**Evaluation Report for Year 2 of the WV MIHOW RCT**

**Oct 2013**

**Submitted by: Marty Amerikaner, Ph. D. Principal Investigator**

A team of researchers from Marshall University is conducting a randomized control trial (RCT), mixed methods evaluation study of the West Virginia MIHOW program, under a contractual agreement with the West Virginia Department of Health and Human Resources (DHHR). The evaluation project is expected to last three years; September 30, 2013 marked the end of the second fiscal year of the ongoing project. What follows below is our report on the second year’s work. The report is organized into the following sections:

1. A brief restatement of the background and need for the study (copied from the Year One report) and a presentation of the current research team personnel.
2. A presentation and discussion of quantitative data describing the overall demographic makeup of the research participants, a discussion of emerging similarities and differences between the participants from our two study sites and the emerging data that speaks to the validity of our randomization process- a process that is key to the overall utility of the RCT design for drawing conclusions about MIHOW at the conclusion of the study.
3. A presentation and discussion of data collected and analyzed by the qualitative research group on our team during this second year of the research program. These qualitative data are drawn from an ongoing series of interviews conducted with MIHOW program enrollees and home visitation staff.
4. A brief discussion of the work that is ongoing in year three, and the decisions that need to be made regarding a possible extension of data collection into a fourth year.
5. **Background and Need for the Study**

The WV Department of Health and Human Resources (DHHR), through the Office of Maternal, Child and Family Health (OMCFH), provides several in-home visitation programs to assist and support pregnant women. These programs are offered throughout the state, and are seen by the OMCFH as key elements in their effort to improve the health and developmental outcomes for infants and young children in West Virginia. One of the programs with an extensive track record in WV is the Maternal Infant Health Outreach Worker (MIHOW) program, which has been offered in the state dating back to 1983. Developed and still centered at Vanderbilt University, the MIHOW website offers the following brief description of its purpose: “**MIHOW is a home visiting program for pregnant women and young families. Trained mothers visit young mothers in their own neighborhoods, teaching them and mentoring them about pregnancy, delivery, breastfeeding, positive parenting, nutrition, etc.”**

In recent years, the federal government has moved to require valid program evaluations as a condition of continued funding for programs that receive federal support. More specifically, the U.S. Department of Health and Human Services initiated a program known as ***Home Visiting Evidence of Effectiveness (HomVEE)***, which is described on their web site in this way:

The Department of Health and Human Services launched Home Visiting Evidence of Effectiveness (HomVEE) to conduct a thorough and transparent review of the home visiting research literature and provide an assessment of the evidence of effectiveness for home visiting programs models that target families with pregnant women and children from birth to age 5.

HomVEE has established criteria for evaluating the quality of program evaluations and requires that programs demonstrate their effectiveness through what they call “high quality” program evaluations. The “gold standard” for program evaluations is called a “randomized control trial” (RCT) design; as will be discussed below, RCTs are the best designs for demonstrating effectiveness, but they are difficult, expensive, and raise several practical and ethical concerns. The MIHOW program, though it has decades of data supporting its value in the lives of the families with which it has worked and the communities in which it operates, has never been the focus of an RCT or other “high quality” program evaluation study, and thus the WVDHHR concluded that it was important to conduct such a study now, in a manner consistent with HomVEE criteria.

**The Research Team**

Our research team remained largely intact for year two; the exceptions are that we have one new quantitative data collector (Ms. Chaffin) and two new members of the qualitative research team.

Dr. Marty Amerikaner, Professor of Psychology, Marshall University, (Principal Investigator)

Dr. Stephen O’Keefe, Professor of Psychology and School Psychology, Marshall University

Dr. Christopher LeGrow, Professor of Psychology, Marshall University  
Melissa Colagrosso, Quantitative Data Collector

Miranda Chaffin, Quantitative Data Collector

Dr. Linda Spatig, Professor of Advanced Educational Studies, Marshall University (Qualitative

Research Director)  
Debra Lockwood, Qualitative Research Assistant

Kathy Bialk, Qualitative Research Assistant

Amy Carlson, Qualitative Research Assistant

Kelly Kerbawy, Qualitative Research Assistant

1. **Year Two Quantitative Data**

As was noted in our first year report, the MIHOW RCT was designed to compare MIHOW program participants- who would receive the full complement of MIHOW services – with a comparable group of women who would instead receive “minimal treatment” in the form of written materials concerning such topics as healthy pregnancy and caring for infants sent out monthly. Additionally, both groups would also receive the inevitable attention that results from the periodic contact by our data collectors; this attention might also be construed as a form of “intervention,” though it is an essentially identical intervention with both groups of participants within the RCT – particularly because the data collectors are “blind” to the group assignment of participants from whom they are collecting data.

Based on careful discussions with MIHOW staff, the decision was made at the outset to focus our evaluation on several key outcome variables that the MIHOW program is intended to influence. These include:

1. Decreased maternal smoking during and after pregnancy and related infant exposure to second hand smoke after birth
2. Improved birth weight of babies (higher birth weight and/or fewer potentially problematic low birth weight babies)
3. Less maternal depression post partum
4. Increased maternal demonstration of knowledge concerning infant development and parenting behavior
5. Decreased stress associated with parenting babies/young children
6. Increased maternal involvement with available community resources
7. **Participant Recruitment**:

Through consultation with the staff at both of the research sites (New River and ABLE Families), agreement was reached that we could realistically plan to recruit a total of 400 mothers into the program over the anticipated time frame for data collection; these women would be randomly assigned to one of the two groups, allowing for comparisons between two groups of 200 participants in each.

At the current time, fewer women have been enrolled in the study than had been anticipated. From the outset of the study through August 1, 2013 (the date we used for analyses presented in this report), a total of 171 women had been recruited and agreed to participate in the study, with 167 of them assigned to one of the two groups by that date. Given the ongoing nature of participant recruitment, the 167 women are at varied phases of participation, ranging from initial enrollment through readiness for the 18 month post birth data collection envisioned as the final data collection point for this study. These enrollment data are presented and discussed more fully below; it is important to point out, however, that the recruitment process is not likely to result in the 400 participants that was initially envisioned. Given that we have entered the last year of the program, those women who are newly enrolled will have one year or less in the research program, and thus will not be able to provide data on outcome variables that are measured at the later data collection points in our design (i.e. 18 months and, for some, 12 months or even six months post birth, depending on their pregnancy status at enrollment). The implications raised by this limitation in recruitment numbers and several related decisions that must be made in the next several months are more fully discussed at the conclusion of the report.

1. **Enrollment at the Two Study Sites**

As anticipated, enrollment has not been equal at the two study sites (New River and ABLE Families); the two sites differ in terms of their size, mission, and functions, and thus it was expected that New River would have a larger pool of potential participants throughout the study period. Through the August 1, 2013 cutoff for the current data presentation, ABLE Families had enrolled a total of 60 participants whereas New River had enrolled 111 (resulting in our total of 171).

In an RCT design, participants are randomly assigned to one of the two groups (full MIHOW treatment or minimal treatment/control. As of Aug 1, 2013, we had 83 in the MIHOW group (27 from ABLE and 56 from New River) and 84 in the control group (29 from ABLE and 55 from New River. NOTE: the assignment data were missing for four participants from ABLE; those data are now in the system, but were not available for the descriptive statistics presented in this report.

1. **Data Collection Point Frequencies**

The nature of the design, which has participants enroll at various times as they are recruited, leads to a data collection process wherein early in the study, there will be far more data from the first data collection points and far less from the later points; that is clearly the case here. As of the August 1 cutoff date, we had the following number of participants from each of the designated data points:

Prenatal visit: 171

1 month (post baby birth) visit: 97

6 month: 41

12 month: 9

18 month: 0

1. **Attrition**

In virtually all community studies, there will be some attrition, due to various factors such has moving, health or economic changes, loss of interest in participation, etc. The keys for a valid RCT are that a) the attrition rate is not too high, and b) there is no clear, systematic difference in attrition between the treatment and control groups. So far, the RCT has been doing well in that regard. Overall, there have been 18 participants (11%) who have discontinued participation in the research, and these have come equally from the two groups: nine each from treatment and control. Reasons for not continuing included the following:

Moving away: 7

Miscarriage: 5

Other/nonspecific decision to discontinue: 6

Given the differences in enrollment at the two sites, it is not surprising that there is greater total attrition at New River (13) than at ABLE (5). Although the difference between the two sites is a bit larger that would be expected from the differences in total enrollment, the attrition numbers are too small to draw any conclusions about site differences. This is an issue to examine more carefully in the report next year.

1. **Overall Participant Demographics and Responses to Survey Questions**

**(all participants, from both sites and both intervention and control groups, collected at time of enrollment in project)**

***Age***:

Mean age is 24.6, with a range of 14-42

***Race*:**

Caucasian/White: 163

African American/Black: 5

Asian: 1

Other: 2

***Employment Status***: **N %**

Unemployed, looking for work: 30 17.5

Unemployed, not looking for work 80 46.8

Employed part time (<32 hrs/week) 20 11.7

Employed full time (>32 hrs/week) 41 24

***Student Status:***

Full Time student: 17

Student, other than full time: 23

Enrolled in job training program: 9

***Educational Attainment:* N %**

8th grade or less: 8 4.7

9-11 grade 40 23.4

HS diploma 51 29.8

GED 4 2.3

Some college 43 25.1

4 year college degree 7 4.1

Grad school, 1 or more years 3 1.8

Other/missing 1 0.6

NOTE: Data refer to current attainment; some participants are still pursuing education

***Living Arrangements/Child Care:***

Is there someone who helps you care for children?

**N %**

No 20 11.7

Mother 31 18.1

Partner/husband 26 15.2

Family members 42 24.6

Center-based child care 11 6.4

How many people live in the household? Mean: 3.39, Range: 1-10

Do you consider your housing as stable or temporary? :

Stable: 135 (78.9%) Temporary: 36 (21.1%)

Do you have a telephone?:

Land Line: 48 (28.1%)

Cell Phone: 103 (60%)

Do you have easy access to the Internet?:

Yes: 115 (67%)

No: 56 (33%)

Do you have easy access to transportation?

Yes: 141 (82%)

No: 30 (17%)

***Finances:***

Which of the following best describes monthly household income?

**N %**

$500 or less 31 18.1

501-1000 34 19.9

1001-1500 21 12.3

1501-2000 24 14.0

2001-4000 32 18.7

4001 or more 20 11.7

Unsure 5 2.9

Did not answer 4 2.4

Financial Assistance Programs/Support:

TANF: 3 1.8

Food Stamps 70 40.9

Disability 11 6.4

Unemployment Ins. 4 2.3

Workers Compens. 1 0.6

Child Support 16 9.4

***Health Care/Health Status:***

Heard/read that folic acid can help prevent birth defects Yes: 103 (60%) No: 67 (39%)

Take folic acid vitamins in three months pre-pregnancy

**N (%)**

No 123 (72)

Yes

1-3 times/week 9 (5)

4-6 5 (3)

Every day 33 (19)

Currently taking multivitamins, prenatal vitamins or folic acid vitamins?

**N %**

Not at all 9 (5)

Yes

1-3 times/week 4 (2)

4-6 6 (4)

Every day 151 (88)

When did you begin taking multivitamins, prenatal vitamins or folic acid vitamins?

**N %**

Before Pregnancy 40 (23)

Month:

1 36 (21)

2 64 (37)

3 12 (7)

4 5 (3)

5 0 (0)

6 3 (2)

What kind of vitamins are you taking?

**N %**

Prescription prenatal 21 (12)

Overcounter prenatal 26 (15)

Adult multivitamin 1 (1)

Child multivitamin 6 (4)

Missing/no answer 117 (68)

What is your overall rating of your health?

**N %**

Excellent 34 (20)

Very Good 50 (29)

Good 68 (40)

Fair 17 (10)

Poor 1 (1)

What is your overall rating of your mental/emotional health?

**N %**

Excellent 36 (21)

Very Good 46 (27)

Good 64 (37)

Fair 19 (11)

Poor 5 (3)

Are you receiving prenatal care?

**N %**

Yes 163 (95)

No 7 (4)

Are there times when you do not have enough food for your family?

**N %**

No 144 (84)

Hardly ever 9 (5)

Yes, some of the time 12 (7)

Yes most of the time 2 (1)

Yes all of the time 3 (2)

***Breastfeeding Intent***

What do you think about breastfeeding your baby?

**N %**

I know I will breastfeed 74 (43)

I think I might breastfeed 32 (19)

I know I will not breastfeed 36 (21)

I don’t know what to do

about breastfeeding 28 (16)

***Pregnancy History***

How many pregnancies resulting in live births have you had?

**N %**

1. 86 (50)
2. 43 (25)
3. 31 (18)
4. 6 (4)
5. 1 (1)
6. 1 (1)
7. 2 (1)

Have you ever had a preterm birth?

**N %**

Yes 13 (8)

No 138 (81)

Have you ever had a miscarriage?

**N %**

Yes 18 (11)

No 42 (25)

Missing/no answer 111 (65)

***Smoking***

Have you smoked at least 100 cigarettes in your life?

**N %**

Yes 110 (64)

No 57 (33)

Don’t know/not sure 3 (2)

Do you now smoke cigarettes…?

**N %**

Every day 57 (33)

Some days 11 (6)

Not at all 102 (60)

Does anyone in your household use cigarettes, cigars, or pipe tobacco?

**N %**

Yes 105 (61)

No 65 (38)

Does anyone smoke inside your house?

**N %**

Yes 64 (37)

No 105 (62)

What best describes rules about smoking inside your house now?

**N %**

No one allowed to smoke

anywhere inside house 103 (60)

Smoking allowed in some rooms or

at some times 31 (18)

Smoking is permitted anywhere 36 (21)

1. **Equivalence of MIHOW Treatment and Minimal Treatment/Control Groups**

In an RCT design like the one being used in this study, a key assumption is that because of the randomization procedure used to assign participants to one of the two groups (treatment and control), the two groups are equivalent at the outset of the study in terms of key variables of interest. It is on this basis that at the conclusion of the study we are able to attribute any differences between the two groups on the outcome variables of interest to the intervention being studied and not to some contaminating differences between the two groups that were present, but not recognized, at the outset of the study. Therefore, it is very important to examine available data to gauge how effectively the randomization process used to form the two groups- treatment and control - did, in fact, create equal or equivalent groups. Although the enrollment process is ongoing, we had enough enrollees as of Aug 1, 2013 to examine the group equivalences on a variety of key demographic variables.

At the most basic level, the random assignment process has produced essentially equal sized treatment and control groups at both sites (New River has 55 control and 56 treatment participants, while ABLE Families has 29 and 27, respectively).

In terms of the attrition of participants from the study, there are no differences between the two groups; exactly nine control and nine MIHOW participants have terminated participation from the study.

The demographic questionnaire completed by all enrollees asks questions about varied aspects of their lives, including health and mental health status, access to health care, educational level, income, prior pregnancies, intentions concerning breastfeeding, use of prenatal vitamins, smoking and rules about smoking in participants’ home, presence of husband/partner, child care support, etc.

There were no statistically significant differences between the two groups (MIHOW treatment or minimal treatment/control) on ANY of the demographic variables. However, there were non-significant trends (p> .05) towards differences between the treatment and control groups on two questions:

1. Control participants reported somewhat more difficulty with accessing sufficient food for their families.
2. On the question asking participants to rate their own mental health status (choices include Excellent, Very Good, Good, Fair, Poor), MIHOW participants were slightly more likely than controls to select “Fair” as their choice. It is worth noting, however, that no other trends emerged on this question (i.e. there were no trends towards group differences in the frequency with which participants chose self-ratings of Excellent, Very Good, Good or Poor mental health status). Further, when grouped together, the percentage of participants who rated their own mental/emotional health as “good” or better was very similar in both groups; thus, it is difficult to interpret this trend, and it would not be appropriate to conclude that there is a trend towards better or worse self-rated mental health within either group.

Overall, it appears that the randomization process is working very well, in that as of Aug 1, 2013 there are no significant differences between the two groups on attrition, or on any demographic variables being measured. To evaluate the overall equivalence of the two groups, this analysis will be repeated in the future after the enrollment process concludes.

1. **Equivalence of the two study sites**

Since our design utilizes two sites (New River and ABLE Families), it is of potential importance to evaluate how similar or different the participant populations are across the two sites. The degree of similarity and the nature of any observed differences will be important considerations in deciding when it may be appropriate to combine the results of the two groups for subsequent analyses. Since we now anticipate that our overall participant numbers will be smaller than originally hoped, it will be of statistical value to be able to combine data from the two sites when it is appropriate to do since this would increase the power of the statistical analyses. However, to the extent that differences in participants from the 2 sites may reasonably appear to influence their response to the MIHOW intervention, it may be important to keep some or all of the group analyses separate for the two sites. These decisions will become clearer as the participant sample becomes finalized during the current year.

As of the August 1, 2013 cutoff date, there were several significant differences observed (p< .05) between the two sites in terms of their responses to the questions asked during the initial/enrollment data collection. These included the following differences:

1. New River moms were more likely to have their meetings at the office while ABLE Families moms were more likely to have their meetings in their homes.

2. New River moms were more likely to be employed and/or looking for work than Able Families moms.

3. ABLE Families moms were more likely to identify themselves as “stay-at-home moms” than New River moms.

4. New River moms were more likely to receive childcare help from family members than ABLE Families moms.

5. New River moms were more likely to use center-based child-care than ABLE Families moms.

6.       New River moms were less likely to have a personal physician than ABLE Families moms.

7.       ABLE Families moms were more likely to have a landline phone in their homes than New River moms.

8.       New River moms were more likely to have a cell phone than ABLE Families moms.

9.       ABLE Families moms were more likely to have internet access than New River moms.

10.     New River moms were more likely to have taken folic acid than Able Families moms.

11.     New River moms were more likely to have taken folic acid before/early on in their pregnancies than ABLE Families moms.

12.     New River moms were more likely to take over the counter vitamins, while ABLE Families moms were more likely to take prescription vitamins.

13.     ABLE Families moms were more likely to be signed up for WIC prenatal program than New River moms,

14.     New River moms were more likely to report knowing they will breastfeed their baby than ABLE Families moms.

15.     New River moms were more likely to report not having enough food to feed their families than ABLE Families moms.

16.     New River moms were more likely to report their mental health as “Good or Fair” than ABLE Families moms.

17.     ABLE Families moms were more likely to have had their last baby via a cesarean birth than New River moms.

18.     ABLE Families moms were more likely to be current smokers than New River moms.

19.     ABLE Families moms were more likely to have someone in their homes who used tobacco products than New River moms.

20.     ABLE Families moms were more likely to have someone that smoked inside the home than New River moms.

21.     ABLE Families moms were more likely to have rules that allow smoking in the home than New River moms.

These differences may or may not remain consistent as the enrollment process continues. However, they are suggestive of patterns that need to be carefully considered in terms of the hypothesized impact of MIHOW and the potential for differential impact on participants from the two sites. ABLE Families moms gave answers indicating that they are more home focused than the New River moms, in that they identified as “stay-at-home moms” more frequently, were less likely to be working or seeking work, and less likely to be accessing child care from family members or centers than were the New River moms. New River moms were more likely than ABLE moms to have MIHOW meetings at the program office, whereas ABLE moms had them more frequently at home. It is difficult to hypothesize how this pattern (if it does remain a reliable pattern) would impact responsiveness to MIHOW interventions, but it may be of value for MIHOW staff to reflect on this data.

The questions tied to economic well-being seem to provide inconsistent data; New River moms are more likely to be employed, and are more likely to have cell phones, while ABLE moms are more likely to be enrolled in WIC; these might indicate more economic viability within the New River cohort. However, ABLE moms were more likely to have internet access, and New River moms reported more frequent experiences of not having enough food for their families. Additionally, the question about overall income resulted in no significant differences between the two groups. Again, this is an area to continue exploring through data collection from new enrollees in the evaluation program

Data from several questions seem directly tied to the outcome goals of the MIHOW program. In terms of pregnancy health status, New River moms report more and earlier use of folic acid than ABLE moms at the time of enrollment in the program; this may suggest that New River moms, because they are typically referred to MIHOW from the health clinic, are already more informed about the importance of folic acid vitamins from their health care providers. New River moms also are more frequently reporting that they know they will breastfeed, while ABLE moms report more frequent smoking and ease of smoking in their homes. If these patterns hold up in terms of the preexisting differences between the two sites, it may be that MIHOW may not have equal impact on the two sites because moms at one site (both treatment and control) are already “ahead” of the other in terms of smoking, folic acid intake and intent to breastfeed; these baseline differences may restrict the degree of impact that the program can have on the New River moms on these behaviors, and thus decrease the likelihood of showing differences between the treatment and control group at the New River site. Again, this is preliminary data, and we will need to reexamine these questions as the enrollment process is completed this year.

1. **Qualitative Research Report – Year Two**

Submitted by: Linda Spatig (MIHOW Qualitative Research Director)

Debra Conner-Lockwood, Amy K. Carlson, Kathy Bialk, and Kelli Kerbawy (Qualitative Research Assistants)

**Purpose**

The purpose of the qualitative component of the West Virginia MIHOW research is to understand how the program is experienced and perceived by people who are involved in it on a day-to-day basis—namely participating families and MIHOW staff. The goals are to provide information and insights that will be helpful in explaining quantitative research findings and helpful to program designers and implementers in efforts to make the program as effective as possible.

**Research Team**

The qualitative research team consists of four research assistants who are doctoral students in education and a lead doctoral-level researcher who is a professor in the College of Education and Professional Development at Marshall University. The research assistants, each of whom has completed at least one, three-hour graduate course in qualitative research methods, are working under the direction of Linda Spatig who has considerable experience with qualitative research, including evaluation studies with community-based programs. During the second year of the project (September 2012 – September 2013), the team met monthly. In team meetings we discussed interview data generated during the month, especially in terms of how new data corresponded with, or extended, what we had learned in earlier interviews. In addition, we used meetings to plan upcoming interviews.

**Participants**

During the second year of the study, we conducted 17 interviews, including home visitors and mothers or mothers-to-be. Of the 17, eight were participants in the MIHOW program affiliated with the New River Health Association and nine were participants in the MIHOW program affiliated with ABLE Families, Inc.

We continued to have difficulty reaching mothers for initial interviews. We encountered disconnected numbers, left messages that received no response, and scheduled appointments for interviews to then find the mother unavailable at the designated time. Periodically MIHOW staff at New River and ABLE Families assisted us by providing updated contact information for participants. Scheduling follow-up (second) interviews was a little easier, possibly because of rapport established in the first interviews. Also, it was helpful that we were able to offer mom participants a small gift ($10 Wal-Mart gift card) for each interview.

**Interviews**

As in year one, research assistants conducted interviews by phone. Initial interviews focused on how participants came to be involved with MIHOW; in what ways their experiences with the program did—or did not—match their prior expectations of it; their perceptions of home visits; their relationships with other program participants (moms and/or home visitors); concerns about pregnancy, childbirth, or parenting; and perceptions of program strengths and shortcomings. Second interviews, conducted only with mothers, focused on their experiences with childbirth; how the new baby is doing; and how MIHOW has—or has not—influenced them or their families.

All interviews were transcribed verbatim. As a first level of analysis, research assistants individually reviewed transcripts of interviews they conducted, adding reflective and analytical comments. Comments identified new information that emerged in the interview and provided insights about how the interview extended their prior understandings of participants’ experiences and perceptions of the program.

In monthly team meetings, we discussed the interviews as a group, comparing ideas and insights about what we were learning. During September and early October, 2013 we coded year-two interviews. First-round coding was done independently. All five research team members coded all 17 interviews. Then we met twice to discuss our individual coding and collaboratively determined how to group the code words into coding categories or themes that captured what we have learned about participants’ experiences and perceptions of MIHOW as of the end of year two of the research.

**Findings**

The year-one qualitative report, based on initial interviews with three moms and two home visitors, identified three emerging themes: (1) that the program is both *uniform and customized* (to meet particular family circumstances) at the same time; (2) that it features *connectedness*—with community organizations and resources, with people, with families; and (3) that it involves moms (and other family members) and staff *learning* new ways of thinking and acting. Our year-two findings build on these initial understandings. In this section, we address the three year-one themes, discussing what we have learned this year about how the program is experienced in terms of *customizing* services for individuals and families, forging strong human *connections*, and encouraging *learning,* as well as an additional theme that emerged during the second year of the study—the way the program is *empowering* for mothers.

***Customizing: “Not the Exact Information I Need”***

In year two, we continued to hear about how the program provides services that are customized for individuals and their families. One home visitor stressed the importance of “know[ing] your families” and “focus[ing] on the family where they’re at,” and another explained that the program could “fit any situation that is out there.” For some mothers, this is exactly how the program is experienced. They expressed gratitude for assistance with a variety of individual needs such as finding a job, getting a car needed for work, and dealing with non-pregnancy related health problems. One expressed appreciation for the “personalization” of the program generally. One mother noticed that her home visitor remembered and used her baby’s favorite song on each visit. Several described how home visitors frequently asked what information they needed and what their babies needed. Mothers reported that home visitors promptly responded to requests that were made.

At the same time, we also began to see evidence that the program may not be customized enough. A few mothers expressed frustration that their individual needs—some pregnancy and parenting-related and some related to other life needs such as housing and food—were *not* satisfactorily met by the program.

Also, we heard from several mothers that MIHOW information—especially related to pregnancy—would have been more helpful had the moms not already received the same information elsewhere, either from prior MIHOW visits and materials, from doctors, or from other sources of information to which they had access. One mom said she had already done her own “research” and knew most of the information before she received it from MIHOW. Another commented about the MIHOW materials saying, “It’s not the exact information I need.” Likewise, a mother said, “I didn’t feel like I learned anything new.” Although several noted that MIHOW information was repetitive, or redundant with information from their doctors, only one expressed concerns about the content of the materials. She perceived inconsistency between guidance from her doctor and MIHOW information on introducing solid foods to babies. She wondered aloud if the MIHOW information might be outdated.

There is also some evidence that home visitors would like their training and professional education experiences to be more tailored to fit with their prior education and experiences. Home visitors we interviewed appreciated the “variety of different options” for training provided by MIHOW. At the same time, they expressed concerns about the extent to which current training options match the wide range of education and experience across home visitors. Some come into the program with very little in the way of job-related credentials or experience while others enter with fairly extensive education and experience.

***Learning: “It’s Really Educational”***

Although several were less than enthusiastic about what they learned from participating in MIHOW, many mothers and mothers-to-be credited the program for new ideas and understandings. MIHOW is “where I learned to be a good mommy,” said a first-time mother. This participant, and many other moms, talked about learning *what to expect*—about pregnancy and childbirth, about breastfeeding, and about child development and parenting. In addition, mothers learned *how to play* with their babies in ways that encourage the babies to learn as well.

***What to expect*.**

For a young, first-time mother, learning what to expect about pregnancy and childbirth through MIHOW was valuable: “I learned a lot . . . . At first going through my pregnancy I was scared and nervous. I didn’t know what to expect because this is my first child. . . . Before I even gave birth she [home visitor] gave me a book for me to prepare myself for when I did go into labor so I’d know what I would be looking forward to.” Another mother was “scared to death” about getting an epidural until her home visitor explained what would happen: “She has taught me a lot that I didn’t know.” Also speaking about how to handle pregnancy pain, another mother learned “that there were epidurals and a bunch of stuff you could do, breathing techniques and everything. . . . [My home visitor] gave me a lot of information about it and what I could do about it.” Yet another mother described feeling more comfortable after receiving information from her home visitor who “goes in overall detail of what to look for and provides me with information so that way I know exactly what to expect.”

Mothers also learned what to expect in parenting a newborn, especially about breastfeeding. In the words of one mother, “One more thing I learned new is about breastfeeding. They talk about breastfeeding and nutrition.” Another commented, “She [home visitor] spent a lot of time talking about delivery and breastfeeding.” According to yet another mother, “I wanted to breastfeed, but the more that MIHOW would like bring the papers, the printouts, and show me all the benefits and ways that it helps the baby, [the more I knew that] there was no way . . . I [would go] with formula.”

In addition to breastfeeding, participants learned what to expect in terms of other aspects of taking care of babies and young children. “We know that’s what we have to look for because that’s what [the MIHOW home visitors] told us,” one mother explained. “Babies cry at night and they tell us what to do when the baby’s crying because they need a diaper change, they’re hungry, they have gas, so it’s really educational.”

Mothers also spoke frequently about developmental “milestones, like is [the baby] walking yet, is she talking yet? How many words is she saying at her age?” Another talked about getting information about “what to expect with [baby’s] growth and development.” Yet another spoke about responding to “signs” that the child is ready—for solid foods, for crawling, walking, talking, and other developmental tasks. More than anything else, however, mothers talked about learning to interact with their babies—reading, singing, and again and again, about *playing*—in ways that would enhance their growth and development.

***How to play***Especially in speaking with moms who had already given birth, we heard a great deal about learning to play with their babies in new ways. In talking about this, moms invariably referred to not only what *they* were learning, but how the child was benefitting as well. As one mother expressed it, “[My baby] has to learn from me first before he learns from anybody else.”

A first-time mother of a three-month-old described a book her home visitor brought—a book that plays lullabies: “[The baby] actually will try to coo at it and try to sing with it. I know he’s not singing but he tries to make noises when he’s listening, so it’s trying to help him talk, too.” The home visitor also brought this mother information about “activities that I can do with him while he’s little . . . exercises and stuff like that.” These program “handouts” include directions about how to “put toys in front of [the baby], make a fist, extend your index finger and see if he’ll grab it.” The information was eye-opening for this mother who had experience working with older children in her job, but had never “seen anybody fool with a baby like this. It shows me a lot of difference than with bigger children.”

Another mom talked about long home-visit sessions—“about two or two and a half hours”—during which the home visitor “plays with the baby and she shows me little things I can do with him like playing patty cake. Or she’ll give out these papers with new games for him for his age range and she’ll show me how to play them with him.” She went on to explain how the “games and stuff help him with his developmental skills.”

Another mother described a game “where you can hide objects under a blanket or something and try to teach the baby where to find it. And I started doing that. . . . [My home visitor] would show me how to do it and I would follow her steps and now the baby is to where . . . I can hide a ball or something and she’ll go find it and she’s pretty good at it. And they showed me how to teach her certain things . . . like how to get her to start mocking noises that I [make], just all kinds of stuff.”

When mothers spoke about what they had learned from MIHOW, they sometimes mentioned papers, books, and other materials provided by the program. But most often, as we have seen, mothers referred to learning directly from their home visitors, with whom many of them became closely connected.

***Connecting: “Like a Sister”***

The nature of the relationships between home visitors and mothers may be a critical ingredient in the quantity and quality of what mothers learn from the program, and in their experience of the program generally. Two mothers, of the twelve we interviewed this year, had not established strong bonds with their home visitors. In one case, this seems to be related to the mom’s lack of interest in the program. When we spoke with her, she was unable to remember recent home visits, but attributed that to her own busy schedule and her decision to cancel visits. In the other case, the mother attributed the lack of a strong bond to a somewhat disorganized home visitor

who was not as conscientious as this mother expected. She spoke of being notified at the last minute about home visits and other program activities.

These two cases notwithstanding, the majority of mothers we interviewed spoke frequently and with considerable intensity about strong, positive relationships with home visitors. It was not uncommon for mothers to identify relationships with their “awesome,” as one young mother put it, home visitors as the best part of the MIHOW program. In addition to face-to-face visits, home visitors connected with mothers via phone, text, and Facebook. In the remainder of this section, we feature mothers’ voices as they describe their home visitors as reliable, respectful companions who have become like friends or family. As one mother explained, “When you can’t talk to your other family members, [your home visitor] is always there. . . . She would put you in mind of a sister that you could talk to.”

A first-time mother initially expected the program to be “like some type of counseling thing” that wasn’t helpful. After experiencing the first few home visits, however, she became less skeptical and “kind of liked the program.” At the time of our interview, she stated unequivocally, “I love it” and spoke enthusiastically about the home visitor who had come every month and “conversated” with her about breastfeeding and other aspects of caring for babies. “It turned out to be a really good program,” she said. Her evolving perceptions of the program seem to have turned on close personal connections to her home visitor whom she perceived as genuinely caring about her wellbeing, much the way a friend would.

[My home visitor] didn’t want me to feel like I was alone or by myself. She’s a very, very sweet woman. She’s nice. She’s understanding. She’s funny. You know, she’s more of a friend to me than anything. Yeah, she’s more of a friend than just the MIHOW program coming to my house. Sometimes it wasn’t even like a visit from MIHOW. She’d just text me or she’d call me and she’d talk to me and make sure I was doing all right and see how I was doing.

Another mother also had relatively low initial expectations of the program, thinking that “it was going to be like a nurse coming in and telling me all of the things to do.” As in the case above, she soon came to perceive the program as “actually more helpful than that.” She explained that the home visitors come every month and “they involve you and everybody else in the program. . . You all make friends instead of you feeling you’re going through this alone. Other people are going through the same thing with you.”

Also referring to her home visitor as a friend with whom she could “share [her] pregnancy,” yet another mother spoke of the reciprocal, trusting relationship she developed with her home visitor from the local community.

I’ve enjoyed being in the program and I think a lot of [my home visitor]. I would say we are like friends. . . . I trust her because she is someone from this community. She knows the area and the people. It’s a small community that is spread out all over little nooks and crannies and being from here helps. She knows a lot of ways to help out because she is from here. . . . She talks as much about herself and her family as I do about mine. That makes it nice. I feel like I know her and her family. She gets on a personal level with you and makes you feel more like a friend and not someone she’s trying to help. So I mean it definitely makes the visits nice.

In addition to describing home visitors as friends and even likening them to family members such as mothers or sisters, mothers characterized home visitors as non-judgmental and respectful of mothers’ privacy and autonomy. As one mom put it, “I don’t feel [the home visitor is] preachy or judgmental. She lets me be me without really putting any pressure on me.” Another commented, “The [home visitors] don’t get [too] personal. They don’t want to snoop around.”

Several mothers spoke at length about how home visitors’ respect for mothers’ autonomy played out in their pregnancy and parenting experiences. One recalled that initially she “really didn’t want to breastfeed [her] baby.” “I don’t know why but I just didn’t like the idea of it,” she explained. For a while, she felt uncomfortable expressing these reservations with her home visitor who frequently spoke strongly about the benefits of breastfeeding.

I felt like I couldn’t go against her and ask her anything about breastfeeding. But after a few visits, she asked me if I had any questions and so I finally just asked her, “What is the worst thing that could really happen if I didn’t want my kid on the breast?” I was like, “Be straight with me.” She was honest and told me that it was my choice but that nothing bad would happen if I didn’t breastfeed. But she also told me again about all the good things that breastfeeding does for the baby. So I guess she talked me into it after all. . . . Even though I decided to do it, I didn’t feel as worried about it after she helped me. She was really an angel about that. I [had] felt like I was going to be a bad mom if I didn’t breastfeed. That is what my doctor made me feel like. But [my home visitor] didn’t make me feel like that. She gave me confidence and made me feel like a mom, not like someone who didn’t know what they were doing.

For many mothers with whom we spoke, the importance of the close, trusting relationships they developed with non-judgmental home visitors who are always “there for you” and willing to go “above and beyond” cannot be overstated. The relationships seem to be the catalyst for these women becoming less fearful and anxious—and more knowledgeable, comfortable, and confident—about pregnancy, childbirth, and parenting than they might have been otherwise. In other words, the relationships, along with what they had learned to expect with regard to pregnancy and parenting, reassured and empowered them as mothers.

***Empowering: “I Feel More Confident”***

“The way I explain it to my friends is if you’re pregnant, it’s a program that helps . . . to get the nervousness out of becoming a new mom,” one MIHOW mother reported. For this participant, the program played a key role in allaying fears and about pregnancy, childbirth, and parenting:

It helps you take that nervous edge off and . . . makes you feel like you’re not alone. You know somebody is there that you can call any time and they can answer your questions and give you an honest answer and it benefits you and your child. . . . So it took a whole lot of stress off my shoulders and changed my whole point of view on being pregnant. . . . They show you how to stay stress free . . . and things that will benefit you in your life.

Similar sentiments were expressed by several other mothers. One, in describing her pregnancy experiences, explained that “whenever. . . I would freak myself out,” the home visitor provided reassuring information and support. This mother went on to say, “When I needed to talk to somebody or had a question about . . . feeling depressed, I could call [my home visitor] or text her and I know that she would give me information about it or help me just talk through it.”

These stories exemplify the power of positive human connections, especially when they involve sharing information that constitutes valuable new knowledge for someone. For these moms, forming strong bonds with trusted home visitors and being able to “pick their brains apart,” as one mother put it, was comforting. One mother explained, “I feel more comfortable because I know what to look for. . . . And [my home visitor] provides me with information so that way I know exactly what to expect.”

In addition to becoming less anxious and worried, mothers reported feeling more prepared for childbirth and parenting and more confident in their abilities to make good choices about those experiences. A key aspect of the shift toward a sense of self efficacy seems to be the way home visitors related with mothers in ways that emphasized their strengths and respected their autonomy, as discussed above. This is exemplified by a mother’s description of her decision about breastfeeding:

I chose not to breastfeed. [My home visitor] would still bring me the information and remind me of how good it was, but still respected my decision not to do it. You know, so I mean she didn’t push it hard. I mean, before I made my decision she was pulling for it, but once I made my decision to not do it, . . . she would remind me that if you’re going to bottle feed, make sure it has the proper vitamins. Make sure it’s what your doctor says to use.

Home visitors also enlightened moms about rights they could exercise, especially with regard to childbirth and parenting. One first-time mom explained that before her involvement in the MIHOW program, she “had no idea of any rights.” In addition to being informed about them by her home visitor, she also learned that those rights might be challenged:

[My home visitor] gave me information that you can stand up during labor. You can watch yourself in a mirror. You can pull the baby out yourself. I didn’t know any of this. . . . [She] told me . . . that just because [the hospital workers] say you have to do one thing, you don’t have to do that. It’s *your* time. You do it how you want to. . . . If you want to cut the cord instead of daddy you can do it. You don’t have to go by what they say. So I felt pretty prepared.

Similar sentiments were expressed by other mothers we interviewed this year. They spoke of being respected, feeling comfortable and prepared, knowing what to expect, being informed about their rights, and of having an increased sense of confidence in their abilities to have successful birth experiences and to function effectively as parents. In the words of one mom, “I feel more confident and secure about things.” Not every mother expressed this enhanced sense of empowerment, but the fact that more than half of them did, and that they attributed it to their MIHOW experiences (learning about what to expect of childbirth and parenting in the context of supportive, respectful relationships with community-based peers), suggests that the program content and format has the potential to influence mothers—and ultimately their children—in this way.

**Future Qualitative Research**

In the upcoming year, we plan to continue interviews with participants already in our sample and hope to add two or three additional moms to that group. Follow-up interviews with participants will continue to explore themes from years one and two. Also, we will identify and explore any additional themes that emerge. Interviews with moms who entered the program early in the study will begin to focus more on how the child is growing and developing beyond infancy.

1. **Conclusions: Current Issues and Direction for Year Three**

Overall, the WV MIHOW evaluation appears to be moving ahead quite well on multiple fronts. The research staff is working effectively, with relatively little turnover. Research and program staff members are working cooperatively, and we are able to communicate effectively when any need for information or clarification of process arises. The RCT design appears to be creating very equivalent groups, and our attrition rate is low and equivalent across the two treatment conditions.

Data collection is proceeding smoothly for both the quantitative and qualitative teams, although both groups of data collectors report periodic difficulties with accessing participants because of changing phone numbers, cancellation of cell phones or change of addresses. So far, however, these contact problems have not significantly interfered with data collection, which is at least partially a testament to the persistence and motivation of our data collection teams! In addition, it is reasonable to guess that participants appreciate the gift cards that they receive upon completion of each data collection contact, which in turn helps maintain our low attrition rate.

While it is too soon to report on any of the outcome variables that the RCT is designed to evaluate, perhaps it is worth emphasizing that the qualitative data reported earlier clearly indicate that across sites, MIHOW participants enjoy and value their engagement in the program. They primarily report very positive relationships with their home visitors- relationships that evolve beyond professional service provision into more meaningful, personal connections. Further, the qualitative data suggest that MIHOW participants experience real learning about babies and about themselves as prospective parents and that these experience help them feel more positive and empowered about becoming parents. The extent to which these preliminary, qualitative findings will predict outcomes on the quantitative measures used for assessing key MIHOW outcome variables regarding the moms well-being and their parenting behaviors will emerge as the RCT continues.

The most challenging aspect of the project as of now is the set of problems associated with a lower enrollment than anticipated. The 171 enrollees included in this report represent fewer than half of the 400 total that we anticipated at the outset of the program. Given the range of challenges and stressors faced by many of the women enrolled in the program, it may be unrealistic to expect a community based program such as MIHOW to achieve vary large changes in the moms’ functioning on target variables; thus, it is important that analyses of data be able to capture even more modest differences between treatment and control groups when these emerge on key variables. As has been noted previously, a smaller number of participants decreases the “power” of statistical analyses used to evaluate the significance of any observed differences between the two groups. Both sites have been working to increase their enrollment numbers by expanding their service delivery to neighbor counties, and thus it is possible that overall participant enrollment is accelerating.

The enrollment issue is a more pronounced concern for the outcome variables to be assessed nearer the end of the project (12 and 18 months post birth) for at least two reasons. First, even though our attrition rate has been relatively low, any loss from a smaller starting N can be problematic. Perhaps more important, however, is the interaction of our fixed evaluation period of three years with the rolling enrollment period. We have just begun the third and final year of the agreed upon evaluation period, and we are still enrolling new participants. Clearly, no one who is currently being enrolled can provide 12 or18 month data within the time limits of the project. For women who have been enrolled for some time, their potential to provide this later data is partially dependent on how early in their pregnancies they were when they enrolled.

We have discussed this set of issues with Jackie Newsom with the Office of Maternal and Child Health at DHHR, and have tentatively agreed on the following:

1. We (the research staff) will request that DHHR grant a one year extension of the evaluation process.
2. If an extension is granted, the additional time will be focused upon collecting data from currently enrolled participants rather than any new enrollees, which will hopefully permit significantly more participants to complete the entire data provision process through 18 months.
3. We will review the enrollment numbers early this coming spring, and decide on a firm cutoff date for new enrollees. The MIHOW sites are understandably looking forward to returning to their customary process of offering services to all community members who are interested, rather than seeing them enroll in an RCT where half of them do not receive the full MIHOW program. The plan for the extension will allow them to do that while the evaluation program is able continue collecting data from participants who were relatively late recruits into the evaluation research.

We hope this report is of value to DHHR and to the MIHOW leaders at both research sites, and we would be glad to discuss any aspect of the report with you at any time.

Respectfully submitted on behalf of the WV MIHOW RCT Evaluation Team,

**Marty Amerikaner, Ph.D., Principal Investigator. November, 2013**