

**COMPARISON OF PRIMIPAROUS AND  
MULTIPAROUS MOTHERS:  
Healthy Families Program Participation, Outcomes, Challenges,  
and Adaptations  
FY 1999 – FY 2010**

**Executive Summary**

Prepared for:

The Pew Center on the States

March, 2012

This research was supported by The Pew Center on the States. The views expressed are those of the authors and do not necessarily reflect the views of The Pew Center on the States or the Pew Charitable Trust.

## EXECUTIVE SUMMARY

This study was conducted to compare the participation and outcomes of multiparous mothers (those with previous children) in Healthy Families (HF) home-visitation programs in Virginia to those of primiparous (first-time) mothers in the same programs. The purpose of these comparisons was to examine the longstanding assumption that multiparous mothers do not do as well as primiparous mothers in home visiting programs. Targeting services based on this untested hypothesis denies services to more than 60% of the American families who deliver each year, based solely on the fact that they have previous children. The first phase of the study was a quantitative analysis of participation and outcomes, and the second phase was qualitative interviewing of the HF programs' managers.

A review of recent studies and meta-analyses, combined with the experience of the co-principal investigators suggested that, although it has been assumed that first-time mothers will benefit more from early home-visitation than will mothers with previous children, very little research has tested this hypothesis.

Studies of the Nurse Family Partnership (NFP), which serves first-time mothers exclusively, have contributed to the assumption that these mothers benefit most from home-visiting. NFP, however, has never been empirically tested with multiparous mothers.

Perhaps the most authoritative meta-analysis conducted to date was the 2003 National Review of the Effectiveness of Early Childhood Home Visitation for Preventing Violence conducted by the Task Force on Community Preventive Services (Hahn, et al., 2003). The Task Force identified 22 studies (representing 27 interventions) that evaluated effects of early childhood home visitation on child maltreatment. Compared with controls, the home visitation programs had median effect sizes of approximately 40% in reducing child abuse and neglect.

That review did not suggest that home visitation be provided only to primiparous mothers.

The recent HomVEE review, although not a meta-analysis, conducted a broad search of home visiting models and identified seven programs (Early Head-Start Home Visiting, Family Check-Up, Healthy Families America, Healthy Steps, Home Instruction of Parents of Preschool Youngsters, Nurse Family Partnership, and Parents as Teachers) that received high or moderate ratings of effectiveness. The HomVEE did not examine parity (Paulsell, Avellar, Martin, & Grosso, 2010).

Results attained by home-visitation programs in Virginia during the past 20 years have also challenged the assumption that multiparous mothers do not benefit from home visiting. First, in the six-year evaluation of the Hampton Healthy Start (HHS) program (Galano & Huntington, 1999), any differences between the primiparous and multiparous mothers were smaller than those between the intervention and the control group. The HHS evaluation included randomized assignment to intervention and control groups. Overall, the results of the HHS evaluation indicated that, although there were significant differences between the intervention and control groups on measures of infant health, parent-child interaction, and the home environment, the mothers' parity was never a factor that effected the outcome. In other words, primiparous and multiparous mothers, and their children, received similar benefits from participation in the intervention. Second, in the past ten years of Healthy Families Virginia evaluations, participants, regardless of parity, attained high levels of success in the program, measured by children's immunization completion rates, developmentally appropriate home environments, and closely-spaced subsequent pregnancies.

The data for this PEW-funded study were collected from Healthy Families participants and their children. Data from participants served between July 1, 1999 and June 30, 2010

provided the basis for these analyses. The relationships between client demographics (race, employment, education, parity, and level of risk), program participation (length of service, number of home visits, and service intensity), and program outcomes (immunization completion, the home environment, and subsequent births) were examined. Multiple regression analysis was used to examine the relationships among these variables.

The analyses for this study were conducted in five stages: 1) comparability of sites serving only primiparous participants (primiparous-only sites) and sites serving both primiparous and multiparous families (multiparous-serving sites), 2) comparability among the multiparous-serving sites, 3) comparability of primiparous and multiparous mothers, 4) the relationships among parity, demographics, and participation, and 5) the relationships among parity, demographics, participation, and outcomes.

Parity was related to level of risk and the risk profile for mothers. Multiparous mothers had higher levels of risk at enrollment (assessed using the KEMPE Family Stress Checklist). Multiparous mothers had higher risk scores on history of abuse, substance abuse, mental health, criminal history, CPS involvement, coping skills, stressors and concerns, and punitive discipline. Multiparous and primiparous mothers did not differ on their potential for violence, perception of the infant, and child unwanted items. Multiparous mothers had lower risk scores on expectations of the child.

Parity was not related to the participation variables (length of service, number of home visits, and intensity). Participation variables were related, however, to participants' risk scores, age, race, employment, and education to varying degrees.

Overall, the results of this study support a conclusion that multiparous mothers participate similarly and have similar outcomes to primiparous mothers in the Healthy Families home

visitation program. Although they were older and at higher risk than the primiparous participants, the multiparous participants participated similarly to primiparous mothers. In addition, the multiparous and primiparous mothers had similar patterns of outcomes. This study examined three outcome indicators (one of which was assessed at two separate times), and none had a significant relationship with parity. In fact, on immunizations, both groups far surpassed the Virginia general population rates. For the HOME, the regression indicated that parity was not a significant predictor of scores on either the first or last HOMEs. This was supported by the finding that mothers' HOME scores did not differ between primiparous and multiparous mothers and that there was a significant increase for all mothers' scores between the two HOME administrations.

The results also indicated that the outcomes were more strongly and consistently predicted by a combination of participation and demographic variables. The most frequent and strongest predictors of participant outcomes were length of service and risk scores. The next most frequent was Black participants compared to Hispanic. This combination of results; no predictive ability for parity, comparable scores for primiparous and multiparous participants on all measures, and stronger prediction of outcomes by participation and demographic variables, suggests that it is neither appropriate nor useful to use parity as a variable to exclude mothers from participation in Healthy Families home visitation services.

Following the quantitative analysis phase, the authors convened a meeting with the Healthy Families program managers so that they could provide feedback for other service providers. Using an open-ended interviewing methodology, the meeting explored the managers' experiences serving multiparous participants, the rationale for serving them, and accommodations or adaptations that the programs had made to engage and retain multiparous

participants. Managers cautioned that multiparous families should not be treated as a unitary bloc. As with other families, the key to success was tailoring services to an individual family's needs.

Sites had originally decided to serve multiparous families for a variety of reasons, from the fiscal to the philosophical. Some sites depended on the larger family sizes to help them financially via Medicaid Case Management billing. Most of the sites expressed that it was not a consideration to serve only primiparous families as it would severely limit their ability to provide services to many high-risk families in their communities.

Overall, this study provided new insight into home visiting services for multiparous families. Despite the assumption that they would not benefit from home visiting programs to the extent seen in primiparous families, and despite the fact that programs that serve them face additional challenges to meet their more complicated needs, this study demonstrated that multiparous families can participate similarly to primiparous families and can achieve similar outcomes. With further funding, HFV could enable communities to serve both multiparous and primiparous mothers so that a randomized experiment could be conducted.

The results of this study suggest several areas of future research. One direction might be to further examine the multiparous mothers' mental health and risk status. In addition, further analysis using tools such as Hierarchical Linear Modeling could examine program and community level variables that contribute to participation and outcomes.