

**Status Report on Home Visiting in the District of Columbia
Literature Review**

**Prepared by DC Action for Children on behalf of the
Office of the District of Columbia Auditor**

September 2016

Introduction

In the District of Columbia, 20% of children born in 2013 were born into families or circumstances considered high-riskⁱ. Engaging these families early on with resources to prevent unfavorable outcomes is essential to raising a generation of children that are healthy and ready to learn. Expansion and support for home visiting, a proven, multi-generational approach to supporting the families of young children, would contribute to the development of a birth-to-three system that addresses the needs of the District's youngest residents.

In anticipation of a report on the status of home visiting in the District, to be conducted by DC Action for Children at the request of the DC Auditor, this literature review seeks to understand what evidence of effectiveness exists for the different home visiting programs that currently exist or that have the potential to be implemented in DC. Outcomes categories analyzed in this search include school readiness, child welfare, and maternal and child health. Outcomes are analyzed by category for each program model selected for review.

Methods

A DC Action for Children staffer searched electronic databases (e.g. Google Scholar, PubMed, ProQuest) for articles in peer-reviewed journals that addressed any of the target outcomes – school readiness, child welfare, maternal/child health – for the four program models reviewed: **Parents as Teachers, Nurse Family Partnership, Home Instruction for the Parents of Preschool Youngsters and Healthy Families America**. Limits on this search were based primarily in the availability of peer-reviewed evaluations of effectiveness for the target outcomes. The extent of the published evidence base varied by program model. This literature review excluded studies considered part of the evidence base for program models if they had never been published in a peer-reviewed journal.

Overview of Programs Included

Healthy Families America (HFA), Home Instruction for the Parents of Preschool Youngsters (HIPPI), Parents as Teachers (PAT) and Nurse-Family Partnership (NFP) are evidence-based home visiting programs included in the Maternal, Infant and Early Childhood Home Visiting Program (MIECHV). HFA, HIPPI, and PAT are currently being implemented in DC, and there is recurring interest in beginning implementation of NFP in the District given evidence the program can reduce child abuse and neglect fatalitiesⁱⁱ.

Below is an overview of each of program model included in this review that includes characteristics of the families targeted by each model, ages of children served, length of program delivery and targeted outcomes. Notably, targeted outcomes vary by program, and not all outcomes categories are targets of each program model.

Positive Outcomes for Evidence-Based Home Visiting Models				
	Healthy Families America	Home Instruction for Parents of Preschool Youngsters	Nurse-Family Partnership	Parents as Teachers
Educational Outcomes	X	X	X	X
Child Welfare (Abuse/Neglect)	X		X	X*
Child/Maternal Health	X		X	

*Although most studies found no positive or negative child welfare outcomes, one study found positive outcomes for a program serving teen parents that included a case management component.

Healthy Families America (HFA)

HFA provides home visiting services to parents experiencing single parenthood, poverty, substance abuse, mental health issues or domestic violence, as well as parents with experiences that may adversely affect their attitudes or knowledge about parenting. Communities implementing HFA may select specific target groups based on the needs of local families. Home visits begin prenatally or before the child is three months old and continue until the child is between three and five years old. HFA's targeted outcomes for children include: 1) improved child health, 2) improved school readiness and 3) improved child welfare, as well as improved parental behaviors and attitudes supporting these outcomes.

Home Instruction for Parents of Preschool Youngsters (HIPPIY)

HIPPY Youngsters serves children, ages 3-5 years, and their parents. The program is designed to work with parents who feel unprepared for their role as parents and includes a curriculum of up to 30 weekly home visits. HIPPY also encourages participating families to attend group meetings with other HIPPY parents to discuss the program and participate in enrichment activities. HIPPY's targeted outcomes for children include improved school readiness and educational outcomes.

Nurse-Family Partnership (NFP)

NFP delivers a home visiting curriculum provided by nurse home visitors to first-time, low-income mothers beginning in pregnancy. Participating mothers begin receiving home visits prior to 28 weeks of gestation and continue to receive visits through the child's second birthday. NFP's targeted outcomes include: 1) improved pregnancy outcomes, 2) improved child health and development and 3) improved family economic self-sufficiency.

Parents as Teachers (PAT)

Parents as Teachers provides home visiting services to families, beginning in pregnancy and continuing through the child's entry into kindergarten. Local programs select their target populations based on the needs of their communities. The PAT curriculum includes a requirement for parent socializations to supplement progress in individual home visits. PAT's targeted outcomes include: 1) improved parenting practices, 2) improved detection of

developmental and health concerns, 3) reduced child abuse and neglect and 4) improved school readiness and educational outcomes.

Educational Outcomes/ School Readiness

- *Healthy Families America (HFA)*

Improved school readiness is a targeted outcome in the Healthy Families America program model. Most studies included in this review found some favorable school readiness outcomes and no studies found unfavorable outcomes. Indicators of school readiness with improved outcomes after HFA participation included parent ratings of children's behavioral and emotional performance in the Child Behavioral Checklist, and Bayley Scale infant development ratings.

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

King, T., Rosenberg, L., Fuddy, L., McFarlane, E., Sia, C., & Duggan, A. (2005). Prevalence and early identification of language delays among at-risk three year olds. *Journal of Developmental & Behavioral Pediatrics*, 26(4), 293–303.

- *Home Instruction for Parents of Preschool Youngsters (HIPPY)*

Improved school readiness is one of HIPPY's primary target outcomes. In the peer-reviewed studies identified in this search, some participating cohorts experienced favorable outcomes compared to control groups after participating in HIPPY, although most positive effects were modest. Improved outcomes were found in preschoolers' cognitive achievements, first grade reading scores, classroom adaptation and behavior, grades in third and sixth grades and school suspensions.

Baker, A. J. L., Piotrkowski, C. S., & Brooks-Gunn, J. (1998). The effects of the home instruction program for preschool youngsters (HIPPY) on children's school performance at the end of the program and one year later. *Early Childhood Research Quarterly*, 13(4), 571-588. doi:10.1016/S0885-2006(99)80061-1

Bradley, R. H., & Gilkey, B. (2002). The impact of the Home Instructional Program for Preschool Youngsters (HIPPY) on school performance in 3rd and 6th Grades. *Early Education and Development*, 13(3), 301-311.

- *Nurse-Family Partnership (NFP)*

Improved child development and reductions in intellectual and behavioral problems are a focus of NFP programming. All studies of NFP with statistically significant effects on participating children found favorable effects on school readiness indicators. In studies where positive outcomes were associated with NFP program participation, impact indicators included language development, parent reports of behavioral problems, vocabulary, arithmetic and reading assessment scores and participation in an early learning or intervention program.

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.

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.

Kitzman, H., Olds, D. L., Henderson, C. R., Hanks, C., Cole, R., Tatelbaum, R., et al. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing. A randomized controlled trial. *JAMA: The Journal of the American Medical Association*, 278(8), 644–652.

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

Olds, D. L., Henderson, C. R., & Kitman, 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.

Olds, D. L., Henderson, C. R., Cole, R., Eckenrode, J., Kitman, H., Luckey, D., et al. (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: The Journal of the American Medical Association*, 280(14), 1238–1244.

Olds, D. L., Kitman, H., Cole, R., Robinson, J., Sidora, K., Luckey, D. W., et al. (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

Olds, D. L., Kitman, H., Hanks, C., Cole, R., Anson, E., Sidora-Arcoleo, K., et al. (2007). Effects of nurse home visiting on maternal and child functioning: Age-9 follow-up of a randomized trial. *Pediatrics*, 120(4), e832–e845.

Olds, D. L., Robinson, J., O'Brien, R., Luckey, D. W., Pettitt, L. M., Henderson, C. R., et al. (2002). Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. *Pediatrics*, 110(3), 486.

Olds, D. L., Robinson, J., Pettitt, L., Luckey, D. W., Holmberg, J., Ng, R. K., et al. (2004). Effects of home visits by paraprofessionals and by nurses: Age 4 follow-up results of a randomized trial. *Pediatrics*, 114(6), 1560-1568.

- Parents as Teachers (PAT)

The PAT program model targets school readiness as an outcome of program participation. All studies in which a statistically significant change in school readiness outcomes were measured found that program participation was correlated with positive outcomes. Two studies found that effects were stronger for more disadvantaged children: children from low-income families and children in primarily Spanish-speaking Latino families experienced greater and more consistent favorable outcomes compared to other children. Additionally, Zigler, Pfannenstiel and Seitz (2008) found that favorable program effects faded as children aged. Broadly, studies noted that participation in PAT would not be sufficient to close academic achievement gaps.

Wagner, M. M., & Clayton, S. L. (1999). The parents as teachers program: Results from two demonstrations. *The Future of Children*, 9(1), 91.

Wagner, M., Spiker, D., & Margaret, I. L. (2002). The effectiveness of the parents as teachers program with low-income parents and children. *Topics in Early Childhood Special Education*, 22(2), 67.

Zigler, E., Pfannenstiel, J. C., & Seitz, V. (2008). The parents as teachers program and school success: A replication and extension. *Journal of Primary Prevention*, 29(2), 103-20.

Child Welfare Outcomes (Child Abuse/Neglect)

- *Healthy Families America (HFA)*

Prevention of child abuse and neglect is prioritized in the HFA program model. Studies indicated mixed effects on participating children's reported neglect and abuse. Although most studies – excluding Dumont, et al. (2008) – found that HFA participation did not prevent child abuse, some found modest favorable effects on child neglect after program participation. Mixed effects were found on the use of physical discipline, with the greatest effects on light physical discipline. Some studies note that low or no impact findings may have resulted from inadequate delivery of or attention to child welfare components of the HFA program.

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

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.

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.

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.

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.

- *Home Instruction for Parents of Preschool Youngsters (HIPPY)*

The HIPPY program model primarily targets educational outcomes and positive parent-child relationships, and does not promote reductions in child neglect and abuse as outcomes of program participation. We were unable to find any evidence supporting a correlation between HIPPY enrollment and improvements in child welfare.

- *Nurse-Family Partnership (NFP)*

Prevention of child abuse and neglect is a targeted outcome of the NFP model. Although findings varied across studies, the majority of NFP studies found that children whose families participated in NFP experienced improved child welfare outcomes. Program participants spent significantly fewer days in the hospital and had fewer outpatient doctors' visits for ingestions and injuries, fewer substantiated reports of neglect or abuse and fewer emergency room visits. Mothers who participated in the programs were also less likely to have perpetrated child neglect or abuse cases long-term, compared to mothers who had not participated in the program.

Eckenrode, J., Zielinski, D., Smith, E., Marcynyszyn, L. A., Henderson, C. R., Kitzman, H., et al. (2001). Child maltreatment and the early onset of problem behaviors: Can a program of nurse home visitation break the link? *Development and Psychopathology*, 13(4), 873–890.

Kitzman, H., Olds, D. L., Henderson, C. R., Hanks, C., Cole, R., Tatelbaum, R., et al. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing. A randomized controlled trial. *JAMA: The Journal of the American Medical Association*, 278(8), 644–652.

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., et al. (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: The Journal of the American Medical Association*, 278(8), 637–643.

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

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.

Olds, D. L., Kitzman, H. J., Cole, R. E., Hanks, C. A., Arcolego, 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

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. doi:10.1017/S0954579409000248

- *Parents as Teachers (PAT)*

Although prevention of child abuse and neglect is a targeted outcome in the PAT logic model, few publications evaluated or found significant impacts on these outcomes. Wagner and Clayton (1999) reviewed two demonstrations of PAT and found mixed results: no effects were found in one study; however, another study that targeted teen parents and included a case management component found significantly fewer open child abuse and neglect cases.

Wagner, M. M., & Clayton, S. L. (1999). The parents as teachers program: Results from two demonstrations. *The Future of Children*, 9(1), 91.

Maternal/Child Health Outcomes

- Healthy Families America (HFA)

Improved child health is a targeted outcome in the HFA program model. Studies found favorable outcomes for select measures, including having a primary care physician who is aware of the family's concerns about the child and increased well-child visits. HFA does not specifically target improvements in maternal health and no studies evaluating these outcomes were found in this search.

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

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.

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.

Duggan, A., Fuddy, L., Burrell, L., Higman, S. M., McFarlane, E., Windham, A., et al. (2004). Randomized trial of a statewide home visiting program to prevent child abuse: Impact in reducing parental risk factors. *Child Abuse & Neglect*, 28(6), 623–643.

El-Kamary, S. S., Higman, S. M., Fuddy, L., McFarlane, E., Sia, C., & Duggan, A. K. (2004). Hawaii's Healthy Start home visiting program: Determinants and impact of rapid repeat birth. *Pediatrics*, 114(3), e317–e326.

- Home Instruction for Parents of Preschool Youngsters (HIPPO)

The HIPPO program model primarily targets educational outcomes and positive parent-child relationships, and does not promote improved maternal and child health as an outcome of program participation. No articles available presented evidence supporting a correlation between HIPPO enrollment and these outcomes.

- Nurse-Family Partnership (NFP)

NFP prioritizes improved maternal health as a pathway to Improved child health. Most studies found some significant maternal or child health outcomes, with some variation by the specific measures employed. Improved child outcomes included reduced substance use at age 12 and reduced emergency visits in first two years of life. Mothers who participated in NFP had fewer subsequent low birth weight births, fewer subsequent pregnancies, pregnancies that were further apart, reduced infections, reduced alcohol-impaired parenting, reduced subsequent miscarriages and increased likelihood to attempt breastfeeding.

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.

- Kitzman, H., Olds, D. L., Sidora, K., Henderson, C. R., Hanks, C., Cole, R., et al. (2000). Enduring effects of nurse home visitation on maternal life course: A 3-year follow-up of a randomized trial. *JAMA: The Journal of the American Medical Association*, 283(15), 1983–1989.
- 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.
- Kitzman, H., Olds, D. L., Henderson, C. R., Hanks, C., Cole, R., Tatelbaum, R., et al. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing. A randomized controlled trial. *JAMA: The Journal of the American Medical Association*, 278(8), 644–652.
- Olds, D. L., Henderson Jr., C. R., Chamberlin, R., & Tatelbaum, R. (1986). Preventing child abuse and neglect: A randomized trial of nurse home visitation. *Pediatrics*, 78, 65–78.
- Olds, D. L., Henderson Jr., C. R., 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.
- Olds, D. L., Henderson, C. R., & Kitman, 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.
- Olds, D. L., Eckenrode, J., Henderson, C. R., Kitman, H., Powers, J., Cole, R., et al. (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: The Journal of the American Medical Association*, 278(8), 637–643.
- Olds, D. L., Henderson, C. R., Cole, R., Eckenrode, J., Kitman, H., Luckey, D., et al. (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: The Journal of the American Medical Association*, 280(14), 1238–1244.
- Olds, D. L., Henderson, Jr., C. R., Tatelbaum, R., & Chamberlin, R. (1988). Improving the lifecourse development of socially disadvantaged parents: A randomized trial of nurse home visitation. *American Journal of Public Health*, 78, 1436–1445.
- Olds, D. L., Kitman, 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.
- Olds, D. L., Kitman, H., Cole, R., Robinson, J., Sidora, K., Luckey, D. W., et al. (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.
- Olds, D. L., Kitman, H., Hanks, C., Cole, R., Anson, E., Sidora-Arcoleo, K., et al. (2007). Effects of nurse home visiting on maternal and child functioning: Age-9 follow-up of a randomized trial. *Pediatrics*, 120(4), e832–e845.

Olds, D. L., Robinson, J., O'Brien, R., Luckey, D. W., Pettitt, L. M., Henderson, C. R., et al. (2002). Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. *Pediatrics*, 110(3), 486.

Olds, D. L., Robinson, J., Pettitt, L., Luckey, D. W., Holmberg, J., Ng, R. K., et al. (2004). Effects of home visits by paraprofessionals and by nurses: Age 4 follow-up results of a randomized trial. *Pediatrics*, 114(6), 1560-1568.

Nguyen, J. D., Carson, M. L., Parris, K. M., & Place, P. (2003). A comparison pilot study of public health field nursing home visitation program interventions for pregnant Hispanic adolescents. *Public Health Nursing*, 20(5), 412. doi:10.1046/j.1525-1446.2003.20509.

- Parents as Teachers (PAT)

Although improved child health is identified in the PAT logic model as a targeted intermediate outcome, few studies evaluated children's health outcomes and none found significant favorable or unfavorable outcome changes. Maternal health is not a targeted health outcome for PAT and no significant outcomes improvements of this type were found in this search.

Wagner, M. & Clayton, S. (1999). The Parents as Teachers program: Results from two demonstrations. *The Future of Children*, 9(1), 91-115.

ⁱ Data via DC KIDS COUNT. Source: 2013 Infant Mortality Report, Data Management and Analysis Division, Center for Policy, Planning and Evaluation, DC Department of Health.

ⁱⁱ Commission to Eliminate Child Abuse and Neglect Fatalities. (2016).

Within our reach: A national strategy to eliminate child abuse and neglect fatalities. Washington, DC: Government Printing Office.