AmeriCorps Impact Evaluation

Sacramento County

Birth and Beyond Home Visitation Program

2013 – 2015

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This evaluation was made possible by an ongoing collaboration among a number of agencies and individuals who have a demonstrated commitment to understanding and improving the lives of families in Sacramento County.

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LIST OF ACRONYMS

AAPI-2	Adult-Adolescent Parenting Inventory
ACSN	
B&B	Birth & Beyond Program
CAPC	Child Abuse Prevention Council of Sacramento, an agency of the Child Abuse Prevention Center
CPS	Sacramento County Child Protective Services
CWS/CMS	Child Welfare Service/Case Management System
FRC	Birth & Beyond Family Resource Center
HV	Home Visitation
NPP	Nurturing Parenting^{TM} Program
WIC	Women Infant and Children Program

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EXECUTIVE SUMMARY

The Birth & Beyond (B&B) Family Resource Center Initiative (FRC) an AmeriCorps State and National (ASCN) program, is dedicated to reducing the incidence of child abuse and neglect. This evaluation focuses on the delivery of parent education during weekly home visits by 96 AmeriCorps members. Home visitation (HV) parenting education uses the evidence-based Nurturing Parenting Program™ (NPP) which includes an Adult-Adolescent Parenting Inventory-2 (AAPI) to determine a parent's risk level for child abuse and neglect. AmeriCorps members and parents develop a Family Nurturing Plan that prescribes the content and number of NPP lessons, over the course of weekly home visits as determined by the AAPI risk level. Program outputs and outcomes were measured for the 2013/14 and 2014/15 AmeriCorps program years. Measures and key findings include:

Program Completion | ***Parents completing their assigned NPP program hours are in the minority.*** Program attendance data identified those parents receiving at least eight hours of home visitation as well as those completing the total hours prescribed in their NPP plan. Less than one-third (28%) of the parents with closed cases during the study period completed their assigned dosage of NPP lessons. This number shrinks more than half (13%) when looking at those parents who came into the program with the highest risk. On average, parents received 19.4 hours at the close of their case with 67 percent receiving at least eight hours.

Improvement in Parenting Skills | ***Parents receiving at least eight hours of HV program services show statistically significant improvement ($p < 0.001$) in their parenting skills and attitudes.*** A pre/post comparison of average AAPI scores was conducted for those parents who had received at least eight hours of service to measure reduced risk/increase in parenting skills and attitudes. Parents in all program groups increased an average of 1.1 points (on a 10-point scale) across all of the five parenting domains measured. This suggests that even though program participants may not be reaching their program goals in terms of hours, their levels of risk for child abuse and neglect are being reduced from those NPP lessons they do receive. Parents entering the program at the highest risk levels are showing the greatest gains in their AAPI scores (i.e., decrease in risk levels).

CPS Recidivism | ***As a result of any level of participation in the HV program, parents with previous CPS history reduce the likelihood of future substantiated referrals.*** A quasi-experimental study compared participating HV parents with previous CPS referrals and a comparison group of parents who did not participate in home visiting, using CPS records and propensity score matching. A Cox regression analysis was used to show a statistically significant difference between parents receiving HV services and those who did not. Being in the HV program group rather than the comparison group decreased the probability of having a substantiated referral by 41 percent at a given time point ($p < 0.05$) and the probability of having any CPS referral by 18 percent at a given time point ($p < 0.10$) when all other variables were held constant.

Optimal Program Hours for Preventing CPS Recidivism | ***Parents with previous CPS history, receiving 25-34 hours of HV program services demonstrated the greatest reduction in post-program referrals of any kind.*** In particular, parents who received 25-34 hours of HV program were 173 percent less likely at a given time to have a substantiated referral and 57 percent less likely at a given

time to have any CPS referral, than those in the comparison group (both significant at the $p < 0.05$ level). However, when divided into dosage groups, there were no statistically significant differences between the comparison group and HV participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from participating in the HV program in relation to CPS recidivism. Parents in the program group receiving *less than 25 hours* of HV programming had a rate of substantiated CPS referrals of 13 percent, compared to those parents receiving *25 hours or more* who had a rate of nine percent.

Conclusion | Findings from this study confirm that any participation in the HV program makes a statistically significant impact in preventing substantiated CPS referrals for those parents with CPS history, and eight hours of the HV program makes a significant improvement in parenting attitudes and practices for all parents, regardless of CPS history. Thus we can infer with the evidence from this study that participation in the Birth and Beyond HV program resulted in the reduction of parental risk and incidences of child maltreatment.

Recommendation #1 | Consider aligning the dosage of the home visitation program towards the optimal 25-34 hour range. Looking at the current sample of parents who closed during the study period (including those without CPS history), 13 percent of the closed cases (143 parents) received 25-34 hours of the HV program and 18 percent (197 parents) received 35 hour or more. It should be noted that parents participating more than 34 hours in HV programming may continue to accrue other types of important benefits such as strengthening their parenting knowledge, skills, and attitudes and/or connecting to other types of program services and supports.

Recommendation #2 | Explore strategies to address program attrition in order to ensure parents are receiving optimal level of HV program dosage. While this evaluation provides evidence of the effectiveness of the HV program, it equally underscores the need for participants to be engaged in the program for a considerable length of time. We recommend that B&B focus on their rates of participant attrition, in order to retain a higher proportion of those parents entering the program. High drop-out rates are a given when targeting highly vulnerable and at risk populations. B&B has already taken a significant step in addressing the surrounding vulnerabilities of the families it serves through their Crisis Intervention Services.

Recommendation #3 | Consider additional research to explore remaining and emergent questions from this study about effectiveness and impact. The current study demonstrates that parents participating in the HV program are making significant gains in their parenting attitudes and practices, in addition to confirming the impact of the program in lowering probability of recidivism among HV participants. While these findings provide evidence of the HV program’s overall impact, the study also generated more nuanced questions that remain to be explored.

AMERICORPS IMPACT EVALUATION | BIRTH & BEYOND HOME VISITATION

Introduction

The Birth & Beyond Family Resource Center Initiative (B&B FRC) an AmeriCorps State and National (ACSN) program, is dedicated to reducing the incidence of child abuse and neglect through parenting education delivered during home visits and FRC workshops. B&B FRC is governed by the Family Support Collaborative (FSC) which was created in 1998 by the Sacramento County Board of Supervisors and is supported extensively by First 5 Sacramento, Sacramento County Department of Health and Human Services, and the State Commission for National and Community Service. FSC is a broad-based public/private community collaborative focusing on child abuse and neglect prevention-to-intervention-to-treatment services for families with children 0-5 years. Its purposes are to engage the community in developing strategies to address child abuse and neglect as well as to coordinate the implementation of B&B services, including but not limited to: 1) home visitation; 2) parenting education; 3) crisis intervention; 4) connection to resources; 5) school readiness; and 6) parent leadership.

The home visitation (HV) component is coordinated through Family Resource Centers (FRCs) located in nine Sacramento County neighborhoods which provide culturally and linguistically diverse services to families who disproportionately reflect social and economic risk factors for child abuse and neglect: long-term poverty, limited education, single parenting, and lack of health care access. The FRCs are operated by six non-profit partner organizations: Folsom Cordova Community Partnership; La Familia Counseling Center; Mutual Assistance Network; River Oak Center for Children; Sacramento Children's Home; and WellSpace Health. These agencies are responsible for managing services, supervising staff, and collecting data. The Child Abuse Prevention Council of Sacramento (CAPC) houses the FSC and provides collaborative support, administers the ACSN grant that provides AmeriCorps members who serve families. CAPC also conducts training, coordinates program evaluation, and monitors program compliance.

For the 2013/14 and 2014/15 AmeriCorps program years, 9-10 full-time members served annually as Home Visitors and Family Resource Aides at each FRC for a total of 166 members. This evaluation focused on the 96 members who delivered education during weekly home visits. B&B parenting education uses the evidence-based Nurturing Parenting Program™ which includes an Adult-Adolescent Parenting Inventory (AAPI) to determine a parent's risk level for child abuse and neglect. AmeriCorps members and parents develop a Family Nurturing Plan based on the AAPI assessed risk level, that prescribes the content and number of NPP lessons, over the course of weekly home visits.

The following study was generously supported by the ACSN program and represents the desire of B&B to increase the level of evidence with which they demonstrate the impact of the home visitation program in Sacramento County. LPC Consulting Associates, Inc. (LPC) has been working with the B&B program for 14 years, developing and managing the home visitation program database as well as conducting regular evaluation activities for the initiative. For this report LPC subcontracted with JBS International, Inc. for analytical support in conducting the quasi-experimental comparison for measuring the impact of the home visitation program on Child Protective Services (CPS) recidivism.

Description of Home Visitation Program Implementation

The Birth & Beyond (B&B) Home Visitation Program supports at risk families with the ultimate goal of preventing child abuse and neglect in Sacramento County. The core component of the HV program is the evidence-based parenting curriculum, Nurturing Parenting Program™. Families enrolled in the HV program are also provided referrals and support for a wide range of supports including, but not limited to, resources and referrals to health services, support groups, developmental child care, and assistance with basic needs such as food access.

Participant Recruitment: Families served by the HV program have one or more risk factors for child maltreatment, ranging from inadequate financial resources, one-parent households, to prior history with CPS. Families can enter the HV program through a number of routes. CPS may refer families who came to the attention of CPS, but upon further investigation, did not result in the suspension of parental custody (i.e., evaluated out, unfounded, or inconclusive CPS referrals). Families may learn of the program through their local networks or community FRC and self-enroll. Families are also referred by medical providers and other public/private agencies such as the Women Infant and Children Program (WIC). Since parents who have an open CPS case are not eligible for HV, a small number of families are referred into the program after the conclusion of an open CPS case as a means of parental support throughout the reunification process with their children. Participation in the HV program is voluntary.

Program Content: The Nurturing Parenting™ Program (NPP) is a competency-based curriculum designed to meet a family's needs based on parenting strengths and weaknesses.[1] The curriculum content focuses on parents' attitudes and knowledge about topics such as child development, appropriate discipline, and empathy (positive bonding) in a one-to-one instructional model which is offered in the family home. Instructors are able to observe family dynamics within the home setting and provide coaching and immediate reinforcement with parents. The NPP curriculum is accompanied by an assessment tool, the Adult-Adolescent Parenting Inventory – 2 (AAPI), which measures parenting beliefs and practices known to result in child maltreatment. Based upon the APPI risk level assessed at intake, parents are assigned into one of three program service level groups. All families in the HV program receive an initial six NPP lessons, with the total number of program lessons determined by their AAPI assessment level and discussion between the home visitor and the client: Prevention Group 16 lessons; Intervention Group 27 lessons; Treatment Group 55 Lessons. This minimum level of eight hours was developed based on the historical patterns of B&B program participation and an assumption of program effectiveness. The impact of HV program dosage on outcomes was measured for the first time by B&B in the following evaluation.

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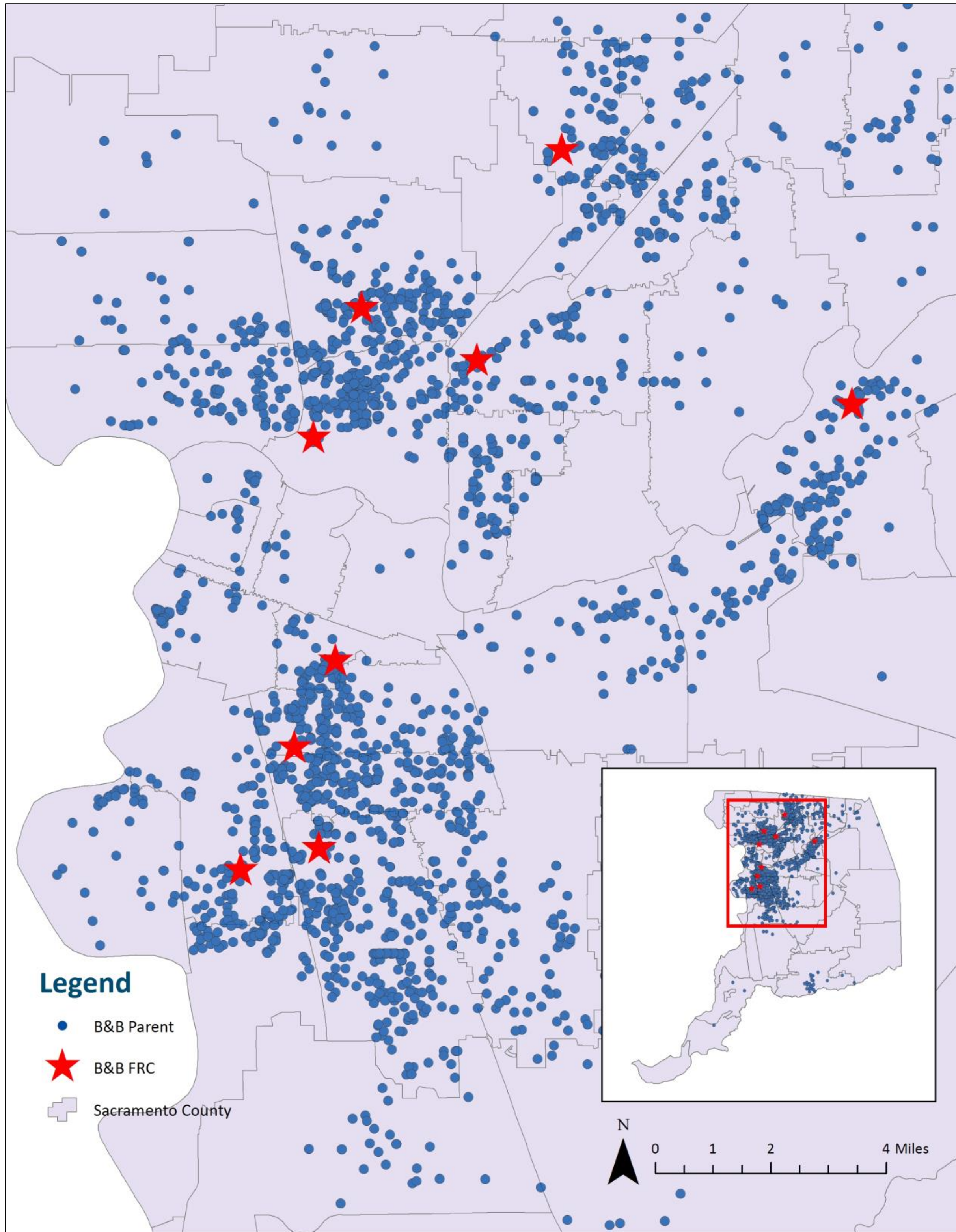
[1] To learn more about the NPP curricula, visit http://www.nurturingparenting.com/ .

Program Delivery: Program services are delivered through the nine FRC sites, which are located in high-need communities with a concentrated risk for child maltreatment and CPS involvement:

- Arcade Community Center
- Firehouse Community Center
- Folsom Cordova Community Partnership
- La Familia Counseling Center
- Meadowview Family Resource Center
- North Sacramento Family Resource Center
- River Oak Family Resource Center at Dunlap House in Oak Park
- Valley Hi Family Resource Center
- WellSpace Health's North Highlands Multi-Service Center

Each FRC has a service delivery team, including a Program Manager, Team Leader, Crisis Intervention Specialist, Family Resource Center Coordinator, and a multi-disciplinary team of professionals from Sacramento County substance abuse treatment, mental health, child protective services, and welfare to review cases. The Team Leader supervises the AmeriCorps Home Visitors at each FRC. Members receive extensive training at the onset of their term and shadow subsequent team members prior to being assigned families. Once a referral is received the Team Leader assesses the referral for appropriateness for B&B and matches a member with the family. Members carry an average caseload of 15 families. Members receive a minimum of one hour of supervision weekly.

Figure 1 | Map of Home Visitation Clients Served by AmeriCorps Members (2013-2015) and B&B Family Resource Centers in Sacramento County



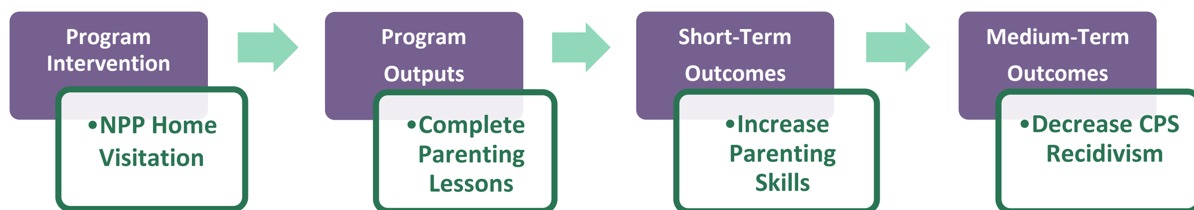
Evaluation Design

This evaluation incorporates measures of short-term and medium-term outcomes for those families with children 0-5 years, who have been served by AmeriCorps members and have received HV program services between September 2013 to August 2015. A quasi-experimental design is used to measure recidivism into the Sacramento County Child Protective Services system and includes four primary research questions that address the continuum of desired program outcomes.

1. What proportion of HV program participants completed their assigned lesson plans based upon their initial program groups? What proportion of the participants receive the performance targeted minimum amount of program services (i.e., 8 hours)?
2. Do parents receiving at least eight hours of home visitation programming show significant improvement in their parenting attitudes and practices as measured by the AAPI?
3. Do parents with previous CPS referrals receiving *any home visitation services, have lower rates of* subsequent CPS involvement compared to similar parents who did not participate?
4. What is the *optimal range of HV program hours,* for parents with previous CPS referrals to have reductions in subsequent CPS involvement compared to similar parents who did not participate?

The evaluation measures the degree to which these parents completed their program plans, experienced changes in their assessed parenting skills/risk for child maltreatment, and compares the rate of CPS referrals during and after program participation to non-B&B families. Figure 2 summarizes the AmeriCorps HV program logic model to demonstrate how these measures are related. For the full logic model, see Appendix III.

Figure 2 | Continuum of AmeriCorps B&B Home Visitation Evaluation Measures



B&B participant and case management records are used in this evaluation to report participant demographics and to measure program completion and average program dosage. Change in parenting skills are measured by a pre-post-comparison of participant AAPI scores.

Due to the constraints in developing a control group that significantly represents B&B participants, the rate of CPS recidivism is examined only for those B&B participants with at least one prior CPS referral. Over two-thirds of the HV participants (69%) had at least one prior CPS referral which may or may not have been substantiated, and were included in the referral if their role was the: 1) perpetrator; 2) non-perpetrator adult but residing in the household (e.g., non-perpetrating mother); or 3) victim when a minor.

A comparison group was constructed from CPS referral records of non-B&B participants who had similar referral histories and demographic profiles using propensity score matching. CPS referrals between the

B&B participant group and the comparison group were tracked over similar time periods to measure the impact of program participation on CPS recidivism.

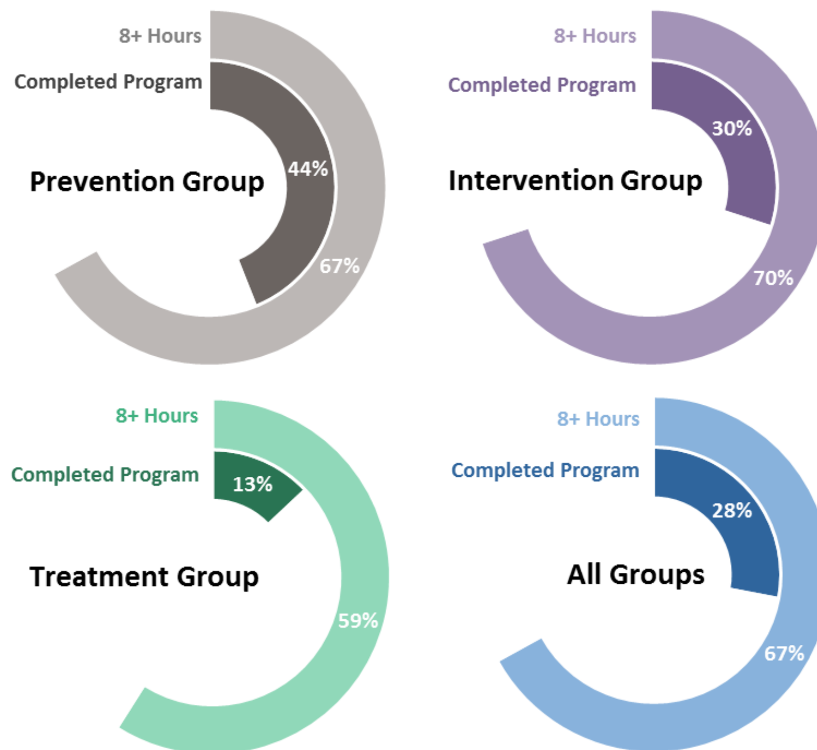
Summary of Evaluation Results

Parenting Lesson Program Completion

The immediate desired output for HV program participants is that they will have completed their assigned NPP lesson plans at the time of their case closure. NPP lesson plans are based on the risk assessed through the AAPI score and discussion with the home visitor and family. Participants with relatively lower risk were assigned 16 lessons (Prevention), those with medium risk were assigned 27 lessons (Intervention), and those with the highest risk were assigned 55 lessons (Treatment). Figure 3 below shows the proportion of HV program participants assigned into the three program service levels. Over half (57%) of the parents were assigned to the medium dosage (Intervention) service level group. About a quarter (24%) of the parents were in the higher (Treatment) service level group and 19 percent were assigned to the lower (Prevention) service level group.

Parents 'complete' their program, when they have received the full 'dosage' of lessons in their assigned group. At the closure of the HV case, AmeriCorps members record if the parent has completed his or her program goals as planned. A total of the percentage of parents who achieved the identified minimum level of eight hours of program participation are also reported in Figure 3 below.

Figure 3 | Percentage of Parents Receiving at Least 8 Hours of HV Program and Completing Program Plan by NPP Cohort Group



Overall, 28 percent of HV program participants completed the full series of lessons in their assigned group; however this proportion varied significantly between groups with 13 percent of the Treatment Group completing the assigned 55 lessons. The proportion of HV program participants receiving a minimum of eight hours programming was more consistent across groups ranging from 70 percent for the Intervention Group and 59 percent for the Treatment Group, with a 67 percent minimum completion rate across all groups.

Change in Parenting Skills | Pre-Post AAPI Comparison

The AAPI assessment measures parent beliefs and practices along five constructs known to contribute to child maltreatment:

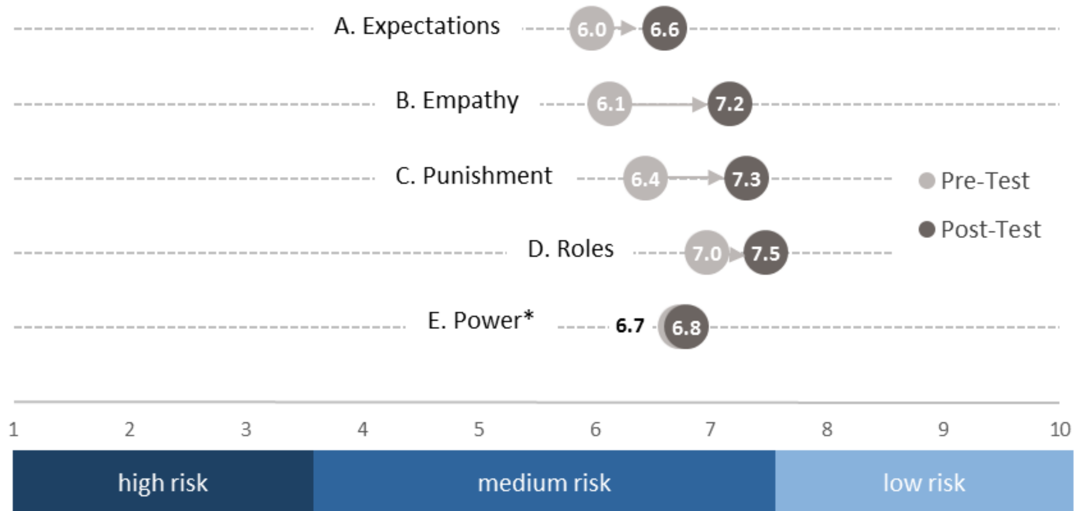
A. Expectations of Children;
B. Parental Empathy towards Children's Needs;
C. Use of Corporal Punishment
D. Parent-Child Role; and
E. Children's Power.

Scores for each of the dimensions are standardized on an index from 1 to 10. Scores ranging from 1-3 are considered "high risk", those ranging 4-7 are "medium risk" and scores 8-10 are considered "low risk". In order to validate the identified minimum program dosage of eight hours, pre and post program AAPI scores were compared for those participants with a closed case and receiving at least eight hours of HV services. With the exception of one[2], all parenting dimensions across all three groups showed statistically significant improvement at the $p<0.001$ level.

Comparison of the average change across the three service level groups demonstrates the average levels of risk in which participants entered the program and their relative improvement at their case closure. Figure 4 shows that participants in the Prevention Group began the program with the highest average AAPI pre-test scores and that each construct score increased by at least 0.5 points, except the *Children's Power* construct which only increased by 0.1 points.

[2] See Figure 5 – The *Power* construct, related to placing high value on children's independence, for the low risk group was the only measure that did not show a statistically significant improvement.

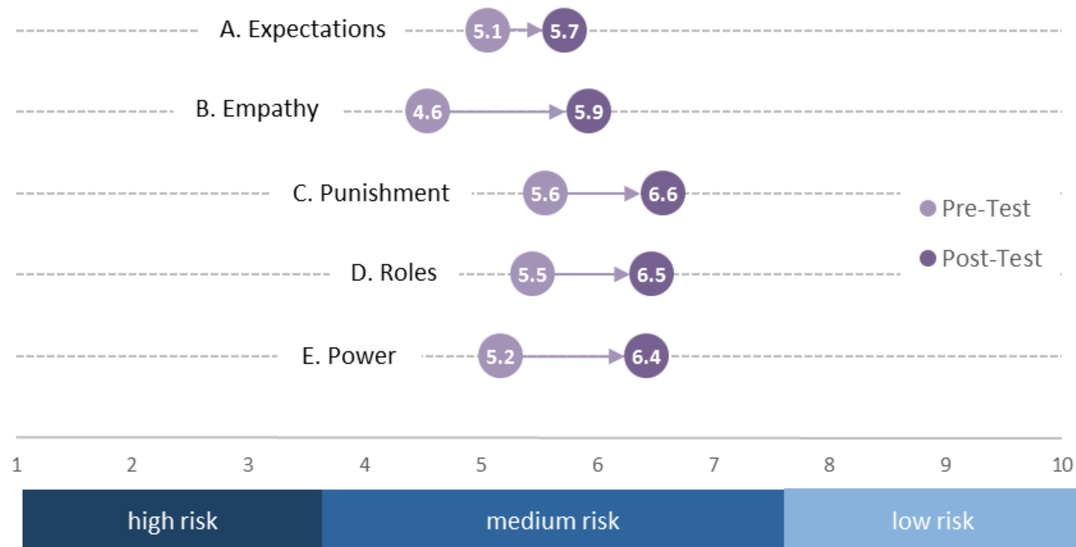
Figure 4 | Pre/Post Comparisons of AAPI Assessment Scores: Prevention Group (n = 137)



***Note**: The average change between pre/post scores among all domains are significant at the p<0.001 level (except for the Power construct).*

Parents in the Intervention Group saw an average increase of at least 0.5 points from pre- to post-test. On average, the *Empathy* construct scored the lowest among the constructs and accordingly, saw the greatest increase at 1.3 points (see Figure 5).

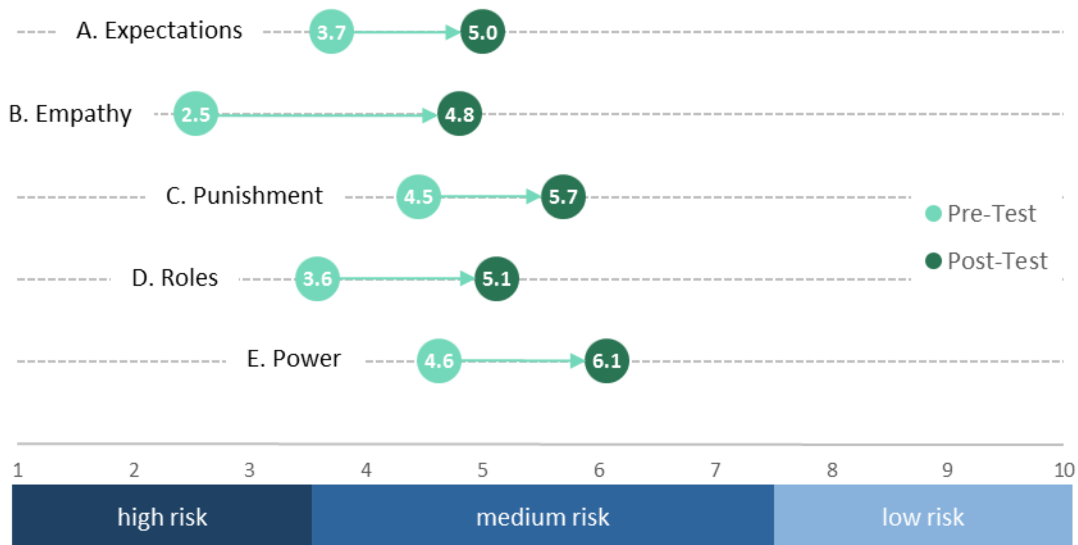
Figure 5 | Pre/Post Comparisons of AAPI Assessment Scores: Intervention Group (n = 330)



***Note**: The average change between pre/post scores among all domains are significant at the p<0.001 level.*

Finally, the parents in the Treatment Group had all scores increase the greatest amount, by at least 1.0 point, with the Empathy construct showing the largest average increase (2.3 points). Overall, the average risk levels from each of the five constructs improved to the extent that the high risk parents left the program with AAPI risk scores within the medium risk range (see Figure 6).

Figure 6 | Pre/Post Comparisons of AAPI Assessment Scores: Treatment Group (n = 80)



Note: *The average change between pre/post scores among all domains are significant at the p<0.001 level.*

In summary, all parents who participated in the HV program lessons for at least eight hours showed statistically significant gains in their parenting attitudes and practice. Improvement was seen across all risk groups, with the highest risk parents showing the greatest improvement and an overall reduction in their risk level.

CPS Recidivism | Quasi-Experimental Comparison

In order to estimate the effects of HV program participation on recidivism into the CPS system, a quasi-experimental comparison was conducted between program participants who had at least one CPS referral and other individuals with prior CPS referrals. The study used HV program data and CPS referral records to match on key demographic and CPS referral history variables between the HV program participants and a hypothetically eligible pool of parents. This process - *propensity score matching* - identifies individuals to be included in a comparison group who have a statistically balanced likelihood to have participated in the HV program without using a random assignment. The initial sample included 496 HV program participants and 9,210 comparison parents. The propensity score matching process yielded matches for 493 program participants and 985 comparison individuals from the CPS records (i.e., two 'matched' comparison individuals were identified for each program participant).

In the process of constructing the comparison group, several interesting findings were identified when examining the *unmatched* differences between HV program participants and the comparison group. In contrast to a similar population of individuals (e.g., women with at least one child 0-5) with referrals in the same time period, HV program participants were more likely to be from a minority group (non-white), were an average of three years younger than comparison individuals, and were on average younger at the time of their first referral (i.e., 17 years old vs. 24 years old). In terms of past CPS referral history, HV program participants were more likely to have been a victim, with more severe victimization, and had overall more referral history than the comparison group. *These comparisons indicate that B&B is successfully engaging a high-need population with their HV program.*

After the matching process, most of these significant differences between the program group and the comparison group were eliminated, and any remaining significant factors were controlled for in the final analysis. Subsequently, a comparison was made between the groups in terms of two outcome variables: 1) occurrence of only those referrals that were substantiated; and 2) occurrence of any type of subsequent CPS referral (i.e., substantiated, inconclusive, unfounded, or pending). A survival analysis was used to determine the differences in CPS recidivism between the HV participants and the comparison group over time. This kind of analysis is particularly well suited to studying recidivism and can predict not only whether or not an event will occur, but the probability that the event will occur at a particular point in time.

As part of the survival analysis, Cox Regression was then used to predict the probability of referral based on the number of days since the participant entered the program (for the B&B HV program group) or became hypothetically eligible for the program (for the comparison group). Survival analysis is a useful analytical tool when each individual in a study is entering the HV program (or becoming eligible for the HV program) at a different point in time, and the probability of recidivism changes as time goes on. For example, an individual who entered the program in 2011, would have had significantly more time to have a referral to CPS than an individual who entered the program in 2015. To account for this, the model predicts the probability of having a referral as a function of time, program participation, and baseline characteristics (demographic and prior referral history variables). A detailed technical discussion of the propensity score matching process and analyses is included in Appendix II.

Analyses were conducted looking at the effect of any program participation on CPS referrals and also to identify the optimal dosage range of program participation to predict significant impact. Each of these analyses are discussed below. All results are for parents with children 0-5 years old during the program period, who had a prior history of CPS referrals, and who were directly served by an AmeriCorps member.

Table 1 | Summary of Cox Regression Analysis Results between HV Program Group & Comparison Group

Home Visiting Program Dosage *Independent Variables*	**Subsequent CPS Referrals** *Outcome/Dependent Variables*	
	Outcome #1: Substantiated Referrals Only	**Outcome #2: All Referrals** (pending, unfounded, inconclusive, substantiated)
Any participation (1+ hours)	HV Program Group 41% less likely[3] to have a substantiated referral*	HV Program Group 18% less likely to have any referral
Optimal participation (identified at 25-34 hours)	HV Program Group 173% less likely to have a substantiated referral*	HV Program Group 57% less likely to have any referral*

*Finding is statistically significant to $p<.05$ level

[3] All percentage differences in this table refer to hazards ratios, which give the probability difference of recidivism at t time X, provided that the individual has not already recidivated.

Table 1 summarizes the results from the Cox Regression analysis and outlines the relationships between the two different dosages of any HV participation (1 or more hours, and 25-34 hours) and subsequent CPS referrals (substantiated referrals only, and all referrals). HV parents who participated in the B&B program for at least one hour were 41 percent less likely to have a substantiated referral (statistically significant at the $p < .05$ level) and 18 percent less likely to have any referral at a given point in time (significant at the $p < .10$ level). The evaluation was initially to look at the stated minimum dosage for ACSN performance measurement purposes (i.e., 8 or more hours); however, a program participation range of 8-100 hours was not useful to determine an optimal range and further analysis was conducted to narrow the dosage. Thus, HV participation at 25-34 hours was identified as producing the most statistically significant impact on CPS recidivism and thus the optimal dosage for impacting the subsequent CPS referrals. B&B HV participants were 173 percent less likely to have a substantiated referral and 57 percent less likely to have any type of referral at a given point in time; both findings are significant at the $p < .05$ level.

Please see Appendix II for a more detailed description of each model and the full results of the Cox regression.

Effects of Any Program Participation (1+ Hours) on CPS Recidivism

Substantiated Referrals Only | Parents who participated in at least one hour of the B&B home visitation program were significantly less likely to have a substantiated CPS referral after they began the B&B HV program than those who did not receive any program services. Specifically, being in the HV program group rather than the comparison group decreased the probability of having a substantiated referral by 41 percent at a given time point when all other variables were held constant. Across both groups, the probability of having a substantiated referral is relatively low—only 15.4 percent of individuals in the sample have a subsequent substantiated referral and on average the first substantiated referral occurs about 529 days after the start of the program period. However, the probability of recidivism increases the more time passes, with the comparison group's risk for recidivism increasing to a larger extent over time than the HV program group.

All Referrals | A similar pattern emerges when predicting the number of days before any type of referral occurred (i.e., substantiated, inconclusive, unfounded, and pending/unknown dispositions) and where the client was the perpetrator or other adult; however, this difference was only marginally significant ($p < 0.10$). Parents who received any home visitation were less likely to have a CPS referral after they began the program than those who did not receive any HV program services. Specifically, being in the HV program group rather than the comparison group decreased the probability of having a CPS referral by 18 percent at a given time point when all other variables were held constant**.** Overall 48.5 percent of the entire sample had a CPS referral during the post-period, with the average person having their first CPS referral approximately 335 days after the start the program. CPS referrals with any disposition occur more frequently than only substantiated referrals, and occur earlier on average in the post-period. However, a similar pattern emerged over time with the probability of having a referral increasing as more days pass and increasing more over time for the comparison group than the program group. Given that these results were only marginally significant they should be interpreted with caution, but they do provide preliminary evidence of the program's impact on all CPS referrals that could be explored in future studies.

Effect of Optimal Program Participation on CPS Recidivism

Substantiated Referrals Only | Parents who received between 25-34 hours of HV programming were significantly less likely to have a substantiated referral after they began the program than those who did

not receive services. In particular, parents who received 25-34 hours of home visiting were 2.73 times less likely at a given time point (representing a 173 percent decrease) to have a substantiated referral than those in the comparison group. However, when the HV participants are divided into dosage groups, there were no statistically significant differences between the comparison group and program group for those parents who received less than 25 hours of face-to-face service or for those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from the HV program in terms of preventing substantiated referrals. Overall, the rates of substantiated CPS referrals in a given time period are relatively low; however, the difference is notable when comparing the dosage of participation in the HV program. Parents in the program group receiving *less than 25 hours* of HV programming had a rate of substantiated CPS referrals of 13 percent, compared to those parents receiving *25 hours or more* who had a rate of 9 percent.

All Referrals | When predicting the number of days before all types of CPS referrals, a similar pattern emerged. Once again, parents who received between 25-34 hours of HV programming were significantly less likely to have any type of CPS referral after they began the program than those who did not receive HV services. In particular, parents who received 25-34 hours of home visitation were 57 percent less likely at a given time point to have any CPS referral than those in the comparison group. However, there were no statistically significant differences between the comparison group and HV participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from the home visitation program in terms of preventing any type of CPS referral.

Key Findings & Recommendations

Since 2002, the annual evaluations of the Birth and Beyond Home Visitation Program and parents served by AmeriCorps members have suggested the positive impacts of program participation on desired individual outcomes. This evaluation was the first time these impacts were confirmed through the use of a quasi-experimental study. Key findings from study research questions provide evidence about the benefits received by program participants as well as help identify potential areas for future HV program modification.

Parents completing their assigned NPP program hours are in the minority. Less than one-third (28%) of the parents with closed cases completed their assigned dosage of NPP lessons. This number shrinks more than half (13%) when looking at those parents who came into the program at the highest risk levels. The NPP program is competency-based, which means that parents do not 'complete' a lesson until they demonstrate the skills, knowledge, and attitudes a lesson was intended to improve. It could be the trend that the majority of the parents have far too many intervening factors that frustrate their participation in the program and/or their ability to demonstrate improvement in their competency levels needed to advance along in their program schedule. The very low completion rate could also indicate that engaging high-risk parents, for example, in 55 hours of home visitation is an unrealistic programmatic goal. The level of programming may inadvertently discourage program participants as too overwhelming of an objective to achieve, with the unintended result of producing a high attrition rate for the program (i.e., 55% either dropping out or no longer responsive to contact).

Parents receiving at least eight hours of HV program services show statistically significant improvement in their parenting attitudes and behaviors. Despite the high attrition rate, program participants are showing statistically significant improvement (at the $p<0.001$ level) in their parenting skills and attitudes as demonstrated by the average improvement in the AAPI constructs. This suggests that even though program participants may not be reaching their program goals in terms of hours, their levels of risk for child abuse and neglect is being reduced from those NPP lessons they do receive. Parents entering the program at the highest risk levels are showing the greatest gains in their AAPI scores (i.e., decrease in risk levels).

As a result of any level of participation in the home visitation program, parents with previous CPS history reduce the likelihood of future substantiated referrals. This study shows a statistically significant difference between parents receiving HV services and those who did not. Being in the HV program group rather than the comparison group decreased the probability of having a substantiated referral by 41 percent at a given time point ($p <0.05$) and the probability of having any CPS referral by 18 percent at a given time point ($p <0.10$) when all other variables were held constant.

As a result of receiving 25-34 hours of HV program services, parents with previous CPS history demonstrated the greatest reduction in post-program referrals of any kind. In particular, parents who received 25-34 hours of HV program were 173 percent less likely at a given time to have a substantiated referral and 57 percent less likely at a given time to have any CPS referral, than those in the comparison group (both at the $p < 0.05$ level). However, when divided into dosage groups, there were no statistically significant differences between the comparison group and HV participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from participation in the program.

Note that the CPS recidivism study did not address HV program effect on subsequent CPS referrals for those parents without a prior CPS referral history. However, these findings do confirm that any participation in the HV program makes a significant impact in preventing substantiated CPS referrals for those parents with CPS history, and a low-level dosage of the program makes a significant improvement in parenting attitudes and practices across all parents with at least eight hours of participation. Thus we can infer with the evidence from this study that participation in the Birth and Beyond HV program resulted in the reduction of parental risk and incidences of child maltreatment.

Several recommendations are suggested based upon the above findings.

Recommendation #1 | Consider aligning the dosage of the home visitation program towards the optimal 25-34 hour range. Parents with previous CPS history show significant impacts in their CPS recidivism after receiving this identified dosage of HV program service. While identifying the optimal range of program dosage across all participants, this finding does not address the current NPP program model in which parents are assigned a scaled number of lessons according to their assessed risk levels. Given the finding that relatively few parents in the High Risk group (and a minority of the other risk groups) actually complete their NPP lessons as prescribed, it is recommended that B&B recalibrate the assigned program to a more achievable and impactful level. That is, it may be the most effective for all participants to receive a core program dosage with the 25-34 hour target regardless of assessed risk level, noting that there was no significant effect on CPS recidivism for those participating in the HV program outside of this range. Looking at the current sample of parents who closed during the study period (including those without CPS

history), 13 percent of the closed cases (143 parents) received 25-34 hours of the HV program and 18 percent (197 parents) received 35 hour or more. It should be noted that parents participating more than 34 hours in HV programming may continue to accrue other types of important benefits such as strengthening their parenting knowledge, skills, and attitudes and/or connecting to other types of program services and supports.

Recommendation #2 | Explore strategies to address program attrition in order to ensure parents are receiving optimal level of HV program dosage. While this evaluation provides evidence of the effectiveness of the HV program, it equally underscores the need for participants to be engaged in the program for a considerable length of time. We recommend that B&B focus on their rates of participant attrition, in order to retain a higher proportion of those parents entering the program. High drop-out rates are a given when targeting highly vulnerable and at risk populations. B&B has already taken a significant step in addressing the surrounding vulnerabilities of the families it serves through their Crisis Intervention Services. We recommend that B&B conduct research with their FRC sites and the HV participants to understand and address why approximately half of the participants drop out of the program after receiving some HV services.

Recommendation #3 | Consider additional research to explore remaining and emergent questions from this study about effectiveness and impact. The current study demonstrates that parents participating in the HV program are making significant gains in their parenting attitudes and practices, in addition to confirming the impact of the program in lowering probability of recidivism among HV participants. While these findings provide evidence of the HV program's overall impact, the study also generated more nuanced questions that remain to be explored.

Unpacking Dosage Effects. The current report examined dosage effects exclusively as a function of the number of hours of face-to-face home visitation services. While the current report notes that 25-34 hours seems to be the most effective dosage amount, it may be useful for future studies to narrow this dosage window and determine which activities (if any) are most essential to effective home visitation services. While home visitation is a primary intervention in the B&B program, it is not the only service in which parents participate. Future research is needed to determine how recidivism varies as a function of participation in other key program components such as group parenting classes, crises intervention services, personal development classes, and community supports.

Limiting Recidivism to Closed Cases. The CPS recidivism was looked at from the point at which women enter the HV program after a triggering referral (i.e., before they complete their lessons or their case is closed). This may not be the ideal model for measuring recidivism because it does not take into account that the conditions around child endangerment often require a significant amount of time regardless of program participation (e.g., a mother leaving an abusing partner or relocating into a new environment/home). It may be more appropriate to model recidivism only after the HV program has been completed. The current timeframe was used because we were unable to identify a satisfactorily comparable date for the comparison group. The current model assumes that even if the program works as intended it may take time for benefits to emerge; however, once the program has been completed recidivism should be especially unlikely. One way to examine this effect in future research would be to measure referrals only after the HV case has closed (as well as after a closure of eligibility date for the comparison group) and look at how these subsequent referrals differ as a function of dosage in the HV program group.

AAPI Risk Levels and Stratified Results. In addition to examining recidivism it would be helpful for future studies to examine the impact of program participation and program dosage on parenting attitudes and practices as measured by the AAPI. It would be useful to determine if there is a significant relationship between the initial assessed risk from the AAPI and subsequent CPS referrals, and the extent to which growth in the AAPI score can predict CPS recidivism. To the extent that this information can be mapped onto program dosage information, it would be useful to determine if the positive findings for the 25-34 hour dosage group replicate equally across AAPI risk cohorts (High, Medium, and Low Risk Groups).

Accounting for Case Information. One limitation of the current study is that some individuals with open CPS cases may have been included in the comparison group even though the HV program is not available to families who have an open case. For this evaluation, it was not feasible to map the multiple dates in the CPS case data set which is organized by child records, onto the comparison CPS referral dataset, which is organized by adult record, and isolate only those referrals which were open, and which were closed. It was possible to identify which adults had an open case at the point of eligibility or after, but this information could not be linked to specific referrals. In future studies this information could be used to model the exact periods during which individuals would or would not be eligible for the program as a result of their family case status.

Additional Demographic and History Variables. Given the limited number of shared demographic variables available across the program and comparison groups, the current evaluation was limited to modeling and controlling for demographic differences according to race (white vs. non-white), age, and primary language. It would be useful to control for and analyze other important demographic covariates such as educational background and socio-economic status in the future. This report uses CPS referral history as a proxy for each individual's history of abuse; however, CPS data rarely includes all the incidents of abuse in an individual's past. To get a better sense of the actual abuse history of each individual it would be useful for future studies to include any additional abuse history information that might be available-- such as the results of any Structured Decision Making (SDM) child abuse and neglect risk assessments which may have been performed.

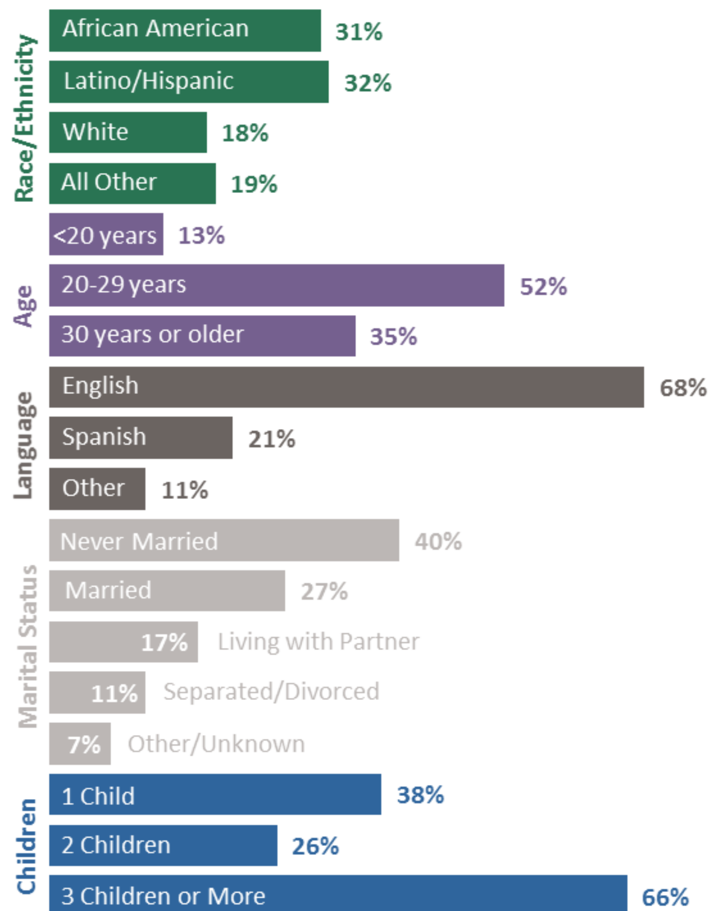
APPENDIX I | B&B PROGRAM DATA ANALYSIS

Participant Demographics & Sample

Detailed participant information is collected during the intake of all families. These data as well as program participation information are recorded into a central Birth and Beyond database which is regularly updated and cleaned by LPC.

Between September 1, 2013 and July 31, 2015, AmeriCorps members served 1,614 families with at least one home visit through the B&B program. This represents a total of 1,758 individual cases. A number of these cases were removed from the sample population for the purposes of this report to allow for comparability across measures and results: cases assigned to the Father's Group (n=45 men); the Prenatal Group (n=50 women); had yet to be assigned (n=102); or unknown (n=5). Families with multiple entries into the program were also filtered (n=383). The resulting base sample includes 1,312 parents who were assigned to one of three program service level groups (i.e., Prevention, Intervention, and Treatment) in the HV program. Individual demographic data reported are related specifically to the primary parent. The sample primarily included people who identified as African American or Hispanic/Latino, with the majority of participants identifying English as their primary language. Additional demographic information is presented in Figure 7.

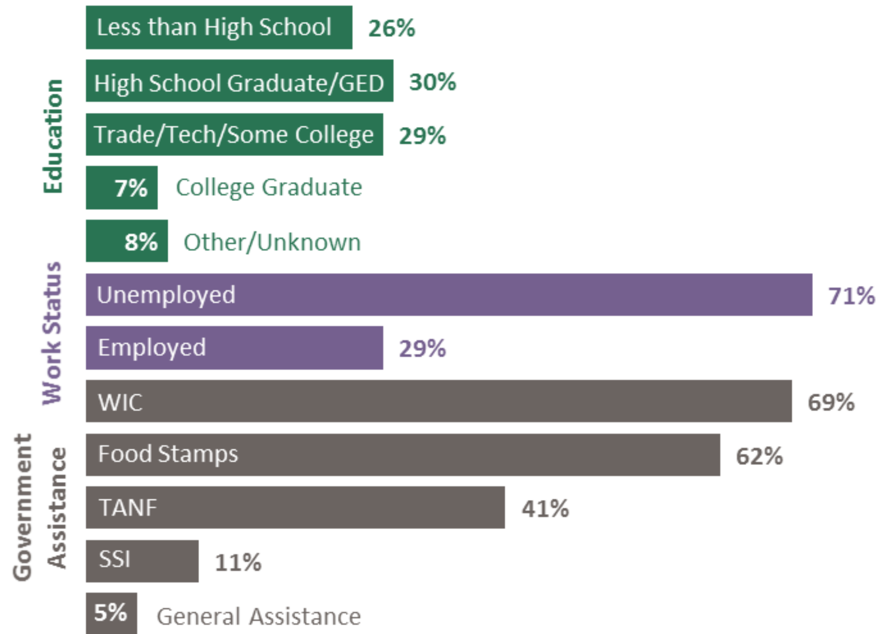
Figure 7 | Demographics of all HV Program Participants Served by AmeriCorps Members Sept 2013 to July 2015 (n=1,312)



Two-thirds of the families (64%) have two or more children at home, and 40 percent reported never being married or living with a partner suggesting that many B&B participants parent alone.

While most participants had at least a high school education, the majority of participants were unemployed at the time they participated in the program, and utilized governmental assistance programs, such as WIC or food stamps. Figure 8 presents employment status and the usage of governmental assistance programs of HV program participants served by AmeriCorps members.

Figure 8 | Characteristics of all HV Participants Served by AmeriCorps (n=1,312)



Rates of Program Completion

During the course of the study period, 82 percent of the cases served by AmeriCorps members closed (n=1075). The status of the program lessons and reasons for closure from the case records are noted below in Table 2; the status at case closure of 33 participants were missing in the case records.

Table 2 | Case Status at Closure by NPP Service Level Group

	Prevention		Intervention		Treatment		All Groups	
Status at Case Closure	#	%	#	%	#	%	#	%
Completed program as planned	**115**	**44%**	**180**	**30%**	**23**	**13%**	**318**	**31%**
No contact per contact policy	61	23%	212	35%	79	44%	352	34%
Declined further service	52	20%	128	21%	40	22%	220	21%
Moved out of service area, no longer eligible	31	12%	66	11%	28	16%	125	12%
CPS case, child safety	4	2%	13	2%	10	6%	27	3%
Total	*263*	*100%*	*599*	*100%*	*180*	*100%*	*1042*	*100%*

Parents enrolled in the Prevention Group had the highest rate of completion at 44 percent, which is somewhat expected given their lesson dosage is the lowest (16 lessons). In contrast, only 13 percent of the Treatment Group completed their program as planned. Looking at those who did not complete their program lesson, the majority of all participants across all groups (55%) were closed due to no longer being able to contact participants or because they declined further service.

Overall, participants served by AmeriCorps members received an average of 19.4 hours of home visitation programming. As expected, participants in the Prevention group received the least amount of service at 16.0 hours on average, while the Intervention and Treatment groups received the most (20.5 hours).

Table 3 | Average Participation in HV Program by NPP Service Level (Closed Cases n=1,075)

	Prevention 16 Lessons	**Intervention** 27 Lessons	**Treatment** 55 Lessons	**All Groups**
Average Visits	12.7	16.9	16.7	15.8
Average Hours	16.0	20.5	20.5	19.4
Received 8+ Hours	*180 (67%)*	*432 (70%)*	*113 (59%)*	*725 (67%)*

Two-thirds (67%) of all cases closed after receiving at least eight hours of lessons, with the Treatment group having the lowest proportion of participants receiving the minimum dosage.

While two-thirds of all participants closing a case during the study period received a minimum of eight hours HV programming, only about a third of all participants stayed with the program long enough to complete their program goals. The Treatment group, with both the highest risk and the greatest number of prescribed lessons, had the lowest rates of program completion and proportion of participants receiving at least eight hours of HV programming.

Pre-Post Comparison of AAPI Assessment

The Adult-Adolescent Parenting Inventory - 2 (AAPI) is a 40 item, norm-referenced, Likert scale designed to assess the parenting beliefs and practices of adult and adolescent parent and non-parent populations. The AAPI is designed to assess the beliefs for parenting children from infancy to 12 years of age. Responses to the AAPI provide an index of risk for child maltreatment in five parenting practices known to result in child maltreatment. The AAPI measures attitudes and behaviors along five constructs of parenting to assess change in the parents' risk for practicing behaviors known to be attributable to child abuse and neglect. These five constructs are described in Table 4 below.

The AAPI provides a level of risk for child maltreatment on three levels: High, Moderate and Low. It is administered by an AmeriCorps Home Visitor during one of the first home visits. Parents are assigned a program service level group (i.e., Prevention, Intervention, or Treatment) based upon their initial AAPI risk level and discussion between the participant and the home visitor. The AAPI is re-administered to parents during their participation in the HV program, with the last assessment completed serving as their "post" score. Because of client attrition, home visitors periodically administer the assessment to ensure the likelihood that there will be a comparison assessment for the high proportion of families who do not finish their parenting lessons. A comparison of a pre- and post-AAPI scores provided an understanding of how participants' knowledge and practices changed throughout the HV program.

Table 4 | Description of AAPI Parenting Constructs

CONSTRUCT	High Risk Low AAPI Score Description	Low Risk High AAPI Score Description
A. Expectations of Children	• Expectations exceed developmental capabilities of children. • Lacks understanding of normal child growth and development. • Self-concept as a parent is weak and easily threatened. • Tends to be demanding and controlling.	• Understands growth and development. • Children are allowed to exhibit normal developmental behaviors. • Self-concept as a caregiver and provider is positive. • Tends to be supportive of children
B. Parental Empathy towards Children's Needs	• Fears spoiling children. • Children's normal development needs not understood or valued. • Children must act right and be good. • Lacks nurturing skills. • May be unable to handle parenting stresses.	• Understands and values children's needs. • Children are allowed to display normal developmental behaviors. • Nurtures children and encourage positive growth. • Communicates with children. • Recognizes feelings for children.
C. Use of Corporal Punishment	• Hitting, spanking, slapping children is appropriate and required. • Lacks knowledge of alternatives to corporal punishment. • Lacks ability to use alternatives to corporal punishment. • Strong disciplinarian, rigid. • Tends to be controlling, authoritarian.	• Understands alternatives to physical force. • Utilizes alternatives to corporal punishment. • Tends to be democratic in rule making. • Rules for family, not just for children. • Tends to have respect for children and their needs. • Values mutual parent-child relationship.
D. Parent-Child Family Roles	• Tends to use children to meet self-needs. • Children perceived as objects for adult gratification. • Tends to treat children as confidant and peer. • Expects children to make life better by providing love, assurance, and comfort. • Tends to exhibit low self-esteem, poor self-awareness, and poor social life.	• Tends to have needs met appropriately. • Finds comfort, support, companionship from peers. • Children are allowed to express developmental needs. • Takes ownership of behavior. • Tends to feel worthwhile as a person, good awareness of self.
E. Children's Power and Independence	• Tends to view children with power as threatening. • Expects strict obedience to demands. • Devalues negotiation and compromise as a means of solving problems. • Tends to view independent thinking as disrespectful.	• Places high-value on children's ability to problem solve. • Encourages children to express views but expects cooperation. • Empowers children to make good choices.

Scores from the earliest and latest administrations of the AAPI were matched for those HV participants who had closed after receiving at least 8 hours of programming. A total of 547 pairs were available for analysis (see Table 5 below).

Table 5 | Closed HV Participants Receiving at Least 8 Hours of Programming with Match Pre and Post AAPI Assessments

	Prevention # (% group)	Intervention # (% group)	Treatment # (% group)	Total # (% group)
Matched Pre-Post AAPI Score	*137 (80%)*	*330 (82%)*	*80 (73%)*	*547 (80%)*

A paired-samples t-test was conducted to compare pre-program and post-program AAPI scores, within the five parenting constructs and among each of the three program groups (see Table 6). Overall, participants' average scores increased between the pre- and post-tests, across all the five constructs and these increases were found to be statistically significant at the p<0.001 level; one exception was the increase in the *Power Domain* within the low risk group which was not statistically significant.

Table 6 | Pre-Post Comparison of AAPI Assessment Scores for NPP Service Level Groups

	Pre Test		Post Test		
AAPI DOMAINS	Mean	Standard Deviation	Mean	Standard Deviation	**Paired t *p <.001**
Prevention Group n = 137					
A. Expectation	5.98	2.15	6.61	2.05	-3.55*
B. Empathy	6.14	2.46	7.17	2.52	-4.63*
C. Punishment	6.44	2.02	7.31	2.16	-4.78*
D. Roles	6.97	2.66	7.48	2.23	-2.68*
E. Power	6.74	2.21	6.80	2.39	-0.22
Intervention Group n = 330					
A. Expectation	5.06	1.84	5.73	1.96	-5.54*
B. Empathy	4.55	2.15	5.93	2.40	-9.48*
C. Punishment	5.56	1.78	6.57	2.01	-8.61*
D. Roles	5.45	2.20	6.47	2.29	-8.25*
E. Power	5.17	2.42	6.43	2.46	-7.86*
Treatment Group n = 80					
A. Expectation	3.71	1.82	5.01	2.17	-4.67*
B. Empathy	2.54	1.86	4.81	2.40	-8.19*
C. Punishment	4.46	1.83	5.70	2.39	-4.70*
D. Roles	3.59	2.31	5.13	2.61	-5.79*
E. Power	4.63	2.34	6.08	2.75	-4.01*

The results suggest that parenting skills and attitudes improved over the course of their participation in the HV program as measured by the AAPI. Similar gains were seen across the five parenting constructs of the assessment with the average increase of 1.1 points for all Groups and Domains.

APPENDIX II | QUASI-EXPERIMENTAL COMPARISON OF CPS RECIDIVISM

Prepared by JBS International, Inc.

Methods

The current report describes findings based on Child Protective Services (CPS) child abuse allegation data and internal data on participation in the Birth and Beyond (B&B) AmeriCorps Home Visitation (HV) Program. To be included in the analysis, female participants had to meet the following three criteria:

1. Be born between January 1, 1970 and December 31, 1999 (approximately 16-45 years old);
2. Have at least one child born between 9/1/2008 and 7/30/2015; and
3. Have at least one CPS referral (or have entered the B&B program) after January 1, 2011.

Data Aggregation and Variables

To estimate the effects of HV program participation on CPS referrals, JBS International, Inc. (JBS) created an aggregated dataset predicting CPS outcomes at the individual level for HV participants and a comparison group. This dataset consisted of prior referral history data (pre-data) and outcome data (post-data) for each participant. For the HV group, all CPS allegations up to and including the start date of the HV program were considered pre-data, while all referrals after that were considered post-data. For the comparison group, all referrals up to and including their first referral post-2011 were considered pre-data, and all subsequent referrals were considered post-data. This pre/post cut-off was selected for the comparison group since the first post-2011 referral represents the date at which each individual would have become eligible for the B&B program.

***Demographic and Program Participation Variables*.** Basic demographic variables included: date of birth, gender, ethnicity, and primary language (see Table 8). HV program participation variables included: the intake date, the date they ended the program, whether or not they received services from AmeriCorps members, and the number of hours of face-to-face home visitation services they received.

***CPS Allegation History Variables*.** JBS used a data construction procedure that resulted in a series of scores to describe each individual's CPS allegation history. Each allegation was classified based on five categories of abuse (sexual, physical, severe neglect, general neglect, and emotional) and three categories describing the individual's role in the allegation (victim, perpetrator, or other). This information was then aggregated to give each individual a score on a total of 15 types of abuse (e.g. Sexual Victimization, Sexual Perpetration, etc.). These scores indicated the extent to which each individual had perpetrated, witnessed, and/or been victimized in a particular category during their pre- and post-program/eligibility period. Scores ranged from 0-3 and were based on whether the individual had no allegations within that category of abuse (0), only missing or unfounded allegations (1), only inconclusive allegations (2), or at least one substantiated allegation (3). In addition to calculating summary scores for each type of abuse, JBS also recorded the date of the first and last allegation, the number of unique referrals, and the age of the individual at the date of their first referral. This information was presented separately for each period (pre- and post-program/eligibility), and was also broken down by role category (victimization, perpetration, and other) and for all referrals and substantiated referrals only. For a more detailed description of these data cleaning procedures, please see Table 8.

Primary Outcome Variables. The primary outcomes analysis was constructed from CPS-allegations during the post-program/eligibility period for HV program and comparison individuals. As described in greater detail below, a survival analysis was used to measure recidivism[4]. To model these effects, JBS created variables measuring the number of:

- Days to the first CPS referral during the post-period, regardless of disposition (substantiated, inconclusive, unfounded, or pending), where the individual is identified as the perpetrator or other adult[5] (Any CPS Referral); and
- Days to the first referral during the post-period where the disposition was substantiated (Substantiated Referral).

Propensity Score Matching

To assess the impact of participation in the HV program, this evaluation used propensity score matching. This process allows the JBS team to compare the outcomes of two groups – one of which received services and the other which did not – in a statistically robust manner that provides more plausible evidence that program participation is the likely reason for any observed changes on key outcome measures (rather than other possible causes). Given the retrospective nature of this study, random assignment was not possible and as such propensity score matching was selected as a way of simulating an experimental design[6].

In a propensity score matched design, the group that participates in the program and the comparison group are not randomly assigned or selected. Because of this, the two groups may differ in both observed and unobserved ways prior to matching that could be the explanation for any changes observed in the outcomes. Propensity score matching minimizes these differences between the two groups statistically. The statistical procedure used in propensity score matching matches program participants with non-participants based on an array of characteristics (see Table 7 below for the characteristics used in this evaluation), without necessitating a one-to-one match on all factors. For this study, each program participant is matched with two non-participants based on a constructed score using the characteristics outlined in Table 7.

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[4] Operationalized as CPS-referrals in the post-period.
[5] This category includes referrals where the role of the individual was listed as “Other” and was 17 or older at the date of the referral. This composite variable was selected as an outcome because it represents the key actions that the HV program is designed to prevent—the perpetration and adult witnessing of abuse (based on the assumption that when the individual is an adult witness of abuse they have a responsibility to intervene or remove the child from the abusive situation).
[6] See Guo and Fraser (2009) for an introduction on PSM and its applications.

Table 7 | List of Parent Characteristics Used in Propensity Score Matching

Category	Characteristics
Demographic Characteristics	• Race (White vs. Non-White) • Primary Language (English vs. Not) • Age in 2015
Number of Referrals[7] and Age at First Referral	• Number of Unique Perpetrator or Adult Other Referrals[8] • Number of Unique Victimization Referrals • Age at First Referral
Referral Severity *(Ranging from 0-9)*[9]	• Most Serious Victimization Referral • Most Serious Perpetration Referral • Most Serious Other Referral
Referral History *Scored from 0-3* *0 = no referrals,* *1 = only pending/missing referrals* *2 = only inconclusive referrals* *3 = at least one substantiated referral*	• Sexual Victimization History • Physical Victimization History • Severe Neglect Victimization History • General Neglect Victimization History • Emotional Neglect Victimization History • Sexual Perpetration History • Physical Perpetration History • Severe Neglect Perpetration History • General Neglect Perpetration History • Emotional Neglect Perpetration History • Sexual Other History • Physical Other History • Severe Neglect Other History • General Neglect Other History • Emotional Neglect Other History

Matching Procedures. The propensity scores were generated in SPSS using a logistic regression model, and an R plug-in for SPSS (MatchIt[10]) was used to perform a nearest neighbor 1:2 matching technique with calipers of one quarter of a standard deviation. The initial sample included 496 HV participants and 9,210 comparison participants. The propensity score matching process yielded matches for 493 HV participants and 985 comparison participants.

Baseline Equivalency Prior to the Match. Prior to matching, HV participants appeared to be more at-risk for perpetrating abuse and had more severe abuse histories than comparison individuals. In terms of demographics, HV participants were more likely to be minorities, were an average of three years younger than comparison individuals, and were on average younger at the time of their first referral (17 years old

[7] All referral history information used in the propensity score matching was based on the referrals that occurred before each individual began the HV program or became eligible for the HV program (for comparison individuals).
[8] This category includes referrals where the individual was listed as the "Perpetrator" at any age or "Other" and was 17 or older at the date of the referral. Perpetration referrals and referrals where the individual was an adult listed as "Other" were combined.
[9] Each type of abuse was ranked based on the demonstrated severity of the abuse shown in prior literature. Scores ranged from 0-9 where: 0 = No abuse at all, 1 = At Risk, Sibling Abused, 2 = Caretaker Absence/Incapacity, 3 = Substantial Risk, 4 = Emotional Abuse, 5 = General Neglect, 6= Severe Neglect, 7 = Physical Abuse, 8 = Exploitation, and 9 = Sexual Abuse.
[10] See

vs. 24 years old). In terms of referral history, HV participants had a larger number of victimization referrals, a larger number of perpetration or adult other referrals, and more severe victimization and other referrals. Furthermore, HV participants were more likely to have had a substantiated victimization referral (across all abuse types), were more likely to have had a substantiated physical and general neglect perpetration referral, and were more likely to have had a substantiated other referral (across all abuse types). Please see Table 8 for a full listing of baseline equivalency results.

Baseline Equivalency After the Match. After the matching, almost all of these significant differences between the HV and comparison group were eliminated. The only remaining difference after the match was that HV participants were still slightly more likely to have had a substantiated general neglect perpetration referral. To address this, JBS included the full set of propensity score variables (listed in Table 1 above) in the final analysis models as covariates. This strategy allows the analysis to limit the influence of any covariates that were not fully equalized through the propensity score matching process.

Survival Analysis

A survival analysis was used to determine the unique effects of HV participation on referrals into CPS (either referrals with a substantiated disposition regardless of the individual role,[11] or referrals regardless of disposition where the individual's role was as the perpetrator or other adult) over time. Survival analysis models are well-suited to predicting recidivism (in this case, referrals to CPS) because they allow researchers to investigate the effect of several variables (e.g., program participation and referral history) on the time that recidivism takes to occur (as measured by the number of days before a referral). This kind of analysis can predict not only whether or not an event will occur, but the probability that the event will occur at a particular point in time.

In this case, a Cox Regression (or Proportional Hazards Regression) was used to predict the probability of referral based on the number of days since the participant entered HV (for the HV group) or became hypothetically eligible for HV (for the comparison group). This type of survival analysis accounts for the fact that each individual is entering HV (or becoming eligible for HV) at a different point in time and the probability of recidivism increases as time goes on. For example, an individual who entered the program in 2011, would have had significantly more time to have a referral than an individual who entered the program in 2015. To account for this, the model predicts the probability of having a referral as a function of time, program participation, and baseline characteristics (demographic and prior referral history variables).

[11] Substantiated referrals include referrals of any role—victim, perpetrator, and other.

Results from Analyses

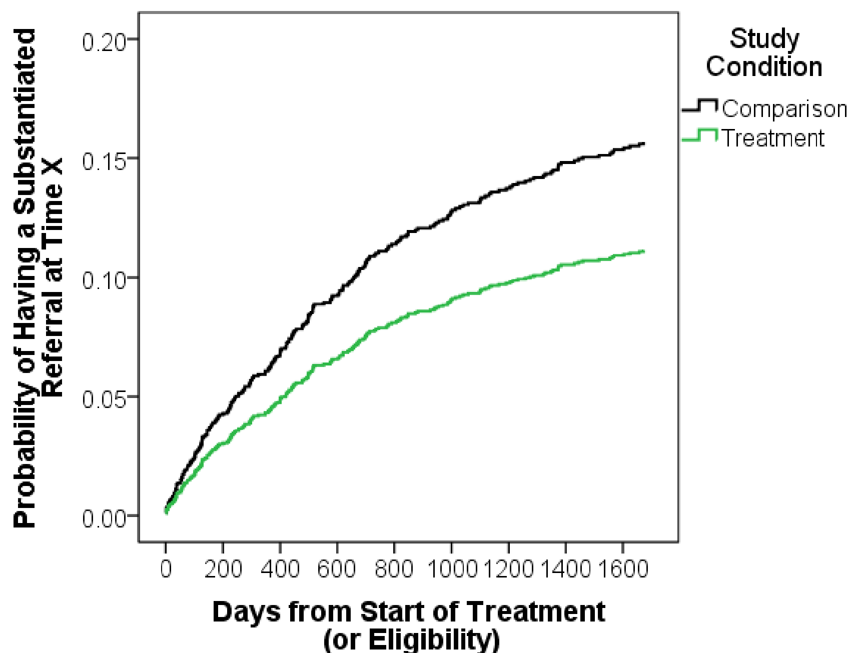
Do parents with previous CPS referrals receiving any home visitation services, reductions in subsequent CPS involvement compared to similar parents who did not participate?

***Effects for Substantiated Referrals*.** Parents of children 0-5 who received any home visitation from AmeriCorps members were significantly less likely to have a substantiated CPS referral after they began the program than those who did not receive any HV services. Specifically, being in the HV group rather than the comparison group decreased the probability of having a substantiated referral by 41 percent at a given time point when all other variables were held constant. Please see Table 9 for a more detailed description of the model and the full results of the Cox regression.

Figure 9 below shows the predicted probability of having a substantiated referral (shown on the y-axis) as a function of program participation (as indicated by green and blue lines) and the number of days from when an individual began HV or became eligible for HV (shown on the x-axis). This figure shows that overall the probability of having a substantiated referral is relatively low—only 15.4 percent of individuals in the sample have a substantiated referral in the post-period, and on average, the first substantiated referral occurs about 529 days after the start of the HV program. However, the probability of having a referral increases as more days pass and increases even more over time for the comparison group than the HV group. For example, at zero days there is almost no probability of having a substantiated referral, but by 1000 days there is roughly a 9 percent predicted probability of having a substantiated referral in the HV group and a 12 percent predicted probability in the comparison group. This gap widens over time, suggesting that over time HV participants have a lower probability of having substantiated referrals than those who did not receive these services.

Figure 9 | At Least One Hour of HV Programming & Substantiated CPS Referrals

Chart demonstrating that parents who receive any home visitation services (treatment group) have a lower probability than the comparison group of having a substantiated referral over time.



Effects for Any CPS Referrals. A similar pattern emerges when predicting the number of days before any referrals where the client was the perpetrator or other adult[12], however this difference was only marginally significant[13]. Parents of children 0-5 who received any home visitation were less likely to have a CPS referral after they began the program than those who did not receive any HV program services. Specifically, being in the HV group rather than the comparison group decreased the probability of having a CPS referral by 18% at a given time point when all other variables were held constant. Given that these results were only marginally significant, they should be interpreted with caution, but they do provide preliminary evidence that could be expanded upon in future studies. Please see Table 1 for a more detailed description of the model and the full results of the Cox regression.

Figure 10 below models the predicted probability of having any CPS referral (shown on the y-axis) as a function of program participation (as indicated by green and blue lines) and the number of days from when individual began HV or became eligible for HV (shown on the x-axis). Overall, 48.5 percent of the sample had a CPS referral during the post-period, with the average person having their first CPS referral approximately 335 days after the start of the HV program. This suggests that CPS referrals are more common than substantiated referrals, and occur earlier on average in the post-period. However, a similar pattern emerged over time, with the probability of having a referral increasing as more days pass and increasing more over time for the comparison group than the HV group. For example, at zero days there

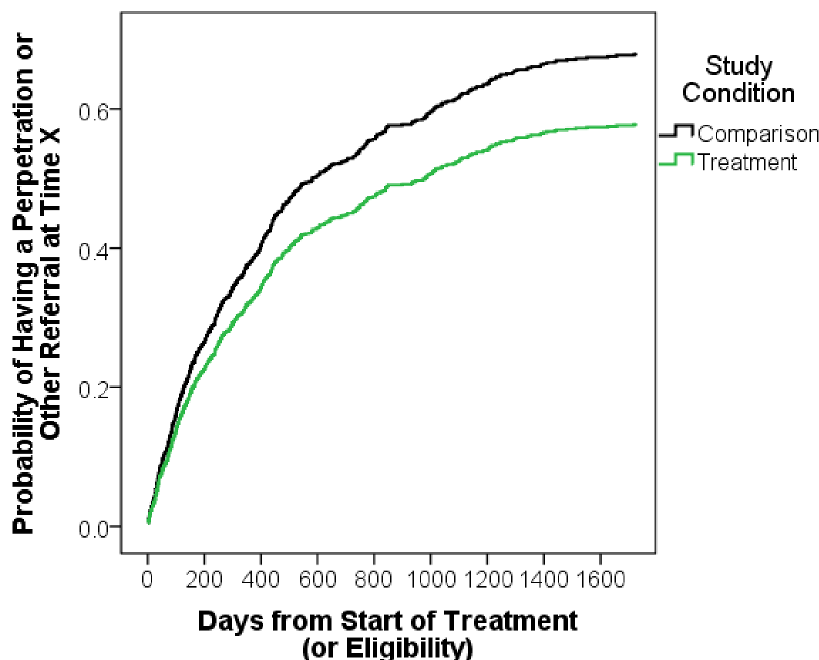
[12] Note. This measure includes both substantiated, inconclusive, unfounded, and pending/unknown dispositions.

[13] Marginal significance indicates p-values less than 0.10.

is almost no probability of having a CPS referral, but by 1000 days there is roughly a 50 percent predicted probability of having a CPS referral in the HV program group (compared to a 60% predicted probability in the comparison group). This gap widens over time suggesting that HV participants have a lower probability of having perpetration or adult other referrals than those who did not receive these services the longer they are out of the program.

Figure 10 | At Least One Hour of HV Programming & Any CPS Referral

Chart demonstrating that parents who receive any home visitation services (treatment group) have a lower probability than the comparison group of having any type of CPS referral over time.



What is the optimal range of HV program hours, for parents with previous CPS referrals to have reductions in subsequent CPS involvement compared to similar parents who did not participate?

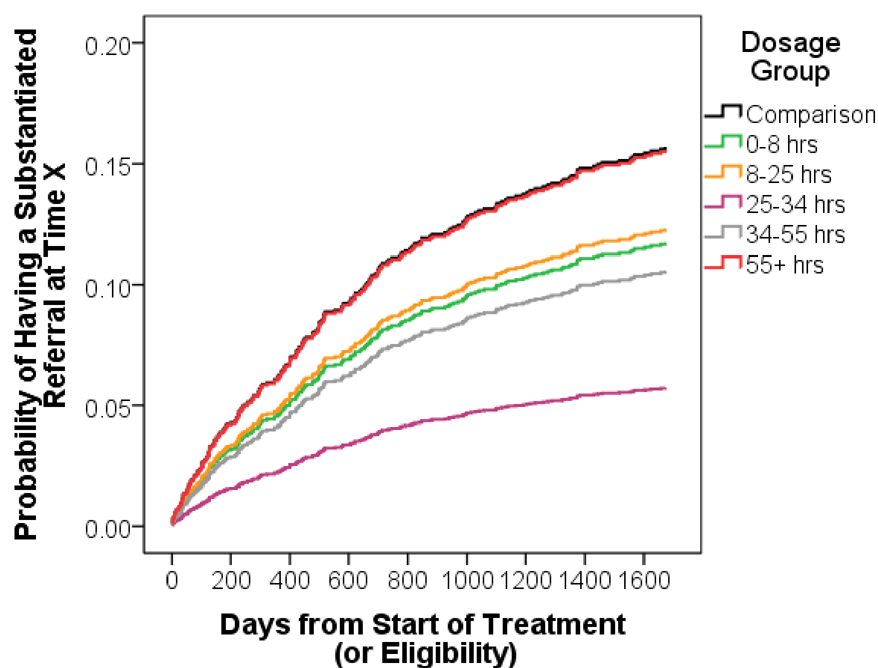
Dosage Effects on Substantiated Referrals. Parents who received between 25-34 hours of home visitation were significantly less likely to have a substantiated referral after they began the program than those who did not receive HV services. In particular, parents who received 25-34 hours of home visitation were 2.73 times (a 173% reduction) less likely at a given time point to have a substantiated referral than those in the comparison group. However, there were no statistically significant differences between the comparison group and HV program participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from participation. Please see Table 10 for a more detailed description of the model and the full results of the Cox regression.

Figure 11 below models the predicted probability of having a substantiated referral (shown on the y-axis) as a function of program dosage (as indicated by the lines labeled on the right) and the number of days

from when an individual began HV or became eligible for the HV program (shown on the x-axis). This figure shows that the probability of having a referral increases as more days pass. However, this increase is generally largest in the comparison group (illustrated with the black line below) and in the HV group who received more than 55 hours of home visitation services (illustrated with the red line below)[14]. Although there are no statistically significant differences between the comparison group and HV participants receiving 0-25 hours and 34-55 hours of home visitation, there does seem to be a trend suggesting that these groups may have a slightly lower probability of recidivism than the comparison group. That said, the only HV dosage group which was significantly different from the comparison group (shown in the black line below) was the 25-34 hour group (indicated by the purple line below). By the end of the HV period, there is roughly a four percent predicted probability of having a substantiated referral in the HV group and a 15 percent predicted probability in the comparison group. This gap shows that HV participants who receive 25-34 hours of home visitation services have a significantly lower probability of having substantiated referrals than those who did not receive these services.

Figure 11 | Receiving 25-34 Hours of HV Programming & Substantiated CPS Referrals

Chart demonstrating that parents receiving 25-34 hours of home visitation services (treatment group) have a lower probability than the comparison group of having a substantiated CPS referral over time.



[14] Note. Here the findings for the comparison group (in black) and the 55+ hours of HV group (in red) appear to be very similar and are not significantly different from one another. However, findings for the HV group who received more than 55 hours of face-to-face home visitation services should be interpreted with caution given the low sample sizes (N=15) and the wide range of hours encompassed (55-78 hours).

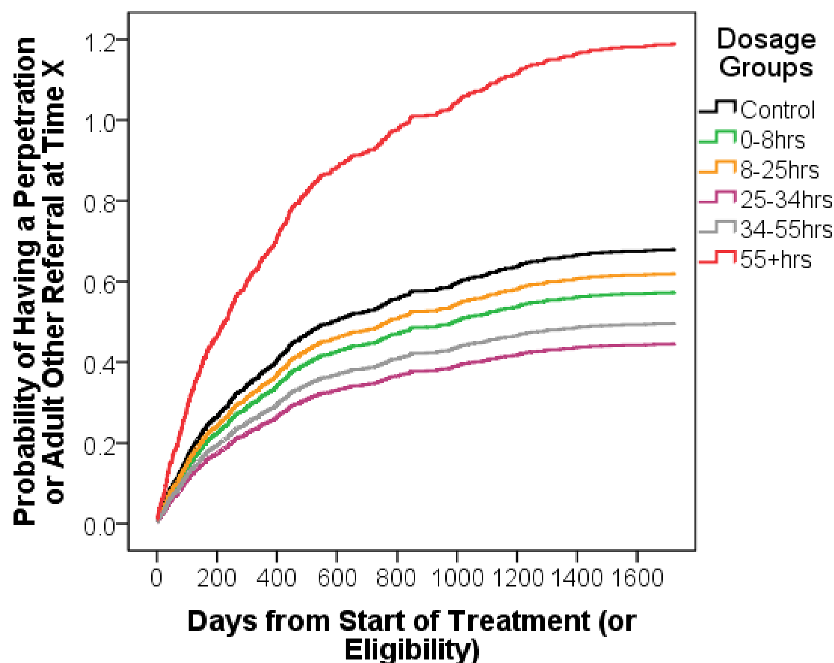
Dosage Effects on Any CPS Referrals. A similar pattern emerges when predicting the number of days before any CPS referral[15]. Once again, parents who received between 25-34 hours of home visitation were significantly less likely[16] to have a CPS referral after they began the program than those who did not receive HV services. In particular, parents who received 25-34 hours of home visitation were 57 percent less likely at a given time point to have a CPS referral than those in the comparison group. However, there were no statistically significant differences between the comparison group and HV program participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from participation. Please see Table 10 for a more detailed description of the model and the full results of the Cox regression.

Figure 12 below models the predicted probability of having any CPS referral (shown on the y-axis) as a function of program dosage (as indicated by the lines labeled on the right) and the number of days from when individual began the HV program or became eligible for the HV program (shown on the x-axis). This figure shows that the probability of having a referral increases as more days pass. However, this increase is generally largest in the comparison group (shown in the black line below) and in the HV group who received more than 55 hours of home visitation services (shown in the red line below)[17]. Although there were no statistically significant differences between the comparison group and HV participants receiving 0-25 hours and 34-55 hours of home visitation, there did seem to be a trend suggesting that these groups may have a slightly lower probability of having a CPS referral than the comparison group. That being said, the only HV group which was significantly different from the comparison group (shown in the black line below) was the 25-34 hour group (indicated by the purple line below). By the end of the HV period there was roughly a 40 percent predicted probability of having a CPS referral in the 25-34 hour HV group (shown in the purple line below) and a 65 percent predicted probability in the comparison group (shown in the black line below). This gap shows that HV AmeriCorps participants who receive 25-34 hours of home visitation services have a significantly lower probability of having CPS referrals than those who did not receive these services.

[15] Note. This measure includes both substantiated and unsubstantiated referrals.
[16] These results are marginally significant, p=0.055.
[17] Note. Findings for the HV program group who received more than 55 hours of face-to-face home visitation services should be interpreted with caution given the low sample sizes (N=15) and the wide range of hours encompassed (55-78 hours). Also, please note that there are no statistically significant differences between participants in the 55+ hours HV group and the comparison group. The results presented are Hazards Ratios, which can be above 1.

Figure 12 | Receiving 25-34 Hours of HV Programming & Any Type of CPS Referral

Chart demonstrating that parents receiving 25-34 hours of home visitation services (treatment group) have a lower probability than the comparison group of having any type of CPS referral over time.



Conclusions

This study suggests that being in the B&B home visitation group rather than the comparison group decreased the probability of having a substantiated referral by 41 percent and the probability of having any CPS referral by 18 percent at a given time point when all other variables were held constant. In particular, parents who received 25-34 hours of home visitation from HV AmeriCorps members were 173 percent less likely at a given time point to have a substantiated referral and 57 percent less likely at a given time point to have any CPS referral than those in the comparison group. However, there were no statistically significant differences between the comparison group and HV participants who received less than 25 hours of face-to-face service and those who received more than 34 hours of service. This suggests that participants who receive between 25-34 hours of service receive the maximum benefit from participation in the program and the program may want to target this level of service in the future.

Table 8 | Means, Percentages, and Standard Deviations (SD) for All Study Variables

Variables	Unmatched					Matched 2:1			
	Treatment (N=496)		Control (N=9,210)			Treatment (N=493)		Control (N=985)	
	Mean/ Percent	SD	Mean/ Percent		SD	Mean/ Percent	SD	Mean/ Percent	SD
Demographics									
Person was White (versus nonwhite)	29.20	-	36.70	***	-	29.40	-	30.60	-
Person's primary language was English (versus any other)	83.70	-	82.90		-	83.60	-	87.00	-
Age in 2015	27.46	6.28	30.39	***	6.11	27.48	6.28	27.54	5.41
Unique Referrals at/Before Point of Eligibility for the Program									
Number of Unique Perpetrator or Other (restricted to those when person was 17 or older) Referrals	2.94	4.43	1.92	***	2.52	2.87	3.80	2.61	3.71
Number of Unique Victim Referrals	2.41	3.74	0.70	***	2.04	2.35	3.61	2.35	3.53
Age of Person's First Referral	16.56	10.14	23.67	***	9.61	16.63	10.12	16.62	9.76
Most Serious Type of Referral at/Before Point of Eligibility for the Program									
Most Serious Victimization Referral (Range 0 to 9[1])	3.71	3.79	1.41	***	2.88	3.69	3.78	3.89	3.82
Most Serious Perpetration Referral (Range 0 to 9)	3.54	2.83	3.59		2.70	3.54	2.84	3.49	2.77
Most Serious Other Referral (Range 0 to 9)	6.97	1.64	6.56	***	1.44	6.96	1.64	6.98	1.53

Presence of Specific Referral Dispositions at/before Point of Eligibility for the Program

Victim										
Sexual[2] Victimization (Range 0-3[3])	0.34	0.80	0.11	***	0.47	0.34	0.80	0.37		0.82
Physical Victimization (Range 0-3)	0.62	0.99	0.21	***	0.63	0.60	0.98	0.53		0.99
Severe Neglect Victimization (Range 0-3)	0.25	0.77	0.07	***	0.43	0.25	0.77	0.25		0.76
General Neglect Victimization (Range 0-3)	0.84	1.11	0.29	***	0.77	0.84	1.11	0.83		1.13
Emotional Neglect Victimization (Range 0-3)	0.21	0.68	0.09	***	0.43	0.21	0.67	0.27		0.73
Perpetrator										
Sexual Perpetration (Range 0-3)	0.02	0.17	0.01		0.12	0.02	0.17	0.01		0.13
Physical Perpetration (Range 0-3)	0.28	0.68	0.21	*	0.59	0.28	0.69	0.21		0.58
Severe Neglect Perpetration (Range 0-3)	0.17	0.64	0.14		0.58	0.17	0.64	0.16		0.62
General Neglect Perpetration (Range 0-3)	1.14	1.17	0.95	**	1.03	1.13	1.16	0.95	**	1.04
Emotional Neglect Perpetration (Range 0-3)	0.08	0.39	0.05		0.30	0.08	0.39	0.50		0.90
Other										
Sexual Other (Range 0-3)	0.49	0.88	0.26	***	0.67	0.48	0.88	0.50		0.90
Physical Other (Range 0-3)	1.40	1.11	0.99	***	1.04	1.39	1.10	1.28		1.09
Severe Neglect Other (Range 0-3)	0.64	1.14	0.37	***	0.91	0.64	1.14	0.66		1.15
General Neglect Other (Range 0-3)	1.88	1.04	1.48	***	1.04	1.87	1.04	1.80		1.05
Emotional Neglect Other (Range 0-3)	0.51	0.94	0.31	***	0.75	0.50	0.93	0.57		0.97

*p<.05; **p<.01; ***p<.001 (treatment compared to comparison group).

[1] See item 1c in Appendix B for details of the 0-9 scoring

[2] See item 2a in Appendix B for details of the allegation type groupings

[3] See item 2b in Appendix B for details of the 0-3 scoring

Table 9 | Cox Regression for Hazard of Recidivism as a Function of Treatment (N=1,478)

Independent Variable	Substantiated Referral				Any Type of Referral			
	O.R.	se	*B*		O.R.	Se	*B*	
Treatment	0.71	0.15	0.34	*	0.85	0.08	0.16	+
Demographics								
Person was White (versus nonwhite)	1.37	0.14	0.31	*	1.25	0.08	0.22	**
Person's primary language was English (versus any other)	1.09	0.25	0.08		1.62	1.41	0.48	**
Age in 2015	1.02	0.02	0.02		1.03	0.01	0.03	*
Unique Referrals at/Before Point of Eligibility for the Program								
Number of Unique Perpetrator or Other (restricted to those when person was 17 or older) Referrals	1.06	0.02	0.06	**	1.06	0.01	0.06	***
Number of Unique Victim Referrals	1.01	0.03	0.01		1.02	0.02	0.02	
Age at Person's First Referral	0.98	0.02	-0.02		0.98	0.01	-0.02	*
Most Serious Type of Referral at/Before Point of Eligibility for the Program								
Most Serious Victimization Referral (Range 0 to 9)	1.00	0.04	0.00		0.98	0.02	-0.02	
Most Serious Perpetration Referral (Range 0 to 9)	0.89	0.04	-0.11	**	0.95	0.02	-0.05	*
Most Serious Other Referral (Range 0 to 9)	0.94	0.08	-0.06		0.91	0.04	-0.10	*

Presence of Specific Referral Dispositions At/Before Point of Eligibility for the Program

Victim								
Sexual Victimization (Range 0-3)	1.05	0.10	0.05		0.98	0.06	-0.02	*
Physical Victimization (Range 0-3)	1.10	0.09	0.10		1.01	0.06	0.01	
Severe Neglect Victimization (Range 0-3)	0.94	0.10	-0.06		1.01	0.06	0.01	
General Neglect Victimization (Range 0-3)	0.99	0.09	-0.01		0.98	0.06	-0.02	
Emotional Neglect Victimization (Range 0-3)	0.92	0.11	-0.09		1.00	0.06	-0.01	
Perpetrator								
Sexual Perpetration (Range 0-3)	1.50	0.33	0.41		1.50	0.19	0.40	
Physical Perpetration (Range 0-3)	0.97	0.14	-0.03		1.11	0.08	0.11	
Severe Neglect Perpetration (Range 0-3)	0.94	0.12	-0.07		0.92	0.07	-0.09	
General Neglect Perpetration (Range 0-3)	1.12	0.11	0.11		1.01	0.06	-0.01	
Emotional Neglect Perpetration (Range 0-3)	1.27	0.16	0.24		1.03	0.11	0.03	
Other								
Sexual Other (Range 0-3)	1.10	0.11	0.09		1.27	0.06	0.24	***
Physical Other (Range 0-3)	1.20	0.09	0.18	*	1.01	0.05	0.01	
Severe Neglect Other (Range 0-3)	0.96	0.07	-0.04		1.06	0.04	0.06	
General Neglect Other (Range 0-3)	1.09	0.10	0.09		1.01	0.06	0.01	
Emotional Neglect Other (Range 0-3)	1.07	0.08	0.07		1.03	0.05	0.03	
Overall Percent Recidivism	15.40	-	-		48.50	-	-	
Average Time to Recidivism (Days)	529.96				335.77			

+p<.10; *p<.05; **p<.01; ***p<.001

Table 10 | Cox Regression for Hazard of Recidivism as a Function of Dosage (N=1,478)

Independent Variable	Substantiated Referral				Any Type of Referral			
	O.R.	se	*B*		O.R.	se	*B*	
Dosage[1]								
0-8 Hours of Face to Face Visits	0.747	0.22	-0.29		.844	.118	-.170	
8-25 Hours of Face to Face Visits	0.78	0.23	-0.24		.912	.131	-.092	
25-34 Hours of Face to Face Visits	0.37	0.51	-1.01	*	.655	.221	-.423	+
34-55 Hours of Face to Face Visits	0.67	0.42	-0.40		.731	.225	-.313	
55+ Hours of Face to Face Visits	0.99	0.59	-0.01		1.751	.297	.560	
Demographics								
Person was White (versus nonwhite)	1.37	.143	.313	*	1.249	.082	.222	**
Person's primary language was English (versus any other)	1.07	.251	.064		1.621	.142	.483	**
Age in 2015	1.03	.024	.024		1.026	.013	.026	*
Unique Referrals At/Before Point of Eligibility for the Program								
Number of Unique Perpetrator or Other (restricted to those when person was 17 or older) Referrals	1.059	0.02	.057	**	1.060	.012	.059	***
Number of Unique Victim Referrals	1.003	0.03	.003		1.015	.019	.015	
Age at Person's First Referral	.976	0.02	-.025		.977	.010	-.023	*
Most Serious Type of Referral At/Before Point of Eligibility for the Program								
Most Serious Victimization Referral (Range 0 to 9)	.998	.039	0.00		.979	.022	-.021	
Most Serious Perpetration Referral (Range 0 to 9)	.893	.043	-0.11	**	.952	.023	-.049	*
Most Serious Other Referral (Range 0 to 9)	.940	.077	-0.06		.904	.041	-.101	*

Presence of Specific Referral Dispositions At/Before Point of Eligibility for the Program

Victim								
Sexual Victimization (Range 0-3)	1.042	.104	.041		.981	.063	-.019	
Physical Victimization (Range 0-3)	1.114	.093	.108		1.012	.056	.012	
Severe Neglect Victimization (Range 0-3)	.946	.096	-.056		1.006	.055	.006	
General Neglect Victimization (Range 0-3)	.999	.094	-.001		.982	.057	-.018	
Emotional Neglect Victimization (Range 0-3)	.914	.106	-.090		.999	.063	-.001	
Perpetrator								
Sexual Perpetration (Range 0-3)	1.504	.332	.408		1.493	.190	.401	*
Physical Perpetration (Range 0-3)	.972	.137	-.029		1.123	.077	.116	
Severe Neglect Perpetration (Range 0-3)	.935	.120	-.067		.920	.068	-.084	
General Neglect Perpetration (Range 0-3)	1.116	.106	.110		1.019	.058	.019	
Emotional Neglect Perpetration (Range 0-3)	1.267	.156	.237		1.019	.110	.019	
Other								
Sexual Other (Range 0-3)	1.104	.107	.099		1.266	.063	.236	***
Physical Other (Range 0-3)	1.194	.088	.177	*	1.012	.050	.012	
Severe Neglect Other (Range 0-3)	.961	.074	-.040		1.071	.042	.068	
General Neglect Other (Range 0-3)	1.093	.098	.089		1.006	.055	.006	
Emotional Neglect Other (Range 0-3)	1.074	.079	.071		1.034	.049	.033	
Overall Percent Recidivism	15.40	-	-		48.50	-	-	
Average Time to Recidivism (Days)	529.96				335.77			

[1] All dosage levels are compared to comparison group

+p<.10; *p<.05; **p<.01; ***p<.001

APPENDIX III | AMERICORPS LOGIC MODEL

Birth & Beyond (B&B) AmeriCorps Logic Model
Program Years 2013/14 – 2014/15

Target Population: Parents who pre-assess as at-risk for child abuse and neglect such as, parents with prior County Child Welfare Agency history, single/teen parents, pregnant parents or those with have children ages 0-5 who have high levels of stress from social isolation, domestic violence, lack of basic needs, limited knowledge of appropriate child development, parenting skills, and child safety and are willing to accept services.

Project Resources	Core Project Components	Evidence of Project Implementation and Participation	Evidence of Change NPM = National Performance Measure		
INPUTS	**ACTIVITIES**	**OUTPUTS**	**OUTCOMES**		
			Short-Term	***Medium-Term***	***Long-Term***
What we invest?	*What we do?*	*Direct products from program activities*	*Changes in knowledge, skills, attitudes, opinions*	*Changes in behavior or action that will result from participant's new knowledge*	*Meaningful changes, often in their condition or status in life*
91 AmeriCorps members (87 FT and 4 HT) serving 52 weeks as Home Visitors & Family Resource Aides. 12 B&B Family Resource Centers (FRC) as service sites operated by 6 non-profit collaborative partner agencies. Evidenced-based parenting education home visits through the FRC:	**Home Visitation:** Provide one-on-one parenting education and support to parents most at-risk for child abuse and neglect. • Administer NPP assessment one-on-one with parents and co-develop with parents a Family Nurturing Plan based on need. • Facilitate NPP lessons through home visits. • Provide information on health insurance,	1500 parents receive 1 to 8 hours of parent support and parenting education • 800 of 1500 parents receive at least 8 hours of parent support and education services. 640 of 800 parents receiving at least 8 hours of home	Parents receiving 8 hours of parent support and parenting education through home visitation will improve their parenting knowledge and skills. Parents receiving 8 hours of home visitation services will enroll in health insurance, health care access, and/or health benefits programs. (NPM H3)	Majority of parents receiving at least 8 hours of home visitation with a history of County Child Welfare Agency referrals have fewer new referrals during the AmeriCorps year than a comparison group who did not participate in the program. Majority of parents receiving at least 8 hours of home	Children are safe and healthy. Parents are nurturing and self-sufficient.

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• Nurturing Parent Program (NPP). Evidenced-based parenting education workshops through the FRC: • Nurturing Parent Program (NPP), and • Make Parenting a Pleasure (MPAP). Funding: • CNCS, • First 5 Sacramento Commission, and • County Child Welfare Agency Organizational Infrastructure: • 24 Team Leaders & FRC Coordinators supervise AmeriCorps members, and • Shared standards of practice across all FRCs: ✓ Staff & Member Training, ✓ Policies & Procedures, and ✓ Documenta-tion &	services, and benefit programs. • Enroll families without insurance or provide referrals to other health insurance providers. Dosage: Deliver 8 hours of one-on-one parenting education and support services. **Parenting Workshop:** Provide parenting education and support through NPP and MPAP workshops at the FRCs to parents most at-risk for child abuse and neglect. • Deliver 2 hour/13 week NPP or MPAP parenting education workshop sessions modeling appropriate positive parent-child interactions. Family Support Services through the FRCs. Support services are tailored and responsive to each FRC's neighborhood/community need.	visitation services receive information on health insurance, health care access, and health benefits programs. (NPM H2) 2500 parents receive parenting education and/or family support services through the FRCs. 1500 of 2500 parents start at least one 13 week parenting education workshop • 1000 of 1500 parents complete one 13 week parenting education workshop through the FRC. 1000 parents receive family support services and core support services.	Parents who complete one 13 week FRC parenting education workshop will increase their parenting knowledge and practices.	visitation with NO history of County Child Welfare Agency referrals have fewer new referrals during the AmeriCorps year than a comparison group who did not participate in the program.	

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Evaluation. 1500 ongoing & one-time non-AmeriCorps Volunteers Partner and member development activities: • Train AmeriCorps members, partner staff, and parent leaders, • Monitor program compliance, and • Implement and evaluate program using data driven and evidence-based practices.	• Orient parents to the FRC and enroll them in home visitation and/or the appropriate parenting workshop. • Provide resource and referrals to meet family's needs. • Limited one-on-one support services. • Conduct community outreach activities to publicize FRC services and recruit volunteers.	1500 volunteers on-going and one-time contribute 9,000 hours to support parenting education and parent support services.			

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