

Pregnant Women, Mothers and Infants

Home Visiting to Pregnant and Parenting Families

Size of the Problem

Over 68,000 births occur annually in Minnesota among the over 1,096,832 women of childbearing age (15 to 44 years old) in the state.¹ The Centers for Disease Control (CDC) estimates that 43% of births nationally could benefit from home visiting because the mother is <20 years old, single, or has less than a high school education.² An estimated **29,240** Minnesota families would benefit from home visiting. Home visiting has been an effective strategy for delivering services to families for more than a century.

Seriousness

People affected by home visiting for pregnant and parenting families

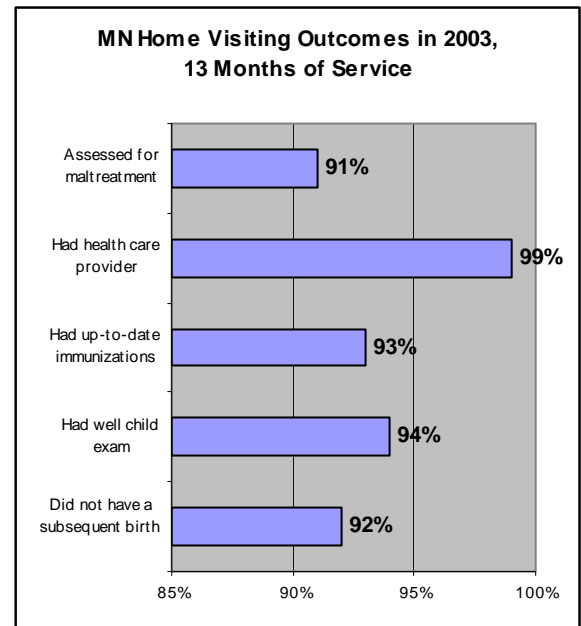
Current research shows that public health nursing home visiting services, especially for pregnant women and families with young children, are effective in helping families achieve economic self-sufficiency, improve health, improve positive parenting, reduce child maltreatment, reduce juvenile delinquency, achieve maternal goals such as child spacing, education and employment, and establish links to community resources.^{3,4,5}

Home visiting is a program that includes visitation of parent(s) and child(ren) in their home by trained personnel, such as nurses, social workers, other professionals, community health workers or community peers.⁶

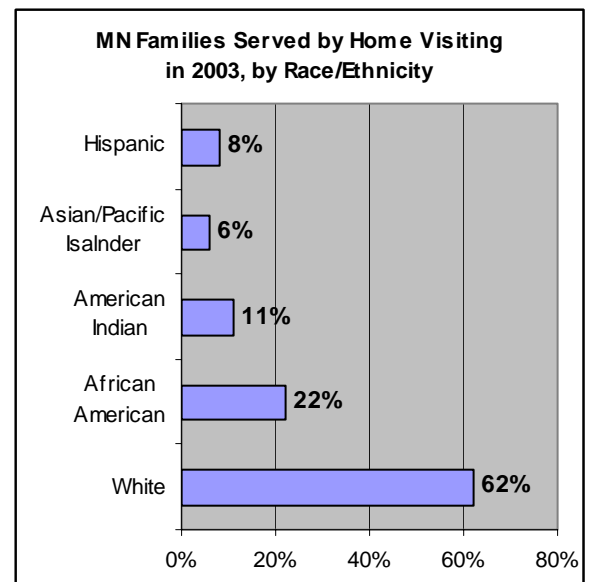
In 2001-2003, 10,296 primary caregivers and 13,756 children received services in the Family Home Visiting program in Minnesota. These families had the following characteristics:

- 34% of the primary caregivers (mother) were 19 years old and under;
- 40% of the caregivers were on Minnesota Family Investment Program (MFIP) at the time of enrollment; and
- 34% of the caregivers were pregnant at enrollment.

The following charts show the outcomes related to the families who received home visiting services for 13 months or more and the racial/ethnic distribution of the caregivers.



Source: MDH. Family Home Visiting- 2003 Summary. 2004.



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Disparities

Numerous national studies show the effectiveness of home visiting by a public health nurse (PHN) and by community health workers for mothers and families of color. These studies are summarized in the table below.

Table 1: Home Visiting Evaluation Studies by Race/Ethnicity of Family

Participants	Results
Single, pregnant low-income, African- American women with drug use	Increased emotional responsiveness of mother and increase ability to identify potential for child abuse
African American (406) & Mexican-Americans (186), many with maternal depression and living in Chicago	REACH Program resulted in: -Better immunization documentation and higher 12-month infant mental development scores for African-Americans; -In Mexican-Americans, improved daily living skills and scores on providing appropriate play materials
African-American women (1047) in Memphis	31% fewer closely spaced (<6 months) subsequent pregnancies; 30% fewer subsequent admissions to neonatal intensive care; 3.64 fewer months of welfare use; 32% increase in father presence in household; 50% increase in marriage.
Low income African American Women	Increased rates of mammograms and clinical breast exams
Native American women	Increased rates of mammograms and clinical breast exams

Source: Black M, et al. *Pediatrics*. 94(4):440-448. 1994.
Norr K, Crittenden S. *Public Health Nursing* 20(3):190-203. 2003.
Kitzman, Olds, Sidora, et al. *JAMA*, April 19, 2000.
Sung J, Blumenthal D, et al. *Am J. of Prevent. Med.* 13(1):51-57. 1997.
Margolis K, Lurie N, et al. *J of General Internal Medicine* 13(8):515-521. 1998.

Economic

The Olds' studies found that long-term benefits from 2½ years of nursing visits per family were recovered by the time the child was 4 years old.^{3,7} Other cost benefit studies quantified the cost saving of home visiting of between **\$6,200 to \$17,100 per youth**. Cost savings documented from studies include:

- *The Nurse Family Partnership for Low Income Women* saved \$2.28 for every dollar of program costs- \$17,180 per youth served; and
- *The Home Visiting Programs for At-Risk Mothers and Children* saved \$2.27 for every dollar spent- \$6,197 per youth served.^{8,9}

Interventions

The Centers for Disease Control and Prevention, Task Force on Community Preventive Services concluded “**there is strong evidence to recommend home visitation to reduce child maltreatment,**” after reviewing 25 studies.² The National Governor’s Association- Center of Best Practices recommends home visiting and offers suggestions for funding sources for these programs.¹⁰

Home visiting by public health nurses and community health workers has been found effective for different outcomes based on the service provider.

- The effectiveness of public health nurses providing short term (5-9 home visits) and long-term (2 ½ years) home visiting has been documented. Research shows short-term health outcomes of increased maternal hemoglobin levels, higher average infant birth weights, increased rate and duration of breastfeeding.⁴ The CDC analysis of home visiting by nurses demonstrated a mean reduction in child abuse of 48.7%.²
- The effectiveness of community health workers providing home visiting has been documented. Research shows increased access to care for immunization compliance, follow-up appointments, increased enrollment in prenatal care, increased baseline cancer screening (mammograms, Paps), HIV/STI prevention behavior change (condom use, HIV tests, needle risk reduction, use of bleach).⁷ The CDC analysis of home visiting by paraprofessional community health workers demonstrated a mean reduction in child abuse of 17.7%.²
- The CDC analysis of home visiting by mental health workers (with post-high school education or experience in child development) demonstrated a mean reduction in child abuse of 44.5%.²

Effectiveness of Interventions

David Olds and associates conducted research over the past 20 years in three different locations. The effectiveness of nurse home visits included a 79% drop in child abuse and neglect, decreased tobacco (25%) and alcohol use (46%) during pregnancy, increased breastfeeding rates (62%), reductions in subsequent pregnancies (43%), increased labor force participation (83%), increased income (20%). Their now adult children had 54% fewer arrests and 69% fewer convictions and probation violations.^{3,4,5}

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Research studies have identified statistically significant effects of nurse home visiting for:

- Increased educational outcomes for mothers;
- Identification of postnatal depression/ parental stress;
- Use of health services;
- Less pregnancy induced hypertension;
- Fewer subsequent pregnancies;
- Fewer acute care office visits;
- Higher birth weight;
- Less infant skin and respiratory problems;
- Identified potential for child abuse;
- Increased awareness of community services and attendance at childbirth classes and WIC;
- Fewer kidney infections;
- Improved diet; and
- Identification of developmental risks.¹¹

Three Minnesota counties participating in the Nurse Family Partnership (David Olds Research) Home Visiting Programs were able to document improved rates of Child and Teen Check-ups (C&TC) as one result of the home visiting.

Table 2: Improved C&TC Rates Achieved with Nurse Home Visiting Programs in Greater MN

	Clay County	Wilkin County	St. Louis County
FY 2000	52%	41%	52%
FY 2001	56%	55%	52%
FY 2002	62%	56%	58%

Source: DHS, C&TC Participation Rates by County, 2000-2003.

St. Louis County, Minnesota, a county participating in the Nurse Family Partnership Home Visiting program, has updated outcome evaluation indicators. The program has 35 families who have graduated from the program and 64 currently active. It is important to note that St. Louis County had fewer racial/ethnic minorities (18%) in its program compared to national program (50%). Key findings include:

- More mothers had mental disorders (14%), chronic STIs (10%) or asthma (20%) than in the national program (5% had mental disorders, 5% STIs or 14% asthma);
- Pregnant women reduced smoking in St. Louis County (11%) with an average number of cigarettes smoked daily in pregnancy of 2.5;
- 4% of pregnant women were victims of domestic violence at intake and this was reduced to 2% at 36 weeks of pregnancy;

- The percentage of women without a high school diploma/GED decreased from 31% at intake to 9% after 24 months of service with 43% of women enrolling in school (post high school/GED);
- Higher immunization rates in St. Louis County (94%) than national program (82% to 98%);
- Lower prematurity rates for Caucasian births (< 37 weeks gestation) in St. Louis County (5.3%) than national program (9.5%);
- Slightly higher rates of low birth weight in St. Louis County Caucasian births (8.4%) than national program (8.0%); and
- Lower rates of subsequent pregnancies in St. Louis County at 12 months (8%) and 24 months (18%) compared to national program subsequent pregnancies at 12 months (13%) and 24 month (32%).

Status

Minnesota Resources

Local Public Health and Tribal Government Maternal and Child Health (MCH) programs that promote home visiting to pregnant and parenting families include those described below.

The **MDH Family Home Visiting (FHV) program**, funded from 2001 to present, was one of eight categorical grants programs included in the Local Public Health (LPH) Act in 2003, and Public Health Nurse (PHN) home visitation is one of the “Essential Local Activities” in the LPH Act. The three overall goals of this program are: a) to improve the health and well-being of children/families; b) to promote family self-sufficiency, and c) to prevent and reduce the incidence of out-of-wedlock pregnancies. FHV services are voluntary. An initial assessment is carried out by a PHN. This assessment includes social, psychological, emotional, economic, environmental, cultural and physical factors. Based on the assessment, the PHN may offer: a) verbal and/or written information on infant care, positive parenting, child development; b) the prevention of disease and exposure to environmental hazards; and c) information about and/or linkages to community support services. Ongoing visits may be carried out by the PHN or by another trained home visitor, e.g., an Early Childhood Family Education (ECFE) parent educator or a paraprofessional home visitor. The FHV program has tracked the types of services provided and evaluated outcomes for three years (FY 01-03).

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Some Minnesota counties and tribes are using universal or targeted approaches modeled after the following home visiting programs:

- The **MDH Home Visiting program to Prevent Child Abuse and Neglect (PCAN)** was funded from 1993 to 2002. This program offered home visiting services by PHNs and other trained home visitors that included parent education, skill building, information and support, and connections to community support services. PCAN had an impact on reducing risks of child maltreatment for those families who participated in the program long enough and received other available community services.
- The **MDH Minnesota Healthy Beginnings (MHB) program** was funded between 1999 and 2003. This program offered home visits to all families with newborns in the six geographic areas funded. The evaluation found that in 12% of families assessed, the PHN had some to great concern about the parent's life experience (anger management, chemical use, mental health and parenting). Also, 19% of the families needed or wanted follow-up related to emotions and depression. These families were more likely to be older (49% were ages 25-35), married (57%) and have more than a high school education (48%).¹²
- St. Louis County and Clay-Wilkin County have home visiting programs that are participating in the **Nurse-Family Partnership Home Visiting Program**. Other home visiting programs, such as Twin Cities Healthy Start, use PHNs and/or other trained professional or paraprofessional home visitors.

Community Awareness

The universally offered Minnesota Healthy Beginnings program was well accepted in Minnesota communities. Overall, 91% of families contacted accepted and completed a first public health nurse home visit, and 50% of these families said they had their needs met with only one visit. A follow-up evaluation found that 99% of the participating families were satisfied or very satisfied with their public health nurse. Of these families, 99% indicated they would recommend the home visits to family and friends.¹²

Home visiting has been recommended by the American Academy of Pediatrics as a means to ensure ongoing parental education, social support, and linkage with community resources.

¹ Minnesota Center for Health Statistics. 2003

² CDC. Task Force on Community Prevention Services. First reports evaluating the effectiveness of strategies for preventing violence: early childhood home visitation. *MMWR*. October 3, 2003.

³ Kitzman H, Olds DL, et al. Enduring effects of nurse home visitation on maternal lifecourse: a 3-year follow-up of a randomized trial. *JAMA*. April 19, 2000. 283(15):1983-1989.

⁴ Olds D, Hill P, et al. Update on home visiting for pregnant women and parents of young children. *Current Problems in Pediatrics*. April 2000. 30(4):107-41.

⁵ Wollesen L, Orr P. Catching the Wind...research and outcome tools capture family strengths, demonstrate service impact and change nursing practice. National Resource Center for Family Centered Practice. *Prevention Report* #1. 2001.

⁶ Guide to Community Preventive Services. New findings demonstrate early childhood home visitation prevents child maltreatment. Sept. 2003.

www.thecommunityguide.org/violence/

⁷ Swider SM. Outcome effectiveness of community health workers: an integrative literature review. *Public Health Nursing*. February 2002. 19(1):11-20.

⁸ Aos S, Lieb J, Mayfiels M, Miller M, Pennucci A. 2004. Benefits and Cost of Prevention and Early Intervention Programs for Youth. Olympia: Washington State Institute for Public Policy.

www.wsipp.ws.gov/rptfiles/04-07-3901.pdf

⁹ www.nccfc.org/nurseFamilyPartnership.cfm Accessed 8-31-04.

¹⁰ National Governor's Association. Center for Best Practices. The Benefits and Financing of Home Visiting Programs. Accessed 6-5-04.

www.nga.org/cda/files/benefitsfinancinghome.pdf

¹¹ McNaughton DB. Nurse HomeVisits to maternal-child clients: A review of intervention research. *Public Health Nursing*. 2004. 21(3):207-219.

¹² MDH. Healthy Beginnings Evaluation. Wilder Research. 2003.