

Randomized Controlled Trial of a Universal Postnatal Nurse Home Visiting Program: Impact on Maternal Wellbeing, 18 months after Childbirth

EXECUTIVE SUMMARY

April 2014

Prepared for | Ken Dodge, Ben Goodman, and Jeannine Sato
Durham Connects

Prepared by | Rachel Goldstein
Master of Public Policy Candidate
The Sanford School of Public Policy
Duke University

Faculty Adviser | Anna Gassman-Pines, Ph.D.

I. INTRODUCTION

Background

Home Visiting

Home visiting (HV) programs have become a popular early intervention tool to fight child maltreatment and to promote healthy child and family development. In the U.S. alone, there are over 400 programs that collectively serve 450,000 families (Avellar & Paulsell, 2011; Johnson, 2009).

The Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), authorized by the 2010 Patient Protection and Affordable Care Act (ACA), substantially increased federal funding for home-visiting programs. Prior to this federal development, public funding for home visitation came mainly from state and local sources. Approximately 15 state Medicaid programs provide funding for home visiting programs (Witgert, Giles, & Richardson, 2012).

Seventy-five percent of federal MIECHV funds are allocated to programs that meet the U.S. Department of Health and Human Services (HHS) criteria for evidence of effectiveness, and up to 25 percent of the funds may be allocated to programs that exhibit “promising approaches” to HV.

Durham Connects

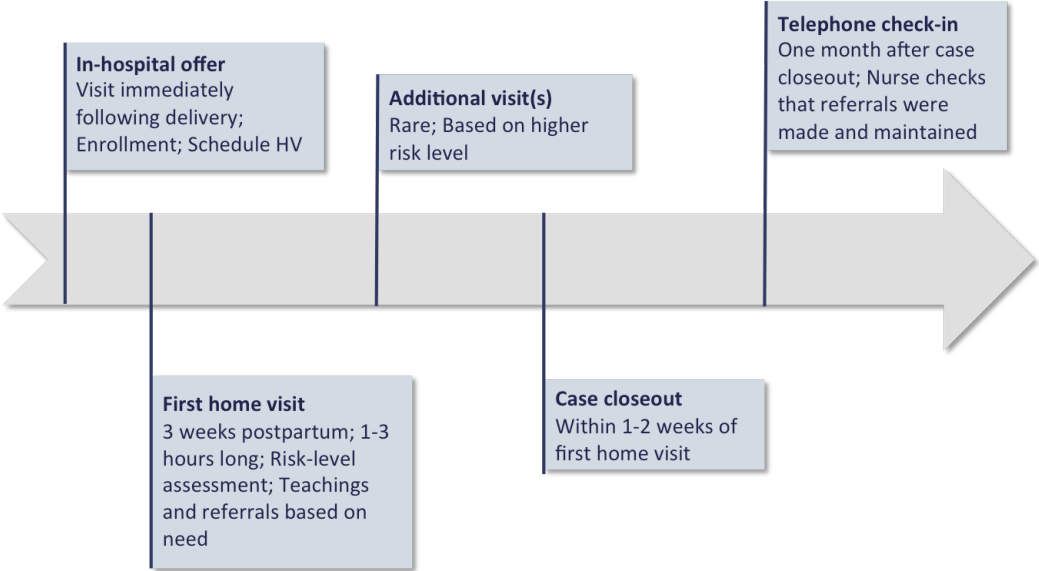
The Durham Connects (DC) program, a universal postnatal nurse home visiting program in Durham County, North Carolina, is in the process of evaluating the effectiveness of its model. Evidence of effectiveness could lead to MIECHV funds for the program, which would secure financial stability for DC’s operating model for years to come.

DC aims to increase child wellbeing by linking parents to a network of community resources based on exhibited type of service need. DC departs from most other home visiting models on a number of defining program characteristics. The program is universal rather than targeted, is brief in duration relative to other models (DC lasts only a month or two max, while other programs can last over a year), and focuses on the postnatal period rather than the prenatal period.

DC’s main goals are to reduce child abuse, to increase appropriate medical care, and to increase connections to community services and agencies that will promote and foster child and family health and wellbeing. A DC staff member first connects with the mother and infant in the hospital upon delivery in order to enroll interested mothers in the program and to schedule a subsequent home visit.

Registered nurses (RNs) visit the home within three weeks following delivery. During the 1-3 hour-long visit, the RNs assess the family’s risk level, deliver “tailored teachings” to the mother, and provide the family with referrals for medical and community-based resources. The nurses close out most families’ cases within one to two weeks of the first home visit. See Figure 1 for a complete depiction of the program timeline.

Figure 1. Timeline of Durham Connects intervention



The DC program design can impact maternal wellbeing in two potential ways: (1) nurse-delivered teachings, and (2) referrals for medical and/ or community resources. During the RCT period, nurses reported that of the tailored teachings they delivered, teachings on maternal wellbeing were among the most common. It is possible that because of either or both of these teachings and DC-initiated linkages, women could experience improved wellbeing.

Research Objectives

- (1) 18 months following the birth of a child, do mothers who participated in Durham Connects show improved wellbeing, relative to controls?
- (2) Does the program benefit a certain group of mothers more than others?

II. RECOMMENDATIONS

Capturing the impact of DC on mothers’ wellbeing (and overall health) is a critical component of evaluating the complete effectiveness of the DC program. In future research and analytical strategy planning efforts, the impact evaluation team should consider ways to strengthen their ability to capture these benefits, including:

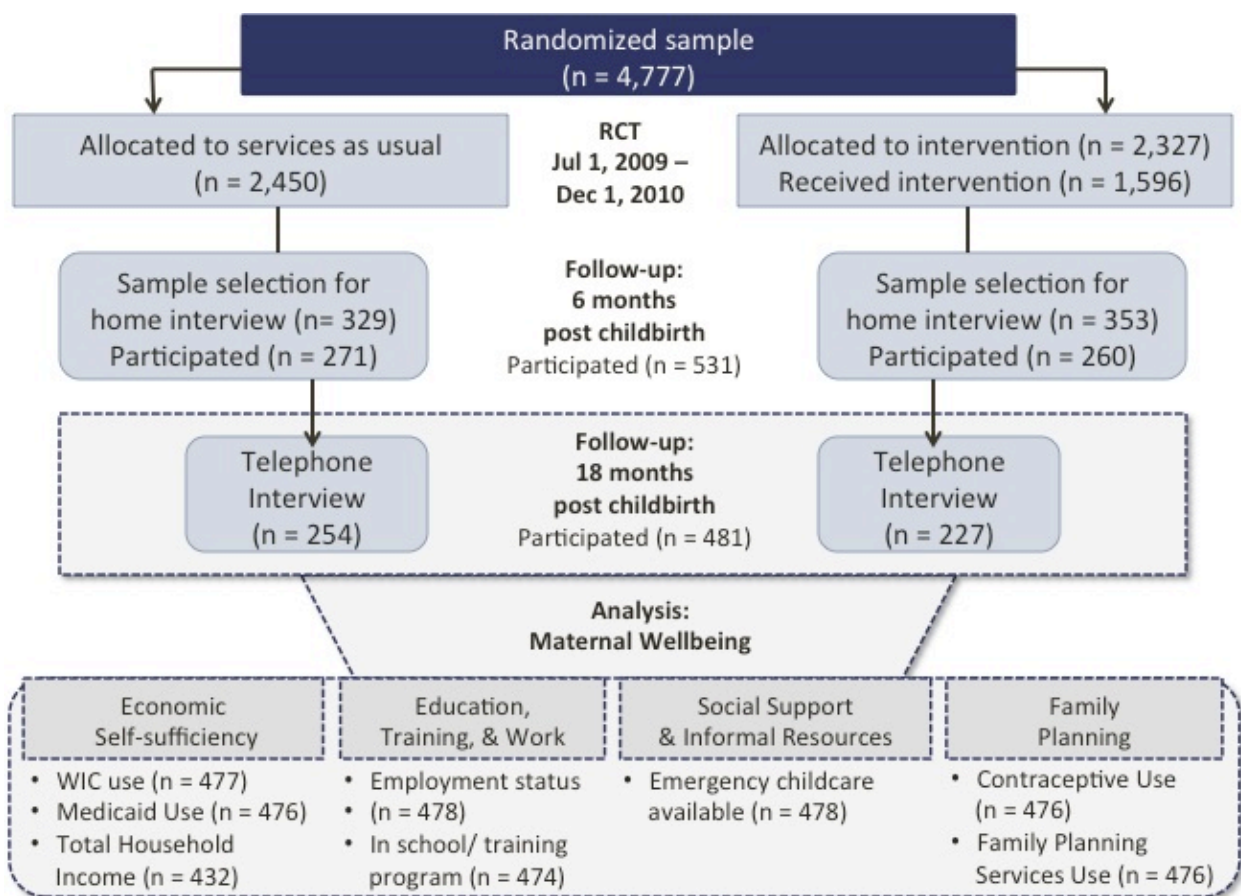
- (1) Mapping a logic model for how specific program mechanisms could impact specific maternal outcomes.
- (2) Adding and/ or revising questions that measure maternal health and wellbeing.

- (3) Including the same questions on maternal health and wellbeing in follow-up surveys in order to detect potential change over time.

III. METHODS

This study evaluates the impact of DC based on the subsample of families that stemmed from data collected during the DC RCT (July 1, 2009 - December 1, 2010). The RCT treatment and control groups were randomly assigned by date of birth; babies born on even birth dates were assigned the intervention (n = 2,327), and babies born on odd birth dates were assigned to the “services as usual,” or control group (n = 2,450). The RCT utilized electronic discharge hospital records in Durham County to ensure that the population was fully identified and randomized for the 18-month period. See Figure 2 for a detailed flow diagram of the RCT’s randomization and follow-up analyses.

Figure 2. Flow diagram of Durham Connects randomization and follow-up analyses



IV. RESULTS

The results of this study suggest that 18 months following childbirth, DC does not significantly impact most measures of mothers' overall wellbeing. The study shows interesting findings in three outcome measures: Medicaid use, employment status, and contraceptive use. While the program aims to increase referrals and linkages with community and medical services, mothers rolling off of Medicaid could suggest increased family and parental stability. The significant difference in reported Medicaid use is a potentially promising finding for the DC program.

The lower employment and lower contraceptive use findings (compared to the control group) present a curious twist to the results. A possible explanation for these findings could be that DC made mothers feel more secure, self-sufficient and economically stable, which could translate into feeling ready to have another child. Attempting to have another child, or being pregnant, could explain the lower contraceptive use amongst treatment mothers compared to the control group. The targeted teachings and medical and community linkages could have made mothers more confident in their ability to parent and engage in healthy personal and family functioning.

Table 2. Descriptive Statistics: Maternal Wellbeing Outcomes, 18 Months after Childbirth

Variable	Intervention			Control			Difference
	Mean	SD	N	Mean	SD	N	P
Economic Self-sufficiency							
WIC use	0.52	0.50	226	0.57	0.50	254	0.29
Medicaid use	0.22	0.41	225	0.34	0.47	254	0.00
Total household income	44,599	43,405	212	40,740	42,556	223	0.35
Work, Education, & Training							
Employment status	0.55	0.50	227	0.65	0.48	254	0.03
In school or training program	0.17	0.38	225	0.21	0.41	252	0.31
Social Support							
Emergency childcare available	0.93	0.25	227	0.94	0.24	254	0.75
Family Planning							
Contraceptive use	0.55	0.50	226	0.64	0.48	253	0.04
Family planning services use	0.10	0.30	225	0.09	0.29	254	0.90

Note. These mean outcomes do not include control variables. See full report for regression tables with covariates.

The results of this study also suggest that young mothers might benefit more from DC than older mothers. Younger mothers often have fewer resources, are less connected, and may be of a lower socio-economic status. The DC program could have connected many of these women with referrals that led to stability. In future research, it would be interesting to run descriptive statistics on where these women were linked to, and if these referrals “stuck.”

See the full report for a more detailed description of methods and results, a discussion of the study's key limitations, and a reference list.