| **Author,**  **Year** | **Study** | **Study Design** | **N** | **Population** | **Setting** | **Duration** |
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| **Clinic-Based Interventions** | | | | | | |
| Dubowitz et al, 200967 | NA | RCT | 558 (Intervention [308], Control [250]) | 93% black 48% female Mothers mean age 25 years Children: 0–5 years | University-based pediatric primary care resident continuity clinic serving a low-income urban population in Baltimore | 3 years (duration of sampling); June 2002 to November 2005 |
| **Home Visitation Interventions** | | | | | | |
| **Elmira Study\*** | | | | | | |
| Olds, 198677\* | Elmira | RCT | 400 | Pregnant women with no previous live births 47% age <19 years  62% unmarried 89% white and 11% black 61% semi-skilled and unskilled laborers 23% met all of the above risk factors | Prenatal clinics in Elmira, New York (small, semi-rural county  of 100,000 residents in Appalachian region of New York) | Pregnancy through age 2 of child |
| Olds et al, 199478\* | Elmira | RCT | Same as above | Same as above | Same as above; however, families dispersed to 14 other states | Pregnancy through age 4 of child |
| Eckenrode et al, 200079\* | Elmira | RCT | 324 families | For this analysis, groups 1 and 2 were combined (N=184) and considered the comparison group. Group 4 (N=116) was considered the treatment group. Group 3 (N=24) was not discussed because it did not differ from the control group | Same as above | Pregnancy through age 15 of child |
| **Memphis Study** | | | | | | |
| Kitzman et al, 199780\* | Memphis | RCT | 1139: 1) 166 2) 515 3) 230 4) 228 | 92% black women 64% age <18 years  85% at or below the federal poverty level | Public obstetric clinic in Memphis, Tennessee | Prenatal through 2 years |
| Olds et al, 200768 | Memphis | RCT | Same as above | 92% black women 98% unmarried 64% age <18 years at registration 85% from households below the federal poverty line | Public obstetric clinic in Memphis, Tennessee | Prenatal through 9 years |
| **Other Studies** | | | | | | |
| Barlow et al, 200769 | Family Partnership Model | RCT | Enrolled: 131 Analyzed: 121 | 94% white 17% working 20% age <17 years  30% no higher educational/vocational qualifications 61% poverty 61% history of mental health issues  52% housing concerns 35% unwanted pregnancy 34% current domestic violence | United Kingdom | 18 months |
| Barth et al, 199181\* | Child Parent Enrichment Program | RCT | Intervention: 97 Control: 94 | Pregnant women 45% white, 31% Latino, 17% black, 7% other Median age 23.5 years 70% family income <$10,000 90% scored above the mean on CAPI | Referrals from various agencies; California, United States | ~6 months |
| Bugental et al, 200282\* | Cognitive Interventions | RCT | 96 families (73 completed) | Children born at medical risk  97% Latino  48% no husband or partner  50% of mothers were abused as children  Average education 7.8 years (SD, 3.1)  Average age of mothers 25.5 years | Referrals from physicians to program; Santa Barbara County, California | 1 year |
| Bugental et al, 200939 | Cognitive Interventions | Comparative  intervention  trial (no  control  group) | 110 families (102 completed) | 87% Latino Mean age at intake 9.37 weeks (SD, 5.50)  Sample was relatively low risk for child maltreatment, according to scores on Family Stress Checklist (M=19) | Santa Barbara County, California | 1 year |
| Duggan et al, 200470 (same as Duggan et al, 199983) | Hawaii's Healthy Start Program | RCT | 643 | Intervention vs. control:  Mean age 23.7 vs. 23.3 years  63% vs. 67% household income below poverty level  34% vs. 33% Native Hawaiian or Pacific Islander; 28% vs. 28% Asian or Filipino; 10% vs. 14% white; 27% vs. 26% no primary ethnicity or unknown  43% vs. 50% poor maternal general mental health  19% vs. 23% maternal substance use  43% vs. 52% domestic violence | Hawaii, hospital obstetrical unit | 3 years |
| Duggan et al, 200771 | Healthy Families Alaska | RCT | 364 | Mean age 23.5 years 21% Alaska Native; 55% white; 9% multiracial 58% mother graduated from high school 58% below poverty level 49% partner violence 44% poor psychological resources  57% depressive symptoms 56% maternal substance use | Alaska | 2 years |
| DuMont et al, 200872 | Healthy Families New York | RCT | 1173:  Intervention: 579 Control: 594 | 34% white, 45% black, 18% Latina  31% age <19 years  54% first-time mothers  53% not completed high school  82% never married | Unversity of Albany, New York | 2 years |
| El-Mohandes et al, 200375 | NA | RCT | 286: Intervention: 146 Control: 140 Loss to followup at 1 year: 41.6% | Mothers receiving no or inadequate prenatal care 98.6% black 54.9% at least high school education 60.1% below poverty level 93% unwanted pregnancy 28% smoked during pregnancy, 19.9% drank alcohol, 12.9% used illicit substances | Washington, DC area hospitals | 1 year |
| Fergusson et al, 200573 | Early Start Program | RCT | 4523 families screened 588 families  eligible 433 families enrolled | Mean age 24.5 years 26% Maori 70% lacked educational qualifications  30% assaulted by current partner 89% welfare dependent 81% unplanned pregnancy | New Zealand | 3 years |
| Fraser et al, 200084 (same as Armstrong et al, 199960) | NA | RCT | 181 | 41.4% married  40.1% single parent  41.1% high school education or more  7.2% self-reported domestic violence  12.2% self-reported abused as child | Royal Womens Hospital, Brisbane, Queensland Australia | 1 year |
| Koniak-Griffin et al, 200376 | Early Intervention Program | RCT | 101 | Mean age 16.7 years Mean gestational age 20.48 weeks  63% Latina, 13% black, 18% nonHispanic white, 4% other 57% history of childhood physical abuse  12% suicide attempt within the previous year | Community Health Services Division of the County Health Department of San Bernadino, California | 2 years |
| Lowell et al, 201174 | Child First | RCT | 157: Child First Intervention: 78 Usual Care: 79 | 59% Latina/Hispanic; 30% black 33% married 25% with high school degree/GED 64% unemployed | Connecticut | 3 years |
| Siegel et al, 198085\* | NA | RCT | Groups 1) 107 2) 50 3) 53  Control: 111 | Pregnant women 25% white; 75% minority Mean age 21 years 33% currently married Mean years of education: 11 | Greensboro, North Carolina | 3rd trimester of pregnancy through 12 months |

| **Author,**  **Year** | **Screening Assessment** | **Recruitment** | **Inclusion Criteria** |
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| **Clinic-Based Interventions** | | | |
| Dubowitz et al, 200967 | Parent Screening Questionnaire | Parents approached by residents | Parents who brought their child ages 0–5 years to a health supervision visit, spoke English, did not have another child in the study, or have the child in foster care |
| **Home Visitation Interventions** | | | |
| **Elmira Study\*** | | | |
| Olds, 198677\* | Interviews of mothers were made at registration in the project and at 6, 10, 12, 22, and 24 months of the infant's life. Babies were measured and weighed at 6, 12, and 24 months, administered developmental tests (Bayley Scale at 12 months, Cattell Scales at 24 months) and an infant temperament Q-sort procedure at 6 months. The Caldwell Home Observation checklist and interview procedure was completed when the infants were ages 10 and 22 months. Outcomes were determined by review of records for the presence of verified cases of abuse or neglect from the department of social services, emergency room visits, and other medical visits. | Recruited through: - Health department antepartum clinic - Obstetrician's offices - Planned Parenthood - Public schools - Variety of other health and human services agencies | Pregnant women (before 30th week) with no previous live births and one of the below risk factors: - Young age (<19 years) - Single-parent status - Low socioeconomic status  However, any woman who asked to  participate bearing a first child was enrolled |
| Olds et al, 199478\* | Same as above (Olds 1986a). In addition, interviews and observational assessments were conducted at 34, 36, 46, and 48 months, including the Caldwell and Bradley Home Inventory and a home hazards inventory. CPS and medical records were reviewed across the various states until the child reached the age of 4 years. | Families in the original study were contacted | Same as above |
| Eckenrode et al, 200079\* | 15-year followup data included mother interviews using a life-history calendar, information on life factors, violence subscales of the Conflict Tactics Scales (measure of domestic violence in the home), and reports of major and minor violence. CPS records were examined for New York and for each state where the families resided. | Families in the original study were contacted, if possible; 49 mother-child pairs were ineligible at the 15-year followup due to child death (n=26), mother death (n=2), child adopted (n=15), and refusal to participate (n=6); 81% of the original sample included and 92% of those eligible for followup | Same as above |
| **Memphis Study** | | | |
| Kitzman et al, 199780\* | Medical records were reviewed for pregnancy outcomes, ingestions, children's injuries, and immunizations; mothers' reports of children's behavioral problems; child mental development (Bayley Scales, Child Behavior Checklist); mothers' report of demographic characteristics, beliefs about children associated with child abuse and neglect, physical punishment; and state records of use of welfare. The HOME Scale was used during home visits. | Eligibility determined at the obstetric care clinic | Pregnant women <29 weeks' gestation, no previous live births, no chronic illnesses, at least 2 sociodemographic risk characteristics (unmarried, <12 years of education, unemployment status). |
| Olds et al, 200768 | Same as above | Same as above | Same as above |
| **Other Studies** | | | |
| Barlow et al, 200769 | Mother-infant interaction was assesed at 12 months on the basis of a 3-min video recording and coded for maternal sensitivity and infant cooperativeness using the CARE Index. Maternal psychopathy was assessed at 6 and 12 months. Parenting attitudes and competence were assessed at 6 and 12 months using the Adult Adolescent Parenting Inventory. Parenting competence  /confidence and experiences were measured at 12 months using the Parenting Sense of Competence scale and What Being the Parent of a Baby is Like. Infant development was assessed independently at 12 months. Validation unclear. | Community midwives in United Kingdom attached to 40 participating general practitioner practices across 2 counties. | Midwives screened women using a range of demographic and socioeconomic criteria (e.g., mental health problems or housing problems) |
| Barth et al, 199181\* | 2-hr initial assessment interview served as pretest for both groups. Posttest given at 6 months or when the child was age 4 months included: self-report of mother's well-being, CAPI, Community Resources Use Scale, prenatal care, birth outcomes, child temperament, child welfare and neglect, review of medical records, and reports of child abuse and removal from home obtained from county social service records. | Pregnant women referred by 19 public health, education, or social service professionals working in 17 different agencies or health offices. | Pregnant or postpartum women at high risk  for engaging in child abuse. Two or more positive responses to a list of criteria determined eligibility for the study. |
| Bugental et al, 200282\* | Preliminary Screening Questionnaire and Family Stress Checklist used to identify at-risk families. Child risk of abuse determined by birth records (Apgar scope <9 and premature status of >3 weeks). Postprogram measures included: Conflict Tactics Scale, a self-report measure, to measure harsh parenting (physical abuse and legally nonabusive use of force), and a subset (n=28)  were verified against the Social Desirability Scale of the Toddler Behavior Assessment Questionnaire;interview with parents about frequency of child injuries, illness, and feeding problems; a variety of cognitive measures such as the Parent Attribution Test, graphic depiction of perceived power, State-Trait Anxiety Inventory, Beck Depression Inventory, and Social Provisions Scale.  All measures were translated to Spanish, some verbally administered. | Families were referred to the program by physicians (obstetricians and pediatricians), social workers, and public health nurses. | Mothers who were identified late during pregnancy or soon after birth to be at moderate risk (scores of 25–40 on Family Stress Checklist) to become abusive were eligible to participate. |
| Bugental et al, 200939 | Measures were retrospective measures (some translated to Spanish, some verbally administered) over the past year conducted postprogram (baseline measures were not possible due to child's age at intake): Conflict Tactics Scale to measure abuse and corporate punishment (spanking); Framingham Safety Survey (safety neglect, household hazards); Child Injury Survey (safety neglect and frequency of falls, cuts, and burns); and perceived power (size of mother's self-drawings, taken at intake and followup). | Same as above | Same as above. Also, presence of a medical risk factor: preterm status <36 weeks’ gestational age (n=48), medical problem (e.g., respiratory or cardiac problems) (n=59), other reason (e.g., Cesarean delivery) (n=40). Parental risk was not considered in the referral. Child included up to age 6 months. |
| Duggan et al, 200470 (same as Duggan et al, 199983) | Kempe's Family Stress Checklist for screening; Revised Conflict Tactics Scale for outcome.  Validation: Factor analysis of the Conflict Tactics Scale items. Reports to CPS, medical record review, mother self-report. | Referred by prenatal care providers but most families screened and assessed at the hospital when children were born. | HSP staff or hospital staff review the mother's medical record and if it suggests risk (or there is too little information to assess risk), staff conduct a semistructured interview with the mother using Kempe's Family Stress Checklist (postive score ≥25). If HSP home visiting intake is open in the family's community, the family is invited to enroll. If intake is closed, the family is referred to other community resources. |
| Duggan et al, 200771 | Kempe's Family Stress Checklist. Validation: unclear. Reports to CPS for suspected child maltreatment. | DHHS administers HFAK through grants to local agencies and an agreement with Public Health Nursing (1 site). HFAK uses a protocol to identify at-risk families. | HFAK staff identified at-risk families using  their usual protocol. Families who screen positive are assessed for risk using Kempe's Family Stress Checklist. Families scoring ≥25 are eligible for HFAK. |
| DuMont et al, 200872 | Kempe Family Stress Checklist used to identify parents at high risk of abuse, who were offered participation in the HFNY program. | Recruited by a Family Assessment Worker. | Women in catchment area, English speaking, have custody of child. |
| El-Mohandes et al, 200375 | Baseline assessment of demographic factors, reproductive history, use of prenatal care, drug and alcohol use, and infant health at delivery. | Enrolled during postpartum hospitalization, using delivery logs to identify eliglbe women. | Mothers residing in Washington, DC, having <5 prenatal care visits or initiating first visit in third trimester, at least age 18 years, English speaking, no history of psychiatric illness, not institutionalized, and not planning to give child up for adoption. Exclude: mothers of infants delivered before 34 weeks’ gestation, birth weight <1500 grams, or birth with congenital abnormalities. |
| Fergusson et al, 200573 | 11-point screening measure based on Hawaii HSP; once in program then Kempe’s Family Stress Checklist given. Validation: at 36 months, parents administered Child Rearing Practices Report and the Adult-Adolescent Parenting Inventory; factor analysis showed adequate reliability for nonpunitive parenting scales (α=0.77). Child health (immunizations, hospital visits), child abuse, parenting skills, parental health, family economic well-being, and partnerships assessed at baseline, 6, 12, 24, and 36 months. | Plunket community nurses in Christchurch urban region screened  all new clients using an 11-point measure based on Hawaii HSP. | Nurse population screening: age of parents, social support, pregnancy planning,  substance use, family finances, family violence. Refer if 2 or more risk factors present. |
| Fraser et al, 200084 (same as Armstrong et al, 199960) | Self-report questionnaire to determine use of health services. Various other outcomes assessed. | By child health nurse at hospital. | Birth of one live-born infant. Excluded those with poor literary skills, as written self-report measures are required. Self-reported vulnerability. |
| Koniak-Griffin et al, 200376 | Self-report questionnaires assessing background factors, sexual history, past and current substance use, educational goals, and social competence. | Referral by Community Health Services Department. | Adolescents ages 14–19 years, ≤26 weeks’ gestation, having their first child, planning to keep the child. Exclude: narcotic or injection drug dependent, having a documented serious medical or obstetric problem. |
| Lowell et al, 201174 | Either child or adult could qualify for inclusion of the family in the trial: Child: Brief Infant-Toddler Social and Emotional Assessment  Parent: Parent Risk Questionnaire | Families recruited from 2 sites that served predominantly inner-city families living in poverty: a) Bridgeport Hospital Prediatric Primary Care Center and b) Supplementary Nutrition Program for Women, Infants, and Children | Children ages 6–36 months who screened positive for social-emotional/behavioral problems on the Brief Infant-Toddler Social and Emotional Assessment and/or parent screened high for psychosocial risk on the Parent Risk Questionnaire. |
| Siegel et al, 198085\* | Data was collected by interview during the last trimester of pregnancy, and by interview and observation in the home at 4 and 12 months post delivery. Hospital and health agency records were also reviewed. Measures: 92-item Attachment Inventory, Peabody Picture Vocabulary Test. | Women in their third trimester who received care at the public prenatal clinic and delivered at the community hospital. | Criteria include: uncomplicated pregnancy at the third trimester, no previous delivery of nonviable infant; not expecting twins; intended to say in the area for ≥1 year; did not have a family member in the study. |

| **Author,**  **Year** | **Intervention** | **Results** | **Quality Rating** |
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| **Clinic-Based Interventions** | | | |
| Dubowitz et al, 200967 | The SEEK Model included:  1) specially trained residents, including handouts for doctors and patients  2) administration of the Parent Screening Questionnaire  3) a social worker | CPS reports: 3.3% vs. 19.2%; p=0.03 Fewer instances of nonadherence to medical care: 4.6% vs. 8.4%; p=0.05 Less delayed immunizations: 3.3% vs. 9.6%; p=0.002  Fewer reported instances of severe or very severe physical assault (average weighted score on Conflict Tactics Scale, Parent-Child version): 0.11 vs. 0.33; p=0.04 Less delayed immunizations (from medical charts): 3.3% vs. 9.6%; p=0.002 Fewer instances of nonadherence to medical care (from medical charts): 4.6% vs. 8.4%; p=0.05 | Fair |
| **Home Visitation Interventions** | | | |
| **Elmira Study\*** | | | |
| Olds, 198677\* | Random assignment to one of four groups:  1) No services control (n=90) 2) Free transportation to clinic appointments (n=94) 3) Same as group 2, plus nurse home visits every 2 weeks during pregnancy; average of 9 visits during pregnancy lasting 1.5 hours per visit (n=100) 4) Same as group 3, with nurse home visits until child is age 2 years. Visit frequency diminished over time (n=116). Nurse home visitation included parent education, enhancement of informal support systems, and linkage  with community services | CPS reports: Higher risk subgroup (poor, unmarried teenagers): 4% vs. 19% confirmed reports of abuse/neglect, p=0.07 Entire sample: No difference Emergency Department visits: Intervention children had fewer visits to the emergency room in first and second year of life (p<0.05 and p<0.01, respectively) and presented with fewer accidents and poisonings at 2 years of age (p<0.05) | Good |
| Olds et al, 199478\* | Same as above | New cases of child abuse/neglect, whole sample: No difference; OR, 0.56 (95% CI, 0.00 to 1.37) Nurse-visited children made 35% fewer visits to the ED than controls (p=0.0008) Mean number of hospitalizations: 0.14 vs. 0.11; p=NS Poisonous substances ingested (p=NS) | Good |
| Eckenrode et al, 200079\* | Same as above | Incidence rate for substantiated child maltreatment reports involving mother as perpetrator: 0.32 vs. 0.65, p=0.01  Incidence rate for substantiated reports involving the study child as subject: 0.44 vs. 0.73; p=0.04  The intervention group receiving nurse-visited home visitation only during pregnancy (Group 3) did not differ in number of child maltreatment reports from the control group (p=NS). Home visitation had no impact on the incidence of domestic violence (p=NS); however, there were fewer cases of child maltreatment among mothers who reported <28 incidents of domestic violence (79% of sample) in the home-visited group (Group 4) versus the control group (p=0.01) | Good |
| **Memphis Study** | | | |
| Kitzman et al, 199780\* | 1) Transportation to clinic 2) Same as group 1 plus developmental screening and referral services at 6, 12, and 24 months  3) Same as groups 1 and 2 plus 3 intensive home visitations 4) Same as groups 1, 2, and 3 plus intensive home visitation services through age 2 years | Adjusted incidence of ED visits for injuries/ingestions during first 2 years of life: 0.33 vs. 0.34; p=NS Adjusted incidence of ED visits for injuries/ingestions: 0.33 vs. 0.34; p=NS Adjusted incidence of hospitalizations for injuries/ingestions: 0.01 vs. 0.03; p=NS Days hospitalized for injuries/ingestions: 7 vs. 879 days; p=0.001 Diagnoses for hospitalizations: 1 burn and 2 ingestions vs. 4 burns, 2 head traumas, 2 fractured skulls, 2 bilateral subdural hematomas, 2 other fractures, 1 strangulated hernia, 1 suspected abuse, 1 coin ingestion, 1 finger injury. Nurse-visited children had fewer health care encounters related to injuries/ingestions in the first 2 years compared with comparison groups (p=0.05), with the most effect for outpatient encounters (p=0.02). By the 24th month, nurse-visited women held fewer beliefs about child-rearing associated with child abuse and neglect (p=0.003); Bayley Mental Development Score at 24 months: 94.5, nurse-visited group, 94.3, comparison group (NS). Immunizations: 70% vs. 68%; p=NS Mean number of well-child visits (0–24 months): 4.6 vs. 4.8; p=NS | Fair |
| Olds et al, 200768 | 1) Transportation to clinic 2) Same as group 1 plus developmental screening and referral services at 6, 12, and 24 months  3) Same as groups 1 and 2 plus 3 intensive home visitations 4) Same as groups 1, 2, and 3 plus intensive home visitation services through age 2 years | Child mortality: 1 vs. 10 deaths; OR, 0.22 (95% CI, 0.03 to1.74); p=0.08 | Fair |
| **Other Studies** | | | |
| Barlow et al, 200769 | 1) Control 2) 18 months of weekly visits from a heath visitor trained in understanding the processes of helping, skills of relating  to parents effectively, and methods of promoting parent-infant interaction using the Family Partnership Mode | Increased placement on child protection register or care proceedings for those in the intervention group: RR, 2.02 (95% CI, 0.46–2.54); p=NS Child protection issues: 17% vs. 15%; p=NS Removal of child from home: 6% (4/68) vs. 0% (0/63); p=NS Proportion of admissions to hospital (maternal report): 8.1% vs. 14.3%; RR, 1.38 (95% CI, 0.68 to 2.8) One child died in the control group “for whom child protection concerns were raised” | Fair |
| Barth et al, 199181\* | 1) Control group received referrals to social and health services 2) Intervention group had home visits; average of 11 visits | CPS reports: Increase in number of unsubstantiated reports: 13 vs. 10 families; p=NS Increase in number of substantiated reports: 10 vs. 13 families; p=NS Increase in number of unsubstantiated reports: 20 vs. 41 total reports; p=NS Increase in number of substantiated reports: 19 vs. 5 total reports; p=NS | Fair |
| Bugental et al, 200282\* | Cognitive-based extension of the HSP home visitation program (n=32–35) vs. standard HSP home visitation program (n=31–34) vs. control condition (n=27–35). The additional cognitive appraisal component was designed to enhance parents' perceptions of power and competence, and included reframing in primary and secondary appraisals. Specifically, parents were assisted in acquiring skills in reading children's cues of distress and countering misattributional processes, and provided with problem-solving training in which they define the problem, brainstorm possible solutions, evaluate possible consequences, develop an action plan, and observe and evaluate the success of their efforts. Home visitors were matched to cultural backgrounds of participants. Weekly supervision and monitoring occurred from a licensed clinical psychologist. Over the first year of life of the child, there were 17 home visits. | Frequency of harsh parenting or physical abuse or spanking/slapping (mean):  HV plus cognitive, 0.06 vs. HV standard, 0.23 vs. control, 0.25; F(2, 70)=3.20; p=0.05  High-risk infants: HV plus cognitive group, 0.07 (SD, 0.20) vs. HV standard/control, 0.42 (SD, 0.44); p<0.05  Low-risk infants: HV plus cognitive group, 0.06 (SD, 0.14) vs. HV standard/control, 0.17 (SD, 0.28); p=NS | Fair |
| Bugental et al, 200939 | Cognitive-based extension of the HSP home visitation program (n=51) vs. standard HSP home visitation program (n=59). No control group. Details of intervention abstracted in Bugental 2002. | Physical abuse (infants): 4% HV plus cognitive vs. 5% HV standard (not possible to allow a reliable statistical comparision due to low percentages) Mean injury score (infants): 3.29 HV plus cognitive vs. 3.39 HV standard; F(1, 96)=3.94; p=0.05 | Fair |
| Duggan et al, 200470 (same as Duggan et al, 199983) | Home visits for 3–5 years by trained paraprofessionals to provide assistance, education, and services; model effective parent-child interaction; ensure child has medical home. Level 1: visited weekly; Level 2: biweekly; Level 3: monthly; Level 4: quarterly, with explicit criteria for promotion; intervention was for 1, 2, or 3 years. | CPS reports: no difference; p=0.56  Placement in foster care: 1.8% vs. 0.8%; p=NS  Ever used ED, first 2 years of life (Duggan, 1999): 58% vs. 60%; p=0.69  Ever hospitalized for any reason in first 2 years of life (Duggan, 1999): 19% vs. 22%; p=0.44  Trauma admissions among patients with complete hospitalization data: 1.5% vs. 1.7%; p=NS  Ambulatory care sensitive conditions among patients with complete hospitalization data: 12% vs. 10%; p=0.39  Immunizations up to date (Duggan, 1999): 87% vs. 85%; p=0.45  Adequate number of well-child visits (Duggan, 1999): 60% vs. 59%; p=0.95  Groups similar in abuse and neglect. 12, 22, and 23 mothers assigned to the HSP group  reported both frequent and severe abusive behavior in years 1, 2, and 3, respectively. Of families receiving a high dose of HSP services, 3, 8, and 5 mothers reported both frequent and severe abusive behavior in years 1, 2, and 3, respectively. | Fair |
| Duggan et al, 200771 | Home visiting for 3–5 years, offered weekly for the first 6–9 months; families are promoted to service levels with less frequent visits as family functioning improves. Home visitation includes information, referrals, preparation of parents for developmental milestones, promotion of child environmental safety, and encouragement of positive parent-child interaction. | CPS reports: no difference; p=0.59 ED visits in first 2 years of life: 81% vs. 78%; p=0.42 Child hospitalized for ambulatory care sensitive conditions: 9% vs. 9%; p=0.80 Using CPS reports, pediatric medical records, interviews with primary caregiver, observation of the home environment and interaction with the child: no difference in HV and control groups in rates for substantiated or overall reports of child maltreatment. Intervention and control groups  did not differ in frequency of hospitalizations and ED visits. From maternal report: Number of well-child visits (Duggan 1999): 60% vs. 59%; p=0.95 Immunizations up to date (Duggan 1999): 87% vs. 85%; p=0.45 | Fair |
| DuMont et al, 200872 | Home visits by trained paraprofessionals to provide assistance, education, and services; model effective parent-child interaction; ensure child has medical home. | CPS reports: no difference; p=NS  At year 2, intervention parents reported one fourth as many acts of serious physical abuse as controls (p=0.03). Consistent with other Healthy Family studies, no significant differences were found for prevalence or frequency of substantiated CPS reports. | Fair |
| El-Mohandes et al, 200375 | One year-long program of home visits, parent-infant  dyadic developmental play groups, parent support groups, and monthly support calls from a family resource specialist. | Well-infant care, intervention vs. control: Mean number of visits at 9 months: 3.14 vs. 2.18; p=0.0098 Mean number of visits at 12 months: 3.51 vs. 2.68; p=0.0098 Intensity of well-infant visits (12 months): At least 1 visit: 93.6% vs. 75.3%; p=0.0022 At least 2 visits: 89.4% vs. 63.6%; p=0.0007 At least 3 visits: 78.7% vs. 51.9%; p=0.0018 At least 4 visits: 59.6% vs. 41.6%; p=0.0363 At least 5 visits: 27.7% vs. 23.4%; p=0.3475 Mean immunization visits, intervention vs. control: At 4 months: 1.01 vs. 0.77; p=0.0498 At 6 months: 1.50 vs. 1.13; p=0.0295 At 9 months: 2.20 vs. 1.64; p=0.0125 At 12 months: 2.44 vs. 2.00; p=NS | Fair |
| Fergusson et al, 200573 | Early Start Program assesses needs and resources, encourages positive partnership, provides support and problem solving. | CPS reports: no difference; p=0.39 Intervention vs. control: Proportion seen in hospital for accident/injury or accidental poisoning (0–36 mo): 17.5% vs. 26.3%; p<0.05 Parental report of severe physical punishment: 4.4% vs. 11.7%; p<0.01; OR, 0.35 (95% CI, 0.15 to 0.80) In contact with agencies for child abuse/neglect: 19.6% vs. 21.3%; p=0.39 Up to date with shots: 23.4% vs. 20.7%; p=0.83 Up to date with well-child visits: 41.9% vs. 30.1%; p<0.05 Seen in hospital for accident/injury or accidental poisoning (0–36 months): 17.5% vs. 26.3%; p<0.05; OR, 0.59 (95% CI, 0.36 to 0.98) Enrolled for dental care: 72.3% vs. 62.8%; p<0.05 | Fair |
| Fraser et al, 200084 (same as Armstrong et al, 199960) | Weekly nurse home visitation (n=90) vs. comparision group receiving standard care (n=91) | Intervention vs. control:  Immunizations: no difference; p=NS | Fair |
| Koniak-Griffin et al, 200376 | Care by public health nurses using a case management approach with one nurse providing continuous care from pregnancy through 1 year postpartum. Case management included 4 “preparation for motherhood” classes, counseling, and a maximum of 17 1.5- to 2-hour home visits (2 prenatal and 15 postpartum). Mean number of home visits, intervention vs. control: 2.13 (prenatal) and 10.35 (postpartum) vs. 1.02 (prenatal) and 1.09 (postpartum) | Children with ED visits (total number): 64% vs. 89%; p=NS Never used ED for child health problems: 36% vs. 11%; p<0.05 Children hospitalized: 21% vs. 36%; p=NS Episodes of hospitalizations for all indications: 19 vs. 36; p<0.01 Days infants hospitalized: 143 vs. 211 days; p<0.001 Adequately immunized: 77% vs. 87%; p=NS | Fair |
| Lowell et al, 201174 | Each family assigned a clinical team, consisting of a master's level developmental/mental health clinician and  an associate's or bachelor's level care coordinator/case manager. Engagement and building trust were fundamental goals of Child First. Services were delivered predominantly in the home. A family driven plan of broad, integrated supports and services for all family members, which reflected family priorities, strengths, culture, and needs  was developed. No set curriculum. | CPS involvement at 36 months: 14% intervention vs. 31% control (estimated); OR, 2.1 (95% CI, 1.1 to 4.4); p<0.05 | Fair |
| Siegel et al, 198085\* | 1) Control group (usual care) 2) Early and extended hospital contact and home visits 3) Early and extended hospital contact only 4) Home visits only | CPS Reports: 14 vs. 9 reports; p=NS No difference in health care utilization, including ED visits; p=NS Number of hospitalizations: no difference; p=NS | Fair |

\*From prior report.

CAPI = Child Abuse Potential Inventory; CI = confidence interval; CPS = Child Protective Services; DHHS = Department of Health and Human Services; ED = emergency department; HFAK = Healthy Families Alaska; HFNY = Healthy Families New York; HSP = Healthy Start Program; HV = home visitation; NA = not applicable; NS = not significant; OR = odds ratio; RCT = randomized, control trial; RR = relative risk; SD = standard deviation; SEEK = Safe Environment for Every Kid.