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# Planning for a Pay for Outcomes Approach in Home Visiting

A Review of Research to Inform Maternal, Infant, and Early Childhood Home Visiting Outcome Selection, Projected Savings, and Pricing

Module 1: Overview of Outcomes Demonstrated in Home Visiting Studies – Study Profiles

OPRE Report 2020-90

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Module 1 Study Profiles

OPRE Report 2020-90

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# Introduction to Module 1 Study Profiles

The studies included in Module 1 each have unique contextual characteristics that should be taken into account by MIECHV awardees when selecting outcomes for a pay for outcomes (PFO) project. Factors that may be considered when reviewing the literature to select relevant outcomes include home visiting model, target population, study location, and effect size. Detailed study profiles were developed for the 89 impact studies reviewed in Module 1, organized by MIECHV-eligible home visiting model. A high-level summary of the outcomes and HomVEE domains addressed across studies is provided for each model, followed by individual study profiles detailing key study characteristics, outcomes demonstrated, and impact estimates (e.g., program and comparison group means, mean difference between groups, effect size). While awardees should use results from their own previous evaluations when possible, findings from the research literature can fill the gap when local results are not available.

Definitions for key terms used in the individual study profiles are provided below:

- **Program/comparison group mean** represents the statistical average for each outcome reported at specific follow-up periods for home visiting and comparison groups.
  - Unless noted otherwise, study authors reported the adjusted mean, which controls for the influence of additional variables on the outcome of interest.
  - **Unadjusted mean/proportion** indicates the study author(s) reported a mean that has not been corrected to compensate for data imbalances and large variances.
  - Note: The data presented in the study profiles were reviewed and reported by HomVEE. Some study authors did not report program or comparison means. As such, this information is noted as "not reported" in the summary of study details. For more detailed information on study findings, awardees should reference the study cited (links to the study profile on HomVEE are provided under each "Summary of Study Details" table).
- **Mean difference** is the average difference in the outcome of interest between study participants in the program group and the comparison group. Some study authors provided other statistics to reflect the magnitude of the difference between groups. These include the following:
  - Odds ratio (OR) is an unstandardized statistic that represents the chances an outcome will occur given participation in home visiting, compared with the chances of the outcome occurring for the comparison group. Strong associations are represented by ORs above 4.3 and weak associations below 1.5 (Cohen, 1988).
  - Coefficient represents the beta for the program—that is, the difference in the outcome of interest between study participants in the program group and the comparison group, holding constant other characteristics included in a regression analysis.

- Effect size measures the size of difference between program and comparison groups—not the likelihood of change captured by statistical significance. It is often used as a measure of how well an intervention works to improve an outcome.
  - Effect size is generally interpreted as .2 = small effect, .5 = medium effect, .8 = large effect (Ferguson, 2009).
  - Negative effect sizes and mean differences indicate the study assessed an unfavorable outcome (such as infant death) and results for the home visiting group were more favorable compared with the comparison group.
  - Effect sizes for each outcome presented were either reported by study author(s), calculated by HomVEE (when study authors did not report an effect size), or not available (Cohen, 1988).

Exhibit 1 summarizes statistically significant impacts on outcomes across the studies reviewed with medium to large effect sizes.

# Exhibit 1. Home Visiting Outcomes With Medium to Large Effect Sizes

#### By model, HomVEE domain, and follow-up time period

Follow-up Period Effect Size		ect Size	
	≤6 months		.5–.79
	12 months		.80–.99
	>12 months		≥1.00

Model	Outcome	Follow- up period	Effect size
	CHILD DEVELOPMENT AND SCHOOL READINESS		
ABC	Disorganized attachment	N/A	
Child First	Child language (clinically concerning assessment scores)		
EHS	Engagement of parent during semistructured play		
Early Start	Internalizing behavior		
	ITSEA Externalizing (general domain)		
Family	ITSEA Externalizing: Activity/impulsivity		
Spirit	ITSEA Externalizing: Peer aggression		
	ITSEA Internalizing: Separation distress		
	Academic Self-Image Measure		
HIPPY	Child Classroom Adaptation Index		
	Child Classroom Adaptation Index at end of program		
	GPA (reading and math; grades 1–6)		
	GPA (reading and math; grades 4–6)		
	PIAT scores (reading and math) at age 12		
NFP	Group achievement test (reading and math; grades 1–6), percentile		
	PLS-3 (language delay) among mothers with low psychological resources		
	Any therapeutic services, treatment 1 vs. 3		

Model	Outcome	Follow- up period	Effect size
	Percentage incoherent stories, treatment 1 vs. 2		
	GPA (reading and math; grades 1–6)		
PALS	Negative affect		
	Gross Motor Delay-Denver Developmental Screening Test, percentage below age level		
	Language Acquisition Quotient-Zimmerman Preschool Language Scale, percentage below age level		
PAT	Mental Processing-Kaufman ABC, percentage below 90		
	Gross Motor Delays-Denver Developmental Screening Test		
	Language Acquisition Quotient-Zimmerman Preschool Language Scale		
	CHILD HEALTH		
ABC	Telomere length		
Early	Child adequately immunized at 1 year postpartum		
Intervention for Adolescent Mothers	Never used the ER for child's health problems at 2 years postpartum		
Family			
Connects	Three or more emergency medical care episodes		
	Infant deceased in hospital at birth		
HANDS	Preterm birth		
	Low birth weight		
HFA	Low birth weight		
MECSH	Breastfeeding duration		
	Youth used cigarettes, alcohol, or marijuana in the past 30 days		
NFP	Subsequent low birth weight newborns among paraprofessional home visitor sample		
	FAMILY ECONOMIC SELF-SUFFICIENCY		
HANDS	Maternal receipt of WIC at birth		
HFA	School or training for mother		
	Increased education by year or more since baseline		
NFP	Duration of current partner relationship		
	Use of food stamps		
	Use of AFDC-TANF		
	LINKAGES AND REFERRALS		
	Service needs received at 6 months		
	Child development services received		
	Service needs received at 12 months		
	Child mental health services received		
Child First	Early education services received		
	Adult education services received		
	Adult mental health services received		
	Services received for concrete needs		
	Family support services received		
	Medical services received		

Model	Outcome	Follow- up period	Effect size
	Social services received		
	Services for child with disability		
	Any education-related services		
EHS	Any employment-related services at 7 to 16 months		
	Any education-related services		
	Any employment-related services at 28 months		
	Use of resources		
HFA	Referral to family planning		
	MATERNAL HEALTH		
Child First	Difficult child (clinically concerning problems)		
Child First	Global psychiatric symptoms (clinically concerning problems)		
HANDS	Adequate prenatal care at birth		
HFA	Use of resources		
MIHP	Any prenatal care		
Minding the Baby	Rapid subsequent childbearing (within 24 months)		
	Pearlin Mastery Scale		
	21-year maternal mortality rate – external cause (nurse home visits during pregnancy and infancy)		
NFP	21-year maternal mortality rate – all causes (nurse home visits		
	during pregnancy plus 2 postpartum visits)		
	21-year maternal mortality rate – all causes (nurse home visits		
	during pregnancy and infancy)		
	POSTIVE PARENTING PRACTICES		
	Positive parent regard		
ABC	Parent sensitivity		
	Growth in parental sensitivity		
	Growth in parental intrusiveness		
Family Check-Up	Parent involvement		
Family	Change in parenting knowledge at 6 months		
Spirit	Change in parenting knowledge at 12 months		
HFA	Safety practices		
HIPPY	Parents' use of home-based supports for children		
NFP	Hostile parenting practices		
	Contingent responsiveness at 12 months		
	Contingent responsiveness at 3 months after program end		
	Labeling actions		
	Labeling objects		
PALS	Physical intrusiveness		
	Redirecting infant foci of attention		
	Verbal encouragement		
	Verbal encouragement		
	REDUCTIONS IN CHILD MALTREATMENT		
Early Start	Percentage severe/very severe assault by any parent at 36 months		
	r ercentage severervery severe assault by driv parent at so months		

Model	Outcome	Follow- up period	Effect size
PAT	Abuse and/or neglect – DSS and school records		
R	EDUCTIONS IN JUVENILE DELINQUENCY, FAMILY VIOLENCE,	AND CRIME	
NFP	Convicted, lifetime		

The studies included in Module 1 provide information needed to calculate outcome incidence rates, which may be helpful to inform a PFO feasibility study. The rate at which home visiting can reduce or improve on an outcome of interest can be used as a measure of success that can be used to negotiate repayments in a PFO model. Based on the rates calculated from previous studies, awardees can estimate reasonable success rates for their own PFO initiative. Repayment may be based on outcome differences between the home visiting and comparison group, solely on outcomes observed for individual participants served, or a combination of both approaches (Nonprofit Finance Fund, 2019). While this information is not provided in the study profiles, awardees should refer to the original study cited to calculate outcome incidence rates for home visiting (and comparison groups, when possible).

Examples of how to select and calculate these rates are provided below.

#### Example 1: Rates for outcomes observed for individual participants served

An awardee using economic stability as an outcome in its feasibility study may find that other home visiting studies have seen between 60 and 75 percent rates of employment among caregivers who participate in home visiting for 12 months, compared with only 8 to 10 percent employment for caregivers in comparison groups. The awardee may use this information, along with local historical data and stakeholder requirements, to estimate it could expect a 70 percent economic stability rate among its home visiting participants.

- Outcome selected: Economic stability
- Indicator: Percentage of caregivers who are employed at 12 months after enrollment as measured by earned income
- Calculation: [(number of caregivers at 12 months who have "earned income" from employment)/(total number of caregivers enrolled in home visiting for 12 months during the reporting window)] X 100

# Example 2: Rates for outcome differences between the home visiting and comparison group

An awardee using child safety as an outcome in its feasibility study may find that other home visiting studies have seen between 10 and 20 percent differences in substantiated child maltreatment cases between home visiting and comparison groups (an indicator of child safety). The awardee may use this information, along with local historical data and stakeholder requirements, to estimate it could expect at least a *15 percent difference between the home visiting and comparison group for substantiated cases*.

- Outcome selected: Child safety
- Indicator: Percentage of families for which there is a substantiated case of maltreatment at a specified follow-up period
- Calculation: Two incidence rates would be calculated for comparison. The difference between these percentages would be used to determine if the awardee met the minimum criteria of 15 percent fewer substantiated cases for the home visiting group compared with the comparison group.
  - Rate for home visiting group: [(number of families at follow-up that have/had a substantiated child maltreatment case during the reporting window)/(total number of families enrolled in home visiting during the reporting window)] X 100
  - Rate for comparison group: [(number of families at follow-up that have/had a substantiated child maltreatment case during the reporting window)/(total number of families in comparison group during the reporting window)] X 100

# References

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Lawrence Erlbaum

- Ferguson, C. J. (2009). An effect size primer: a guide for clinicians and researchers. Professional Psychology Research & Practice, 40, 532-538. http://psychology.okstate.edu/faculty/jgrice/psyc3214/Ferguson EffectSizes 2009.pdf
- Nonprofit Finance Fund. (2019). A comparative analysis of the First 25 Pay for Success Projects in the United States. <u>https://nff.org/sites/default/files/paragraphs/file/download/pay-for-success-first-25.pdf</u>

# Attachment and Biobehavioral Catch-Up (ABC)

Four studies with a moderate or high HomVEE rating were reviewed for ABC. Studies achieved favorable results in the following three domains: child development and school readiness, child health, and positive parenting practices (see Exhibit 1).

### Exhibit 1. ABC: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Bernard et al., 2012)	(Bernard et al., 2015)	(Hoye et al., n.d.)	(Yarger, 2015)
CI	hild Development and S	chool Readiness		
Disorganized attachment	•			
	Child Healt	h		
Telomere length (a proxy for childhood adversity)			•	
	Positive Parenting	Practices		
Positive parent regard		•		
Parent sensitivity		•		•
Growth in parental intrusiveness				•

Individual study details are provided below.

**Study 1.** Bernard, K., Dozier, M., Bick, J., Lewis-Morrarty, E., Lindhiem, O., & Carlson, E. (2012). Enhancing attachment organization among maltreated children: Results of a randomized clinical trial. *Child Development*, *83*(2), 623–636.

*Program model:* Attachment and Biobehavioral Catch-Up (ABC)

Research design: Randomized controlled trial

Target population: Parents/caregivers of children younger than 2 years of age with child protective services involvement

*Study location:* Not specified; a large city in the Mid-Atlantic

### Exhibit 2. Summary of Study Details (Bernard et al., 2012)

Attachment and Biobehavioral Catch-Up (ABC)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child	Development and Sc	hool Readiness		
Disorganized attachment Follow-up at approximately 1 month after program end or longer if child not yet old enough to measure outcome	Strange Situation Procedure	Unadjusted proportion = 0.32	Unadjusted proportion = 0.57	-0.25	HomVEE calculated = 0.67

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Bernard, K., Yarger, H. A., Meade, E. B., Wallin, A., & Dozier, M. (2015). *Enhancing sensitivity and positive regard among parents of children adopted internationally: Long-term effects from a randomized clinical trial* [Unpublished manuscript]. Department of Psychology, Stony Brook University.

*Program model:* Attachment and Biobehavioral Catch-Up (ABC)

*Research design*: Randomized controlled trial

*Target population:* Parents who recently completed an international adoption of child or children

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### Exhibit 3. Summary of Study Details (Bernard et al., 2015)

Attachment and Biobehavioral Catch-Up (ABC)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Posi	tive Parenting Prac	tices		
Positive parent regard Follow-up at 0–6 months postintervention	National Institute of Child Health and Development's (NICHD's) Observational Record of the Caregiving Environment	Unadjusted mean = 4.32	Unadjusted mean = 3.76	0.56	HomVEE calculated = 0.70
Parent sensitivity Follow-up at 0–6 months postintervention	NICHD's Observational Record of the Caregiving Environment	Unadjusted mean = 3.56	Unadjusted mean = 2.93	0.63	HomVEE calculated = 0.62

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Hoye, J., Asok, A., Bernard, K., Roth, T., Rosen, J., & Dozier, M. (n.d.). *Intervening early to protect telomeres: Results of a randomized clinical trial* [Unpublished manuscript].

- *Program model:* Attachment and Biobehavioral Catch-Up (ABC)
- *Research design*: Randomized controlled trial
- *Target population:* Children who were adopted internationally

Study location: Participants lived within 100 miles of the University of Delaware

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## Exhibit 4. Summary of Study Details (Hoye et al., n.d.)

Attachment and Biobehavioral Catch-Up (ABC)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Telomere length (used as a proxy for childhood adversity)	Telomere length	Not reported	Not reported	Not reported	Study reported = 0.58
Follow-up at 5 years of age					

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 4.** Yarger, H. A. (2015). *Investigating trajectories of change in Attachment and Biobehavioral Catch-Up among high-risk mothers: A randomized clinical trial* (Publication No.1596912) [Master's thesis, University of Delaware]. ProQuest Dissertations Publishing.

- *Program model:* Attachment and Biobehavioral Catch-Up (ABC)
- Research design: Randomized controlled trial
- *Target population:* Mothers who had an unsubstantiated allegation of child neglect

Study location: Delaware

## Exhibit 5. Summary of Study Details (Yarger, 2015)

Attachment and Biobehavioral Catch-Up (ABC)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	P	ositive Parenting Pr	actices		
Growth in parental intrusiveness Follow-up at 16–19 weeks	The Observational Record of the Caregiving Environment (ORCE) intrusiveness scale	Unadjusted mean = -1.22	Unadjusted mean = -0.26	-0.96	Study reported =0.81
Growth in parental sensitivity Follow-up at 16–19 weeks	The ORCE sensitivity scale	Unadjusted mean = 0.97	Unadjusted mean = 0.26	0.71	Study reported = 0.70

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Child First

One study with a high HomVEE rating was reviewed for Child First. The study achieved favorable results in the following four domains: child development and school readiness, linkages and referrals, maternal health, and reductions in child maltreatment (see Exhibit 1).

### Exhibit 1. Child First: Overview of Statistically Significant Findings

### Outcomes Favoring Home Visiting, by Domain

Outcome	(Lowell et al., 2011)
Child Development and School Readiness	
Child externalizing behaviors	•
Social-emotional/behavioral problems	•
Child language	•
Linkages and Referrals	
Child development services received	•
Service needs received	•
Child mental health services received	•
Early education services received	•
Adult education services received	•
Adult mental health services received	•
Services received for concrete needs	•
Family support services received	•

Medical services received	•
Social services received	•
Maternal Health	
Global psychiatric symptoms	•
Depression	•
Difficult child	•
Parent distress	•
Parent-child systems that are under stress and are at risk for dysfunctional parenting practices	•
Reductions in Child Maltreatment	
Family involvement with Child Protective Services	•

Individual study details are provided below.

**Study 1.** Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of Child First: A comprehensive home-based intervention translating research into early childhood practice. *Child Development, 82*(1), 193–208.

*Program model:* Child First

*Research design*: Randomized controlled trial

*Target population:* Children were eligible if they were between 6 and 36 months of age; had a positive screening for socialemotional/behavioral problems on the Brief Infant-Toddler Social and Emotional Assessment and/or the parent screened high for psychosocial risk; and lived in a permanent caregiving environment in Bridgeport, CT.

Study location: Bridgeport, CT

## Exhibit 2. Summary of Study Details (Lowell et al., 2011)

Child First

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Child Development and School Readiness							
Infant-Toddler Social and Emotional Assessment (ITSEA) Follow-up at 12 months after random assignment	Child social- emotional /behavioral problems: ITSEA externalizing	13.80	18.40	-4.60	HomVEE calculated = 0.49		
ITSEA Follow-up at 12 months after random assignment	Child social- emotional /behavioral problems: ITSEA externalizing (proportion with clinically concerning problems)	% (adjusted) = 17.00	Adjusted mean % = 29.10	Difference = 12.10	HomVEE calculated = -0.42		
ITSEA Follow-up at 12 months after random assignment	Child social- emotional /behavioral problems: any ITSEA domain (proportion with clinically concerning problems)	% (adjusted) = 26.40	Adjusted mean % = 36.40	Difference = -10.00	HomVEE calculated = -0.28		
Infant-Toddler Developmental Assessment (IDA) Follow-up at 6 months after random assignment	Child language (proportion with clinically concerning problems)	% (adjusted) = 16.90	Adjusted mean % = 30.30	OR = 3.00	HomVEE calculated = -0.46		

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IDA Follow-up at 12 months after random assignment	Child language (proportion with clinically concerning problems)	% (adjusted) = 10.50	Adjusted mean % = 33.30	OR = 4.40	HomVEE calculated = -0.88
		Linkages and R	teferrals		
Percentage of families receiving desired child development services Follow-up at 12 months after random assignment	Child development services received	% = 99.00	% = 14.00	Difference = 85.00	HomVEE calculated = 3.89
Percentage of families whose wanted service needs were met Follow-up at 6 months after random assignment	Service needs received	% = 88.10	% = 31.80	Difference = 56.30	HomVEE calculated = 3.79
Percentage of families whose wanted service needs were met Follow-up at 12 months after random assignment	Service needs received	% = 91.20	% = 33.20	Difference = 58.00	HomVEE calculated = 3.93
Percentage of families receiving desired child mental health services Follow-up at 12 months after random assignment	Child mental health services received	% = 93.00	% = 2.00	Difference = 91.00	HomVEE calculated = 3.93

Percentage of families receiving desired early education services Follow-up at 12 months after random assignment	Early education services received	% = 88.00	% = 26.00	Difference = 62.00	HomVEE calculated = 1.84
Percentage of families receiving desired adult education services Follow-up at 12 months after random assignment	Adult education services received	% = 62.00	% = 9.00	Difference = 53.00	HomVEE calculated = 1.70
Percentage of families receiving desired adult mental health services Follow-up at 12 months after random assignment	Adult mental health services received	% = 92.00	% = 7.00	Difference = 85.00	HomVEE calculated = 3.05
Percentage of families receiving desired concrete services Follow-up at 12 months after random assignment	Services received for concrete needs	% = 89.00	% = 16.00	Difference = 73.00	HomVEE calculated = 2.27
Percentage of families receiving desired family support services Follow-up at 12 months after random assignment	Family support services received	% = 83.00	% = 9.00	Difference = 74.00	HomVEE calculated = 2.36

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Percentage of families receiving medical services Follow-up at 12 months after random assignment	Medical services received	% = 98.00	% = 78.00	Difference = 20.00	HomVEE calculated = 1.59
Percentage of families receiving desired social services Follow-up at 12 months after random assignment	Social services received	% = 93.00	% = 56.00	Difference = 37.00	HomVEE calculated = 1.42
		Maternal He	ealth		
The Brief Symptom Inventory (BSI) Follow-up at 12 months after random assignment	Global psychiatric symptoms	21.00	35.10	-14.10	HomVEE calculated = 0.56
BS) Follow-up at 12 months after random assignment	Global psychiatric symptoms (proportion with clinically concerning problems)	% (adjusted) = 14.00	Adjusted mean % = 39.00	Difference = -25.00	HomVEE calculated = -0.83
Center for Epidemiological Studies Depression Scale (CES- D) Follow-up at 12 months after random assignment	Depression	13.50	17.40	-3.90	HomVEE calculated = 0.45

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Parenting Stress Index (PSI) Short Form Follow-up at 6 months after random assignment	Difficult child	23.50	26.50	-3.00	HomVEE calculated = 0.47
PSI Short Form Follow-up at 6 months after random assignment	Difficult child (proportion with clinically concerning problems)	% (adjusted) = 4.80	Adjusted mean % = 19.70	Difference = -14.90	HomVEE calculated = -0.96
PSI Short Form Follow-up at 6 months after random assignment	Parent distress	30.30	33.60	-3.30	HomVEE calculated = 0.47
PSI Short Form Follow-up at 6 months after random assignment	Parent distress (proportion with clinically concerning problems)	% (adjusted) = 31.80	Adjusted mean % = 45.50	Difference = -13.70	HomVEE calculated = -0.35
PSI Short Form Follow-up at 6 months after random assignment	PSI total score	74.20	81.90	-7.70	HomVEE calculated = 0.49
PSI Short Form Follow-up at 6 months after random assignment	PSI total score (proportion with clinically concerning problems)	% (adjusted) = 20.60	Adjusted mean % = 34.90	Difference = -14.30	HomVEE calculated = -0.44
PSI Short Form Follow-up at 6 months after random assignment	Any PSI scale (proportion with clinically concerning problems)	% (adjusted) = 38.10	Adjusted mean % = 57.60	Difference = -19.50	HomVEE calculated = -0.48

PSI Short Form Follow-up at 12 months after random assignment	Any PSI scale (proportion with clinically concerning problems)	% (adjusted) = 32.70	Adjusted mean % = 44.10	Difference = -11.40	HomVEE calculated = -0.29		
	Reductions in Child Maltreatment						
Child Protective Services (CPS) involvement	Family involvement with CPS	Not available	Not available	OR = 2.10	Not available		
Follow-up at 36 months after random assignment							

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Early Intervention Program for Adolescent Mothers

Three studies with a moderate or high HomVEE rating were reviewed for Early Intervention Program for Adolescent Mothers. Studies achieved favorable results in the following two domains: child health and family economic self-sufficiency (see Exhibit 1).

# Exhibit 1. Early Intervention Program for Adolescent Mothers: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Koniak-Griffin et al., 2000)	(Koniak-Griffin et al., 2002)	(Koniak-Griffin et al., 2003)				
Child Health							
Child hospitalization	•	•	•				
Children adequately immunized		•					
Emergency department (ED) visits			•				
	Family Economic S	Self-Sufficiency					
Positive education outcome	•						
Positive education transition	•						

Individual study details are provided below.

**Study 1.** Koniak-Griffin, D., Anderson, N. L., Verzemnieks, I., & Brecht, M. L. (2000). A public health nursing early intervention program for adolescent mothers: Outcomes from pregnancy through 6 weeks postpartum. *Nursing Research, 49*(3), 130–138.

Program model:	Early Intervention Program for Adolescent Mothers

Research design: Randomized cont	trolled trial
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*Target population:* Young mothers aged 14–19

Study location: San Bernardino County, CA

### Exhibit 2. Summary of Study Details (Koniak-Griffin et al., 2000)

#### Early Intervention Program for Adolescent Mothers

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Additional days of rehospitalization Follow-up at 6 weeks postpartum	Additional days of newborn rehospitalization	Number of days = 23.00	Numbers of days = 36.00	-13.00	Not available
Total number of days for infant rehospitalization during the first 6 weeks of life Follow-up at 6 weeks postpartum	Total number of days infants were re-hospitalized during their first 6 weeks of life	Number of days = 114.00	Number of days = 146.00	-32.00	Not available

Family Economic Self-Sufficiency					
Positive education outcome	Percentage of participants experiencing positive education outcomes such	Not available	Not available	Not reported	Not available
Follow-up at 6 weeks postpartum	as attending high school or junior college or having successfully graduated from high school				
Positive education transition	Four categories of education transitions from pregnancy (intake) to	Not available	Not available	Not reported	Not available
Follow-up at 6 weeks postpartum	postpartum examined for group differences: positive change, negative change, positive status quo, negative status quo				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 2.** Koniak-Griffin, D., Anderson, N. L., Brecht, M. L., Verzemnieks, I., Lesser, J., & Kim, S. (2002). Public health nursing care for adolescent mothers: Impact on infant health and selected maternal outcomes at 1 year post-birth. *Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine, 30*(1), 44–54.

- *Program model:* Early Intervention Program for Adolescent Mothers
- *Research design:* Randomized controlled trial
- *Target population:* Young mothers aged 14–19
- Study location: San Bernardino County, CA

### Exhibit 3. Summary of Study Details (Koniak-Griffin et al., 2002)

Early Intervention Program for Adolescent Mothers

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health	ı		
Number of episodes of hospitalizations Follow-up at 1 year postpartum	Total number of child hospitalization episodes during the first year of life	Number of episodes = 14.00	Number of episodes = 24.00	Difference = -10.00	Not available
Percentage of children adequately immunized Follow-up at 1 year postpartum	Percentage of children who received 3 doses of diptheriatetanus–pertussis vaccine and 2 doses of oral polio vaccine by 12 months of age as recommended by the Centers for Disease Control and Prevention	% = 0.96	Mean % = 0.86	0.10	HomVEE calculated = 0.83
Total number of days of non-birth related infant hospitalization Follow-up at 1 year postpartum	Total number of days of non-birth related infant hospitalization during the first year of life. Common reasons for hospitalization included respiratory problems, gastrointestinal problems, and fever.	Number of days = 74.00	Number of days = 154.00	Difference = -80.00	Not available

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

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**Study 3.** Koniak-Griffin, D., Verzemnieks, I. L., Anderson, N. L., Brecht, M. L., Lesser, J., Kim, S., & Turner-Pluta, C. (2003). Nurse visitation for adolescent mothers: Two-year infant health and maternal outcomes. *Nursing Research*, *52*(2), 127–136.

Program model:	Early Intervention Program for Adolescent Mothers
Research design:	Randomized controlled trial
Target population:	Young mothers aged 14–19
Study location:	San Bernardino County, California

### Exhibit 4. Summary of Study Details (Koniak-Griffin et al., 2003)

#### Early Intervention Program for Adolescent Mothers

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Number of episodes of hospitalizations Follow-up at 2 years postpartum	Count of the number of episodes of hospitalization during the first 24 months of the child's life	Number of episodes = 19.00	Number of episodes = 36.00	Difference = -17.00	Not available
Percentage never using the ER for child's health problems Follow-up at 2 years postpartum	Percentage of mothers who had not used emergency room services for their child's health during the first 24 months of the child's life	% = 0.36	Mean % = 0.11	0.25	HomVEE calculated = 0.92

Total number of days of non-birth related infant hospitalization	Count of the total number of days of non-birth related child hospitalization during the first 24 months of the	Number of days = 143.00	Number of days = 211.00	-68.00	Not available
Follow-up at 2 years postpartum	child's life				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

# Early Start (New Zealand)

One study with a moderate HomVEE rating was reviewed for Early Start (New Zealand). The study achieved favorable results in the following four domains: child development and school readiness, child health, positive parenting practices, and reductions in child maltreatment (see Exhibit 1).

#### Exhibit 1. Early Start (New Zealand): Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Fergusson et al., 2005 – Full Sample)	(Fergusson et al., 2005 – Tribal/Māori sample)				
Child Development	and School Readiness					
Attendance in early childhood education	•					
Internalizing and externalizing social-emotional/behavioral problems	•	•				
Internalizing behaviors: inhibition/separation problems and depression/withdrawal	•	•				
Child	l Health					
Number of visits made to family doctor	•	•				
Child up to date with well-child checks	•					
Dental services received	•					
Positive Parenting Practices						
Nonpunitive attitude	•					
Positive parenting attitude	•	•				

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Reductions in Child Maltreatment				
Hospitalization or accident/injury for accidental poisoning	•			
Severe/very severe assault by any parent	•	•		

Individual study details are provided below.

Study 1. Fergusson, D. M., Horwood, L. J., Grant, H., & Ridder, E. M. (2005). Early Start evaluation report. Early Start Project Ltd.

Program model:	Early Start (New Zealand)
Research design:	Randomized controlled trial
Target population:	Families who had a new infant in the Christchurch area
Study location:	Christchurch, New Zealand

### Exhibit 2. Summary of Study Details (Fergusson et al., 2005)

### Early Start (New Zealand)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Dev	velopment and Scho	ol Readiness		
Duration of attendance (months) among Christchurch sample	Duration of attendance in early childhood education (in months)	Unadjusted mean = 16.40	Unadjusted mean = 13.60	2.80	0.22
Follow-up at 36 months after random assignment					

Total behavior score among Christchurch sample Follow-up at 36 months after random assignment	Child social-emotional /behavioral problems were assessed using 50 items from the Infant-Toddler Social and Emotional Assessment (ITSEA).	Unadjusted mean = 9.87	Unadjusted mean = 10.11	-0.24	0.24
Total internalizing score among Christchurch sample Follow-up at 36 months after random assignment	Child social-emotional /behavioral problems were assessed using 50 items from the ITSEA. The dimensions of inhibition/separation problems and depression/withdrawal compose the internalizing score	Unadjusted mean = 9.86	Unadjusted mean = 10.12	-0.26	0.26
Total behavior score among Tribal/Māori sample Follow-up at 36 months after random assignment	Child social-emotional /behavioral problems were assessed using 50 items from the ITSEA.	Unadjusted mean = 9.93	Unadjusted mean = 10.36	-0.43	HomVEE calculated = -0.40

Total internalizing score among Tribal/Māori sample Follow-up at 36 months after random assignment	Child social-emotional /behavioral problems were assessed using 50 items from the ITSEA. The dimensions of inhibition/separation problems and depression/withdrawal compose the internalizing score	Unadjusted mean = 9.84	Unadjusted mean = 10.41	-0.57	HomVEE calculated = -0.57
		Child Health			
Number of visits made to family doctor in past 36 months among Christchurch sample Follow-up at 36 months after random assignment	Mean number of visits to family doctor within the past 36 months	Unadjusted mean = 23.50	Unadjusted mean = 20.70	2.80	Study reported = 0.24
Percentage of children up to date with well-child checks among Christchurch sample Follow-up at 36 months after random assignment	Percentage of children who were up to date with well-child checks	% = 41.90	% = 30.10	11.80	Study reported = 0.24

Percentage with dental service among Christchurch sample Follow-up at 36 months after random assignment	Percentage of children enrolled to receive free dental service	% = 72.30	% = 62.80	9.50	Study reported = 0.20
	Po	sitive Parenting Pra	ctices		
Nonpunitive attitudes among Christchurch sample Follow-up at 36 months after random assignment	Positive and punitive parenting practices were assessed using a 49-item measure that combined items from the Child Rearing Practices Report (CRPR), the Adult- Adolescent Parenting Inventory (AAPI), and study-developed items.	Unadjusted mean = 10.12	Unadjusted mean = 9.90	0.22	Study reported = 0.22
Positive parenting attitude among Christchurch sample Follow-up at 36 months after random assignment	Positive and punitive parenting practices were assessed using a 49-item measure that combined items from the CRPR, the AAPI, and study- developed items.	Unadjusted mean = 10.14	Unadjusted mean = 9.88	0.26	Study reported = 0.26

Total parenting score among Christchurch sample Follow-up at 36 months after random assignment	Positive and punitive parenting practices were assessed using a 49-item measure that combined items from the CRPR, the AAPI, and study- developed items.	Unadjusted mean = 10.14	Unadjusted mean = 9.87	0.27	Study reported = 0.27
Total parenting score among Tribal/Māori sample Follow-up at 36 months after random assignment	Positive and punitive parenting practices were assessed using a 49-item measure that combined items from the CRPR, the AAPI, and study- developed items.	Unadjusted mean = 10.04	Unadjusted mean = 9.63	0.41	HomVEE calculated = 0.37
Percentage severe/very severe assault by any parent among Tribal/Māori sample Follow-up at 36 months after random assignment	The Severe/Very Severe assault subscales of the Parent-Child Conflict Tactics Scale were used to assess child abuse/neglect.	Unadjusted mean = 10.07	Unadjusted mean = 9.65	0.42	HomVEE calculated = 0.38
	Redu	ctions in Child Maltr	reatment		
Percentage attended hospital or accident/injury for accidental poisoning among Christchurch sample Follow-up at 36 months after random assignment	Percentage of children who attended the hospital for accident/injury or accidental poisoning	% = 17.50	% = 26.3.0	-8.90	Study reported = 0.22

Percentage severe/very severe assault by any parent among Christchurch sample Follow-up at 36 months after random assignment	The Severe/Very Severe assault subscales of the Parent-Child Conflict Tactics Scale were used to assess child abuse/neglect.	% = 4.40	% = 11.70	-7.30	Study reported = 0.26
Percentage severe/very severe assault by any parent among Tribal/Māori sample Follow-up at 36 months after random assignment	The Severe/Very Severe assault subscales of the Parent-Child Conflict Tactics Scale were used to assess child abuse/neglect.	0.03	0.12	-9.40	HomVEE calculated = -0.98

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.
# Early Head Start–Home-Based Option (EHS)

Five studies with a moderate or high HomVEE rating were reviewed for EHS. The studies achieved favorable results in the following five domains: child development and school readiness, family economic self-sufficiency, linkages and referrals, positive parenting practices, and reductions in child maltreatment (see Exhibit 1).

#### Exhibit 1. EHS: Overview of Statistically Significant Findings Across Studies

## Outcomes Favoring Home Visiting, by Domain

Outcome	(Chazan-Cohen et al., 2013)	(Love et al., 2001)	(Love et al., 2002)	(Roggman et al., 2009)	(Roggman & Cook, 2010)			
Child Deve	Child Development and School Readiness							
Positive approaches to learning	•							
Social behavior problems	•							
Engagement of parent during parent-child semistructed play			•					
Cognitive functioning				•				
Attachment security				•				
Family	/ Economic Self-Sı	ufficiency						
Parent income	•							
Receiving education or training		•	•					
Ever in English as a Second Language class		•						
Ever in high school		•	•					
Ever in vocational program		•						

Outcome	(Chazan-Cohen et al., 2013)	(Love et al., 2001)	(Love et al., 2002)	(Roggman et al., 2009)	(Roggman & Cook, 2010)		
Employment			•				
Linkages and Referrals							
Education-related services		•	•				
Employment-related services		•	•				
Identification of child's disability		•					
Services for child with disability		•					
Transportation assistance		•	•				
Pos	sitive Parenting Pra	actices					
Language and literacy development	•						
Provide children's books in the home	•						
Reading to child	•	•					
Engaging in teaching activities with child	•						
Parent's knowledge of childrearing practices and developmental processes		•					
Quality and quantity of stimulation and support available to a child in the home environment		•					
Supportiveness during parent-child semistructured play		•	•				
Reduc	ctions in Child Malt	reatment			· 		
Physical punishment					•		

Individual study details are provided below.

**Study 1.** Chazan-Cohen, R., Raikes, H. H., & Vogel, C. (2013). Program subgroups: Patterns of impacts for home-based, center-based, and mixed-approach programs. *Monographs of the Society for Research in Child Development, 78*(1), 93–109.

Program model:	Early Head Start–Home-Based Option (EHS)
Research design:	Randomized controlled trial
Target population:	Families enrolled in Early Head Start-Home Based Option
Study location:	Seventeen EHS programs throughout the United States, including seven programs with home-based of

## Exhibit 2. Summary of Study Details (Chazan-Cohen et al., 2013)

## Early Head Start-Home-Based Option (EHS)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	opment and Schoo	l Readiness		
Positive approaches to learning Follow-up at 5 years of age	Subscales from Family and Child Experiences Survey (FACES) assessed child social-emotional functioning, social skills, and positive approaches to learning	Not reported	Not reported	Not reported	Study reported = 0.18
Social-behavioral problems Follow-up at 5 years of age	Subscales from FACES assessed child social- emotional functioning, social skills, and positive approaches to learning	Not reported	Not reported	Not reported	Study reported = -0.13

options

	Family Economic Self-Sufficiency						
Parent income (dollars) Follow-up at 5 years of age	Parents provided monthly income	Not reported	Not reported	Not reported	Study reported = 0.16		
Pollow-up at 5 years of age					0.10		
	Posit	ive Parenting Prac	tices				
The Home Observation for Measurement of the Environment (HOME) language and literacy Follow-up at 5 years of age	The HOME scale is a 45- item measure that assesses parenting practices and the child's home environment, including physical structure, play materials, and amount of stimulation.	Not reported	Not reported	Not reported	Study reported = 0.16		
26 or more children's books Follow-up at 5 years of age	Percentage of parents who provided 26 or more children's books in the home	Not reported	Not reported	Not reported	Study reported = 0.14		
Percentage reading daily Follow-up at 5 years of age	Percentage of parents who read to their child daily	Not reported	Not reported	Not reported	Study reported = 0.15		
Teaching activities Follow-up at 5 years of age	Percentage of parents who engaged in eight or more teaching activities with their child	Not reported	Not reported	Not reported	Study reported = 0.15		

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Love, J., Kisker, E., Ross, C., Schochet, P., Brooks-Gunn, J., Boller, K., Paulsell, D., Fuligni, A. S., & Berlin, L. J., (2001). *Building their futures: How Early Head Start programs are enhancing the lives of infants and toddlers in low-income families. Summary report.* Report to Commissioner's Office of Research and Evaluation, Head Start Bureau, Administration on Children, Youth and Families, and Department of Health and Human Services. Mathematica Policy Research.

Program model:	Early Head Start–Home-Based Option (EHS)
Research design:	Randomized controlled trial
Target population:	Families enrolled in Early Head Start–Home-Based Option
Study location:	Seventeen EHS programs throughout the United States, including seven

## Exhibit 3. Summary of Study Details (Love et al., 2001)

#### Early Head Start–Home-Based Option (EHS)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Fan	nily Economic Self-Su	fficiency		
Average hours per week in education or training Follow-up at 7 to 16 months after assignment	The average hours per week program participants spent in school or job/vocational training	Adjusted mean = 4.90	Adjusted mean = 3.70	1.20	Study reported = -0.16
Ever in English as a Second Language (ESL) class Follow-up at 7 to 16 months after assignment	Percentage of parents who had ever enrolled in ESL classes during their time in EHS	% = 2.30	% = 0.70	1.60	Study reported = -0.15

programs with home-based options

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Ever in education or training Follow-up at 7 to 16 months after assignment	Percentage of parents who had ever participated in an education or job training program during their time in EHS	% = 45.50	% = 39.60	6.30	Study reported = -0.12
Ever in high school Follow-up at 7 to 16 months after assignment	Percentage of parents who had ever enrolled in high school during their time in EHS	% = 11.50	% = 6.20	5.30	Study reported = -0.18
Ever in vocational program Follow-up at 7 to 16 months after assignment	Percentage of parents who had ever enrolled in a vocational training program during their time in EHS	% = 12.70	% = 8.50	-6.80	Study reported = -0.15
In education or training: fourth quarter Follow-up at 7 to 16 months after assignment	Percentage of parents who were participating in an education or job training program in the fourth quarter after enrolling in EHS	% = 28.20	% = 22.60	5.60	Study reported = -0.13
In education or training: fifth quarter Follow-up at 7 to 16 months after assignment	Percentage of parents who were participating in an education or job training program in the fifth quarter after enrolling in EHS	% = 30.50	% = 23.60	6.90	Study reported = -0.16

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Linkages and Referr	als		
Any education-related services Follow-up at 7 to 16 months after assignment	Indicates whether the family reported receiving any education-related services from the EHS program	% = 83.40	% = 45.20	38.20	Study reported = 1.09
Any employment-related services Follow-up at 7 to 16 months after assignment	Indicates whether the family reported receiving help finding a job from the EHS program	% = 71.60	% = 32.90	39.00	Study reported = 1.00
Identification of child's disability Follow-up at 7 to 16 months after assignment	Indicates whether the family reported that a child's disability was identified	% = 5.10	% = 2.50	2.60	Study reported = 0.45
Services for child with disability Follow-up at 7 to 16 months after assignment	Indicates whether the family reported receiving services for a child with a disability	% = 3.80	% = 1.70	2.10	Study reported = 0.50
Transportation assistance Follow-up at 7 to 16 months after assignment	Indicates whether the family reported receiving transportation assistance from the EHS program	% = 29.80	% = 20.70	9.10	Study reported = 0.29

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	F	Positive Parenting Pra	ctices		
HOME total score Follow-up at 2 years of age	HOME assesses parenting practices and aspects of the home environment.	Adjusted mean = 26.90	Adjusted mean = 26.40	0.50	Study reported = 0.13
The Knowledge of Infant Development Inventory (KIDI) Follow-up at 2 years of age	KIDI measures the parent's knowledge of childrearing practices and developmental processes.	Adjusted mean = 3.40	Adjusted mean = 3.30	0.10	Study reported = 0.17
Percentage of parents who read to child as part of the bedtime routine Follow-up at 2 years of age	Percentage of parents who read to child as part of the regular bedtime routine and followed this routine 4 out of 5 weekdays in previous week	% = 26.00	% = 19.50	6.50	Study reported = 0.16

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Love, J., Kisker, E., Ross, C. M., Schochet, P. Z., Brooks-Gunn, J., Paulsell, D., Boller, K., Constantine, J., Vogel, C., Fuligni, A. S., & Brady-Smith, C. (2002). *Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start. Volumes I-III: Final technical report [and] appendixes [and] local contributions to understanding the programs and their impacts.* Mathematica Policy Research.

Program model:	Early Head Start–Home-Based Option (EHS)
Research design:	Randomized controlled trial
Target population:	Families enrolled in Early Head Start–Home-Based Option
Study location:	Seventeen EHS programs throughout the United States, including seven programs with home-based options

## Exhibit 4. Summary of Study Details (Love et al., 2002)

#### Early Head Start–Home-Based Option (EHS)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child De	velopment and Scho	ol Readiness		
Engagement of parent during parent- child semistructed play Follow-up at 3 years of age	The child's behavior during a play task was coded. Child engagement with parent was measured as to the extent to which the child interacted with the parent and communicated positive feelings	Adjusted mean = 4.80	Adjusted mean = 4.60	0.20	Study reported = 19.20

	Fa	mily Economic Self-Sı	ufficiency		
Average hours per week in education or training Follow-up at 28 months after assignment	The average hours per week program participants spend in school or job/vocational training	Adjusted mean = 4.50	Adjusted mean = 3.00	1.50	Study reported = -0.24
Employment, education, or training Follow-up at 28 months after assignment	Percentage of parents who participated in school, job/vocational training, or employment activities in the first, second, third, fourth, fifth, sixth, seventh, and eighth quarters after enrolling in EHS	% = 72.90	% = 66.40	6.50	Study reported = -0.14
Ever in education or training Follow-up at 28 months after assignment	Percentage of parents who had ever participated in an education or job training program during their time in EHS	% = 53.10	% = 45.50	7.60	Study reported = -0.15
In education or training: fifth quarter Follow-up at 28 months after assignment	Percentage of parents who were participating in an education or job training program in the fifth quarter after enrolling in EHS	% = 28.60	% = 22.90	5.70	Study reported = -0.13

	Fa	mily Economic Self-S	ufficiency			
In education or training: sixth quarter Follow-up at 28 months after assignment	Percentage of parents who were participating in an education or job training program in the sixth quarter after enrolling in EHS	% = 28.70	% = 21.30	7.40	Study reported = -0.18	
In education or training: seventh quarter Follow-up at 28 months after assignment	Percentage of parents who were participating in an education or job training program in the seventh quarter after enrolling in EHS	% = 23.10	% = 17.60	5.50	Study reported = -0.14	
In education or training: eighth quarter Follow-up at 28 months after assignment	Percentage of parents who were participating in an education or job training program in the eighth quarter after enrolling in EHS	% = 24.30	% = 15.60	8.70	Study reported = -0.22	
Ever in high school Follow-up at 28 months after assignment	Percentage of parents who had ever enrolled in high school during their time in EHS	% = 12.60	% = 6.80	5.80	Study reported = -0.20	
Linkages and Referrals						
Any education-related services Follow-up at 28 months after assignment	Indicates whether the family reported receiving any education-related services from the EHS program	% = 86.90	% = 50.80	36.10	HomVEE calculated = 1.13	

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	Fa	mily Economic Self-S	ufficiency		
Any employment- related services Follow-up at 28 months after assignment	Indicates whether the family reported receiving help finding a job from the EHS program	% = 77.30	% = 47.10	30.20	HomVEE calculated = 0.81
Transportation assistance Follow-up at 28 months after assignment	Indicates whether the family reported receiving transportation assistance from the EHS program	% = 32.00	% = 23.90	8.10	HomVEE calculated = 0.24
		Positive Parenting Pr	actices		
Supportiveness during parent-child semistructured play Follow-up at 3 years of age	The parent and child were given three bags of toys and asked to play with the toys in sequence, and child and parent behaviors were coded. The assessment was adapted from the Three Box coding scales used in the National Institute of Child Health and Development Study of Early Child Care. Aspects of the parent's behavior with the child were rated on a 7-point scale.	Adjusted mean = 4.00	Adjusted mean = 3.90	0.10	Study reported = 0.16

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

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**Study 4.** Roggman, L., Boyce, L. K., & Cook, G. (2009). Keeping kids on track: Impacts of a parenting-focused Early Head Start program on attachment security and cognitive development. *Early Education & Development, 20*(6), 920–941.

Program model:	Early Head Start–Home-Based Option (EHS)
Research design:	Randomized controlled trial
Target population:	Families that participated in Bear River Early Head Start–Home-Based Option
Study location:	Northern Utah and Southern Idaho

## Exhibit 5. Summary of Study Details (Roggman et al., 2009)

#### Early Head Start–Home-Based Option (EHS)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Child Development and School Readiness								
Bayley Scales of Infant Development (BSID), Mental Development Index Follow-up at 36 months after assignment	The Mental Development Index of the Bayley Scales of Infant Development assesses cognitive function of young children.	Not reported	Not reported	β = 0.19	Not available				
Attachment security Follow-up at 18 months after assignment	The Attachment Q-Sort scale assesses security of attachment and dependency in young children.	Not reported	Not reported	β = 0.17	Not available				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the ≤0.05 level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

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Study 5. Roggman, L. A., & Cook, G. A. (2010). Attachment, aggression, and family risk in a low-income sample. *Family Science*, 1(3), 191–204. doi:10.1080/19424620.2010.567829

Program model:	Early Head Start–Home-Based Option (EHS)
Research design:	Randomized controlled trial
Target population:	Mothers and children in one Early Head Start–Home-Based Option program
Study location:	Not provided on HomVEE

## Exhibit 6. Summary of Study Details (Roggman et al., 2010)

Early Head Start–Home-Based Option (EHS)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Reductions	in Child Maltreatm	nent		
Physical punishment	Whether the child had been spanked in the past week, and	Not reported	Not reported	coeff = -0.22	Not available
Follow-up at 36 months after assignment	if so, how many times				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Family Check-Up for Children

Eleven studies with a moderate or high HomVEE rating were reviewed for Family Check-Up for Children. The studies achieved favorable results in the following three domains: child development and school readiness, maternal health, and positive parenting practices (see Exhibit 1).

#### Exhibit 1. Family Check-Up for Children: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Brenna n et al., 2013)	(Chang et al., 2015)	(Chang et al., 2016)	(Dishion et al., 2008)	(Dishion et al., 2015)	(Gardner et al., 2009)	(Hyde et al., 2013)	(Lunken heimer et al., 2008)	(Shaw et al., 2006)	(Shaw et al., 2009)	(Sitnick et al., 2015)
			С	hild Develo	oment and S	School Reac	liness				
Externalizing behaviors						•				•	
Internalizing behaviors										•	
Degree to which a behavior is a problem for caregivers						•				•	
Maternal Health											
Maternal depression										•	

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

Outcome	(Brenna n et al., 2013)	(Chang et al., 2015)	(Chang et al., 2016)	(Dishion et al., 2008)	(Dishion et al., 2015)	(Gardner et al., 2009)	(Hyde et al., 2013)	(Lunken heimer et al., 2008)	(Shaw et al., 2006)	(Shaw et al., 2009)	(Sitnick et al., 2015)
				Positiv	ve Parenting	g Practices					
Caregiver supporting child's positive behaviors	•			•			•	•			
Parent's behavior to anticipate problems or prevent children from becoming upset		•									
Positive engagement between parent and child			•		•						•
Parent involvement (parent keeps child in visual range, parent talks to child while doing housework, and parent structures child's play)									•		

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

Individual study details are provided below.

**Study 1.** Brennan, L. M., Shelleby, E. C., Shaw, D. S., Gardner, F., Dishion, T. J., & Wilson, M. (2013). Indirect effects of the Family Check-Up on school-age academic achievement through improvements in parenting in early childhood. *Journal of Educational Psychology, 105*(3), 762–773.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Young mothers aged 14–19
Study location:	San Bernardino County, CA

## Exhibit 2. Summary of Study Details (Brennan et al., 2013)

## Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Measure Program mean Comparison mean		Mean difference	Effect size <sup>2</sup>
	Po	sitive Parenting Pra	ctices		
Positive behavior support	A construct reflecting how well the caregiver supported the child's positive behaviors; combines scores on four measures (parent	Not reported	Not reported	Not reported	Study reported = 0.33
Follow-up at 3 years of age	involvement, positive reinforcement, engaged parent-child interaction time, proactive parenting)				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the ≤0.05 level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

**Study 2.** Chang, H., Shaw, D. S., Dishion, T. J., Gardner, F., & Wilson, M. N. (2015). Proactive parenting and children's effortful control: Mediating role of language and indirect intervention effects. *Social Development*, *24*(1), 206–223.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

#### Exhibit 3. Summary of Study Details (Chang et al., 2015)

#### Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Pos	itive Parenting Pra	ctices		
Proactive parenting	An average score of six items measuring a parent's behavior	Not reported	Not reported	Not reported	Not available
Follow-up at 3 years of age	to anticipate problems or prevent children from becoming upset; uses the Coder Impressions Inventory to score videotaped interactions between the caregiver and child				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

**Study 3.** Chang, H., Shaw, D. S., Shelleby, E. C., Dishion, T. J., & Wilson, M. N. (2016). The long-term effectiveness of the Family Check-Up on peer preference: Parent-child interaction and child effortful control as sequential mediators. *Journal of Abnormal Child Psychology*. Advance online publication.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

## Exhibit 4. Summary of Study Details (Chang et al., 2016)

#### Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Positive Parenting Practices					
Positive engagement	A summary score describing duration of	Not reported	Not reported	Not reported	Not available
Follow-up at 3 to 5 years of age	positive and neutral engagement between parent and child				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

Planning for a Pay for Outcomes Approach in Home Visiting - Module 1 Study Profiles

**Study 4.** Dishion, T. J., Shaw, D., Connell, A., Gardner, F., Weaver, C., & Wilson, M. (2008). The Family Check-Up with high-risk indigent families: Preventing problem behavior by increasing parents' positive behavior support in early childhood. *Child Development*, *79*(5), 1395–1414.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

## Exhibit 5. Summary of Study Details (Dishion et al., 2008)

## Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Posi	tive Parenting Pract	ices		
Positive behavior support Follow-up at 3 years of age	A construct reflecting how well the caregiver supported the child's positive behaviors; combines scores on four measures (parent involvement, positive reinforcement, engaged parent-	Not reported	Not reported	Not reported	Study reported = 0.33
	child interaction time, proactive parenting)				

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Positive parenting, structural equation model (SEM), Figure 5 Follow-up at 3 years of age	A combination of four measures (parent involvement, caregiver prompting and reinforcing positive behavior, engaged parent-child interactions, proactive parenting) of how well the caregiver supported the child's positive behaviors	Not reported	Not reported	Not reported	Not available
Positive Parenting, SEM, Figure 6 Follow-up at 3 years of age	A combination of four measures (parent involvement, caregiver prompting and reinforcing positive behavior, engaged parent-child interactions, proactive parenting) of how well the caregiver supported the child's positive behaviors	Not reported	Not reported	Not reported	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 5.** Dishion, T. J., Mun, C. J., Drake, E. C., Tein, J. Y., Shaw, D. S., & Wilson, M. (2015). A transactional approach to preventing early childhood neglect: The Family Check-Up as a public health strategy [Special issue 4, pt. 2]. *Development and Psychopathology, 27*, 1647–1660.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

## Exhibit 6. Summary of Study Details (Dishion et al., 2015)

#### Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Ро	sitive Parenting P	ractices		
Dyadic positive engagement	Proportion of time parents and children engage in mutually positive engagement	Not reported	Not Reported	Not Reported	Not available
Follow-up at 3 years of age	(positive or neutral behaviors), measured using the Relationship Affect Coding System				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as .2 = small effect, .5 = medium effect, .8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

Planning for a Pay for Outcomes Approach in Home Visiting - Module 1 Study Profiles

**Study 6.** Gardner, F., Connell, A., Trentacosta, C. J., Shaw, D. S., Dishion, T. J., & Wilson, M. N. (2009). Moderators of outcome in a brief family-centered intervention for preventing early problem behavior. *Journal of Consulting and Clinical Psychology*, 77(3), 543–553.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

#### Exhibit 7. Summary of Study Details (Gardner et al., 2009)

#### Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	opment and School	Readiness		
Child Behavior Checklist (CBCL) Externalizing, mean and standard deviations Follow-up at 4 years of age	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Unadjusted mean = 52.68	Unadjusted mean = 54.67	-1.99	HomVEE calculated = -0.19
CBCL Externalizin (Latent growth model) Follow-up at 3 and 4 years of age	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Not reported	Not reported	Not reported	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Eyeberg Child Behavior Inventory Problem Score, mean and SD Follow-up at 4 years of age	The Eyeberg Child Behavior Inventory is a 36- item behavior checklist that assesses 2 factors: (1) the perceived intensity and (2) the degree a behavior is a problem for caregivers.	Unadjusted mean = 58.64	Unadjusted mean = 60.63	-1.99	HomVEE calculated = -0.18
Eyeberg Child Behavior Inventory Problem Score, latent growth model Follow-up at 3 and 4 years of age	The Eyeberg Child Behavior Inventory is a 36- item behavior checklist that assesses 2 factors: (1) the perceived intensity and (2) the degree a behavior is a problem for caregivers.	Not reported	Not reported	Not reported	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 7.** Hyde, L. W., Shaw, D. S., Gardner, F., Cheong, J., Dishion, T. J., & Wilson, M. (2013). Dimensions of callousness in early childhood: Links to problem behavior and family intervention effectiveness. *Development and Psychopathology, 25*(2), 347–363.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

# Exhibit 8. Summary of Study Details (Hyde et al., 2013)

Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Positi	ive Parenting Pract	ices		
Positive behavior support Follow-up at 3 years of age	A construct reflecting how well the caregiver supported the child's positive behaviors; combines scores on four measures (parent involvement, positive reinforcement, engaged parent-child interaction time, proactive parenting)	Not reported	Not reported	Not reported	Not available

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the ≤0.05 level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 8.** Lunkenheimer, E. S., Dishion, T. J., Shaw, D. S., Connell, A. M., Gardner, F., Wilson, M. N., & Skuban, E. M. (2008). Collateral benefits of the Family Check-Up on early childhood school readiness: Indirect effects of parents' positive behavior support. *Developmental Psychology*, *44*(6), 1737–1752.

*Program model:* Family Check-Up for Children

*Research design*: Randomized controlled trial

Target population:Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and<br/>Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they<br/>met the study's criteria for being at risk for behavior problems.

*Study location:* Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

## Exhibit 9. Summary of Study Details (Lunkenheimer et al., 2008)

Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Positive Parenting Practices				
Positive behavior support Follow-up at 3 years of age	A construct reflecting how well the caregiver supported the child's positive behaviors; combines scores on four measures (parent involvement, positive reinforcement, engaged parent-child interaction time, proactive parenting).	Not reported	Not reported	Not reported	Study reported = 0.24

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 9.** Shaw, D. S., Dishion, T. J., Supplee, L., Gardner, F., & Arnds, K. (2006). Randomized trial of a family-centered approach to the prevention of early conduct problems: 2-year effects of the Family Check-Up in early childhood. *Journal of Consulting and Clinical Psychology*, *74*(1), 1–9.

- *Program model:* Family Check-Up for Children
- Research design: Randomized controlled trial
- *Target population:* Mothers who participated in the Women, Infants and Children program and had sons between 17 and 27 months of age at the time of recruitment in 2001. Families also must have demonstrated at least two of three possible risk factors: (1) socioeconomic status; (2) family risk factors (maternal depression or substance abuse); and (3) child risk factors or conduct problems.

*Study location:* Eight sites of the WIC program in the Pittsburgh, PA, area

## Exhibit 10. Summary of Study Details (Shaw et al., 2006)

Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Positiv	ve Parenting Pract	ices		
Home Observation for Measurement of the Environment (HOME) Involvement	The HOME assesses parenting practices and aspects of the home environment. Three items were drawn from the HOME, Involvement scale: (1) parent	2.00	1.72	0.82	HomVEE calculated = 30.27
Follow-up at 3 and 4 years of age	keeps child in visual range; (2) parent talks to child while doing housework; and (3) parent structures child's play.				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 10.** Shaw, D. S., Connell, A., Dishion, T. J., Wilson, M. N., & Gardner, F. (2009). Improvements in maternal depression as a mediator of intervention effects on early childhood problem behavior. *Development and Psychopathology, 21*, 417–439.

Program model:	Family Check-Up for Children
Research design:	Randomized controlled trial
Target population:	Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they met the study's criteria for being at risk for behavior problems.
Study location:	Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

# Exhibit 11. Summary of Study Details (Shaw et al., 2009)

Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Child Development and School Readiness						
Child Behavior Checklist (CBCL) Externalizing Follow-up at 4 years of age	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Not reported	Not reported	Not reported	Not available	
CBCL Internalizing Follow-up at 4 years of age	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Not reported	Not reported	Not reported	Not available	
Eyeberg Child Behavior Inventory Problem Score Follow-up at 4 years of age	The Eyeberg Child Behavior Inventory is a 36-item behavior checklist that assesses 2 factors: (1) the perceived intensity and (2) the degree a behavior is a problem for caregivers.	Not reported	Not reported	Not reported	Not available	
Growth in CBCL Externalizing from 2 to 4 years of age, latent growth model Follow-up at 3 and 4 years of age	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Not reported	Not reported	Not reported	Study reported = 0.23	

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Growth in CBCL Internalizing from 2 to 4 years of age, latent growth model Follow-up at 3 and 4 years of	The CBCL for 1.5 to 5 years of age is a 99-item assessment of behavioral problems in young children.	Not reported	Not reported	Not reported	Study reported = 0.21
age Growth in Eyeberg Child Behavior Inventory Problem Score from 2 to 4 years of age, latent growth model Follow-up at 3 and 4 years of age	The Eyeberg Child Behavior Inventory is a 36-item behavior checklist that assesses 2 factors: (1) the perceived intensity and (2) the degree a behavior is a problem for caregivers.	Not reported	Not reported	Not reported	Study reported = 0.23
	Mate	ernal Health			
Maternal Depression (SEM, Figure 2 in the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available
Maternal Depression (SEM, Figure 3 in the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available
Maternal Depression (SEM, Figure 4 I the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Maternal Depression (SEM, Figure 5 in the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available
Maternal Depression (SEM, Figure 6 in the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available
Maternal Depression (SEM, Figure 7 in the article) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Not available
Maternal Depression (Autoregressive model) Follow-up at 3 years of age	The Center for Epidemiological Studies–Depression Scale is a 20- item assessment of depressive symptoms.	Not reported	Not reported	Not reported	Study reported = 0.18
	Positive Pa	arenting Practices			
Positive Parenting (SEM, Figure 5 in the article) Follow-up at 3 years of age	A combination of four measures (parent involvement, caregiver prompting and reinforcing positive behavior, engaged parent-child interactions, proactive parenting) of how well the caregiver supported the child's positive behaviors	Not reported	Not reported	Not Reported	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Positive Parenting, (SEM, Figure 6 in the article) Follow-up at 3 years of age	A combination of four measures (parent involvement, caregiver prompting and reinforcing positive behavior, engaged parent-child interactions, proactive parenting) of how well the caregiver supported the child's positive behaviors	Not reported	Not reported	Not reported	Not available
Positive Parenting (SEM, Figure 7 in the article) Follow-up at 3 years of age	A combination of four measures (parent involvement, caregiver prompting and reinforcing positive behavior, engaged parent-child interactions, proactive parenting) of how well the caregiver supported the child's positive behaviors	Not reported	Not reported	Not reported	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 11.** Sitnick, S. L., Shaw, D. S., Gill, A., Dishion, T., Winter, C., Waller, R., Gardner, F., & Wilson, M. (2015). Parenting and the Family Check-Up: Changes in observed parent-child interaction following early childhood intervention. *Journal of Clinical Child & Adolescent Psychology, 44*(6), 970–984.

*Program model:* Family Check-Up for Children

*Research design*: Randomized controlled trial

Target population:Families that met two criteria: First, they participated in the Supplemental Nutrition Program for Women, Infants, and<br/>Children when their son or daughter was between 2 years 0 months old and 2 years 11 months old. Second, they<br/>met the study's criteria for being at risk for behavior problems.

Study location: Pittsburgh, PA; Eugene, OR; and Charlottesville, VA

## Exhibit 12. Summary of Study Details (Sitnick et al., 2015)

## Family Check-Up for Children

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Pc	sitive Parenting P	ractices		
Positive Engagement (SEM) Follow-up at 3 years of age	A summary score describing duration of positive and neutral engagement between parent and child	Not reported	Not reported	Not reported	Not available
Positive Engagement, (Correlation) Follow-up at 3 years of age	A summary score describing duration of positive and neutral engagement between parent and child	Not reported	Not reported	Not reported	Not available
Positive Engagement, ( <i>t</i> -test) Follow-up at 3 years of age	A summary score describing duration of positive and neutral engagement between parent and child	0.37	0.34	0.03	HomVEE calculated = -0.24

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Positive Engagement, (Correlation) Follow-up at 5 years of age	A summary score describing duration of positive and neutral engagement between parent and child	Not reported	Not reported	Not reported	Not available
Positive Engagement, ( <i>t</i> - test) Follow-up at 5 years of age	A summary score describing duration of positive and neutral engagement between parent and child	0.38	0.36	0.02	HomVEE calculated = -0.17

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

# Family Connects

Two studies with a moderate HomVEE rating were reviewed for Family Connects. The studies achieved favorable results in the following four domains: child health, linkages and referrals, maternal health, and positive parenting practices (see Exhibit 1).

#### Exhibit 1. Family Connects: Overview of Statistically Significant Findings Across Studies

## Outcomes Favoring Home Visiting, by Domain

Outcome	(Dodge et al., 2013a) (Dodge et al., 2013b)			
	Child Health			
Number of overnight stays in hospital	•	•		
Emergency medical care episodes	•			
Linkages and Referrals				
Number of community connections		•		
	Maternal Health			
Possible anxiety disorder		•		
Positive Parenting Practices				
Positive parenting behaviors		•		

Individual study details are provided below.

**Study 1.** Dodge, K. A., Goodman, W. B., Murphy, R. A., O'Donnell, K., & Sato, J. (2013). Randomized controlled trial of universal postnatal nurse home visiting: Impact on emergency care. *Pediatrics, 132*(S2), S140–S146.

Program model:	Family Connects
Research design:	Randomized controlled trial
Target population:	Among 4,777 residential births from July 1, 2009, through December 31, 2010, the authors randomly selected 1 family with a birth on each even day to receive Durham Connects and 1 family with a birth on each odd day to be followed as the control group.

Study location: Durham, NC

## Exhibit 2. Summary of Study Details (Dodge et al., 2013a)

#### Family Connects

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Health								
Number of overnights in hospital	Number of Emergency Department (ED) visits since initial hospital	Unadjusted mean = 0.11	Unadjusted mean = 0.74	-0.63	Study reported = 0.27			
Secondary data review of hospital records from birth to 12 months of age	discharge							

Number of total emergency medical care episodes Secondary data review of hospital records from 6 to 12 months of age	Number of ED visits since initial hospital discharge	Unadjusted mean = 0.36	Unadjusted mean = 0.52	-0.16	Study reported = 0.14
Number of total emergency medical care episodes Secondary data review of hospital records from birth to 12 months of age	Number of hospital overnights, excluding overnights for birth- related medical care	Unadjusted mean = 0.78	Unadjusted mean = 1.57	-0.79	Study reported = 0.28

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Dodge, K. A., Goodman, W. B., Murphy, R. A., O'Donnell, K., Sato, J., & Guptill, S. (2013b). Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting. *American Journal of Public Health*. Advance online publication.

- Program model: Family Connects
- Research design: Randomized controlled trial
- *Target population:* Among 4,777 residential births from July 1, 2009, through December 31, 2010, the authors randomly selected 1 family with a birth on each even day to receive Durham Connects and 1 family with a birth on each odd day to be followed as the control group.

Study location: Durham, NC
# Exhibit 3. Summary of Study Details (Dodge et al., 2013b)

# Family Connects

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Number of overnights in hospital (parent report) Follow-up at 6 months of age	Infant's number of overnights in any hospital for non-birth related medical care in the past 3 months	Unadjusted mean = 0.08	Unadjusted mean = 0.40	1.60	Study reported = 0.20
Number of total emergency medical care episodes (hospital records) Follow-up at 6 months of age	Average number of emergency medical care episodes (emergency department visits plus hospital overnights) per family by 6 months of age	Unadjusted mean = 0.43	Unadjusted mean = 1.05	0.91	Study reported = 0.26
Number of total emergency medical care episodes (parent report) Follow-up at 6 months of age	Average number of emergency medical care episodes (emergency pediatric visits plus emergency department visits plus hospital overnights) per family by 6 months of age	Unadjusted mean = 0.89	Unadjusted mean = 1.37	0.40	Study reported = 0.21

Three or more emergency medical care episodes (hospital records), proportion Follow-up at 6 months of age	Proportion of families with 3 or more emergency medical care episodes (emergency department visits plus hospital overnights) by 6 months of age	Unadjusted proportion = 0.03	Unadjusted proportion = 0.09	-0.05	HomVEE calculated = -0.65
Three or more emergency medical care episodes (parent report), proportion Follow-up at 6 months of age	Proportion of families with 3 or more emergency medical care episodes (emergency pediatric visits plus emergency department visits plus hospital overnights) by 6 months of age	Unadjusted proportion = 0.09	Unadjusted proportion = 0.13	-0.04	HomVEE calculated = -0.26
Two or more emergency medical care episodes (hospital records), proportion Follow-up at 6 months of age	Proportion of families with 2 or more emergency medical care episodes (emergency department visits plus hospital overnights) by 6 months of age	Unadjusted proportion = 0.10	Unadjusted proportion = 0.15	-0.06	HomVEE calculated = -0.31

	Linkages and Referrals							
Number of community connections Follow-up at 6 months of age	Community resources used in the past 3 months, including professional, paraprofessional, and informal resources	Unadjusted mean = 5.02	Unadjusted mean = 4.31	0.86	0.28			
		Maternal Health						
Mother with possible anxiety disorder Follow-up at 6 months of age	7-item brief Generalized Anxiety Disorder 7- Questionnare, indicating possible clinical anxiety (cut point = 5)	Unadjusted proportion = 0.21	Unadjusted proportion = 0.30	OR = 0.65	HomVEE calculated = -0.27			
Positive Parenting Practices								
Mother with positive parenting behaviors Follow-up at 6 months of age	Positive parenting behaviors (seven items; e.g., "comforted infant")	Unadjusted mean = 4.12	Unadjusted mean = 4.01	0.10	Study reported = 0.25			

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

# Family Spirit

Three studies with a moderate or high HomVEE rating were reviewed for Family Spirit. The studies achieved favorable results in the following three domains: child development and school readiness, maternal health, and positive parenting practices (see Exhibit 1).

#### Exhibit 1. Family Spirit: Overview of Statistically Significant Findings Across Studies

#### Outcomes Favoring Home Visiting, by Domain

Outcome	(Barlow et al., 2013)	(Barlow et al., 2015)	(Walkup et al., 2009)			
(	Child Development and Sc	hool Readiness				
Externalizing behaviors	•	•	•			
Internalizing behaviors		•	•			
Dysregulation		•				
Maternal Health						
Externalizing behaviors	•	•				
Depressive symptoms		•				
Substance use		•				
	Positive Parenting F	Practices				
Parental self-efficacy	•					
Home safety attitudes	•					
Parenting knowledge	•	•	•			
Parenting locus of control		•				

Individual study details are provided below.

**Study 1.** Barlow, A., Mullany, B., Neault, N., Compton, S., Carter, A., Hastings, R., Billy, T., CohoMescal, V., Lorenzo, S., & Walkup, J. T. (2013). Effect of a paraprofessional home-visiting intervention on American Indian teen mothers' and infants' behavioral risks: A randomized controlled trial. *The American Journal of Psychiatry*, *170*(1), 83–93.

Program model:	Family Spirit
Research design:	Randomized controlled trial
Target population:	American Indian adolescent females aged 12–19 years at conception and at 32 weeks or earlier gestation who resided in 1 of 4 participating communities were recruited.
Study location:	Four tribal communities across three reservations in Arizona

#### Exhibit 2. Summary of Study Details (Barlow et al., 2013)

#### Family Spirit

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Development and School Readiness							
Infant-Toddler Social & Emotional Assessment (ITSEA) – Externalizing domain	Subscale from 126- item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.62	Adjusted mean = 0.71	-0.09	Study reported = -0.19			
Follow-up at 12 months postpartum								

Maternal Health						
Achenbach System of Empirically Based Assessment (ASEBA) – Externalizing domain Follow-up at 12 months postpartum	ASEBA is a 112-item assessment of externalizing, internalizing, and total problems that produces results in relation to multicultural norms.	Adjusted mean = 38.20	Adjusted mean = 40.70	-2.50	Study reported = -0.20	
		Positive Parenting Pra	actices			
Parental Locus of Control (PLOC) Parental self- efficacy Follow-up at 12 months postpartum	Self-efficacy subscale from PLOC assessment	Adjusted mean = 23.21	Adjusted mean = 24.71	-1.51	Study reported = -0.23	
Home safety attitudes Follow-up at 12 months postpartum	8-item assessment of attitudes toward home safety for children	Adjusted mean = 29.54	Adjusted mean = 28.61	0.94	Study reported = 0.19	
Parenting knowledge Follow-up at 12 months postpartum	30-item assessment created by the investigator team to measure knowledge gains	Adjusted mean = 15.43	Adjusted mean = 14.08	1.35	Study reported = 0.33	

<sup>2</sup>Effect size is generally interpreted as, 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

**Study 2.** Barlow, A., Mullany, B., Neault, N., Goklish, N., Billy, T., Hastings, R., Lorenzo, S., Kee, C., Lake, K., Redmond, C., Carter, A., & Walkup, J. T. (2015). Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children: 3-year outcomes from a randomized controlled trial. *American Journal of Psychiatry*, *172*(2), 154–162.

Program model:	Family Spirit
Research design:	Randomized controlled trial
Target population:	Expectant women who were at less than or equal to 32 weeks gestation, aged 12–19 at conception, self-identified as American-Indian, and residing in 1 of the 4 participating reservation communities
Study location:	Four Southwestern reservation communities

#### Exhibit 3. Summary of Study Details (Barlow et al., 2015)

#### Family Spirit

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child De	evelopment and Sch	ool Readiness		
ITSEA – Externalizing domain (proportion clinically at risk; >10%) Follow-up at 3 years postpartum	Proportion clinically at risk on subscale from 126-item normed assessment of child behaviors, ITSEA	Unadjusted mean = 0.17	Unadjusted mean = 0.24	-0.07	HomVEE calculated = -0.24
ITSEA – Internalizing domain (proportion clinically at risk; >10%) Follow-up at 3 years postpartum	Proportion clinically at risk on subscale from 126-item normed assessment of child behaviors, ITSEA	Unadjusted mean = 0.10	Unadjusted mean = 0.15	-0.05	HomVEE calculated = -0.27

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
ITSEA mean – Dysregulation domain (range 0–2) Follow-up at 3 years postpartum	Subscale from 126-item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.48	Adjusted mean = 0.55	-0.07	Study reported = 0.27
ITSEA mean, Externalizing domain (range 0–2) Follow-up at 3 years postpartum	Subscale from 126-item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.64	Adjusted mean = 0.71	-0.07	Study reported = 0.23
ITSEA mean, Internalizing domain (range 0–2) Follow-up at 3 years postpartum	Subscale from 126-item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.54	Adjusted mean = 0.60	-0.05	Study reported = 0.23
		Maternal Health	1		
ASEBA (T-score) – Externalizing domain Follow-up at 3 years postpartum	ASEBA is a 112-item assessment of externalizing, internalizing, and total problems that produces results in relation to multicultural norms.	Adjusted mean = 41.35	Adjusted mean = 42.58	-1.23	Study reported = 0.14

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Center for Epidemiological Studies Depression (CES- D) score (0–60) Follow-up at 3 years postpartum	CES-D is a 20-item assessment of depressive symptoms.	Adjusted mean = 12.48	Adjusted mean = 13.65	-1.17	Study reported = 0.16	
Any illegal drug use in past 30 days Follow-up at 3 years postpartum (proportion)	Proportion with use as measured by Voices for Indian Teens, a culturally specific assessment that measures quantity and frequency of substance use	Unadjusted mean = 0.12	Unadjusted mean = 0.17	-0.05	HomVEE calculated = -0.24	
Marijuana use in past 30 days Follow-up at 3 years postpartum (proportion)	Proportion with use as measured by Voices for Indian Teens, a culturally specific assessment that measures quantity and frequency of substance use	Unadjusted mean = 0.11	Unadjusted mean = 0.16	-0.05	HomVEE calculated = -0.26	
Positive Parenting Practices						
Parenting knowledge (range 0–30) Follow-up at 3 years postpartum	30-item assessment created by the investigator team to measure knowledge gains	Adjusted mean = 15.94	Adjusted mean = 14.66	1.28	Study reported = 0.42	

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Parenting locus of control (range 27–135)	27-item assessment of parent self-efficacy, parent control, and	Adjusted mean = 64.34	Adjusted mean = 66.03	-1.69	Study reported = 0.17
Follow-up at 3 years postpartum	child control				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Walkup, J. T., Barlow, A., Mullany, B. C., Pan, W., Goklish, N., Hasting, R., Cowboy, B., Fields, P., Baker, E. V., Speakman, K., Ginsburg, G., & Reid, R. (2009). Randomized controlled trial of a paraprofessional-delivered in-home intervention for young reservation-based American Indian mothers. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*(6), 591–601.

Program model:	Family Spirit
Research design:	Randomized controlled trial
Target population:	Reservation-based American Indian mothers aged 12–22 years at 28 weeks or earlier of gestation were eligible to participate if they did not also have extreme medical, psychiatric, or substance abuse problems.
Study location:	Four American Indian health service catchment areas on the Navajo and White Mountain Apache reservations in New Mexico and Arizona

# Exhibit 4. Summary of Study Details (Walkup et al., 2009)

Family Spirit

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Child Development and School Readiness							
ITSEA –Externalizing domain Follow-up at 12 months postpartum	Subscale from 126- item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.39	Adjusted mean = 0.57	coeff = -0.17	HomVEE calculated = -0.63		
ITSEA Externalizing domain: Activity/impulsivity Follow-up at 12 months postpartum	Subscale from 126- item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.69	Adjusted mean = 0.98	coeff = -0.27	HomVEE calculated = -0.65		
ITSEA Externalizing domain: Peer aggression Follow-up at 12 months postpartum	Subscale from 126- item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.13	Adjusted mean = 0.30	coeff = -0.23	HomVEE calculated = -0.68		
ITSEA Internalizing domain: Separation distress Follow-up at 12 months postpartum	Subscale from 126- item normed assessment of child behaviors, ITSEA	Adjusted mean = 0.84	Adjusted mean = 1.02	coeff = -0.17	HomVEE calculated = -0.52		

Positive Parenting Practices						
Change in parenting knowledge Follow-up at 12 months postpartum	76-item assessment created by the investigator team to measure knowledge gains	Adjusted mean = 26.60	Adjusted mean = 15.20	coeff = 13.92	HomVEE calculated = 0.86	
Change in parenting knowledge Follow-up at 6 months postpartum	76-item assessment created by the investigator team to measure knowledge gains	Adjusted mean = 23.80	Adjusted mean = 12.80	coeff = 13.46	HomVEE calculated = 0.81	

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Health Access Nurturing Development Services (HANDS) Program

Four studies with a moderate HomVEE rating were reviewed for HANDS. The studies achieved favorable results in the following four domains: child health, family economic self-sufficiency, positive parenting practices, and reductions in child maltreatment (see Exhibit 1).

#### Exhibit 1. HANDS: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Williams et al., 2014a)	(Williams et al., 2014b)	(Williams et al., 2014c)	(Williams et al., 2014d)				
Child Health								
Infant deceased in hospital at birth	•							
Low birth weight	•		•					
Preterm birth	•	•						
Breastfeeding at birth			•					
	Family Econo	mic Self-Sufficiency						
Maternal receipt of Women, Infants, and Children (WIC)		•		•				
	Positive Pa	arenting Practices						
Adequate prenatal care		•		•				
Pregnancy-induced hypertension		•	•	•				

Planning for a Pay for Outcomes Approach in Home Visiting - Module 1 Study Profiles

Outcome	(Williams et al., 2014a)	(Williams et al., 2014b)	(Williams et al., 2014c)	(Williams et al., 2014d)
Maternal complications during delivery				•
Maternal weight gain during pregnancy				•
	Reductions in	n Child Maltreatment		
Substantiated reports of child maltreatment	•			

Individual study details are provided below.

**Study 1.** Williams, C. M., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2014a). *Child health improvement by HANDS home visiting program* [Unpublished manuscript]. Department of Obstetrics and Gynecology, University of Kentucky.

*Program model:* Health Access Nurturing Development Services (HANDS) Program

*Research design*: Quasi-experimental design

Target population:All study participants were first-time parents, had at least 2 risk factors, and were either pregnant or had a child<br/>aged 3 months or younger. Risk factors included unemployment, isolation, history of substance abuse, unstable<br/>housing, limited parental education, domestic violence, poor prenatal care, and maternal depression.

*Study location:* Kentucky (statewide)

### Exhibit 2. Summary of Study Details (Williams et al., 2014a)

Health Access Nurturing Development Services (HANDS) Program

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Infant deceased in hospital (proportion) Secondary data review of live birth records	Percentage of infants who were not living at the time the birth certificate was completed	Unadjusted mean = 0.00	Unadjusted mean = 0.02	OR = 0.06	HomVEE calculated = -1.70
Low birth weight (proportion) Secondary data review of live birth records	Percentage of children who were identified as low birth weight (<2,500 grams)	Unadjusted mean = 0.07	Unadjusted mean = 0.12	OR = 0.54	HomVEE calculated = -0.37
Preterm birth (proportion) Secondary data review of live birth records	Percentage of children who were delivered at less than 37 weeks gestation	Unadjusted mean = 0.11	Unadjusted mean = 0.14	OR = 0.74	HomVEE calculated = -0.18
	Reductio	ons in Child Maltre	atment		
Substantiated reports of child maltreatment (proportion) Secondary review of administrative data	Percentage of families who had a substantiated report for child maltreatment	Unadjusted mean = 0.06	Unadjusted mean = 0.11	OR = 0.53	HomVEE calculated = -0.38

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 2.** Williams, C. M., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2014b). *Maternal and child health improvement by HANDS home visiting program in the Bluegrass area development district* [Unpublished manuscript]. Department of Obstetrics and Gynecology, University of Kentucky.

Program model:	Health Access Nurturing Development Services (HANDS) Program
Research design:	Quasi-experimental design
Target population:	All study participants were first-time parents, had at least 2 risk factors, and were either pregnant or had a child aged 3 months or younger. Risk factors included unemployment, isolation, history of substance abuse, unstable housing, limited parental education, domestic violence, poor prenatal care, and maternal depression.
Study location:	Bluegrass Area Development District, KY

#### Exhibit 3. Summary of Study Details (Williams et al., 2014b)

#### Health Access Nurturing Development Services (HANDS) Program

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Preterm birth Secondary data review of live birth records	Percentage of children who were delivered at less than 37 weeks gestation	Unadjusted mean = 0.10	Unadjusted mean = 0.31	OR = 0.21	HomVEE calculated = -0.95
	Fan	nily Economic Self-S	Sufficiency		
Maternal receipt of Women, Infants, and Children (WIC) Secondary data review of live birth records	Percentage of women who received WIC for themselves during pregnancy	Unadjusted mean = 0.89	Unadjusted mean = 0.71	OR = 3.31	HomVEE calculated = 0.72

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Maternal Healt	th		
Adequate prenatal care Secondary data review of live birth records	Percentage of mothers who received adequate prenatal care during their pregnancy, as defined by the Kotelchuck Index	Unadjusted mean = 0.77	Unadjusted mean = 0.50	OR = 4.23	HomVEE calculated = 0.87
Pregnancy-induced hypertension Secondary data review of live birth records	Percentage of women who experienced pregnancy-induced hypertension	Unadjusted mean = 0.11	Unadjusted mean = 0.20	OR = 0.49	HomVEE calculated = -0.43

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Williams, C. M., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2014c). *Maternal and child health improvement by HANDS home visiting program in the KIPDA area development district, Kentucky* [Unpublished manuscript]. Department of Obstetrics and Gynecology, University of Kentucky.

Program model:	Health Access Nurturing Development Services (HANDS) Program
Research design:	Quasi-experimental design
Target population:	All study participants were first-time parents, had at least 2 risk factors, and were either pregnant or had a child aged 3 months or younger. Risk factors included unemployment, isolation, history of substance abuse, unstable housing, limited parental education, domestic violence, poor prenatal care, and maternal depression.
Study location:	Kentuckiana Regional Planning & Development Agency (KIPDA) Area Development District, KY

#### Exhibit 4. Summary of Study Details (Williams et al., 2014c)

#### Health Access Nurturing Development Services (HANDS) Program

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health	ו		
Breastfeeding Secondary data review of live birth records	Percentage of women who were breastfeeding when discharged from the hospital	Unadjusted mean = 0.70	Unadjusted mean = 0.54	OR = 2.16	HomVEE calculated = 0.47
Low birth weight Secondary data review of live birth records	Percentage of children who were identified as low birth weight (<2,500 grams)	Unadjusted mean = 0.07	Unadjusted mean = 0.15	OR = 0.44	HomVEE calculated = -0.50

Maternal Health						
Pregnancy-induced hypertension	Percentage of women who experienced pregnancy-induced	Unadjusted mean = 0.11	Unadjusted mean = 0.20	OR = 0.56	HomVEE calculated = -0.35	
Secondary data review of live birth records	hypertension					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 4.** Williams, C. M., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2014d). *Maternal health improvement by HANDS home visiting program* [Unpublished manuscript]. Department of Obstetrics and Gynecology, University of Kentucky.

Program model:	Health Access Nurturing Development Services (HANDS) Program
Research design:	Quasi-experimental design
Target population:	All study participants were first-time parents, had at least 2 risk factors, and were either pregnant or had a child aged 3 months or younger. Risk factors included unemployment, isolation, history of substance abuse, unstable housing, limited parental education, domestic violence, poor prenatal care, and maternal depression.
Study location:	Kentucky (statewide)

Exhibit 5. Summary of Study Details (Williams et al., 2014d)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
	Family	v Economic Self-Su	fficiency			
Maternal receipt of WIC (proportion) Secondary data review of live birth records	Percentage of women who received WIC for themselves during pregnancy	Unadjusted mean = 0.92	Unadjusted mean = 0.88	OR = 1.57	HomVEE calculated = 0.27	
	Maternal Health					
Adequate prenatal care (proportion) Secondary data review of live birth records	Percentage of mothers who received adequate prenatal care during their pregnancy, as defined by the Kotelchuck Index	Unadjusted mean = 0.74	Unadjusted mean = 0.71	OR = 1.14	HomVEE calculated = 0.08	

Health Access Nurturing Development Services (HANDS) Program

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Maternal complications during delivery (proportion) Secondary data review of live birth records	Percentage of women who experienced any complications associated with labor and delivery	Unadjusted mean = 0.02	Unadjusted mean = 0.03	OR = 0.30	HomVEE calculated = -0.31
Maternal weight gain during pregnancy (pounds) Secondary data review of live birth records	The change in reported weight (pounds) from pre- pregnancy to delivery	Not reported	Not reported	-1.20	Not available
Pregnancy-induced hypertension Secondary data review of live birth records	Percentage of women who experienced pregnancy-induced hypertension	Unadjusted mean = 0.09	Unadjusted mean = 0.18	OR = 0.51	HomVEE calculated = -0.41

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Healthy Beginnings

Two studies with a moderate HomVEE rating were reviewed for Healthy Beginnings. The studies achieved favorable results in the following four domains: child development and school readiness, child health, maternal health, and positive parenting practices (see Exhibit 1).

#### Exhibit 1. Healthy Beginnings: Overview of Statistically Significant Findings Across Studies

#### Outcomes Favoring Home Visiting, by Domain

Outcome	(Wen et al., 2011)	(Wen et al., 2012)
	Child Development and School Readiness	
Child use of cup at 12 months	•	
	Child Health	
Breastfeeding	•	
Introduction of solid foods	•	
Body Mass Index		•
Child vegetable servings/day		•
	Maternal Health	
Mother activity time		•
Mother eats processed meat		•
Mother vegetable servings/day		•
	Positive Parenting Practices	
Bottle at bedtime	•	

Outcome	(Wen et al., 2011)	(Wen et al., 2012)
Food used as reward	•	•
Tummy time, age started	•	
Child eats dinner in front of television		•
Minutes/day child watches television		•
Television on during meal		•

Individual study details are provided below.

**Study 1.** Wen, L. M., Baur, L. A., Simpson, J. M., Rissel, C., & Flood, V. M. (2011). Effectiveness of an early intervention on infant feeding practices and "tummy time": A randomized controlled trial. *Archives of Pediatrics & Adolescent Medicine, 165*(8), 701–707.

Program model:	Healthy Beginnings
Research design:	Randomized controlled trial
Target population:	Pregnant women receiving prenatal care through two hospitals
Study location:	Southwestern Sydney, Australia, through Liverpool and Campbelltown Hospitals

# Exhibit 2. Summary of Study Details (Wen et al., 2011)

# Healthy Beginnings

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Development and School Readiness							
Child use of cup Follow-up at 12 months postpartum	Percentage of mothers who reported the child used a cup	Unadjusted mean = 0.92	Unadjusted mean = 0.85	0.07	HomVEE calculated = 0.43			
		Child Health						
Breastfeeding (yes/no), chi-square Follow-up at 12 months postpartum	Percentage of mothers who were breastfeeding 12 months after child's birth	Unadjusted mean = 0.21	Unadjusted mean = 0.15	0.06	HomVEE calculated = 0.25			
Breastfeeding (yes/no), chi-square Follow-up at 6 months postpartum	Percentage of mothers who were breastfeeding 6 months after child's birth	Unadjusted mean = 0.42	Unadjusted mean = 0.32	0.10	HomVEE calculated = 0.26			
Breastfeeding duration (weeks) Follow-up at 12 months postpartum	Number of weeks the mother breastfed child	Unadjusted mean = 0.17	Unadjusted mean = 0.13	0.04	Not available			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Introduction of solids (4 months or younger) Follow-up at 6 months postpartum	Percentage of mothers who introduced solid foods when child was aged 4 months or younger	Unadjusted mean = 0.18	Unadjusted mean = 0.26	-0.08	HomVEE calculated = -0.30
Introduction of solids (5 months) Follow-up at 6 months postpartum	Percentage of mothers who introduced solid foods when child was 5 months of age	Unadjusted mean = 0.44	Unadjusted mean = 0.48	-0.04	HomVEE calculated = -0.10
Introduction of solids (6 months) Follow-up at 6 months postpartum	Percentage of mothers who introduced solid foods when child was 6 months of age	Unadjusted mean = 0.39	Unadjusted mean = 0.26	0.13	HomVEE calculated = 0.35
Introduction of solids (before 6 months) Follow-up at 6 months postpartum	Percentage of mothers who introduced solid foods prior to child turning 6 months of age	Unadjusted mean = 0.62	Unadjusted mean = 0.74	-0.12	HomVEE calculated = -0.34
	Posi	tive Parenting Prac	tices		
Bottle at bedtime Follow-up at 12 months postpartum	Percentage of mothers who put child to bed with a bottle at 12 months	Unadjusted mean = 0.35	Unadjusted mean = 0.44	-0.09	HomVEE calculated = -0.23

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Food used as reward Follow-up at 12 months postpartum	Percentage of mothers reporting they used food as a reward with child	Unadjusted mean = 0.18	Unadjusted mean = 0.25	-0.07	HomVEE calculated = -0.27
Tummy time, age started (4–8 weeks) Follow-up at 6 months postpartum	Percentage of mothers who had child spend time on his or her tummy when child was between 4 and 8 weeks of age	Unadjusted mean = 0.22	Unadjusted mean = 0.26	-0.04	HomVEE calculated = -0.12
Tummy time, age started (later than 8 weeks) Follow-up at 6 months postpartum	Percentage of mothers who had child spend time on his or her tummy when child was older than 8 weeks of age	Unadjusted mean = 0.19	Unadjusted mean = 0.25	-0.06	HomVEE calculated = -0.20
Tummy time, age started (earlier than 4 weeks) Follow-up at 6 months postpartum	Percentage of mothers who had child spend time on his or her tummy when child was younger than 4 weeks of age	Unadjusted mean = 0.58	Unadjusted mean = 0.49	0.09	HomVEE calculated = 0.22
Tummy time, if daily Follow-up at 6 months postpartum	Percentage of mothers who had child spend time daily on his or her tummy	Unadjusted mean = 0.83	Unadjusted mean = 0.76	0.07	HomVEE calculated = 0.25

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Wen, L. M., Baur, L. A., Simpson, J. M., Rissel, C., Wardle, K., & Flood, V. M. (2012). Effectiveness of home based early intervention on children's BMI at age 2: Randomised controlled trial. *BMJ*, *344*, e3732.

Program model:	Healthy Beginnings
Research design:	Randomized controlled trial
Target population:	Pregnant women receiving prenatal care through two hospitals
Study location:	Southwestern Sydney, Australia, through Liverpool and Campbelltown Hospitals

#### Exhibit 3. Summary of Study Details (Wen et al., 2012)

#### Healthy Beginnings

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Body mass index (BMI) Follow-up at 24 months postpartum	BMI based on direct measures of height and weight	Unadjusted mean = 16.49	Unadjusted mean = 16.87	-0.38	HomVEE calculated = -0.22
Child vegetable ≥ 1 serving/day Follow-up at 24 months postpartum	Percentage of children who consume one or more servings of vegetable a day	Unadjusted mean = 0.89	Unadjusted mean = 0.83	0.07	HomVEE calculated = 0.35
		Maternal Health			
Mother activity time ≥ 150 minutes/week	Percentage of mothers who engage in 150 minutes or more of activity in a week	Unadjusted mean = 0.48	Unadjusted mean = 0.38	0.10	HomVEE calculated = 0.24

Follow-up at 24 months postpartum					
Mother eats processed meat	Percentage of mothers who eat processed meat	Unadjusted mean = 0.20	Unadjusted mean = 0.28	-0.08	HomVEE calculated = -0.28
Follow-up at 24 months postpartum					
Mother >2 vegetable servings/day	Percentage of mothers who consume more than two servings per day of	Unadjusted mean = 0.52	Unadjusted mean = 0.36	0.16	HomVEE calculated = 0.41
Follow-up at 24 months postpartum	vegetables				
	Posi	tive Parenting Prac	tices		
Child eats dinner if front of TV Follow-up at 24 months postpartum	Percentage of children who eat dinner in front of TV	Unadjusted mean = 0.56	Unadjusted mean = 0.68	-0.12	HomVEE calculated = -0.31
Child watches TV >60 minutes/day Follow-up at 24 months postpartum	Percentage of children who watch TV for more than 60 minutes per day	Unadjusted mean = 0.14	Unadjusted mean = 0.22	-0.08	HomVEE calculated = -0.35
Food used as a reward	Percentage of mothers reporting they used food	Unadjusted mean = 0.62	Unadjusted mean = 0.72	-0.09	HomVEE calculated = -0.25

TV on during meal	Percentage of mothers reporting TV is on during	Unadjusted mean = 0.66	Unadjusted mean = 0.76	-0.10	HomVEE calculated =
Follow-up at 24 months postpartum	meals				-0.29

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

# Healthy Families America (HFA)

Sixteen studies with a moderate or high HomVEE rating were reviewed for HFA. The studies achieved favorable results in all eight domains: child development and school readiness; child health; family economic self-sufficiency; linkages and referrals; maternal health; positive parenting practices; reductions in child maltreatment; and reductions in juvenile delinquency, family violence, and crime (see Exhibit 1).

#### Exhibit 1. HFA: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

		Numbered studies (see Exhibit 2 for citations)														
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16
	Chi	ld Dev	velopn	nent a	nd Sc	hool l	Readi	ness								
Externalizing behaviors			•													
Internalizing behaviors			•													
Cognitive development and abilities			•													
Maternal self-efficacy			•													
Participating in a gifted program								•								
Receiving special education								•								
Excelling academically												•				
Retained in first grade												•				

	Numbered studies (see Exhibit 2 for citations)															
Outcome		Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16
Mental development													•			
Somatic problems													•			
Child Health																
Has health care insurance			•													•
Has a primary care provider who knows family's concerns about child				•												
Baby received developmental screening in first year of life										•						
Received well-child visits													•			
Low birth weight															•	
		Fami	ly Ecc	onomi	c Self	-Suffic	ciency	,							·	
Increased education by year or more	•								•							
Received Supplemental Nutrition Assistance Program									•							
Completed at least 1 year of college											•					
School or training for mother													•			
			Linka	ges a	nd Re	ferrals	S									
Referral to family planning	•															

Outcome		Numbered studies (see Exhibit 2 for citations)														
		Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16
Use of resources (not specified)														•		
Maternal Health																
Alcohol use														•		
Use of resources such as mental health counseling, financial counseling, center- based family assistance, and so forth														•		
Prenatal care visits during third trimester															•	
Mother has primary care provider															•	
		Рс	sitive	Pare	nting I	Practi	ces									
Parenting efficacy				•												
Poor-quality home environment						•										
Parent read to child										•						
Parent engagement in activities with the child that stimulate cognitive and language development										•						
Never shouted or yelled at child														•		
Never slapped child's hand														٠		
Safety practices														•		

		Numbered studies (see Exhibit 2 for citations)														
Outcome		Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16
		Redu	uction	s in C	hild M	altrea	tment									
Common corporal/verbal punishment					•	٠										
Neglect					•											
Mild physical assault						٠							•			
Psychological aggression						٠	•						•			
Harsh parenting in past week							•									
Minor physical aggression							•									
Serious physical abuse							•	•								
Very serious physical abuse							•									
Biological mother confirmed subject of sexual abuse								•								
Nonviolent discipline								٠								
Substantiated physical or sexual abuse report									•							
Reductions in Juvenile Delinquency, Family Violence, and Crime																
Maternal perpetration (average across 3 years of the program) – victimization and perpetration related to intimate partner violence and maltreatment		•														

Note: Studies have been numbered rather than named to fit on a single page. Please see Exhibit 2 for short citations.

Exhibit 2 provides the citation for studies numbered in the previous exhibit. These can be used to identify specific study profiles of interest.

#### Exhibit 2. List of Healthy Families America (HFA) Studies

Study Number and Short Citation

- Study 1: (Anisfeld et al., 2004)
- Study 2: (Bair-Merrit et al., 2010)
- Study 3: (Caldera et al., 2007)
- Study 4: (Duggan et al., 1999)
- Study 5: (Duggan et al., 2004)
- Study 6: (Duggan et al., 2007)
- Study 7: (DuMont et al., 2008)
- Study 8: (DuMont et al., 2010)
- Study 9: (Green et al., 2017)
- Study 10: (Green et al., 2014)
- Study 11: (Jacobs et al., 2015)
- Study 12: (Kirkland et al., 2012)
- Study 13: (Landsverk et al., 2002)
- Study 14: (LeCroy et al., 2011)
- Study 15: (Lee et al., 2009)
- Study 16: (Mitchell-Herzfeld et al., 2005)

Individual study details are provided below.

**Study 1.** Anisfeld, E., Sandy, J., & Guterman, N. B. (2004). *Best Beginnings: A randomized controlled trial of a paraprofessional home visiting program: Technical report*. Report to the Smith Richardson Foundation and New York State Office of Children and Family Services. Columbia University School of Social Work.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Women who were pregnant or had an infant under 2 months old and were screened using a checklist for risk factors for child abuse and neglect
Study location:	Washington Heights, NY

#### Exhibit 3. Summary of Study Details (Anisfeld et al., 2004)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>								
Family Economic Self-Sufficiency													
Mother increased education by year or more since baseline	Parent/caregiver report	% = 18.40	% = 7.40	OR = 2.50	HomVEE calculated = 0.63								
Follow-up at 24-months postpartum													

Linkages and Referrals												
Referral to family planning	Review of Service Referral Forms	% = 25.00	% = 10.00	15.00	HomVEE calculated =							
Follow-up at 24 months postpartum	completed by home visitors at the time of referral				0.67							

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Bair-Merritt, M. H., Jennings, J. M., Chen, R., Burrell, L., McFarlane, E., Fuddy, L., et al. (2010). Reducing maternal intimate partner violence after the birth of a child: A randomized controlled trial of the Hawaii Healthy Start home visitation program. *Archives of Pediatrics and Adolescent Medicine*, *164*(1), 16–23.

- *Program model:* Healthy Families America (HFA)
- *Research design*: Randomized controlled trial
- *Target population:* Mothers from one of four Oahu communities delivering children at Kapiolani Maternity Hospital with risk factors for child abuse and neglect. Mothers found to be at risk, or those whose records did not contain sufficient information to screen out, were screened further using the Kempe Family Stress Checklist; eligible families were those in which either parent scored 25 or greater.

Study location: Six Healthy Start Program sites operated by three community-based organizations in Oahu, HI
## Exhibit 4. Summary of Study Details (Bair-Merritt et al., 2010)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Reductions in Juvenile Delinquency, Family Violence, and Crime						
Maternal perpetration	The Conflicts Tactic Scale assesses	5.08	7.72	IRR = 0.83	Not available	
Follow-up after 3 years in the program; used the	victimization and perpetration related to					
average across the 3 years	intimate partner violence and maltreatment.					

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 3.** Caldera, D., Burrell, L., Rodriguez, K., Crowne, S. S., Rohde, C., & Duggan, A. (2007). Impact of a statewide home visiting program on parenting and on child health and development. *Child Abuse & Neglect, 31*(8), 829–852. doi:10.1016/j.chiabu.2007.02.008

- Program model: Healthy Families America (HFA)
- *Research design*: Randomized controlled trial
- *Target population:* Families who screened positive on a Healthy Families Alaska protocol for risk factors associated with poor health and social outcomes and received scores of 25 or higher on the Kempe Family Stress Checklist
- Study location: Six Healthy Families Alaska sites, two in Anchorage and one each in Wasilla, Fairbanks, Juneau, and Kenai

## Exhibit 5. Summary of Study Details (Caldera et al., 2007)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Child Development and School Readiness								
Child Behavior Checklist (CBCL) percentage with externalizing scores in normal range for children in custody of biological mother Follow-up at 2 years of age	The CBCL is a questionnaire that assesses behavioral problems in young children.	% (adjusted) = 82.00	Adjusted mean % = 77.00	OR = 1.48	HomVEE calculated = 0.19				
CBCL percentage with internalizing scores in normal range for children in custody of biological mother Follow-up at 2 years of age	The CBCL is a questionnaire that assesses behavioral problems in young children.	% (adjusted) = 87.00	Adjusted mean % = 79.00	OR = 2.06	HomVEE calculated = 0.35				
CBCL total internalizing score for children in custody of biological mother Follow-up at 2 years of age	The CBCL is a questionnaire that assesses behavioral problems in young children.	Adjusted mean = 48.20	Adjusted mean = 51.00	Mean difference = -2.80	Not available				

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Bayley Scales of Infant Development (BSID) Cognitive score Follow-up at 2 years of age	The BSID tests the mental, motor, and behavioral development and abilities of young children.	Adjusted mean = 88.00	Adjusted mean = 84.80	Mean difference = 3.20	Not available	
BSID percentage within normal limits on cognitive score Follow-up at 2 years of age	The BSID tests the mental, motor, and behavioral development and abilities of young children.	% (adjusted) = 58.00	Adjusted mean % = 48.00	OR = 1.55	HomVEE calculated = 0.24	
		Child Health				
Has health care coverage Follow-up at 2 years of age	Parent/caregiver report	% (adjusted) = 95.00	Adjusted mean % = 90.00	OR = 2.05	HomVEE calculated = 0.45	
Positive Parenting Practices						
Maternal self-efficacy (Teti scale) Follow-up at 2 years of age	The Teti Maternal Self- Efficacy Scale assesses self- evaluated parenting competence and effectiveness.	Adjusted mean = 35.10	Adjusted mean = 34.60	Mean difference = 0.50	Not available	

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 4.** Duggan, A. K., McFarlane, E. C., Windham, A. M., Rohde, C. A., Salkever, D. S., Fuddy, L., et al. (1999). Evaluation of Hawaii's Healthy Start program. *Future of Children*, *9*(1), 66–90; discussion 177–178.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Mothers with risk factors for child abuse and neglect. Mothers found to be at risk, or those whose records did not contain sufficient information to screen out, were screened further using the Kempe Family Stress Checklist.
Study location:	Six Healthy Start Program sites operated by three community-based organizations in Oahu, HI

#### Exhibit 6. Summary of Study Details (Duggan et al., 1999)

## Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
		Child Health					
Has a primary care provider who knows family's concerns about child Follow-up 2 years after random assignment	Parent/caregiver report	% = 50.00	% = 39.00	11.00	HomVEE calculated = 0.27		
	Positive Parenting Practices						
Parenting efficacy Follow-up 2 years after random assignment	The Parenting Sense of Competence measures parent attitudes and self- efficacy.	76.10	74.10	Not reported	Not available		

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 5.** Duggan, A., McFarlane, E., Fuddy, L., Burrell, L., Higman, S. M., Windham, A., et al. (2004). Randomized trial of a statewide home visiting program: Impact in preventing child abuse and neglect. *Child Abuse & Neglect, 28*(6), 597–622.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Mothers with risk factors for child abuse and neglect. Mothers found to be at risk, or those whose records did not contain sufficient information to screen out, were screened further using the Kempe Family Stress Checklist.
Study location:	Six Healthy Start Program sites operated by three community-based organizations in Oahu, HI

## Exhibit 7. Summary of Study Details (Duggan et al., 2004)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Reductions in Child Maltreatment							
Common corporal/verbal punishment (past year) Follow up at years 1–3 after random assignment	The Conflict Tactics Scale – Parent Child domain assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts. The assessment is divided into six subscales, including a scale of nonviolent discipline.	Not available	Not available	OR = 0.59	Not available		

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Neglect at years Follow-up at years 1–3 after random assignment	The Conflict Tactics Scale – Parent Child domain assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts. The assessment is divided into six subscales, including a scale of nonviolent discipline.	Not available	Not available	OR = 0.72	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 6.** Duggan, A., Caldera, D., Rodriguez, K., Burrell, L., Rohde, C., & Crowne, S. S. (2007). Impact of a statewide home visiting program to prevent child abuse. *Child Abuse & Neglect, 31*(8), 801–827.

- *Program model:* Healthy Families America (HFA)
- *Research design*: Randomized controlled trial
- *Target population:* Families who screened positive on a Healthy Families Alaska protocol for risk factors associated with poor health and social outcomes and received scores of 25 or higher on the Kempe's Family Stress Checklist were recruited during pregnancy or at the time of birth.

Study location: Six Healthy Families Alaska sites, two in Anchorage and one each in Wasilla, Fairbanks, Juneau, and Kena

## Exhibit 8. Summary of Study Details (Duggan et al., 2007)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Reductions in Child Maltreatment							
Common corporal punishment Follow-up at 2 years after random assignment	The Conflict Tactics Scale – Parent Child domain assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts. The assessment is divided into six subscales, including a scale of nonviolent discipline.	Adjusted mean = 19.48	Adjusted mean = 24.17	-4.69	Not available			
Mild physical assault frequency Follow-up at 2 years after random assignment	The Conflict Tactics Scale – Parent Child domain assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts. The assessment is divided into six subscales, including a scale of nonviolent discipline.	Adjusted mean = 9.56	Adjusted mean = 11.93	-2.38	Not available			
Psychological aggression frequency Follow-up at 2 years after random assignment	The Conflict Tactics Scale – Parent Child domain assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts. The assessment is divided into six subscales, including a scale of nonviolent discipline.	Adjusted mean = 11.17	Adjusted mean = 13.09	-1.92	Not available			

Positive Parenting Practices						
Poor-quality home environment (Home Observation for Measurement of the Environment [HOME] score = 33)	HOME assesses parenting practices and aspects of the home environment. The researchers defined poor-quality home environment as a HOME total score below or equal to 33.	% = 20.00	% = 31.00	OR = 0.51	HomVEE calculated = -0.36	
Follow-up at 2 years after random assignment						

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 7.** DuMont, K., Mitchell-Herzfeld, S., Greene, R., Lee, E., Lowenfels, A., Rodriguez, M., et al. (2008). Healthy Families New York (HFNY) randomized trial: Effects on early child abuse and neglect. *Child Abuse & Neglect, 32*(3), 295–315.

- *Program model:* Healthy Families America (HFA)
- *Research design*: Randomized controlled trial
- *Target population:* Pregnant women or parents with an infant aged 3 months or younger who were found to be at risk for child abuse or neglect and lived in communities with high rates of teen pregnancy, infant mortality, and welfare receipt, and low rates of prenatal care

Study location: Three Healthy Families New York sites: Erie, Rensselaer, and Ulster counties

## Exhibit 9. Summary of Study Details (DuMont et al., 2008)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Reductions in Child Maltreatment							
Frequency of harsh parenting in the past week Follow-up at 1 year after random assignment	The Conflict Tactics Scale- Parent Child (CTS-PC) assesses for serious abuse and neglect, very serious physical abuse, serious physical abuse, minor physical aggression, psychological aggression, neglect, and harsh parenting in the past week.	Adjusted mean = 1.21	Adjusted mean = 1.81	-0.60	Not available		
Frequency of minor physical aggression Follow-up at 1 year after random assignment	CTS-PC assesses for serious abuse and neglect, very serious physical abuse, serious physical abuse, minor physical aggression, psychological aggression, neglect, and harsh parenting in the past week.	Adjusted mean = 2.40	Adjusted mean = 3.46	-1.06	Not available		
Frequency of psychological aggression Follow-up at 1 year after random assignment	CTS-PC assesses for serious abuse and neglect, very serious physical abuse, serious physical abuse, minor physical aggression, psychological aggression, neglect, and harsh parenting in the past week.	Adjusted mean = 3.34	Adjusted mean = 4.74	-1.40	Not available		

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Frequency of serious physical abuse Follow-up at 2 years after random assignment	CTS-PC assesses for serious abuse and neglect, very serious physical abuse, serious physical abuse, minor physical aggression, psychological aggression, neglect, and harsh parenting in the past week.	Adjusted mean = 0.27	Adjusted mean = 0.53	-0.03	Not available
Frequency of very serious physical abuse Follow-up at 1 year after random assignment	CTS-PC assesses for serious abuse and neglect, very serious physical abuse, serious physical abuse, minor physical aggression, psychological aggression, neglect, and harsh parenting in the past week.	Adjusted mean = 0.01	Adjusted mean = 0.08	-0.07	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 8.** DuMont, K., Kirkland, K., Mitchell-Herzfeld, S., Ehrhard-Dietzel, S., Rodriguez, M. L., Lee, E., ... & Greene, R. (2010). *A randomized trial of Healthy Families New York (HFNY): Does home visiting prevent child maltreatment?* New York State Office of Children & Family Services and Albany, NY: University of Albany, State University of New York.

*Program model:* Healthy Families America (HFA)

*Research design*: Randomized controlled trial

*Target population:* Expectant parents and parents with an infant younger than 3 months of age who lived in high-risk target areas and who were considered to be at risk for child abuse or neglect

*Study location:* Three sites within the HFNY home visiting program

#### Exhibit 10. Summary of Study Details (DuMont et al., 2010)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Development and School Readiness								
Percentage participating in a gifted program Follow-up at 7 years after	Parent/caregiver report	Adjusted mean % = 5.38	Adjusted mean % = 1.99	OR = 2.80	Not available			
random assignment								
Percentage receiving special education	Parent/caregiver report	Adjusted mean % = 12.33	Adjusted mean % = 16.74	OR = 0.70	Not available			
Follow-up at 7 years after random assignment								
	Reductio	ns in Child Maltrea	atment					
Biological mother confirmed subject of sexual abuse, cumulative rate	Review of Child Protective Services records	Mean % = 0.00	Mean % = 0.70	OR = 0.00	Not available			
Follow-up at 7 years after random assignment								

Nonviolent discipline frequency Follow-up at 7 years after random assignment	The Conflict Tactics Scale- Parent Child (CTS-PC) is a 27-item instrument designed to assess parenting practices. The authors used subscales that described the prevalence or frequency of parenting behaviors during the previous year, including nonviolent discipline, psychological aggression, minor physical aggression, serious physical abuse, and neglect.	Adjusted mean = 49.27	Adjusted mean = 45.27	4.00	Study calculated = 0.14
Serious physical abuse frequency Follow-up at 7 years after random assignment	CTS-PC is a 27-item instrument designed to assess parenting practices. The authors used subscales that described the prevalence or frequency of parenting behaviors during the previous year, including nonviolent discipline, psychological aggression, minor physical aggression, serious physical abuse, and neglect.	Adjusted mean = 0.03	Adjusted mean = 0.15	-0.12	Study calculated = - 0.20

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 9.** Green, B. L., Sanders, M. B., & Tarte, J. (2017). Using administrative data to evaluate the effectiveness of the Healthy Families Oregon home visiting program: 2-year impacts on child maltreatment & service utilization. *Children and Youth Services Review, 75*, 77–86.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Eligible families were English-speaking, first-time parents with a child under 90 days old and identified as high risk on a standardized screening tool (the New Baby Questionnaire). Parents who scored positive for substance abuse or depression, or a combination of two other parent and child risks (such as lack of comprehensive prenatal care or single-parent status) were determined to be high risk.
Study location:	Seven Healthy Families Oregon sites that were oversubscribed, three of which served primarily rural communities and four of which served mixed urban and rural communities

#### Exhibit 11. Summary of Study Details (Green et al., 2017)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Family	Economic Self-Suf	ficiency		
Percentage ever received Supplemental Nutrition Assistance Program (SNAP), intent-to-treat analysis, unadjusted	Administrative records	Unadjusted proportion = 0.85	Unadjusted proportion = 0.82	0.02	HomVEE calculated = 0.10
Follow-up at 2 years after random assignment					

Reductions in Child Maltreatment						
Percentage with at least one substantiated physical or sexual abuse report, intent-to-treat analysis, unadjusted	Administrative records	Unadjusted proportion = 0.01	Unadjusted proportion = 0.01	0.00	HomVEE calculated = -0.29	
Follow-up at 2 years after random assignment						

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 10.** Green, B. L., Tarte, J. M., Harrison, P. M., Nygren, M., & Sanders, M. B. (2014). Results from a randomized trial of the Healthy Families Oregon accredited statewide program: Early program impacts on parenting. *Children and Youth Services Review, 44*, 288–298.

*Program model:* Healthy Families America (HFA)

*Research design*: Randomized controlled trial

*Target population:* Mothers were study eligible if they were first-time mothers, were pregnant or had an infant up to 3 months of age, and did not have medically fragile infants or children at risk of removal from the home, and if either the mother or the family was at risk according to Healthy Families Oregon's screener assessment (the New Baby Questionnaire).

*Study location:* Seven Healthy Families Oregon sites, four of which were primarily urban and three of which were rural

## Exhibit 12. Summary of Study Details (Green et al., 2014)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Baby received developmental screening in first year of life	Parent/caregiver report	Adjusted proportion = 0.94	Adjusted proportion = 0.87	OR = 0.41	Not available
Follow-up by child's first birthday					
	Positiv	ve Parenting Pract	ices		
Number of times in past month parent read to child, – full sample Follow-up by child's first	Administrative records	Adjusted mean = 4.74	Adjusted mean = 4.43	0.31	HomVEE calculated = 0.26
birthday Parent-Child Activities	PCAS assesses the frequency	Adjusted mean	Adjusted mean =	0.11	HomVEE
Scale (PCAS) score Follow-up by child's first birthday	with which the parent engaged in several activities with the child that can stimulate cognitive and language development, including reading or telling stories, dancing, singing, and playing outside together.	= 4.84	4.73	0.11	calculated = 0.15

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 11.** Jacobs, F., Easterbrooks, M. A., Goldberg, J., Mistry, J., Bumgarner, E., Raskin, M., Fosse, N., & Fauth, R. (2015). Improving adolescent parenting: Results from a randomized controlled trial of a home visiting program for young families. *American Journal of Public Health*. Advance online publication, e1–e7.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Participants were from 18 Healthy Families Massachusetts sites, female, at least 16 years of age, conversant in English or Spanish, new to HFM, and able to provide informed consent. Based on HFM enrollment criteria, mothers also had to be first-time parents under 21 years of age who enrolled while they were pregnant or during their child's first year of life.

*Study location:* Eighteen sites in Massachusetts

#### Exhibit 13. Summary of Study Details (Jacobs et al., 2015)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Fami	y Economic Self-Suf	ficiency		
Completed at least 1 year of college	Mother self-report	Not reported	Not reported	OR = 1.92	HomVEE calculated = 0.39
Follow-up at 2 years after random assignment					0.00

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

**Study 12.** Kirkland, K., & Mitchell-Herzfeld, S. (2012). *Evaluating the effectiveness of home visiting services in promoting children's adjustment in school: Final report to the Pew Center on the States*. New York State Office of Children and Family Services, Bureau of Evaluation and Research.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Expectant parents and parents with an infant younger than 3 months of age who lived in high-risk target areas and who were considered to be at risk for child abuse or neglect
Study location:	Three sites within the Healthy Families New York home visiting program

## Exhibit 14. Summary of Study Details (Kirkland et al., 2012)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Deve	elopment and Scho	ol Readiness		
Excelling academically (all three behaviors that promote learning) by first grade Secondary data review of first grade school record	First grade school record	0.13	0.08	0.05	HomVEE calculated = 0.36
Retained in first grade Secondary data review of first grade school record	First grade school record	0.04	0.07	-0.04	HomVEE calculated = -0.44

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 13.** Landsverk, J., Carrilio, T., Connelly, C. D., Ganger, W., Slymen, D., Newton, R., et al. (2002). *Healthy Families San Diego clinical trial: Technical report*. The Stuart Foundation, California Wellness Foundation, State of California Department of Social Services: Office of Child Abuse Prevention.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Eligibility criteria included (1) residence in the target area, (2) being a nonmilitary family, and (3) speaking English or Spanish. Families that met these criteria were screened for risk factors for child abuse and neglect. Mothers who screened positive for risk or for whom information was not sufficient to screen them out were screened further using the Kempe Family Stress Checklist.

*Study location:* San Diego County, a primarily urban county that includes suburban and rural regions

#### Exhibit 15. Summary of Study Details (Landsverk et al., 2002)

## Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Health							
Number of well-child visits Follow-up at 3 years after random assignment	Parent/caregiver report	2.40	1.90	0.50	HomVEE calculated = 0.22			
	Child Develo	opment and Schoo	l Readiness					
Mental Development Index Follow-up at 1 year after random assignment	The Bayley Scales of Infant Development tests the mental, motor, and behavioral development	105.00	102.50	2.50	HomVEE calculated = 0.23			

	and abilities of young children.				
Child Behavior Checklist (CBCL) Somatic problems <i>T</i> score Follow-up at 3 years after	CBCL is a questionnaire that assesses behavioral problems in young children.	53.80	55.20	-1.40	HomVEE calculated = -0.24
random assignment					
	Family E	conomic Self-Suf	ficiency		
Mother attended school Follow-up at 3 years after random assignment	Parent/caregiver report	% = 37.00	% = 28.00	9.00	HomVEE calculated = 0.25
	Reductio	ons in Child Maltre	eatment		
Mild physical assault frequency Follow-up at 3 years after random assignment	The Conflict Tactics Scale- Parent Child (CTS-PC) assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts.	3.40	4.60	-1.20	HomVEE calculated = -0.29
Psychological aggression frequency Follow-up at 3 years after random assignment	CTS-PC assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts.	4.80	6.00	-1.20	HomVEE calculated = -0.27

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 14.** LeCroy, C. W., & Krysik, J. (2011). Randomized trial of the Healthy Families Arizona home visiting program. *Children and Youth Services Review, 33*(10), 1761–1766.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Not provided in HomVEE
Study location:	Single Healthy Families Arizona site in a large metropolitan area

## Exhibit 16. Summary of Study Details (LeCroy et al., 2011)

## Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Linkages and Referrals							
Use of resources	Not reported on HomVEE	2.71	2.06	0.65	HomVEE calculated =			
Follow-up at 6 months of age					4.32			
	Family E	conomic Self-Suffi	ciency					
School or training for mother	A measure of whether the participant had enrolled	% = 35.20	% = 6.80	0.28	HomVEE calculated =			
Follow-up at 12 months of age	and was attending training or school for advancement				1.19			
		Maternal Health						
Alcohol use	Alcohol use was measured by a series of	% = 12.00	% = 20.50	-8.50	HomVEE calculated =			
Follow-up at 12 months of age	questions that included the following: Do you drink				-0.40			

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	beer or alcohol? The mother could answer yes or no. If the mother answered yes, then another question was asked: In the past two weeks how many times did you drink beer or alcohol?				
Use of resources Follow-up at 12 months of age	A scale representing the number of resources, such as mental health counseling, financial counseling, and center- based family assistance, the family reported using	2.53	1.95	0.58	HomVEE calculated = 1.58
	Positiv	ve Parenting Practi	ices		
Never shouted or yelled at child Follow-up at 12 months of age	The authors developed a modified version of the Revised Parent-Child Conflict Tactics Scale that used the most serious indicators of abusive and neglectful behavior.	% = 50.60	% = 34.10	16.50	HomVEE calculated = 0.43
Never slapped child's hand Follow-up at 12 months of age	The authors developed a modified version of the Revised Parent-Child Conflict Tactics Scale that used the most serious indicators of abusive and neglectful behavior.	% = 56.60	% = 38.80	17.80	HomVEE calculated = 0.42

Safety practices	A safety practices index included a list of items,	17.95	16.05	1.90	HomVEE calculated =
Follow-up at 6 months of age	such as parent has a car seat, poisons are not within child's reach, and similar indicators, that were validated as true or false.				3.00

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 15.** Lee, E., Mitchell-Herzfeld, S., Lowenfels, A. A., Greene, R., Dorabawila, V., & DuMont, K. A. (2009). Reducing low birth weight through home visitation: A randomized controlled trial. *American Journal of Preventive Medicine, 36*(2), 154–160.

- *Program model:* Healthy Families America (HFA)
- *Research design*: Randomized controlled trial
- *Target population:* Eligible participants lived at or under 200 percent of the federal poverty level and were pregnant or had given birth within 3 months of enrollment. This study focused on the subsample of mothers who were randomized at 30 or fewer weeks of gestation and who had a single birth.
- *Study location:* Three Healthy Families of New York sites: Erie, Rensselaer, and Ulster counties

## Exhibit 17. Summary of Study Details (Lee et al., 2009)

Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Child Health							
Low birth weight Secondary review of birth certificate data	The study considered a baby born weighing less than 2,500 grams as low birth weight. The study determined birth weight using birth certificates.	Adjusted proportion = 0.05	Adjusted proportion = 0.10	OR = 0.43	HomVEE calculated = -0.51		
		Maternal Health					
Frequency of prenatal care visits during third trimester Follow-up interview with mother at birth	The mother was asked about the frequency of prenatal care visits during third trimester.	Not reported	Not reported	Not reported	Not available		
Mother has primary care provider Follow-up interview with mother at birth	The mother was asked if she had a primary care provider.	Unadjusted proportion = 0.94	Unadjusted proportion = 0.88	Not reported	Not available		

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 16.** Mitchell-Herzfeld, S., Izzo, C., Greene, R., Lee, E., & Lowenfels, A. (2005). *Evaluation of Healthy Families New York (HFNY): First year program impacts*. University at Albany, Center for Human Services Research.

Program model:	Healthy Families America (HFA)
Research design:	Randomized controlled trial
Target population:	Pregnant women or parents with an infant aged 3 months or younger who were found to be at risk for child abuse or neglect and lived in communities with high rates of teen pregnancy, infant mortality, and welfare receipt, and low rates of prenatal care were referred to HFNY. Consenting families were screened using the Kempe Family Stress Checklist.
Study location:	Three Healthy Families of New York sites: Erie, Rensselaer, and Ulster counties

## Exhibit 18. Summary of Study Details (Mitchell-Herzfeld et al., 2005)

#### Healthy Families America (HFA)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Child has health insurance	Percentage of children who had health	% = 93.90	% = 90.40	3.50	HomVEE calculated =
Follow-up at 1 year of age	insurance coverage				0.30

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

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# Home Instruction for Parents of Preschool Youngsters (HIPPY)

Two studies with a moderate or high HomVEE rating were reviewed for HIPPY. The studies achieved favorable results in the following two domains: child development and school readiness, and positive parenting practices (see Exhibit 1).

## Exhibit 1. HIPPY: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Baker et al., 1996)	(Necoechea, 2007)					
Child Develop	Child Development and School Readiness						
Academic self-image	•						
Motivation, adaption to the classroom, and interest in learning	•						
Delayed entry into school	•						
Grade placement at beginning of year	•						
Expressive vocabulary skills	•	•					
Positiv	ve Parenting Practices						
School days child attended	•						
Parent involvement (parents' use of home-based supports for children, such as oral language-based activities, print-based activities, literacy exposure, and parent book reading)		•					

Individual study details are provided below.

**Study 1.** Baker, A. J. L., & Piotrkowski, C. S. (1996). *Parents and children through the school years: The effects of the Home Instruction Program for Preschool Youngsters*. National Council of Jewish Women Center for the Child.

Program model:	Home Instruction for Parents of Preschool Youngsters (HIPPY)
Research design:	Randomized controlled trial
Target population:	In Arkansas, families were recruited by word of mouth and with flyers. In New York, students were recruited through the city's Public School Early Childhood Center.
Study location:	Two unnamed cities, one in Arkansas and one in New York. The Arkansas city was relatively small and the school district served only 6,200 students, but the New York city has a population of 200,000 and is the fourth largest in the state.

## Exhibit 2. Summary of Study Details (Baker et al., 1996)

#### Home Instruction for Parents of Preschool Youngsters (HIPPY)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
	Child Development and School Readiness						
Academic Self-Image Measure Follow-up at 1 year after assignment	A 23-item assessment that asked respondents to rate themselves on a scale of 1 to 5 based on how successful they think they are at a series of academic, social, and athletic areas	Adjusted mean = 4.21	Adjusted mean = 3.79	0.42	Study calculated = 0.62		

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Child Classroom Adaptation Index (CCAI) Follow-up at 1 year after assignment	The CCAI assesses the motivation, adaption to the classroom, and interest in learning of young children.	Adjusted mean = 3.65	Adjusted mean = 3.04	0.51	Study calculated =0.59	
Delayed entry into school Follow-up at end of program	Proportion of children who had a delayed entry into school	Not available	Not available	Not reported	Study calculated = 0.41	
Grade placement at beginning of year Follow-up at 1 year after assignment	Percentage of children in their appropriate grade at the beginning of the academic year	Mean % = 87.00	Mean % = 69.00	18.00	Study calculated = 0.44	
Child Classroom Adaptation Index Follow-up at end of program	The CCAI assesses the motivation, adaption to the classroom, and interest in learning of young children.	Adjusted mean = 3.69	Adjusted mean = 2.71	0.96	Study calculated = 0.76	
Positive Parenting Practices						
Percentage of days attended (nonparametric test) Follow-up at end of program	Percentage of total school days child attended	Mean % = 96.00	Mean % = 94.00	Not reported	Study calculated = 0.39	

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

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**Study 2.** Necoechea, D. M. (2007). *Children at-risk for poor school readiness: The effect of an early intervention home visiting program on children and parents* [Unpublished dissertation]. University of California, Riverside.

Program model:	Home Instruction for Parents of Preschool Youngsters (HIPPY)
Research design:	Randomized controlled trial
Target population:	Mother-child dyads from state-run preschool sites and community centers
Study location:	San Diego, CA

## Exhibit 3. Summary of Study Details (Necoechea, 2007)

Home Instruction for Parents of Preschool Youngsters (HIPPY)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Development and School Readiness							
Expressive One- Word Picture Vocabulary Test – Revised (EOWPVT- R) Follow-up at 16 weeks after assignment	The EOWPVT-R assesses expressive vocabulary skills in young children.	29.36	25.30	4.03	Study calculated = 0.34			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	P	ositive Parenting P	ractices		
Parent-Home Survey Follow-up at 16 weeks after assignment	A researcher-developed instrument that assessed parents' use of home-based supports for children, such as oral language-based activities, print-based activities, literacy exposure, and parent book reading. The responses were used to generate an index of parent involvement.	70.58	61.64	8.94	Study calculated = 0.87

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

# Maternal Early Childhood Sustained Home-Visiting Program (MECSH)

Two studies with a moderate HomVEE rating were reviewed for MESCH. The studies achieved favorable results in the following three domains: child health, maternal health, and positive parenting practices (see Exhibit 1).

#### Exhibit 1. MECSH: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Kemp et al., 2011)	(Kemp et al., 2013)
Child Health		
Breastfeeding	•	
Sudden Infant Death Syndrome (SIDS) risk knowledge		•
Maternal Health		
Maternal general health		•
Positive Parenting Practices		
Parental responsivity	•	

Individual study details are provided below.

**Study 1.** Kemp, L., Harris, E., McMahon, C., Matthey, S., Vimpani, G., Anderson, T., Schmied, V., Aslam, H., & Zapart, S. (2011). Child and family outcomes of a long-term nurse home visitation programme: A randomised controlled trial. *Archives of Disease in Childhood, 96*(6), 533–540.

Program model:	Maternal Early Childhood Sustained Home-Visiting Program (MECSH)
Research design:	Randomized controlled trial
Target population:	Pregnant women were eligible to participate if they did not require the use of an interpreter and reported at least one risk factor for poor maternal or child outcomes during routine psychosocial and domestic violence screenings conducted by midwives in a local hospital.
Study location:	In a socioeconomically disadvantaged suburb of Sydney, Australia

## Exhibit 2. Summary of Study Details (Kemp et al., 2011)

## Maternal Early Childhood Sustained Home-Visiting Program (MECSH)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
	Child Health						
Breastfeeding duration (weeks)	Total number of weeks mother breastfed	16.12	8.24	7.88	HomVEE calculated = 0.52		
Follow-up at 12 months postpartum							

	Positive Parenting Practices						
Home Observation for Measurement of the Environment (HOME) responsivity	The HOME assesses parenting practices and aspects of the home environment. The researchers examined the following subscales: avoidance of restriction and punishment, maternal involvement with	9.35	8.88	0.47	Study calculated = 0.26		
Follow-up at 24 months postpartum	child, organization of the environment, variety in daily stimulation, parental responsivity, and provision of appropriate play materials.						

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 2.** Kemp, L., Harris, E., McMahon, C., Matthey, S., Vimpani, G., Anderson, T., Schmied, V., & Aslam, H. (2013). Benefits of psychosocial intervention and continuity of care by child and family health nurses in the pre- and postnatal period: Process evaluation. *Journal of Advanced Nursing*, *69*(8), 1850–1861.

- *Program model:* Maternal Early Childhood Sustained Home-Visiting Program (MECSH)
- *Research design*: Randomized controlled trial

Target population:Pregnant women were eligible to participate if they did not require the use of an interpreter and reported at least one<br/>risk factor for poor maternal or child outcomes during routine psychosocial and domestic violence screenings<br/>conducted by midwives in a local hospital.

Study location: In a socioeconomically disadvantaged suburb of Sydney, Australia

## Exhibit 3. Summary of Study Details (Kemp et al., 2013)

Maternal Early Childhood Sustained Home-Visiting Program (MECSH)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Maternal Health			
Maternal general health, very good or excellent	Percentage of mothers who reported their health was very good or excellent at 4–	Unadjusted % = 51.30	Unadjusted % = 35.40	15.90	Study calculated = 0.44
Follow-up at 4–6 weeks postpartum	6 weeks postpartum				
		Child Health			
SIDS risk knowledge	Percentage of mothers who could name 2 or more SIDS	Unadjusted % = 83.30	Unadjusted % = 68.30	15.00	Study calculated =
Follow-up at 4–6 weeks postpartum	risk factors at 4–6 weeks postpartum				0.35

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

## Maternal Infant Health Program (MIHP)

Three studies with a moderate HomVEE rating were reviewed for MIHP. The studies achieved favorable results in the following two domains: child health and maternal health (see Exhibit 1).

#### Exhibit 1. MIHP: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Meghea et al., 2013)	(Roman et al., 2014)	(Meghea et al., 2015)
	Child Health		
Low birth weight		•	
Preterm birth		•	
Infant death			•
	Maternal Health		
Prenatal care	•		
Appropriate postnatal visit at 12 months postpartum	•		

Individual study details are provided below.

**Study 1.** Meghea, C. I., Raffo, J. E., Zhu, Q., & Roman, L. (2013). Medicaid home visitation and maternal and infant healthcare utilization. *American Journal of Preventive Medicine*, *45*(4), 441–447.

*Program model:* Maternal Infant Health Program (MIHP)

*Research design*: Quasi-experimental design

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Target population:The study population included women who were recipients of Medicaid and delivered a baby in Michigan in 2010.<br/>The authors obtained records from the state Medicaid program and the Michigan Department of Community Health<br/>to identify pregnant mothers who submitted a Medicaid claim identifying MIHP participation during pregnancy or an<br/>MIHP prenatal risk screening. These mothers were matched one to one with mothers in Medicaid claims data who<br/>did not participate in the MIHP program at pregnancy.

Study location: Michigan

#### Exhibit 2. Summary of Study Details (Meghea et al., 2013)

#### Maternal Infant Health Program (MIHP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Maternal Health			
Adequate prenatal care Follow-up at 12 months postpartum	Mother received adequate prenatal care as defined by the Adequacy of Prenatal Care Utilization (Kotelchuck) Index	Unadjusted proportion = 0.65	Unadjusted proportion = 0.63	OR = 1.06	HomVEE calculated = 0.04
Any prenatal care Follow-up at 12 months postpartum	Mother received any prenatal care	Unadjusted proportion = 0.99	Unadjusted proportion = 0.97	OR = 2.94	HomVEE calculated = 0.65
Appropriate postnatal visit Follow-up at 12 months postpartum	Mother had postnatal visit between 21 and 56 days after delivery	Unadjusted proportion = 0.50	Unadjusted proportion = 0.41	OR = 1.50	HomVEE calculated = 0.25

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Study 2.** Roman, L., Raffo, J. E., Zhu, Q., & Meghea, C. (2014). A statewide Medicaid enhanced prenatal care program: Impact on birth outcomes. *JAMA Pediatrics*, *168*(3), 220–227.

Program model:	Maternal Infant Health Program (MIHP)
Research design:	Quasi-experimental design
Target population:	Administrative data for 60,653 pregnant women who had a Medicaid-insured singleton birth in 2010 were drawn from the Michigan Department of Community Health.
Study location:	Michigan

## Exhibit 3. Summary of Study Details (Roman et al., 2014)

Maternal Infant Health Program (MIHP)

Outcome	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Low birth weight (<2,500 grams) Secondary data review of administrative birth records	A binary indicator defined as birth weight less than 2,500 grams	Unadjusted proportion = 0.08	Unadjusted proportion = 0.09	OR = 0.91	HomVEE calculated = -0.06
Preterm birth (<37 weeks) Secondary data review of administrative birth records	A binary indicator defined as delivery before 37 complete weeks gestation	Unadjusted proportion = 0.11	Unadjusted proportion = 0.12	OR = 0.91	HomVEE calculated = -0.06
Outcome	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
---	---	---------------------------------	---------------------------------	-----------------	---------------------------------
Very low birthweight (<1,500 grams)	A binary indicator defined as birth weight less than 1,500 grams	Unadjusted proportion = 0.01	Unadjusted proportion = 0.02	OR = 0.71	HomVEE calculated = -0.21
Secondary data review of administrative birth records					
Very preterm birth (<32 weeks)	A binary indicator defined as delivery before 32 complete weeks gestation	Unadjusted proportion = 0.02	Unadjusted proportion = 0.03	OR = 0.80	HomVEE calculated = -0.14
Secondary data review of administrative birth records					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Meghea, C. I., You, Z., Raffo, J., Leach, R. E., & Roman, L. A. (2015). Statewide Medicaid enhanced prenatal care programs and infant mortality. *Pediatrics*, *136*(2), 334–342.

- *Program model:* Maternal Infant Health Program (MIHP)
- *Research design*: Quasi-experimental design
- Target population:The study population included 126,880 women who were recipients of Medicaid and delivered a baby during the<br/>2009–2012 calendar years in Michigan, with 63,440 women each in the treatment and comparison groups.
- Study location: Michigan

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## Exhibit 4. Summary of Study Details (Meghea et al., 2015)

Maternal Infant Health Program (MIHP)

Outcome	Measure	Program mean	Compa	arison mean	Mean difference	Effect size <sup>2</sup>
		Child Health				
Infant death <1 year Follow-up at 1 year following birth	Infant death in first year of life	Unadjusted propor = 0.01	pr	Inadjusted roportion = .01	OR = 0.73	HomVEE calculated = -0.19
Infant death <28 days Follow-up at 28 days following birth	Neonatal infant death (less than 28 days)	Unadjusted proport = 0.00	pr	Inadjusted roportion = .00	OR = 0.70	HomVEE calculated = -0.22
Infant death 28–365 days Follow-up at 1 year following birth	Post-neonatal infant death (28–365 days)	Unadjusted proport = 0.00	pr	Inadjusted roportion = .00	OR = 0.78	HomVEE calculated = -0.15

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the ≤0.05 level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Minding the Baby

One study with a moderate HomVEE rating was reviewed for Minding the Baby. The study achieved favorable results in the following two domains: child health and maternal health (see Exhibit 1).

#### Exhibit 1. Minding the Baby: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

Outcome	(Sadler et al., 2013)
	Child Health
Immunizations up to date	•
	Maternal Health
Rapid subsequent childbearing	•

Individual study details are provided below.

**Study 1.** Sadler, L. S., Slade, A., Close, N., Webb, D. L., Simpson, T., Fennie, K., & Mayes, L. C. (2013). Minding the Baby: Enhancing reflectiveness to improve early health and relationship outcomes in an interdisciplinary home-visiting program. *Infant Mental Health Journal, 34*(5), 391–405.

Program	model:	Minding	the	Baby
i i ogi ai i i		ivinianing		Daby

*Research design*: Randomized controlled trial

*Target population:* Mothers who met the following inclusion criteria: (1) English oral and comprehension fluency; (2) aged 14–25; (3) having a first child; (4) no active heroin or cocaine use (already a criteria for participating in group prenatal care); (5) no diagnoses of a psychotic disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, 4th

edition; and (6) no major or terminal chronic condition (e.g., AIDS, cancer; already an eligibility criteria for group prenatal care participation)

Study location: New Haven, CT

#### Exhibit 2. Summary of Study Details (Sadler et al., 2013)

#### Minding the Baby

Outcome	Measure	Program mean	Comparison mean	Mean difference	Effect size
		Child Health			
Immunizations up to date	Infant's pediatric health record and mother	Not reported	Not reported	Not reported	Not available
Follow-up at 12 months postpartum	report				
		Maternal Healt	:h		
Rapid subsequent childbearing – birth of second child within 24 months of the index birth	Mother report and health center record review	% = 1.60	15.00	-13.40	HomVEE calculated = -1.42
Follow-up at 24 months postpartum					

Note: Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

# Nurse-Family Partnership (NFP)

Twenty-one studies with a moderate or high HomVEE rating were reviewed for NFP. The studies achieved favorable results in seven domains: child development and school readiness; child health; family economic self-sufficiency; maternal health; positive parenting practices; reductions in child maltreatment; and reductions in juvenile delinquency, family violence; and crime (see Exhibit 1).

#### Exhibit 1. NFP: Overview of Statistically Significant Findings Across Studies

Outcomes Favoring Home Visiting, by Domain

							Num	bered	lstud	dies (	see E	xhibit	t 2 fo	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
			C	hild	Deve	lopm	ient a	and S	choo	l Rea	dines	s									
Externalizing behaviors		•																			
Grade Point Average (GPA)							•									•					
Reading achievement test scores							•								•	•					
Math achievement test scores							•								•	•					
Cognitive functioning													•					•			
Language delay and development													•	•							
Infant low vitality: exhibiting low reactivity and low looking at mother in response to joy and anger stimuli													•								

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

						l	Numl	bered	stuc	dies (	see Ex	xhibit	t 2 foi	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
Infant vulnerability: exhibiting high reactivity and low looking at mother in response to fear stimuli													•								
Children's ability to regulate their behavior and emotions														•							
Children's capacity for sustained attention and inhibitory control														•							
Dysregulated aggressive behavior															•			•			
Coherence in completing stories															•						
Internalizing and externalizing disorders															•						
Receptive vocabulary															•						
Child attended Head Start, preschool, day care, or early intervention															•						
Any therapeutic services																		•			
Receptive language																		•			
Skills in memory or attention																		•			
Behavioral regulation																		•			
Physical aggression																				•	

							Numl	bered	stuc	dies (	see E	xhibi	t 2 fo	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
		<u> </u>				C	hild	Healt	h												
Low birth weight			•											•							
Breastfeeding attempt					•																
Substance use							•														
Used cigarettes, alcohol, or marijuana							•														
Child had a happy, positive, and content disposition									•												
Emergency department visits									•	•											
Child behavioral/parental coping problems										•											
Child mortality rate from preventable causes (Sudden Infant Death Syndrome, unintentional injury, homicide)																			•		
				Fa	mily	Ecor	nomi	c Self	f-Suff	ficier	су										
Used other community service					•																
Living with father of child						•								•							
Living with partner						•															

							Numl	pered	stuc	lies (	see E	xhibit	: 2 foi	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
Current partner employed						•										•					
Mother or child received Aid to Families with Dependent Children (AFDC)															•		•				
Mother or child received food stamps						•									•	•	•				
Received nutritional supplementation vouchers						•		•													
Mother employment													•	•							
Duration of current partner relationship															•	•	•				
Receiving Temporary Assistance for Needy Families (TANF)																•	•				
						Ма	iterna	al Hea	alth												
Yeast infections					•																
Pregnancy-induced hypertension					•																
Sense of mastery or control over life					•									•		•	•				
Subsequent live birth					•	•							•	•	•	•					
Subsequent pregnancy					•	•							•		•						

							Numl	pered	stuc	dies (	see E	xhibi	t 2 fo	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
Change in average adequacy of diet								•													
Kidney infection								•													
Mental health in the areas of anxiety, depression, behavior, positive affect, and general distress														•							
Subsequent miscarriage														•							
Role impairment resulting from alcohol or drug use																	•				
Maternal mortality rate – all causes																			•		
Maternal mortality rate – external causes																			•		
					Posi	itive	Parer	nting	Prac	tices											
Parenting practices – hostility				•																	
Parent provides emotional/ cognitive stimulation					•																
Beliefs associated with child abuse					•																
Worry or concern over child behavioral problems									•												

						l	Numt	pered	l stud	dies (	see E	xhibit	t <b>2 fo</b> i	r cita	tions	)					
Outcome	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Study 8	Study 9	Study 10	Study 11	Study 12	Study 13	Study 14	Study 15	Study 16	Study 17	Study 18	Study 19	Study 20	Study 21
Hazardous exposures observed in home										•											
Mother-infant responsive interaction													•	•							
				R	educi	tions	in Cl	nild N	laltre	eatmo	ent									·	
Child hospitalized for injuries/ingestions					•																
Injuries/ingestions					•					•											
Emergency department visits for accidents and poisonings									•												
Substantiated reports of child abuse and neglect											•										
F	Reduo	ction	s in .	Juver	nile D	elinc	quenc	:y, Fa	mily	Viol	ence,	and C	rime								
Arrests	•											•									
Convictions	•											•									
Child internalizing disorders							•														
Probation violations												•									
Domestic violence														٠							
Onset of neglect (age)																					•

Note: Studies have been numbered rather than named to fit on a single page. Please see Exhibit 2 for short citations.

Exhibit 2 provides the citation for studies numbered in the previous exhibit. These can be used to identify specific study profiles of interest.

### Exhibit 2. List of Nurse-Family Partnership (NFP) Studies

#### Study Number and Short Citation

- Study 1: (Eckenrode et al., 2010)
- Study 2: (Enoch et al., 2016)
- Study 3: (Holland et al., 2018)
- Study 4: (Izzo et al., 2005)
- Study 5: (Kitzman et al., 1997)
- Study 6: (Kitzman et al., 2000)
- Study 7: (Kitzman et al., 2010)
- Study 8: (Olds, Henderson, Tatelbaum, & Chamberlin, 1986)
- Study 9: (Olds, Henderson Jr., Chamberlin, & Tatelbaum, 1986)
- Study 10: (Olds et al., 1994)
- Study 11: (Olds et al., 1997)

- Study 12: (Olds et al., 1998)
- Study 13: (Olds et al., 2002)
- Study 14: (Olds, Robinson, et al., 2004)
- Study 15: (Olds, Kitzman, et al., 2004)
- Study 16: (Olds et al., 2007)
- Study 17: (Olds et al., 2010)
- Study 18: (Olds, Holmberg, et al., 2014)
- Study 19: (Olds, Kitzman, et al., 2014)
- Study 20: (Sidora-Arcoleo et al., 2010)
- Study 21: (Zielinski et al., 2009)

Individual study details are provided below.

**Study 1.** Eckenrode, J., Campa, M., Luckey, D. W., Henderson, C. R., Cole, R., Kitzman, H., Anson, E., Sidora-Arcoleo, K., Powers, J., & Olds, D. (2010). Long-term effects of prenatal and infancy nurse home visitation on the life course of youths: 19-year follow-up of a randomized trial. *Archives of Pediatrics & Adolescent Medicine, 164*(1), 9–15.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were fewer than 25 weeks pregnant, were younger than 19 years of age, were single parents, or had low socioeconomic status
Study location:	Elmira, NY

#### Exhibit 3. Summary of Study Details (Eckenrode et al., 2010)

## Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Reductions in Juvenile	Delinquency, Fam	ily Violence, and Crim	e	
Arrested, lifetime Follow-up at 19 years of age	Percentage of youth who had been arrested at least once during lifetime	% (adjusted) = 21.00	Adjusted mean % = 37.00	Difference = 16	HomVEE calculated = 48
Convicted, lifetime Follow-up at 19 years of age	Percentage of youth who had been convicted of a crime during lifetime	% (adjusted) = 12.00	Adjusted mean % = 28.00	Difference = 16	HomVEE calculated = 64

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Number of arrests, lifetime Follow-up at 19 years of	Number of times adolescent had been arrested during lifetime	Adjusted mean = .37	Adjusted mean = .86	49	Not available
age					
Number of convictions, lifetime	Number of times adolescent had been convicted of a crime during	Adjusted mean = .20	Adjusted mean = .58	38	Not available
Follow-up at 19 years of age	lifetime				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Enoch, M. A., Kitzman, H., Smith, J. A., Anson, E., Hodgkinson, C. A., Goldman, D., & Olds, D. L. (2016). A prospective cohort study of influences on externalizing behaviors across childhood: Results from a nurse home visiting randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, *55*(5), 376–382.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Women who were less than 29 weeks pregnant, had never delivered a live birth, and had 2 or more of the following risk factors: unmarried, less than 12 years of education, and/or unemployed
Study location:	Memphis, TN

## Exhibit 4. Summary of Study Details (Enoch et al., 2016)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Development and School Readiness							
Composite externalizing disorders continuous total scores: Achenbach Child Behavior Checklist (CBCL) Follow-up at 2 years of age	The CBCL Externalizing Disorders Composite is a standardized tool completed by parents and is designed to assess the presence of behavioral or emotional problems in children.	Not reported	Not reported	Not reported	Not available			

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 3.** Holland, M. L., Groth, S. W., Smith, J. A., Meng, Y., & Kitzman, H. (2018). Low birthweight in second children after nurse home visiting. *Journal of Perinatology*, *38*(12), 1610–1619.

*Program model:* Nurse-Family Partnership (NFP)

*Research design*: Randomized controlled trial (RCT)

Target population:Triads (mother, firstborn child, and second-born child). This study focused on second-born child outcomes.Participants were from a larger RCT in which women had to be primiparous and demonstrate two of three riskfactors: unmarried, unemployed, and not graduated from high school.

Study location: Memphis, TN

## Exhibit 5. Summary of Study Details (Holland et al., 2018)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Child Health							
Low birth weight of second child	Likelihood of second- born child having birth weight below 2,500	Not reported	Not reported	OR = 0.51	Study reported = -0.41		
Follow-up at 18 years of age	grams				-01		

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 4.** Izzo, C., Eckenrode, J., Smith, E., Henderson, C., Cole, R., Kitzman, H., & Olds, D. L. (2005). Reducing the impact of uncontrollable stressful life events through a program of nurse home visitation for new parents. *Prevention Science*, *6*(4), 269–274.

- *Program model:* Nurse-Family Partnership (NFP)
- *Research design*: Randomized controlled trial

*Target population:* Pregnant, first-time mothers who were less than 25 weeks pregnant and were either under 19 years of age, unmarried, or had low socioeconomic status, as indicated by their Medicaid eligibility

Study location: Elmira, NY

## Exhibit 6. Summary of Study Details (Izzo et al., 2005)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Positive Parenting Practices						
Parenting practices - Hostility: Child Report of Parental Behavior Inventory (CRPBI)	The CRPBI is designed to assess parenting behavior based on child and	Unadjusted mean = 1.38	Unadjusted mean = 1.99	-0.61	HomVEE calculated = -1.22	
Follow-up at 15 years of age	parent reports					

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the ≤0.05 level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 5.** Kitzman, H., Olds, D. L., Henderson, C. R., Hanks, C., Cole, R., Tatelbaum, R., McConnochie, K. M., Sidora, K., Luckey, D. W., Shaver, D., Engelhardt, K., James, D., & Barnard, K. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing. A randomized controlled trial. *JAMA*, *278*(8), 644–652.

- *Program model:* Nurse-Family Partnership (NFP)
- *Research design*: Randomized controlled trial
- Target population:Pregnant women with no previous live births, no chronic illnesses linked to fetal growth retardation or preterm<br/>delivery, and at least 2 of the following sociodemographic characteristics: unmarried, less than 12 years of<br/>education, and unemployed

Study location: Memphis, TN

# Exhibit 7. Summary of Study Details (Kitzman et al., 1997)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Child Health							
Breastfeeding attempt Follow-up at 2 years postnatal	Percentage of mothers who had attempted breastfeeding	% (adjusted) = 26.00	Adjusted mean % = 16.00	OR = 1.90	HomVEE calculated = 0.37			
	Family E	conomic Self-Suf	ficiency					
Used other community service Follow-up at 36th week of pregnancy	Percentage of women who used other community services at 28 weeks gestation	% (adjusted) = 29.00	Adjusted mean % = 20.00	OR = 1.80	HomVEE calculated = 0.30			
		Maternal Health						
Number of yeast infections Follow-up at 36th week of pregnancy	Number of diagnosed yeast infections after mother was randomized to a treatment condition	Adjusted mean = 0.14	Adjusted mean = 0.19	-0.05	Not available			
Pregnancy-induced hypertension Follow-up at 36th week of pregnancy	Percentage of mothers with pregnancy-induced hypertension. The outcome includes cases of preeclampsia, eclampsia, toxemia, and pregnancy-induced hypertension	% (adjusted) = 13.00	Adjusted mean % = 20.00	OR = 0.60	HomVEE calculated = -0.31			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Pearlin Mastery Follow-up at 24 months postpartum	The Pearlin Mastery Scale assesses the degree to which a person has a sense of mastery or control over his or her life	Adjusted mean = 101.60	Adjusted mean = 99.40	2.20	Not available
Subsequent live birth Follow-up at 24 months postpartum	Percentage of mothers who had a subsequent live birth 0–24 months postpartum	% (adjusted) = 22.00	Adjusted mean % = 31.00	OR = 0.60	HomVEE calculated = -0.28
Subsequent pregnancy Follow-up at 24 months postpartum	Percentage of mothers who had a subsequent pregnancy 0–24 months postpartum	% (adjusted) = 36.00	Adjusted mean % = 47.00	OR = 0.60	HomVEE calculated = -0.28
	Positi	ive Parenting Prac	tices		
Home Observation for Measurement of the Environment (HOME) – emotional/cognitive stimulation Follow-up at 2 years postpartum	The HOME assesses parenting practices and aspects of the home environment	Adjusted mean = 32.30	Adjusted mean = 30.90	1.40	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Beliefs associated with child abuse – Adult Adolescent Parenting Inventory (AAPI; total score) Follow-up at 2 years postpartum	The AAPI assesses parenting and childrearing attitudes. The researchers examined the AAPI total score to measure beliefs associated with child abuse	Adjusted mean = 98.70	Adjusted mean = 100.50	-1.80	Not available
	Reduction	ons in Child Maltre	eatment		
Number of days hospitalized – injuries/ingestions Follow-up at 2 years postnatal	Counts of days child was hospitalized for injuries and poison ingestions	Adjusted mean = 0.04	Adjusted mean = 0.18	-0.14	Not available
Number of outpatient visits – injuries/ingestions Follow-up at 2 years postnatal	Counts of child outpatient visits for injuries and poison ingestions	Adjusted mean = 0.11	Adjusted mean = 0.20	-0.09	Not available
Total number of health care encounters – injuries/ingestions Follow-up at 2 years postnatal	Counts of child injuries and poison ingestions	Adjusted mean = 0.43	Adjusted mean = 0.56	-0.13	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

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**Study 6.** Kitzman, H., Olds, D. L., Sidora, K., Henderson, C. R., Hanks, C., Cole, R., Luckey, D. W., Bondy, J., Cole, K., & Glazner, J. (2000). Enduring effects of nurse home visitation on maternal life course: A 3-year follow-up of a randomized trial. *JAMA*, 283(15), 1983–1989.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant women with no previous live births, no chronic illnesses linked to fetal growth retardation or preterm delivery, and at least 2 of the following sociodemographic characteristics: unmarried, less than 12 years of education, and unemployed
Study location:	Memphis, TN

## Exhibit 8. Summary of Study Details (Kitzman et al., 2000)

#### Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Family	Economic Self-Suf	ficiency		
Living with father of child (percentage) Follow-up at 3 years	Percentage of mothers living with father of their child	% (adjusted) = 19.00	Adjusted mean % = 13.00	OR = 1.68	HomVEE calculated = 0.29
Living with partner (percentage) Follow-up at 3 years	Percentage of mothers living with their partner	% (adjusted) = 43.00	Adjusted mean % = 32.00	OR = 1.64	HomVEE calculated = 0.27

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Numbers of months current partner employed Follow-up at 3 years	Number of months mother's current partner was employed	Adjusted mean = 35.15	Adjusted mean = 26.45	8.70	Not available
Number of months mother or child received Aid to Families with Dependent Children (AFDC; 0–60 months postpartum) Follow-up at 3 years	Number of months mother received AFDC	Adjusted mean = 32.55	Adjusted mean = 36.19	-3.64	Not available
Number of months mother or child received food stamps (0–60 months postpartum) Follow-up at 3 years	Number of months mother received food stamps. The outcome was measured for the period of 0 to 60 months postpartum.	Adjusted mean = 41.57	Adjusted mean = 45.04	-3.47	Not available
		Maternal Health			
Number of months between birth or first and second child Follow-up at 3 years	Number of months between the birth of mother's first and second child	Adjusted mean = 30.25	Adjusted mean = 26.60	3.65	Not available
Number of subsequent pregnancies Follow-up at 3 years	Number of subsequent pregnancies experienced by mother	Adjusted mean = 1.15	Adjusted mean = 1.34	-0.19	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Number of subsequent pregnancies with short intervals (<6 months from previous delivery or termination)	Number of pregnancies for which conception occurred less than 6 months from previous delivery or termination	Adjusted mean = 0.22	Adjusted mean = 0.32	-0.10	Not available
Follow-up at 3 years					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 7.** Kitzman, H. J., Olds, D. L., Cole, R. E., Hanks, C. A., Anson, E. A., Arcoleo, K. J., Luckey, D. W., Knudtson, M. D., Henderson, C. R., & Holmberg, J. R. (2010). Enduring effects of prenatal and infancy home visiting by nurses on children: Follow-up of a randomized trial among children at age 12 years. *Archives of Pediatrics & Adolescent Medicine*, *164*(5), 412–418.

*Program model:* Nurse-Family Partnership (NFP)

*Research design*: Randomized controlled trial

*Target population:* African American women at fewer than 29 weeks of gestation, with no previous live births, and with at least 2 of the following sociodemographic risk characteristics: unmarried, fewer than 12 years of education, and unemployed

Study location: Memphis, TN

# Exhibit 9. Summary of Study Details (Kitzman et al., 2010)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Development and School Readiness								
Grade Point Average (GPA; reading and math; grades 1–6) Follow-up at 12 years of age	Reading and math end- of-year GPAs in grades 1 through 6 (score ranges from 0 to 4)	Mean = 2.46	Mean = 2.27	0.20	HomVEE calculated = 3.32			
GPA (reading and math; grades 4–6) Follow-up at 12 years of age	Reading and math end- of-year GPAs in grades 4 through 6 (score ranges from 0 to 4)	Mean = 2.27	Mean = 2.08	0.19	HomVEE calculated = 2.83			
Peabody Individual Achievement Test (PIAT) scores (reading and math) at 12 years old Follow-up at 12 years of age	PIAT assess reading, mathematics, and spelling ability in children	Mean = 88.78	Mean = 85.70	3.07	HomVEE calculated = 3.91			
Group achievement test scores (reading and math; grades 1– 6), percentile Follow-up at 12 years of age	Reading and math achievement score percentiles derived from the Tennessee Comprehensive Assessment Program test scores for grades 1 through 6	Mean = 40.52	Mean = 34.85	5.67	HomVEE calculated = 3.39			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Health								
Incidence of days of substance use in the past 30 days Follow-up at 12 years of age	Count of days of substance use (theoretical range, 0–90)	0.03	0.18	IR = 0.15	Not available			
Number of substances used in past 30 days Follow-up at 12 years of age	Count of substances used in past 30 days (0– 3)	0.02	0.08	IR = 0.06	Not available			
Used cigarettes, alcohol, or marijuana in past 30 days Follow-up at 12 years of age	Whether cigarettes, alcohol, or marijuana were used in past 30 days (yes or no)	% (adjusted) = 1.70	Adjusted mean % = 5.10	OR = 0.31	HomVEE calculated = -0.69			
	Reductions in Juvenile D	elinquency, Family	v Violence, and Crime	9				
Internalizing disorders Follow-up at 12 years of age	Internalizing behavioral problems scored from parents', teachers', and children's reports. Children were scored as positive whenever at least two of the three reporters gave the child a score in the borderline or clinical range.	% (adjusted) = 22.10	Adjusted mean % = 30.90	OR = 0.63	HomVEE calculated = -0.28			

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

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**Study 8.** Olds, D. L., Henderson, C. R., Jr., Tatelbaum, R., & Chamberlin, R. (1986). Improving the delivery of prenatal care and outcomes of pregnancy: A randomized trial of nurse home visitation. *Pediatrics*, 77(1),16–28.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were less than 30 weeks pregnant
Study location:	Elmira, NY

## Exhibit 10. Summary of Study Details (Olds, Henderson Jr., Tatelbaum, and Chamberlin, 1986) Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Family E	conomic Self-Suffi	ciency		
Number of nutritional supplementation vouchers Follow-up at 32 weeks gestation	Number of nutritional supplementation vouchers	Mean = 2.18	Mean = 1.56	0.62	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Maternal Health								
Change in average adequacy of diet (percentage Recommended Dietary Allowance) Follow-up from enrollment to 32 weeks gestation	Change from early to late pregnancy in reported average percentage of Recommended Dietary Allowance consumed by mothers	Mean = 4.14	Mean = -0.33	3.81	Not available				
Kidney infection (percentage) Follow-up from enrollment to delivery	Percentage of mothers who had diagnosed kidney infections	Mean % = 0.00	Mean % = 3.00	-3.00	Not available				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 9.** Olds, D. L., Henderson, C. R., Jr. Chamberlin, R., & Tatelbaum, R. (1986). Preventing child abuse and neglect: A randomized trial of nurse home visitation. *Pediatrics*, *78*, 65–78.

- *Program model:* Nurse-Family Partnership (NFP)
- *Research design*: Randomized controlled trial
- *Target population:* Pregnant women who were less than 19 years old, were single parents, or had low socioeconomic status

Study location: Elmira, NY

# Exhibit 11. Summary of Study Details (Olds, Henderson Jr., Chamberlin, and Tatelbaum, 1986) Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Health								
Mother-reported positive mood Follow-up at 6 months of age	Measure of the extent to which child had a happy, positive, and content disposition	Adjusted mean = 2.40	Adjusted mean = 2.29	0.11	Not available			
Number of emergency department visits (first year of life) Follow-up at 1 year of age	Total number of times infant was seen in the emergency department	Adjusted mean = 0.74	Adjusted mean = 1.02	-0.28	Not available			
Number of emergency department visits (second year of life) Follow-up at 2 years of age	Total number of times infant was seen in the emergency department	Adjusted mean = 0.74	Adjusted mean = 1.09	-0.35	Not available			
	Positi	ive Parenting Praction	ces					
Worry or concern (sum of positive responses for behavioral problems) Follow-up at 6 months of age	Sum of positive responses to behavioral problems, such as feeding difficulties and crying	Adjusted mean = 0.83	Adjusted mean = 0.54	0.29	Not available			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
Reductions in Child Maltreatment							
Number of emergency department visits for accidents and poisonings (second year of life)	Counts of emergency department visits for accidents and poisonings	Adjusted mean = 0.15	Adjusted mean = 0.34	-0.19	Not available		
Follow-up at 2 years of age							

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 10.** Olds, D. L., Henderson, C. R., & Kitzman, H. (1994). Does prenatal and infancy nurse home visitation have enduring effects on qualities of parental caregiving and child health at 25 to 50 months of life? *Pediatrics*, *93*(1), 89–98.

*Program model:* Nurse-Family Partnership (NFP)

*Research design*: Randomized controlled trial

*Target population:* Pregnant women who were less than 19 years old, were single parents, or had low socioeconomic status

Study location: Elmira, NY

# Exhibit 12. Summary of Study Details (Olds et al., 1994)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
Number of child behavioral/parental coping problems in physician's record (25–50 months of age) Follow-up at 50 months of	Number of child behavioral and parental coping problems noted in physician's record	Adjusted mean = 0.39	Adjusted mean = 0.71	-0.32	Not available
age					
Number of emergency department visits (25–50 months of age)	Total number of emergency department encounters	Adjusted mean = 1.00	Adjusted mean = 1.53	-0.53	Not available
Follow-up at 50 months of age					
	Pos	itive Parenting Pract	ices		
Hazardous exposures observed in home Follow-up at 34 months of age	Checklist indicating the degree of child's exposure to the following categories of household hazards: (1) chipped or flaking paint, (2) sharp objects, (3) danger of burns, and (4) objects that pose a risk for falls	Adjusted mean = 0.22	Adjusted mean = 0.38	-0.16	Not available

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Hazardous exposures observed in home Follow-up at 46 months of age	Checklist indicating the degree of child's exposure to the following categories of household hazards: (1) chipped or flaking paint, (2) sharp objects, (3) danger of burns, and (4) objects that pose a risk for falls	Adjusted mean = 0.21	Adjusted mean = 0.46	-0.25	Not available
	Reduc	tions in Child Maltre	atment		
Number of injuries/ingestions in physician's record (25–50 months of age) Follow-up at 50 months of age	Counts of injuries and poison ingestions in physician's records	Adjusted mean = 0.34	Adjusted mean = 0.57	-0.23	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 11.** Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L. M., & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow-up of a randomized trial. *JAMA*, *278*(8), 637–643.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were less than 25 weeks pregnant, were less than 19 years old, were single parents, or had low socioeconomic status
Study location:	Elmira, NY

### Exhibit 13. Summary of Study Details (Olds et al., 1997)

Nurse-Family Partnership (NFP)

Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Reductions in Child Maltreatment							
Incidence of substantiated reports of child abuse or neglect	Adjusted mean = 0.29	Adjusted mean = 0.54	-0.25	Not available			
	Redu Incidence of substantiated reports of	Reductions in Child Malt   Incidence of Adjusted mean =   substantiated reports of 0.29	Reductions in Child MaltreatmentIncidence of substantiated reports ofAdjusted mean = 0.29Adjusted mean = 0.54	Reductions in Child Maltreatment   Incidence of substantiated reports of Adjusted mean = 0.25   0.29 0.54			

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

**Study 12.** Olds, D. L., Henderson, C. R., Cole, R., Eckenrode, J., Kitzman, H., Luckey, D., Pettitt, L., Sidora, K., Morris, P., & Powers, J. (1998). Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *JAMA*, *280*(14), 1238–1244.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were less than 30 weeks pregnant
Study location:	Elmira, NY

#### Exhibit 14. Summary of Study Details (Olds et al., 1998)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
	Reductions in Juvenile Delinquency, Family Violence, and Crime						
Incidence – convictions and probation violations Follow-up at 15 years of age	Number of times youth had been convicted of original crime or parole violation up to his or her 15th year	Adjusted mean = 0.10	Adjusted mean = 0.27	-0.17	Not available		
Incidence – arrests (self- report) Follow-up at 15 years of age	Number of times youth had been arrested up to his or her 15th year	Adjusted mean = 0.16	Adjusted mean = 0.36	-0.20	Not available		

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Incidence – convictions and	Number of times youth	Adjusted mean =	Adjusted mean =	-0.21	Not
probation violations (self-	had been convicted of	0.06	0.27		available
report)	original crime or parole				
	violation up to his or her				
Follow-up at 15 years of age	15th year				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

Study 13. Olds, D. L., Robinson, J., O'Brien, R., Luckey, D. W., Pettitt, L. M., Henderson, C. R., Ng, R. K., Sheff, K. L., Korfmacher, J.,

Hiatt, S., & Talmi, A. (2002). Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. *Pediatrics, 110*(3), 486–496.

- *Program model:* Nurse-Family Partnership (NFP)
- Research design: Randomized controlled trial

*Target population:* Pregnant women who had no previous live births and either qualified for Medicaid or had no private health insurance

*Study location:* Denver, CO, metropolitan area

# Exhibit 15. Summary of Study Details (Olds et al., 2002)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Child Development and School Readiness						
Bayley Scales of Infant and Toddler Development (BSID) – mental development index Follow-up at 24 months of age	The mental development index of the BSID assesses the cognitive functioning of young children	Adjusted mean = 90.18	Adjusted mean = 86.20	3.98	Not available	
Preschool Language Scale-3 (PLS-3; language delay) Follow-up at 21 months of age	The PLS-3 assesses expressive and receptive language skills in young children	0.07	0.18	OR = 0.32	HomVEE calculated = -0.65	
PLS-3 (language development) Follow-up at 21 months of age	The PLS-3 assesses expressive and receptive language skills in young children	Adjusted mean = 101.52	Adjusted mean = 96.85	4.67	Not available	
Infant low vitality: anger stimuli (video coding) among mothers with low psychological resources Follow-up at 6-months of age	Children's emotional reactivity and looking at mother were videotaped and coded separately for their responses to stimuli designed to elicit fear, joy, and anger	0.13	0.32	OR = 0.33	HomVEE calculated = -0.31	

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Infant low vitality: joy stimuli (video coding) among mothers with low psychological resources Follow-up at 6 months of age	Children's emotional reactivity and looking at mother were videotaped and coded separately for their responses to stimuli designed to elicit fear, joy, and anger	0.24	0.40	OR = 0.46	HomVEE calculated = -0.45	
PLS-3 (language delay) Follow-up at 21 months of age	The PLS-3 assesses expressive and receptive language skills in young children	% (adjusted) = 6.00	Adjusted mean % = 12.00	OR = 0.48	HomVEE calculated = -0.45	
Infant vulnerability: fear stimuli (video coding) Follow-up at 6 months of age	Children's emotional reactivity and looking at mother were videotaped and coded separately for their responses to stimuli designed to elicit fear, joy, and anger	% (adjusted) = 16.00	Adjusted mean % = 25.00	OR = 0.57	HomVEE calculated = -0.34	
Family Economic Self-Sufficiency						
Months employed (13–24 months postpartum) Follow-up at 24 months of age	Number of months mother was employed. The outcome was measured for the periods of 1 to 12 months postpartum and 13 to 24 months postpartum.	Adjusted mean = 6.87	Adjusted mean = 5.73	1.14	Not available	

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>	
Maternal Health						
Subsequent birth Follow-up at 24 months postpartum	Number of subsequent births experienced by mother	% (adjusted) = 12.00	Adjusted mean % = 19.00	OR = 0.58	HomVEE calculated = -0.33	
Subsequent pregnancy Follow-up at 24 months postpartum	Number of subsequent pregnancies experienced by mother	% (adjusted) = 29.00	Adjusted mean % = 41.00	OR = 0.60	HomVEE calculated = -0.32	
	Positiv	ve Parenting Pract	ices			
Mother-infant responsive interaction Follow-up at 24 months of age	Subscale scores were factor analyzed and identified a single internally consistent principal component, responsive interaction, which was standardized to a mean of 100 and a standard deviation of 10.	Adjusted mean = 100.31	Adjusted mean = 98.99	1.32	Not available	

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.
**Study 14.** Olds, D. L., Robinson, J., Pettitt, L., Luckey, D. W., Holmberg, J., Ng, R. K., Isacks, K., Sheff, K., & Henderson, C. R. (2004). Effects of home visits by paraprofessionals and by nurses: Age 4 follow-up results of a randomized trial. *Pediatrics, 114*(6), 1560–1568.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant women who had no previous live births and either qualified for Medicaid or had no private health insurance
Study location:	Denver, CO, metropolitan area

# Exhibit 16. Summary of Study Details (Olds, Robinson, et al., 2004)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	pment and School	Readiness		
Total language score among mothers with low psychological resources – nurse home visitors sample	The PLS-3 assesses expressive and receptive language skills in young children.	Adjusted mean = 91.39	Adjusted mean = 86.73	4.66	Study reported = 0.31
Follow-up at 4 years of age					

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Behavioral adaptation in testing among mothers with low psychological resources – nurse home visitors sample Follow-up at 4 years of age	Assessments of children's ability to regulate their behavior and emotions were analyzed using principal components analysis to produce two scales: (1) behavioral adaptation (attention, activity level, organization of behavior/impulse control, and sociability); and (2) emotional regulation (anxiety, energy and feelings, regulation of mood, and sensory reactivity).	Adjusted mean = 100.41	Adjusted mean = 96.66	3.75	Study reported = 0.38
Executive function composite among mothers with low psychological resources – nurse home visitors sample Follow-up at 4 years of age	Assessments of a series of cognitive tasks focusing primarily on the children's capacity for sustained attention and inhibitory control were coded and analyzed using principal components analysis to produce a single composite index labeled as "executive functions"	Adjusted mean = 100.16	Adjusted mean = 95.48	4.68	Study reported = 0.47
		Child Health			
Subsequent low birth weight newborns among paraprofessional home visitor sample Follow-up at 4 years of age	Rate of subsequent low birth weight newborns per subsequent births after completion of program	0.03	0.08	OR = 0.34	HomVEE calculated = -0.64

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Family Economic Self-Sufficiency								
Lives with father of child among paraprofessional home visitor sample Follow-up at 4 years of age	Percentage of mothers who lived with father of study's focal child	0.33	= 0.43	OR = 0.64	HomVEE calculated = -0.27				
Months mother employed (25–48 months postpartum) among paraprofessional home visitor sample	Number of months mother was employed	Adjusted mean = 15.13	Adjusted mean = 13.38	1.75	Study reported = 0.11				
		Maternal Health							
Months between births of first and second children at 4-year follow-up among nurse home visitor sample Follow-up at 4 years of age	Number of months between birth of mother's first and second child	Adjusted mean = 24.51	Adjusted mean = 20.39	4.12	Study reported = 0.32				

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Mental Health Inventory (MHI) among paraprofessional home visitor sample Follow-up at 4 years of age	The MHI assesses mental health in the areas of anxiety, depression, behavior, positive affect, and general distress	Adjusted mean = 101.20	Adjusted mean = 99.16	0.66	Study reported = -0.03
Pearlin Mastery Scale among paraprofessional home visitor sample Follow-up at 4 years of age	The Pearlin Mastery Scale assesses the degree to which a person has a sense of mastery or control over his or her life	Adjusted mean = 101.20	Adjusted mean = 99.31	1.94	Study reported = 0.20
Subsequent miscarriage among paraprofessional home visitor sample Follow-up at 4 years of	Rate of miscarriage per subsequent pregnancy experienced by mothers	0.07	0.12	OR = 0.50	HomVEE calculated = -0.42
age	Positiv	ve Parenting Pract	ices		
Sensitive/responsive interaction among paraprofessional home visitor sample Follow-up at 4 years of age	Mother-child interaction during free play was coded and subsequently analyzed using principal components analysis to derive a single factor for sensitive/responsive interaction	Adjusted mean = 100.92	Adjusted mean = 98.66	2.26	Study reported = 0.23

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
	Reductions in Juvenile Delinquency, Family Violence, and Crime							
Any domestic violence (past 6 months) among nurse home visitor sample	Whether the mother had experienced physical violence from any of her partners during previous 6 months	0.07	0.14	OR = 0.47	HomVEE calculated = -0.46			
Follow-up at 4 years of age								

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 15.** Olds, D. L., Kitzman, H., Cole, R., Robinson, J., Sidora, K., Luckey, D. W., Henderson, C. R., Hanks, C., Bondy, J., & Holmberg, J. (2004). Effects of nurse home-visiting on maternal life course and child development: Age 6 follow-up results of a randomized trial. *Pediatrics, 114*(6), 1550–1559.

- *Program model:* Nurse-Family Partnership (NFP)
- *Research design*: Randomized controlled trial
- *Target population:* Pregnant, first-time mothers who were less than 25 weeks pregnant

Study location: Memphis, TN

# Exhibit 17. Summary of Study Details (Olds, Kitzman, et al., 2004)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Child Development and School Readiness								
Kaufman Assessment Battery for Children (KABC) arithmetic achievement Follow-up at 6 years of age	The KABC assesses achievement and intelligence in young children	Adjusted mean = 88.61	Adjusted mean = 85.42	3.19	Study reported = 0.25				
KABC mental processing composite (arithmetic and reading) Follow-up at 6 years of age	The KABC assesses achievement and intelligence in young children	Adjusted mean = 90.49	Adjusted mean = 87.64	2.85	Study reported = 0.25				
McArthur Story Stem Battery (MSSB; dysregulated aggression index) Follow-up at 6 years of age	Children's responses to eight story stems were videotaped and coded for a series of content themes, observable affective expressions, and coherence in completing the stories	Adjusted mean = 98.58	Adjusted mean = 101.10	-2.52	Study reported = -0.25				

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
MSSB (percentage incoherent stories) Follow-up at 6 years of age	Children's responses to eight story stems were videotaped and coded for a series of content themes, observable affective expressions, and coherence in completing the stories	Adjusted mean = 20.90	Adjusted mean = 29.84	-8.94	Study reported = -0.34
Achenbach Child Behavior Checklist (CBCL; total problems) Follow-up at 6 years of age	The CBCL is a questionnaire that assesses behavioral problems in young children. The researchers used the assessment to examine the aggregate internalizing and externalizing problems of the child.	% (adjusted) = 2.00	Adjusted mean % = 5.00	OR = 0.32	HomVEE calculated = -0.37
KABC mental processing composite (arithmetic and reading) Follow-up at 6 years of age	The KABC assesses achievement and intelligence in young children	Adjusted mean = 92.34	Adjusted mean = 90.24	2.10	Study reported = 0.18
Peabody Picture Vocabulary Test-III (PPVT- III) receptive vocabulary Follow-up at 6 years of age	The PPVT-III assesses receptive vocabulary for Standard American English in young children	Adjusted mean = 84.32	Adjusted mean = 82.13	2.19	Study reported = 0.17

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Child attended Head Start, preschool, day care, or early intervention, aged 24–54 months	Percentage of children who attended Head Start, preschool, day care, or an early intervention	% (adjusted) = 82.00	Adjusted mean % = 75.00	OR = 1.53	HomVEE calculated = 0.26
Follow-up at 6 years of age					
	Family	Economic Self-Suffi	ciency		
Months of Aid to Families with Dependent Children (AFDC; 54–72 months postpartum) Follow-up at 6 years of age	Number of months mother received AFDC	Adjusted mean = 7.21	Adjusted mean = 8.96	-1.75	Study reported = -0.22
Months of food stamps (54–72 months postpartum) Follow-up at 6 years of age	Number of months mother received food stamps	Adjusted mean = 9.67	Adjusted mean = 11.50	-1.83	Study reported = -0.24
Months with current partner Follow-up at 6 years of age	Number of months mother had been in a relationship with current partner	Adjusted mean = 54.36	Adjusted mean = 45.00	9.36	Study reported = 0.24
		Maternal Health			
Months between births of first and second children Follow-up at 6 years of age	Number of months between birth of mother's first and second child	Adjusted mean = 34.38	Adjusted mean = 30.23	4.15	Study reported = 0.26

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Number of subsequent children (birth–72 months postpartum)	Number of subsequent children born to mother	Adjusted mean = 1.08	Adjusted mean = 1.28	-0.20	Study reported = -0.22
Follow-up at 6 years of age					
Number of subsequent pregnancies (birth–72 months postpartum)	Number of subsequent pregnancies experienced by mother	Adjusted mean = 1.16	Adjusted mean = 1.38	-0.22	Study reported = -0.22
Follow-up at 6 years of age					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 16.** Olds, D. L., Kitzman, H., Hanks, C., Cole, R., Anson, E., Sidora-Arcoleo, K., Luckey, D. W., Henderson, C. R., Holmberg, J., Tutt, R. A., Stevenson, A. J., & Bondy, J. (2007). Effects of nurse home visiting on maternal and child functioning: Age-9 follow-up of a randomized trial. *Pediatrics, 120*(4), e832–e845.

- *Program model:* Nurse-Family Partnership (NFP)
- *Research design*: Randomized controlled trial
- *Target population:* Pregnant, first-time mothers who were less than 29 weeks pregnant
- *Study location:* Memphis, TN

# Exhibit 18. Summary of Study Details (Olds et al., 2007)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>			
Child Development and School Readiness								
Achievement tests (reading and math, grades 1–3) Follow-up at 9 years of age	Scores received on achievement tests (primarily the Tennessee Comprehensive Assessment Program Achievement Test) during grades 1 to 3	Adjusted mean = 44.89	Adjusted mean = 35.72	9.17	Study reported = 0.33			
Grade Point Average (reading and math, grades 1–3) Follow-up at 9 years of age	Grades received in math and reading during grades 1 to 3	Adjusted mean = 2.68	Adjusted mean = 2.44	0.24	Study reported = 0.22			
	Family E	conomic Self-Suffi	ciency					
Number of months on Temporary Assistance for Needy Families (TANF) per year (0–9 years postpartum) Follow-up at 9 years of age	Number of months per year mother received Aid to Families with Dependent Children or TANF	Adjusted mean = 5.21	Adjusted mean = 5.92	-0.71	Study reported = -0.14			
Number of months on food stamps per year (0–9 years postpartum) Follow-up at 9 years of age	Number of months per year mother received food stamps	Adjusted mean = 6.98	Adjusted mean = 7.80	-0.82	Study reported = -0.17			

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Number of months on food stamps per year (6–9 years postpartum) Follow-up at 9 years of age	Number of months per year mother received food stamps	Adjusted mean = 4.89	Adjusted mean = 5.92	-1.03	Study reported = -0.21
Number of months with current partner (at 6 and 9 years postpartum) Follow-up at 9 years of age	Number of months mother had been in relationship with current partner	Adjusted mean = 51.89	Adjusted mean = 44.48	7.41	Study reported = 0.23
Number of months with current partner (at 9 years postpartum) Follow-up at 9 years of age	Number of months mother had been in relationship with current partner	Adjusted mean = 61.59	Adjusted mean = 52.40	9.19	Study reported = 0.28
Number of months with employed partner (at 6 and 9 years postpartum) Follow-up at 9 years of age	Number of months mother had been in relationship with an employed partner	Adjusted mean = 46.04	Adjusted mean = 38.43	7.61	Study reported =0.25
Number of months with employed partner (at 9 years postpartum) Follow-up at 9 years of age	Number of months mother had been in relationship with an employed partner	Adjusted mean = 54.95	Adjusted mean = 46.01	8.94	Study reported = 0.30

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Maternal Health								
Cumulative subsequent live births per year (0–9 years postpartum) Follow-up at 9 years of age	Rate of subsequent births per year experienced by mothers	Adjusted mean = 0.81	Adjusted mean = 0.93	-0.12	Study reported = -0.14				
Number of months between birth of first and second child Follow-up at 9 years of age	Number of months between birth of mother's first and second child	Adjusted mean = 40.73	Adjusted mean = 34.09	6.64	Study reported = 0.29				
Pearlin Mastery Scale (6 months–9 years postpartum) Follow-up at 9 years of age	The Pearlin Mastery Scale assesses the degree to which a person has a sense of mastery or control over his or her life	Adjusted mean = 101.00	Adjusted mean = 99.50	1.53	Study reported = 0.15				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 17.** Olds, D. L., Kitzman, H. J., Cole, R. E., Hanks, C. A., Arcoleo, K. J., Anson, E. A., Luckey, D. W., Knudtson, M. D., Henderson, C. R., Bondy, J., & Stevenson, A. J. (2010). Enduring effects of prenatal and infancy home visiting by nurses on maternal life course and government spending: Follow-up of a randomized trial among children at age 12 years. *Archives of Pediatrics & Adolescent Medicine*, *164*(5), 419–424.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were less than 29 weeks pregnant
Study location:	Memphis, TN

#### Exhibit 19. Summary of Study Details (Olds et al., 2010)

#### Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>				
	Family Economic Self-Sufficiency								
Use of Aid to Families with Dependent Children and Temporary Assistance for Needy Families (AFDC- TANF) Follow-up at 12 years of age	Number of months per year mother used AFDC- TANF from birth through child's 12th birthday	Adjusted mean = 4.97	Adjusted mean = 5.47	-0.50	HomVEE calculated = -3.03				
Duration of current partner relationship at 6, 9, and 12 years Follow-up at 12 years of age	Number of months mother has been in relationship with current partner	Adjusted mean = 59.58	Adjusted mean = 52.67	6.91	HomVEE calculated = 3.55				

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Use of food stamps Follow-up at 12 years of age	Number of months per year mother received food stamps from birth through child's 12th birthday	Adjusted mean = 6.27	Adjusted mean = 6.86	-0.59	HomVEE calculated = -3.90
		Maternal Health			
Pearlin Mastery Scale Follow-up at 12 years of age	The Pearlin Mastery Scale assesses the degree to which a person has a sense of mastery or control over his or her life	Adjusted mean = 101.04	Adjusted mean = 99.60	1.44	HomVEE calculated = 4.30
Role impairment resulting from alcohol or drug use Follow-up at 12 years of age	Percentage of mothers who experienced any impairment in role functioning (at work, with friends, or with family members) because of use of alcohol and other drugs since the last interview at child's 9th birthday	% (adjusted) = 0.00	Adjusted mean % = 3.00	Difference = -0.03	Not available

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 18.** Olds, D. L., Holmberg, J. R., Donelan-McCall, N., Luckey, D. W., Knudtson, M. D., & Robinson, J. (2014). Effects of home visits by paraprofessionals and by nurses on children: Age-six and nine follow-up of a randomized trial. *JAMA Pediatrics, 168*(2), 114–121.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant women who were eligible for Medicaid or were uninsured and had no previous live births
Study location:	Denver, CO

#### Exhibit 20. Summary of Study Details (Olds, Holmberg, et al., 2014)

## Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develop	ment and School I	Readiness		
Any therapeutic services – 6- year, low psych resources, Follow-up at 6 years of age	Parental report on whether child ever received therapeutic services for any of the following: speech and language, cognitive delays, attention deficit and hyperactivity, or emotional problems	Unadjusted mean = 0.17	Unadjusted mean = 0.36	-0.19	HomVEE calculated = -0.63
Receptive language – averaged over 2, 4, and 6 years, low psych resources, treatment 1 versus 3 Follow-up at 6 years of age	Average score on Peabody Picture Vocabulary Test (PPVT- III), which assesses receptive vocabulary for Standard American English in young children	Adjusted mean = 92.96	Adjusted mean = 89.01	3.95	Study reported =0.30

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Sustained attention – 6-year, low psych resources, treatment 1 versus 3 Follow-up at 6 years of age	Average score on Leiter Sustained Attention Scale, which assesses skills in memory or attention in children	Adjusted mean = 9.28	Adjusted mean = 8.32	0.96	Study reported = 0.33
Sustained attention – averaged over 4, 6, and 9 years, low psych resources, treatment 1 versus 3 Follow-up at 9 years of age	Average score on Leiter Sustained Attention Scale, which assesses skills in memory or attention in children	Adjusted mean = 9.83	Adjusted mean = 8.80	1.03	Study reported = 0.36
Behavioral regulation in testing – 6-year, low psych resources, treatment 1 versus 2 Follow-up at 6 years of age	Based on ratings from child evaluators	Adjusted mean = 99.89	Adjusted mean = 97.16	2.73	Study reported = 0.32
Dysregulated aggression – 6- year, low psych resources, treatment 1 versus 2 Follow-up at 6 years of age	Average dysregulated aggression index based on coded children's responses to the MacArthur Story Stem Battery	Adjusted mean = 99.34	Adjusted mean = 103.26	-3.92	Study reported = -0.36

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Percent incoherent stories – 6- year, low psych resources, treatment 1 versus 2	Average score on percentage of incoherent story completion, based on coded children's	Adjusted mean = 49.94	Adjusted mean = 65.63	-15.69	Study reported = -0.50
Follow-up at 6 years of age	responses to the MacArthur Story Stem Battery				

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 19.** Olds, D. L., Kitzman, H., Knudtson, M. D., Anson, E., Smith, J. A., & Cole, R. (2014). Effect of home visiting by nurses on maternal and child mortality: Results of a 2-decade follow-up of a randomized clinical trial. *JAMA Pediatrics, 168*(9), 800–806.

Program model:	Nurse-Family	Partnership	(NFP)	

- *Research design*: Randomized controlled trial
- *Target population:* Pregnant women with no previous live births, no chronic illnesses linked to fetal growth retardation or preterm delivery, and at least 2 of the following sociodemographic characteristics: unmarried, less than 12 years of education, and unemployed

Study location: Memphis, TN

# Exhibit 21. Summary of Study Details (Olds, Kitzman, et al., 2014)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
		Child Health			
20-year child mortality rate – preventable causes (nurse home visits during pregnancy and infancy versus developmental screening comparison)	Percentage of children dying from preventable causes (SIDS, unintentional injury, homicide)	Unadjusted mean = 0.00	Unadjusted mean = 0.02	-0.02	Not available
Secondary data review of administrative records					
		Maternal Health			
21-year maternal mortality rate – all causes (nurse home visits during pregnancy and infancy versus transport to prenatal appointment comparison) Secondary data review of administrative records	Percentage of mothers dying from any cause	Unadjusted mean = 0.01	Unadjusted mean = 0.04	-0.03	HomVEE calculated = -0.69
21-year maternal mortality rate – external causes (nurse home visits during pregnancy and infancy versus transport to prenatal appointment comparison) Secondary data review of administrative records	Percentage of mothers dying from external causes (including drug overdose, suicide, unintentional injuries, and homicide)	Unadjusted mean = 0.00	Unadjusted mean = 0.02	-0.01	HomVEE calculated = -1.22

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
21-year maternal mortality rate – all causes (nurse home visits during pregnancy plus 2 postpartum visits versus transport to prenatal appointment comparison)	Percentage of mothers dying from any cause	Unadjusted mean = 0.00	Unadjusted mean = 0.04	-0.04	HomVEE calculated = -1.41
Secondary data review of administrative records					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website

**Study 20.** Sidora-Arcoleo, K., Anson, E., Lorber, M., Cole, R., Olds, D., & Kitzman, H. (2010). Differential effects of a nurse home-visiting intervention on physically aggressive behavior in children. *Journal of Pediatric Nursing*, *25*(1), 35–45.

*Program model:* Nurse-Family Partnership (NFP)

*Research design*: Randomized controlled trial

Target population:Pregnant women who were less than 29 weeks pregnant, had no previous live births, and had none of a specified<br/>list of chronic illnesses and met 2 or more of the following criteria: unmarried, less than 12 years of education, and<br/>unemployed

Study location: Memphis, TN

## Exhibit 22. Summary of Study Details (Sidora-Arcoleo et al., 2010)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	opment and School	Readiness		
Physical aggression	The Child Behavior Checklist (CBCL) assesses behavioral and emotional problems in young children.	Not reported	Not reported	Not reported	HomVEE calculated = -0.21
Follow-up at 2 years of age	Researchers assessed physical aggression using three items from the aggression subscale of the CBCL for children ages 2–3 years: physically attacks others, hits others, and gets into fights.				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website

**Study 21.** Zielinski, D. S., Eckenrode, J., & Olds, D. L. (2009). Nurse home visitation and the prevention of child maltreatment: Impact on the timing of official reports. *Development and Psychopathology, 21*(2), 441–453.

Program model:	Nurse-Family Partnership (NFP)
Research design:	Randomized controlled trial
Target population:	Pregnant, first-time mothers who were less than 30 weeks pregnant
Study location:	Memphis, TN

## Exhibit 23. Summary of Study Details (Zielinski et al., 2009)

Nurse-Family Partnership (NFP)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Reduc	tions in Child Mal	reatment		
Onset of neglect	Age at which child first received a verified Child	Not available	Not available	Hazard ratio = 0.59	Not available
Follow-up at 15 years of age	Protective Services report of neglect				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website

# Play and Learning Strategies (PALS) Infant

Three studies with a high HomVEE rating were reviewed for PALS Infant. The studies achieved favorable results in two domains: child development and school readiness, and positive parenting practices (see Exhibit 1).

# Exhibit 1. Play and Learning Strategies (PALS) Infant: Overview of Statistically Significant Findings Across Studies

#### Outcomes Favoring Home Visiting, by Domain

Outcome	(Landry et al., 2006)	(Landry et al., 2008)	(Landry et al., 2012)				
Child D	Child Development and School Readiness						
Negative affect (infant displayed signs of irritation)	•						
Receptive vocabulary		•					
Cooperation (child attempted to respond to his or her mother's request for an action or verbalization)		•					
Social engagement (degree to which the child tried to positively engage his or her mother using verbal and nonverbal communication)		•					
Use of words		•					
Engagement in activity			•				
Asking questions and requests to learn more			•				
	Positive Parenting Practices						
Contingent responsiveness	•	•					

Outcome	(Landry et al., 2006)	(Landry et al., 2008)	(Landry et al., 2012)
Harshness of voice tone	•		
Labeling actions	•		
Labeling objects	•		
Physical intrusiveness	•		
Redirecting infant foci of attention	•	•	
Verbal encouragement	•		
Verbal scaffolding	•		
Warm sensitivity	•	•	
Maintaining child foci		•	
Mother praised her infant's efforts		•	
Mother asked open-ended questions or made requests that required the child to think more generally			•

Individual study details are provided below.

**Study 1.** Landry, S. H., Smith, K. E., & Swank, P. R. (2006). Responsive parenting: Establishing early foundations for social, communication, and independent problem-solving skills. *Developmental Psychology*, *42*(4), 627–642.

- Program model: Play and Learning Strategies (PALS) Infant
- *Research design*: Randomized controlled trial
- *Target population:* Mother-infant pairs were recruited from hospitals serving families from lower-income backgrounds.

*Study location:* Houston-Galveston, TX, area

# Exhibit 2. Summary of Study Details (Landry et al., 2006)

Play and Learning Strategies (PALS) Infant

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>		
	Child Development and School Readiness						
Negative affect (with examiner) Follow-up at 12 months	The frequency with which an infant displayed signs of irritation such as whining, fussing, and crying when interacting with the examiner	Coefficient = -0.07	Coefficient = 0.28	Not reported	Study reported = 0.70		
	Positiv	ve Parenting Pract	ices				
Contingent responsiveness Follow-up at 12 months	Degree to which mother responded promptly and appropriately to her infant's cues, rated on a 5-point scale.	Coefficient = 0.77	Coefficient = 0.99	Not reported	Study reported = 0.93		
Harshness of voice tone Follow-up at 12 months	Degree to which mother used a harsh and/or impatient tone with her infant, rated on a 5- point scale	Coefficient = 0.07	Coefficient = 0.12	Not reported	Study reported = 0.28		
Labeling actions Follow-up at 12 months	Frequency with which mother provided the specific names of actions during the interaction	Coefficient = -8.94	Coefficient = -9.20	Not reported	Study reported = 0.63		
Labeling objects Follow-up at 12 months	Frequency with which mother provided the specific names of objects during the interaction	Coefficient = -5.47	Coefficient = -5.86	Not reported	Study reported = 0.71		

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Physical intrusiveness Follow-up at 12 months	Degree of abruptness in physical interactions such as moving the infant, and physical expressions of impatience	Coefficient = 0.44	Coefficient = 0.51	Not reported	Study reported = 0.50
Redirecting infant foci of attention Follow-up at 12 months	Frequency with which mother's interaction was unrelated to her child's current activity in an attempt to redirect the child's attention	Coefficient = 1.14	Coefficient = 1.57	Not reported	Study reported = 1.31
Verbal encouragement Follow-up at 12 months	Frequency with which mother praised her infant's efforts	Coefficient = 0.67	Coefficient = 0.24	Not reported	Study reported = 0.71
Verbal scaffolding Follow-up at 12 months	Frequency with which mother provided verbal hints and prompts	Coefficient = 0.41	Coefficient = -0.08	Not reported	Study reported = 0.79
Warm sensitivity Follow-up at 12 months	Degree to which mother was warm and sensitive in her interactions with her infant (e.g., accepting of the infant's needs and interests), rated on a 5-point scale	Coefficient = 0.74	Coefficient = 0.90	Not reported	Study reported = 0.49

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 2.** Landry, S. H., Smith, K. E., Swank, P. R., & Guttentag, C. (2008). A responsive parenting intervention: The optimal timing across early childhood for impacting maternal behaviors and child outcomes. *Developmental Psychology*, *44*(5), 1335–1353.

Program model:	Play and Learning Strategies (PALS) Infant
Research design:	Randomized controlled trial
Target population:	Mother-infant pairs were recruited from hospitals serving families from lower-income backgrounds.
Study location:	Houston-Galveston, TX, area

#### Exhibit 3. Summary of Study Details (Landry et al., 2008)

## Play and Learning Strategies (PALS) Infant

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develop	oment and School	Readiness		
Peabody Picture Vocabulary Test-Third Edition (PPVT-III) receptive vocabulary Follow-up at 3 months after program end	The PPVT-III assesses an individual's receptive language skills.	Growth curve coefficient = -0.37	Not applicable	Not reported	Study reported = 0.36
Cooperation Follow-up at 3 months after program end	Frequency with which child attempted to respond to his or her mother's request for an action or verbalization	Growth curve coefficient = -0.38	Not applicable	Not reported	Study reported = 0.30

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Social engagement Follow-up at 3 months after program end	Degree to which child tried to positively engage his or her mother using verbal and nonverbal communication, coded on a 5-point scale	Growth curve coefficient = -0.44	Not applicable	Not reported	Study reported = 0.32
Use of words Follow-up at 3 months after program end	Frequency with which child communicated verbally with his or her mother during the interaction. Communication included single utterance sound; babbling with sentence- like intonation; and word approximation (single words, two- to three-word phrases, four- to five-word phrases, and six- or more- word phrases).	Growth curve coefficient = -0.42	Not applicable	Not reported	Study reported = 0.37
	Positiv	ve Parenting Pract	ices		
Maintaining child foci Follow-up at 3 months after program end	Frequency with which mother's behavior helped sustain her child's current activity	Growth curve coefficient = -0.06	Not applicable	Not reported	Study reported = 0.32

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Warm sensitivity Follow-up at 3 months after program end	Degree to which mother was warm and sensitive in her interactions with her infant (e.g., accepting of the infant's needs and interests), rated on a 5- point scale	Growth curve coefficient = -0.35	Not applicable	Not reported	Study reported = 0.29
Contingent responsiveness Follow-up at 3 months after program end	Degree to which mother responded promptly and appropriately to her infant's cues, rated on a 5- point scale	Growth curve coefficient = 0.64	Not applicable	Not reported	Study reported = 0.51
Redirecting child foci Follow-up at 3 months after program end	Frequency with which mother's interaction was unrelated to her child's current activity in an attempt to redirect the child's attention	Growth curve coefficient = -0.61	Not applicable	Not reported	Study reported = 0.39
Verbal encouragement Follow-up at 3 months after program end	Frequency with which mother praised her infant's efforts	Growth curve coefficient = -0.41	Not applicable	Not reported	Study reported = 0.25

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 3.** Landry, S. H., Smith, K. E., Swank, P. R., Zucker, T., Crawford, A. D., & Solari, E. F. (2012). The effects of a responsive parenting intervention on parent-child interactions during shared book reading. *Developmental Psychology*, *48*(4), 969–986.

Program model:	Play and Learning Strategies (PALS) Infant
Research design:	Randomized controlled trial
Target population:	Mother-infant pairs were recruited from hospitals serving families from lower-income backgrounds.
Study location:	Houston-Galveston (Texas) area

### Exhibit 4. Summary of Study Details (Landry et al., 2012)

Play and Learning Strategies (PALS) Infant

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develop	ment and School F	Readiness		
Engagement in activity Follow-up at 3 months after program end	Amount of time in which child actively participated in book reading activity	Coeff = 0.08	Not applicable	Not reported	Not available
Questions and requests Follow-up at 3 months after program end	Frequency with which child requested his or her mother identify a picture or asked his or her mother a more sophisticated question, such as "What is he doing?"	Coeff = -0.57	Not applicable	Not reported	Study reported = 0.16

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Positive	e Parenting Practic	ces		
Open prompts Follow-up at 3 months after program end	Frequency with which mother asked open-ended questions or made requests that required child to think more generally about what was happening in the story	Coeff = 0.24	Not applicable	Not reported	Study reported = 0.38

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

# Parents as Teachers (PAT)

Four studies with a moderate or high HomVEE rating were reviewed for PAT. The studies achieved favorable results in four domains: child development and school readiness, family economic self-sufficiency, positive parenting practices, and reductions in child maltreatment (see Exhibit 1).

#### Exhibit 1. PAT: Overview of Statistically Significant Findings Across Studies

#### Outcomes Favoring Home Visiting, by Domain

Outcome	(Drazen et al., 1993)	(Droter et al., 2009)	(Wagner et al., 1996)	(Wagner et al., 1999)	
Child Development and School Readiness					
Gross motor delays	•				
Language development	•				
Mental processing abilities	•				
Mastery Motivation – task competence in problem solving		•			
Self-help skills				•	
	Family Economic S	elf-Sufficiency			
Receiving Aid to Families with Dependent Children (AFDC)	•				
Positive Parenting Practices					
Appropriate play materials in the home			•		
Parental responsivity			•		

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

Outcome	(Drazen et al., 1993)	(Droter et al., 2009)	(Wagner et al., 1996)	(Wagner et al., 1999)
Quality and quantity of stimulation and support available to child in the home environment			٠	
	Reductions in Child	d Maltreatment		
Abuse and/or neglect	•			

Individual study details are provided below.

**Study 1.** Drazen, S. M., & Haust, M. (1993, August). *Raising reading readiness in low-income children by parent education* [Paper presentation]. Annual meeting of the American Psychological Association.

*Program model:* Parents as Teachers (PAT)

*Research design*: Quasi-experimental design

*Target population:* Parents and Children Together (PACT) graduates aged 4–5 with the highest risk of school failure whose parents started participation in PACT between the time of the child's birth and first birthday (most started when children were newborns).

*Study location:* Binghamton City School District in New York

# Exhibit 2. Summary of Study Details (Drazen et al., 1993)

Parents as Teaches (PAT)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	opment and School	Readiness		
Gross Motor Delays – Denver Developmental Screening Test Follow-up at 4 to 5 years of age	Mean number of gross motor delays (definite delays) and cautions (questionable delays) on the Denver Developmental Screening Test	Unadjusted mean = 0.10	Unadjusted mean = 0.90	-0.80	HomVEE calculated = -0.77
Gross Motor Delays – Denver Developmental Screening Test, percentage below age level Follow-up at 4 to 5 years of age	Percentage of children who scored below age level for gross motor delays (definite delays) and cautions (questionable delays) on the Denver Developmental Screening Test	Unadjusted mean = 0.10	Unadjusted mean = 0.45	-0.35	HomVEE calculated = 1.05
Language Acquisition Quotient – Zimmerman Preschool Language Scale Follow-up at 4 to 5 years of age	Mean language age quotient on Zimmerman Preschool Language Scale, calculated by comparing child's language development with his or her chronical age to measure language development	Unadjusted mean = 107.00	Unadjusted mean = 100.00	7.00	HomVEE calculated = 0.57

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Language Acquisition Quotient – Zimmerman Preschool Language Scale, percentage below age level Follow-up at 4 to 5 years of age	Percentage of children whose language age quotient was below 100 on the Zimmerman Preschool Language Scale, indicating their language development was below their chronological age	Unadjusted mean = 0.30	Unadjusted mean = 0.65	-0.35	HomVEE calculated = -0.80
Mental processing (percentage scoring below 90) Follow-up at 4 to 5 years of age	Percentage of children who scored below 90 on mental processing portion of Kaufman Assessment Battery for Children	Unadjusted mean = 0.05	Unadjusted mean = 0.25	-0.20	HomVEE calculated = -1.27
	Family E	conomic Self-Suffi	ciency		
Change in AFDC status Follow-up at 4 to 5 years of age	Difference in percentage of families who received AFDC when children were aged 1 and when children were aged 4 or 5	Unadjusted mean = -0.10	Unadjusted mean = 0.20	-0.30	Not available

	Reducti	ons in Child Maltrea	atment		
Abuse and/or neglect – Department of Social Services Records and School Records, current suspected cases	Percentage of children currently suspected to be abused and/or neglected	Unadjusted mean = 0.25	Unadjusted mean = 0.50	-0.25	HomVEE calculated = -0.65
Follow-up at 4 to 5 years of age					

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

**Study 2.** Drotar, D., Robinson, J., Jeavons, L., & Lester Kirchner, H. (2009). A randomized, controlled evaluation of early intervention: The Born to Learn curriculum. *Child: Care, Health & Development, 35*(5), 643–649.

*Program model:* Parents as Teachers (PAT)

- *Research design*: Randomized controlled trial
- *Target population:* Women enrolled in the PAT program with the Born to Learn curriculum within 9 months of the child's birth
- *Study location:* Cleveland, OH, and its eastern suburb

## Exhibit 3. Summary of Study Details (Drotar et al., 2009)

Parents as Teaches (PAT)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Develo	pment and School	Readiness		
Mastery Motivation – Task Competence	Children were introduced to various toys and were evaluated based on persistence, pleasure,	847.98	841.74	6.24	Study reported = 0.20
Follow-up at 36 months of age	and competence in problem solving for up to 4 minutes.				

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

**Source:** Additional study information is available on the <u>HomVEE website</u>.

**Study 3.** Wagner, M., Cameto, R., & Gerlach-Downie, S. (1996). *Intervention in support of adolescent parents and their children: A final report on the Teen Parents as Teachers Demonstration*. SRI International.

- *Program model:* Parents as Teachers (PAT)
- Research design: Randomized controlled trial
- *Target population:* Teens were eligible if they (1) were less than 19 years of age and (2) were pregnant or had babies younger than 6 months of age.
- Study location: Four sites: Los Angeles, San Bernardino, San Diego, and Santa Barbara

## Exhibit 4. Summary of Study Details (Wagner et al., 1996)

Parents as Teaches (PAT)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Positive Parenting practices					
Home Observation for Measurement of the Environment (HOME) appropriate play materials subscale Follow-up at 1 year of age	The HOME assesses parenting practices and aspects of the home environment	7.60	7.20	0.40	Not available
HOME parental responsivity subscale Follow-up at 1 year of age	The HOME assesses parenting practices and aspects of the home environment	9.90	9.40	0.50	Not available
HOME total scale Follow-up at 1 year of age	The HOME assesses parenting practices and aspects of the home environment	37.60	36.20	1.40	Not available

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the <u>HomVEE website</u>.

**Study 4.** Wagner, M., Clayton, S., Gerlach-Downie, S., & McElroy, M. (1999). *An evaluation of the northern California Parents as Teachers demonstration*. SRI International.

Program model:	Parents as Teachers (PAT)
Research design:	Randomized controlled trial
Target population:	Families with a child up to 6 months of age
Study location:	A single site in the Salinas Valley in Northern California

#### Exhibit 5. Summary of Study Details (Wagner et al., 1999)

Parents as Teaches (PAT)

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
	Child Dev	elopment and Scho	ol Readiness		
Development Profile II (DPII) Self-Help Development Scale (mean months differential) Follow-up at 3 years of age	The subscales of the DPII assess the physical, communication, self-help, social, and cognitive development of young children.	13.00	10.80	2.20	Study reported = 0.25

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.

Planning for a Pay for Outcomes Approach in Home Visiting – Module 1 Study Profiles

# SafeCare Augmented

One study with a high HomVEE rating was reviewed for SafeCare Augmented. The study achieved favorable results in two domains: linkages and referrals, and reductions in child maltreatment (see Exhibit 1).

#### Exhibit 1. SafeCare Augmented: Overview of Statistically Significant Findings Across Studies

#### Outcomes Favoring Home Visiting, by Domain

Outcome (Silovsky et al., 2011)		
	Linkages and Referrals	
Referrals/linkages to additional services	•	
	Reductions in Child Maltreatment	
Nonviolent discipline techniques	•	

Individual study details are provided below.

**Study 1.** Silovsky, J. F., Bard, D., Chaffin, M., Hecht, D., Burris, L., Owora, A., Beasley, L., Doughty, D., & Lutzker, J. (2011). Prevention of child maltreatment in high-risk rural families: A randomized clinical trial with child welfare outcomes. *Children and Youth Services Review,* 33, 1435–1444.

Program model:	SafeCare Augmented
Research design:	Randomized controlled trial
Target population:	Families with a caregiver at least 16 years of age, at least 1 child aged 5 or younger, and at least 1 of the following risk factors: parental substance abuse, mental health issues, or intimate partner violence

*Study location:* A rural county in the American Southwest, with a population of fewer than 100,000 people and fewer than 30,000 households

## Exhibit 2. Summary of Study Details (Silovsky et al., 2011):

#### SafeCare Augmented

Outcome <sup>1</sup>	Measure	Program mean	Comparison mean	Mean difference	Effect size <sup>2</sup>
Reductions in Child Maltreatment					
Conflict Tactics Scale – Parent-Child Version (CTS- PC), nonviolent discipline Follow-up at 10 months	The CTS-PC assesses neglectful, psychologically aggressive, and abusive parenting behaviors and acts	55.20	50.50	4.70	HomVEE calculated = 0.16
Linkages and Referrals					
Referrals/linkages to additional services Follow-up at 10 months	Percentage of program providers who referred and linked families to additional services	0.50	0.00	0.50	Not available

<sup>1</sup>The exhibit presents only study outcomes that are statistically significant at the  $\leq 0.05$  level and favorable toward the home visiting intervention group.

<sup>2</sup>Effect size is generally interpreted as 0.2 = small effect, 0.5 = medium effect, 0.8 = large effect.

Source: Additional study information is available on the HomVEE website.