

Variation in Home Visiting over the First Three Years of Life: Links to Family Characteristics,  
Aspects of Home Visits, and Child Outcomes

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## Executive Summary

Home visiting programs are a popular intervention strategy which serves about 500,000 families each year. However, home visiting programs differ in many respects: the age of the child, risk status of the family, range of services, intensity of the home visits, and the content of the program's curriculum. Programs also vary by who provides the services, how effectively the program is implemented, and the outcomes examined. What home visiting programs share is the belief that services delivered in the home will have a positive impact on families and that altering parenting practices can have measurable, long-term benefits for children's development.

Study Rationale: A major question facing home visiting programs is not whether they work, but under what conditions. Family participation is vital to successful outcomes, however, as much as 40% of families invited to enroll in home visiting programs choose not to enroll. Once enrolled, 20 to 80% of families leave programs before the end of the program, with attrition rates averaging about 50% (Gomby, 2005)<sup>i</sup>. Families who stay receive about half of the scheduled visits. With such poor participation, and in the absence of knowing the reason for a family's departure, it is imperative to better understand which families participate and which do not. To date, research has not successfully identified these families, although the general sentiment is that families who drop out earlier are the ones who need the services most and who should benefit more from the receipt of services. In addition, although a greater number of home visits is expected to be associated with better outcomes, the extent to which the frequency of home visits is associated with such outcomes has only recently been examined. Few studies have systematically examined the quantity and quality of home visits, and no studies have examined changes in the frequency of home visiting over the life of a home visiting program.

Purpose: The present study examines: 1) differences in the patterns of visits over time, 2) whether child, maternal, and family variables are associated with these patterns, and 3) whether

higher patterns of home visits are associated with greater treatment effects for child cognitive and behavioral outcomes, home environment, and for maternal coping, support, and depression.

Design/Methods: The Infant Health and Development Program (IHDP) is a randomized early childhood intervention program with a clearly-specified home visitation model for serving low birth weight, premature infants and their families. Of the 985 families, one-third were randomly assigned to the intervention (n=377); two-thirds to the follow-up (n=608). Intervention children received 3 years of home visiting (weekly first year visits, biweekly thereafter) and pediatric care and 2 years of fulltime center-based educational childcare. Follow-up children only received 3 years of pediatric care. Home visitors engaged parents in learning games with their children and encouraged their use on a regular basis. Home visitors also taught parents problem-solving skills. After each visit, home visitors recorded the duration of the visit and the nature of the caregiver-home visitor relationship. This sample consists of 377 intervention families who received home visitation. Ward's cluster analysis was used to examine patterns of home visiting frequency over the entire three years.

Results: Four patterns of home visitation were found: low, medium decreasing, medium stable, and high. The low group, which represents 9% of the sample, is a unique group who are not in urgent need of services. Mothers in this group do not have any chronic health conditions, nor were there any twins. Children in the low group were less likely to have medical visits and more likely to have better neonatal health. Quality aspects of the visit were also important. The low group had a greater proportion of trusting visits but less time per home visit. The medium decreasing group was more likely to be Hispanic and had a moderate need of services. Children were more likely to have worse neonatal health and to have medical visits. Families were less likely to have trusting home visits, but more time per visit. In contrast, the medium stable and

high groups comprise 85% of the sample. The medium stable group had a moderate need for services. Children were more likely to have worse neonatal health, lower birth weight, and were more likely to have a medical visit; families had more time spent per home visit and had more contacts to schedule visits. The high group had a greater need for child medical services than the low group, but less need than the medium stable group. Children in the high group were more likely to have better neonatal health and higher birth weight; families had more time spent per visit, more trusting visits, and fewer contacts to schedule visits. Greater contacts were not associated with greater home visitation for the low and medium decreasing groups and were not necessary for the high group. Greater time spent per visit was an important predictor of home visiting, but was not consistently associated with greater home visits. Instead, the proportion of trusting visits was associated with being in a higher home visiting group. Teenage parenthood, Black ethnicity, or residential moves were not associated with home visitation patterns.

The goal of home visitation, to provide services to families most in need, was accomplished by the IHDP. The low group who was not in need of services represents a small minority; the high group represents close to the majority. By the end of the first year, participation waned for the low and medium decreasing groups, but not for the medium stable and high groups. By the end of three years, the low and medium decreasing groups converged to virtually no visits per month, and the medium stable and high groups converged upon an average of about 2 visits per month (which is the level of visitation offered by the program).

Based on propensity score matching, which compared each of the home visitation patterns with a matched member from the follow-up group, treatment effects were examined for child and maternal outcomes. Matches were based on similarities in demographic and background characteristics. Matched analyses resulted in larger treatment effects across

outcomes, compared to unmatched analyses. In addition, positive dosage effects for home visits were found. While treatment effects were nonsignificant for the low and medium decreasing groups, positive treatment effects were found for children's home learning environment, IQ and verbal scores for both the medium stable and high dosage groups. Treatment effects for the medium stable group were stronger and were significant for more outcomes (overall home environment, maternal coping, and children's behavior problems).

Limitations: The IHDP program was conducted over 20 years ago. Also, the results from a LBW sample may not generalize to normal birth weight samples, and having a small number of families in the low and medium decreasing groups limited the number of predictors examined.

Implications for Policy and Practice: Home visiting programs should target families most in need. Families most in need are more likely to participate and to reap the most benefit, while families who are not in need are less likely to participate and to benefit. Continued family participation is also fundamental. Repeated contacts to schedule visits are not effective in maintaining participation. Instead, establishing and maintaining trust between the home visitor and caregiver are vital to family participation, especially over the long-term. There is a threshold or minimum dosage for the amount of home visitation families should receive. Maintaining a biweekly schedule is crucial to achieving positive effects upon children's cognitive performance and overall home environment.

Future Research: Although determining patterns of home visitation based on the number of visits is an objective measure of participation, an index could incorporate overall time spent and visit quality. Dosage effects of home visitation were found for outcomes at three years.

Future research should examine the possibility of longer term dosage effects.

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<sup>i</sup> Gomby, D. S. (2005). Home visitation in 2005: Outcomes for children and parents. Invest in Kids Working Paper No. 7. Committee for Economic Development. Invest in Kids Working Group.