

AMERICAN ACADEMY OF PEDIATRICS

Council on Child and Adolescent Health

The Role of Home-Visitation Programs in Improving Health Outcomes for Children and Families

ABSTRACT. Traditional pediatric care is often based on the assumption that parents have the basic knowledge and resources to provide a nurturing, safe environment and to provide for the emotional, physical, developmental, and health care needs of their infants and young children. Unfortunately, many families have insufficient knowledge of parenting skills and an inadequate support system of friends, extended family, or professionals to help with these vital tasks. Home-visitation programs offer an effective mechanism to ensure ongoing parental education, social support, and linkage with public and private community services. This statement reviews the history and current research on home-visitation programs and provides recommendations about the pediatrician's role in supporting and using home visitation.

HISTORY OF HOME-VISITATION PROGRAMS

Home visitation for parents is a widespread early-intervention strategy in most industrialized nations other than the United States. In most countries, home health visiting is free, voluntary, not income-related, and embedded in comprehensive maternal and child health systems. Although a causative link has not been demonstrated conclusively, countries with extensive home visitor programs generally have lower infant mortality than does the United States. This is despite per capita health spending in the United States that far exceeds expenditures in other industrialized countries.¹ Denmark established home visiting by law in 1937 after a pilot program was successful in lowering infant mortality. France provides free prenatal care and home visits by midwives or nurses to provide education about smoking, nutrition, alcohol and other drug use, housing, and other health-related issues. In England, every prospective mother is visited at home at least once before birth, with six more visits typically occurring before the child is 5 years of age.² In the United States, home-visitation services have been perceived by many as too costly and unnecessary for all new families.

Home-visitation programs began in the United States in the late 19th century. Public health nurses and social workers provided in-home education and health care to women and children, primarily in poor urban environments.^{3,4} At the beginning of the 20th century, the New York City Health Department im-

plemented a home visitor program, using student nurses to instruct mothers about breastfeeding and hygiene. This program reduced the high mortality rate of inner-city infants from summer diarrhea when previous efforts of private agencies had failed.⁵ In the late 20th century, as funding for public health nurses has declined relative to the need, home-visitation programs have focused on families with special problems such as premature or low-birth-weight infants, children with developmental delay, teenage parents, and families at risk for child abuse or neglect.⁶

Almost 20 years ago, Dr C Henry Kempe suggested that to ensure the right of every child to comprehensive care, every pregnant woman be assigned a home health visitor who would work with the family until the child began school.⁷ Insurance companies declined to pay for this service because of a lack of empirical evidence to support its effectiveness. Kempe continued to advocate home visiting vigorously, suggesting that it could play a major role in the prevention of child abuse. He reiterated these ideas in the 1978 Abraham Jacobi Award Address.⁸ In 1980, the American Academy of Pediatrics held a conference on home visitation. The conferees were unable to find sufficient research on home visitation to recommend it as national policy.⁴

In the 1992 Jacobi Award Address, Sia⁹ renewed Kempe's arguments, citing additional information about the effectiveness of health-related home-visitation programs in Hawaii in improving health and social outcomes for children. The publication in 1988 of Schorr's book, *Within Our Reach: Breaking the Cycle of Disadvantage*,¹⁰ encouraged Sia and other advocates in Hawaii to move ahead with the first statewide home-visitation program. Begun in 1993, this program currently is the subject of two rigorously designed outcome studies and has stimulated research and development of similar programs in other states.¹¹

POTENTIAL BENEFITS OF HOME-VISITATION PROGRAMS

A small but growing body of research has supported the effectiveness of home-visitation programs. The following benefits have been found as an outcome of some, but not all, home visitor programs:¹²

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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Prenatal Effects

- Increased use of prenatal care^{6,13}
- Increased birth weight^{6,13}
- Decreased preterm labor and increased length of gestation^{6,13}
- Increased use of health and other community resources (eg, prenatal visits, well-child visits, family planning, programs for women, infants, and children [WIC], and immunizations)^{6,13}
- Improved nutrition during pregnancy¹³
- Fewer urinary tract infections during pregnancy¹³
- Increased attendance at childbirth classes¹³
- Decrease in maternal smoking^{6,13}
- Greater interest by fathers in the pregnancy^{6,13}
- Increase in the number of mothers having a labor room companion^{6,13}

Postnatal Effects

- Fewer subsequent pregnancies^{14,15}
- Increased spacing between pregnancies^{6,14}
- Increased length of maternal employment^{6,14}
- Increased rate of return to, or retention in, school by mothers⁶
- Fewer emergency department visits¹⁶
- Fewer accidental injuries and poisonings resulting in a visit to the physician¹⁶
- Decrease in the number of verified incidents of child abuse and neglect^{6,15,16}
- Decrease in physical punishment and restriction of infants, with an increase in use of appropriate discipline for older children^{14,17}
- Improved maternal-child interaction and maternal satisfaction with parenting^{6,12}
- Increased use of appropriate play materials at home¹⁶
- Improved growth in low-birth-weight infants¹²
- Higher developmental quotients in infants visited¹⁸

Long-term Effects

A 15-year follow-up study of families who received a mean of nine home visits by nurses during pregnancy and 23 home visits up to their child's second birthday has demonstrated the following long-term benefits:

- Fewer subsequent pregnancies¹⁵
- Reduced maternal criminal behavior¹⁵
- Decrease in use of welfare¹⁵
- Decrease in verified incidents of child abuse and neglect¹⁵
- Less maternal behavioral impairment attributable to alcohol and drug abuse¹⁵

The observed effect of home-visitation programs seems to be greatest in high-risk populations, such as mothers who are teenagers, unmarried, poor, or have been abused themselves, and in children who are preterm or low birth weight.¹⁵

PERTINENT VARIABLES IN HOME-VISITATION PROGRAMS

Home visitors may be professionals or paraprofessionals, volunteers or paid workers. The services

they provide may be social, health-related, or educational and may be targeted to an individual child or to an entire family.⁶ They are not intended to replace office-based pediatric care, but rather to supplement and reinforce it. Caution is advised in comparing the outcomes of different home-visitation programs, because they may vary in important ways, including the following:

- Use of trained paraprofessionals versus professional nurses
- Volunteers versus paid visitors
- Onset of services (first trimester vs later; before birth vs after)
- Duration of services (eg, until the second birthday or beyond)
- Frequency of visits
- Universal availability to families versus selective application to families at risk
- Training of providers
- Aim and scope of program
- Intervention strategies used (simple social support vs active intervention, education, and advocacy)
- Adequacy of supervision of visitors
- Ratio of families to visitors
- Client variables and demographics
- Level of risk in families served
- Clients' perception of need for services

ELEMENTS OF SUCCESSFUL HOME-VISITATION PROGRAMS

Olds has made a plea that health and human services groups not make recommendations about, design, or implement home-visitation programs without considering the empirical evidence about the types of programs that are more successful.¹⁴ Current research indicates that more successful programs contain the following elements:^{8,14}

1. A focus on families in greater need of services (as opposed to universal programs that may avoid stigmatizing families but might dilute scarce resources), including families with low-birth-weight and preterm infants; children with chronic illness and disabilities; low-income, unmarried teenage mothers; parents with low IQs; and families with a history of substance abuse;
2. Intervention beginning in pregnancy and continuing through the second to fifth year of life;
3. Flexibility and family specificity, so that the duration and frequency of visits and the kinds of services provided can be adjusted to a family's need and risk level;
4. Active promotion of positive health-related behaviors and specific qualities of infant care-giving instead of focusing solely on social support;
5. A broad multiproblem focus to address the full complement of family needs (as opposed to a focus on a single domain such as increasing birth weights or reducing child abuse);
6. Measures to reduce family stress by improving its social and physical environments; and
7. Use of nurses or well-trained paraprofessionals.

COST-EFFECTIVENESS OF HOME VISITATION

Are home-visitation programs cost-effective? Olds writes that “a major portion of the cost for home visitation can be offset by avoided foster care placements, hospitalizations, emergency room visits, and child protective service worker time incurred during the same period that the home visitor program is provided. The long-range financial savings to the community are in all likelihood substantially greater, as is the reduction of human suffering.”⁶ Olds reports that current home-visitation programs cost between \$300 and \$1750 per family per year depending on the level and frequency of services provided. Even the most expensive programs pay for themselves by the time the children are 4 years old. Approximately 80% of the cost savings comes from reduction in welfare payments and food stamps, with one third of the savings coming from reduction in unintended subsequent pregnancies.^{8,14}

NEED FOR EVALUATION AND SAFETY

Many small home-visitation programs are being developed and implemented around the country. In the absence of careful design, attention to empirical findings from previous research on home-visitation programs, and high standards for field experimentation, it will be difficult to determine whether public and private monies are well spent. Public funding measures for home-visitation programs should require both continuous examination of outcome measures and the ability to make midcourse corrections.^{8,14} Accrediting may be a key component to providing some degree of uniformity, accountability, and quality in home-visitation programs. Home-visitation programs also must ensure the safety of their visitors and protect them from the violence often found in the environment of families with the highest needs.¹⁹

LIAISON WITH PRIMARY PROVIDERS

Home visitors can be health care advocates to improve access to providers of health care. Home visitors can be partners with pediatricians and other clinicians, working in the home setting to provide essential education and supportive services to at-risk children and families and to improve adherence to medical prevention and treatment regimens. Home-visitation programs include a “degree of social support that is difficult to provide in most clinical settings; outreach and liaison between the pediatrician, the family, and the community; involvement with socioeconomic issues that directly affect the well-being of the child and family; reinforcement and follow-up of preventive care, peer helper support, as well as encouragement, by the home health visitor who has the advantage of being with the family in its own home—a more accepting, less threatening setting for the family.”⁶

Home-visitation programs should be integrated into a community’s existing health care system, expanding the effectiveness of private providers, health mainte-

nance organizations, and public health nurses. Visitation programs can provide or supplement services that are constrained by managed care or budgetary reductions. Aspects of home-visitation services for pregnant women, infants, and preschool children already are provided in many communities through public and home health agencies, parent-child services, hospitals, and private agencies. In some areas, home-visitation programs have linked with Head Start and other community-based family support programs to provide continuous services from conception to the start of school.²⁰

CONCLUSION

Home-visitation programs can be an effective early-intervention strategy to improve the health and well-being of children, particularly if they are embedded in comprehensive community services to families at risk.⁴ Home-visitation programs are not a panacea, sufficient unto themselves to reverse or prevent the damaging effects on children of poverty and inadequate or inexperienced parenting. Successful home-visitation programs require physician support and participation.

RECOMMENDATIONS

The American Academy of Pediatrics encourages pediatricians to:

1. Recognize that home-visitation programs are complimentary to office-based practice and part of a continuum of care;
2. Become familiar with the outcomes of home-visitation programs and the variables that enhance favorable outcomes;
3. Become aware of and coordinate with the types of home-visitation programs that exist in their area;
4. Advocate for home health visitors as members of the health care family and partners in obtaining information about factors that affect patients’ health and assist in the implementation of health care recommendations. In this process, pediatricians should become familiar with the concept of “The Medical Home” as described by Brewer et al²¹ and developed by Sia⁹;
5. Support referral of high-risk parents to home-visitation programs as early as possible, ideally before or at the time of the prenatal visit to the pediatrician;
6. Be willing to participate in the planning, implementation, and evaluation of home-visitation programs in their communities;
7. Be available to participate in the education and evaluation of home visitors or ensure that home-visitation activities have adequate support;
8. Advocate that home-visitation programs be incorporated into managed health care plans, on a cost-added basis to avoid being compromised by capitation; and
9. Advocate at the local, state, and national levels for the funding, development, and careful evaluation of quality home-visitation programs.

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REFERENCES

1. Schieber GJ, Poullier JP, Greenwald LM. Health care systems in twenty-four countries. *Health Aff (Millwood)*. 1991;10:22-38
2. Kamerman SB, Kahn AJ. Home health visiting in Europe. *Future Child*. 1993;3:39-52
3. Buhler-Wilkerson K. Public health nursing: in sickness or in health? *Am J Public Health*. 1985;75:1155-1161
4. Weiss HB. Home visits: necessary but not sufficient. *Future Child*. 1993;3:113-128
5. Baker JP. Women and the invention of well child care. *Pediatrics*. 1994;94:527-531
6. Chapman J, Siegel E, Cross A. Home visitors and child health: analysis of selected programs. *Pediatrics*. 1990;85:1059-1068
7. Kempe CH. Approaches to preventing child abuse: the health visitors concept. *Am J Dis Child*. 1976;130:941-947
8. Kempe CH. Child abuse: the pediatrician's role in child advocacy and preventive pediatrics. *Am J Dis Child*. 1978;132:255-260
9. Sia CC. The medical home: pediatric practice and child advocacy in the 1990s. *Pediatrics*. 1992;90:419-423. Abraham Jacobi Award address, April 14, 1992
10. Schorr LB. *Within Our Reach. Breaking the Cycle of Disadvantage*. New York, NY: Anchor Press/Doubleday; 1988
11. Daro D. New dimensions in preventing child sexual abuse—home visitations. *NRCCSA News*. 1996;5:1-8
12. Olds DL, Kitzman H. Review of research on home visiting for pregnant women and parents of young children. *Future Child*. 1993;3:53-92
13. Olds DL, Henderson CR Jr, Tatelbaum R, Chamberlin R. Improving the delivery of prenatal care and outcomes of pregnancy: a randomized trial of nurse home visitation. *Pediatrics*. 1986;77:16-28
14. Olds DL. Home visitation for pregnant women and parents of young children. *Am J Dis Child*. 1992;146:704-708
15. Kritzman H, Olds DL, Henderson CR, et al. Long term effects of home visitation on maternal life course and child abuse and neglect: fifteen year follow-up of a randomized trial. *JAMA*. 1997;278:637-643
16. Olds DL, Henderson CR Jr, Chamberlin R, Tatelbaum R. Preventing child abuse and neglect: a randomized trial of nurse home visitation. *Pediatrics*. 1986;78:65-78
17. Olds DL, Henderson CR Jr, Kitzman H. 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*. 1994;93:89-98
18. Olds DL, Henderson CR Jr, Tatelbaum R. Prevention of intellectual impairment in children of women who smoke cigarettes during pregnancy. *Pediatrics*. 1994;93:228-233
19. Nadwairski JA. Inner-city safety for home care providers. *J Nurs Adm*. 1992;22:42-47
20. American Academy of Pediatrics, Committee on Early Childhood, Adoption, and Dependent Care. The pediatrician's role in family support programs. *Pediatrics*. 1995;5:781-783
21. Brewer EJ Jr, McPherson M, Magrab P, Hutchins VL. Family-centered, community-based, coordinated care for children with special health care needs. *Pediatrics*. 1989;83:1055-1060