactful on improving pregnancy and birth outcomes? Which have had the least amount of impact on outcomes? Please give specific examples.

   Facilitator note: *One of our main research objectives is to know more about whether/how the following family strengthening strategies work. Please allow participants to answer the question above without prompts concerning case management, parent education, and home visiting. But make sure that before you move on to the next question, participants have spoken directly to each probe below.*

   a. *(Probe) Case Management*
   b. *(Probe) Parent Education*
   c. *(Probe) Home Visiting*

5. Focusing more now on the present, we want to hear your thoughts about and experiences with the transition to the revised BIH model.

   Facilitator note: *A-C below are not probes.*

   a. How do you and your colleagues feel about transitioning to the revised BIH model? Please explain.

   b. What has gone well so far in terms of the planning and preparation?
      i. *(Probe) Have you been able to ensure that what was successful about the original model is sustained in the revised one? Why or why not?*
      ii. *(Probe) What supports, both internally, from First 5 LA, and State Department of Public Health, have been helpful?*

   c. What has been challenging and/or discouraging with respect to the planning or the transition in general?
      i. *(Probe) Have there been any supports that you've needed that have been lacking? Explain.*

6. What positives and negatives do you see coming from implementation of the new model?
   a. *(Probe) What supports do you anticipate needing in the future, both internally from your BIH administrators and from First 5 LA, to be successful in delivering the revised BIH model?*

7. What are the most important lessons learned based on your time and experiences delivering BIH services to clients that you would like us to know about and pass on to BIH administrators and/or First 5 LA?

8. Is there anything we haven't asked today that you'd like us to know about your experiences with the BIH program?

THANK YOU FOR YOUR TIME TODAY!!

BIH Administrator Interview Protocol

Script to Introduce Evaluation and to Address Human Subject Protections

Thank you for agreeing to participate in this interview. Today's interview is part of the Black Infant Health Program evaluation, which is funded by First 5 LA. We expect the focus group to take approximately 90 minutes, and we really appreciate your time.

The current evaluation will investigate the outcomes of the Black Infant Health Program in Los Angeles County and examine issues related to the ongoing implementation of the initiative. This evaluation aims to understand the extent to which the Black Infant Health Program is achieving the desired goals of improving pregnancy and birth outcomes for African American women. Second, the evaluation will provide insight into the mechanisms through which positive outcomes are being achieved. As part of this objective, there will be particular focus on helping to identify successful practices with respect to intensive family strengthening strategies, which represent a central component of First 5 LA's Strategies Framework. Lastly, the evaluation will cull from stakeholder respondents the lessons learned that can help to shape future planning and implementation processes.

As a Black Infant Health Program administrator, we are particularly interested in your opinions about and experiences with the program. Your input is critical, and we appreciate your candid responses.

As a participant in the evaluation, you should know the following information and that you have protections:

Voluntary Participation – Participation is completely voluntary. You have the right to refuse to answer any question(s) for any reason, without penalty. You also have the right to withdraw from this interview without penalty. Your decision whether or not to participate in this research study will in no way affect your future relationship with First 5 LA or the Black Infant Health Program.

Confidentiality – Any information provided in the interview that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. As evaluators, we pledge to keep the information shared in the interview confidential, and we ask that everyone participating in a joint interview do the same. In the case of joint or group interviews, because we cannot guarantee this for each participant, we ask that you participate

at your own level of comfort. For reporting purposes, individual responses will be kept confidential. Any findings from the interview will be reported in aggregate (group) form with no identifying information.

Risk – There are no foreseeable risks to you. You have the right to not answer any questions during the interview that may make you uncomfortable.

Benefit – The benefit of participation is that you have the opportunity to provide information that can help the Black Infant Health Program improve and be sustained. Ultimately, there is potential to improve services and supports to women and infants participating in BIH.

Recording the Interview – We will be recording today's interview. The purpose of the recording is so that if we miss something important as we take notes, we can go back to hear exactly what was said. Only members of the research team will have access to the recording, and it will be destroyed upon completion of this project.

Alternatives – Your alternative is to not be in this study. If you have questions about anything you've heard so far, please ask. If you do not want to participate, you are free to leave at this time.

Questions – If you have any questions, concerns or complaints or would like additional information about the study or interview, please contact Dr. Jane Yoo at 626-791-5861.

Facilitator note: *Before you begin asking questions, ask participants to help you brainstorm a list of ground rules for the focus group (e.g., one person talks at a time, no side conversations, respect everyone's opinions, turn off cell phones, etc.)*

1. Please reflect on your experiences to date with delivering intensive family strengthening strategies (i.e., case management, parent education, and home visiting) in the African American community through the BIH Program.

   Facilitator Note: *Please ask administrators to answer these questions from a policy and procedures perspective more so than a direct practice perspective.*

   Facilitator Note: *Questions A-D are not probes. Please ask all of the questions.*

   a. What works in terms of outreach to African American families and what doesn't?
   b. What works in terms of case management with African American families and what doesn't?
   c. What works in terms of parent education with African American families and what doesn't?
   d. What works in terms of home visiting with African American families and what doesn't?

2. Overall, do you think the BIH Program has achieved its objectives of improving pregnancy and birth outcomes for African American women and infants to date? Why or why not?

3. We'd like to hear your thoughts about and experiences with the transition to the revised BIH model:

   Facilitator Note: *Questions A-D are not probes. Please ask all questions.*

   a. As administrators, how do you feel about transitioning to the revised BIH model? Please explain.
   b. How would you characterize the transition from the original to revised BIH model for your staff? For example, how is your line staff reacting to the new model and/or adjusting to the transition?
   c. What has gone well so far in terms of the planning and preparation for the revised model?

   i. *(Probe) How do you ensure that what was successful about the original model is sustained in the revised one?*
   ii. *(Probe) What supports, both internally, from First 5 LA, and from the State Department of Public Health, have been helpful?*

d. What has been challenging and/or discouraging with respect to the planning or the transition in general?
   i. *(Probe) Have there been any supports that you've needed that have been lacking? Explain.*

4. Looking ahead, what are your greatest anticipations, excitements, and fears about the prospect of implementing the revised BIH model?

5. What supports do you anticipate needing from First 5 LA to be successful in delivering the revised BIH model?
   a. *(Probe) What are some of the specific aspects of the relationship between your organization and First 5 LA that have facilitated implementation of BIH to date and that you will continue to draw from in the future?*
   b. *(Probe) What are some of the specific aspects of the relationship between your organization and First 5 LA that need to be improved and/or that seem to hinder the achievement of the goals and objectives of the BIH Program? Do you have any suggestions on how these challenges can be addressed or overcome?*

6. Is there anything we haven't asked about today that you'd like us to know about your experiences with this program? Any overarching lessons learned or other feedback to share with First 5 LA?

THANK YOU FOR YOUR TIME TODAY!