

Prevention of Perinatal Depression in Home Visiting Clients: Moving from Efficacy to Effectiveness

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Home Visitation (HV) Programs for Expectant and New Mothers

Home Visiting Overview

Who?	Expectant and new mothers at risk for poor maternal and child health outcomes (e.g., LBW, child abuse)
When?	Prenatal period and child's early years
Why?	To promote maternal and child health outcomes among high-risk families
How?	Paraprofessional and professional models
Where?	Throughout the United States and internationally

- **HV one of the largest avenues through which perinatal women come to the attention of service providers in the U.S.**
- **Estimated 750K women receiving HV; these numbers will grow given HV funding in the Affordable Care Act**

Why do HV Programs Need to Address Maternal Depression?

1. High prevalence of maternal depression among HV clients (Ammerman et al 2009; Chazen-Cohen 2007; Duggan et al 2007; Tandon et al 2005)
2. Maternal depression associated with poor birth, child abuse & neglect, and school readiness outcomes (Center on the Developing Child, 2009; National Research Council, 2009)
3. Maternal depression interferes with HV program delivery (Jacobs & Easterbrooks, 2005; Mitchell-Herzfeld et al., 2005; ACYF, 2002;

Interventions to Prevent Postpartum Depression

- Given the negative consequences of postpartum depression and challenges associated with ensuring initiation and maintenance of depression treatment (e.g., stigma), a handful of randomized controlled trials (RCTs) aimed at **preventing** postpartum depression have been conducted
- Different theoretical frameworks:
 - Cognitive-behavioral therapy (CBT)
 - Interpersonal psychotherapy (IPT)
 - Psychoeducation

Mamás y Bebés/ Mothers & Babies (MB) Course

- Based on CBT principles
 - (1) Pleasant activities, (2) Thoughts, (3) Support from others
- Psychoeducational
 - Therapist → Instructor Patient → Student
- Group-based
- 12-week curriculum developed in San Francisco for use with pregnant Latinas in an OB/GYN clinic
 - 14% new cases clinical depression for MB participants compared with 25% not receiving MB (Munoz et al., 2007)
- 8-week curriculum implemented in Washington DC with low-income Latinas recruited from prenatal care clinic
 - Fewer women receiving the MB Course reported moderate levels of depression after intervention (Le et al., 2011)

Mothers and Babies Course for Home Visiting Programs

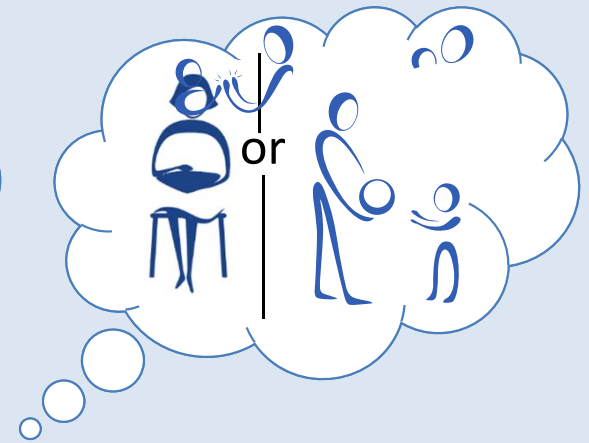
- Qualitative study to inform translation of MB Course for Baltimore HV programs
(Leis, Mendelson, Perry, & Tandon, 2011)
- Provided data to:
 - (1) Make the MB Course more contextually appropriate for low-income African American women
 - Ex.) Activities and examples in the Contact with Others module of the curriculum modified to incorporate relationship stress
 - (2) Develop “home visitor reinforcement” of intervention materials

Structure of MB Home Visiting Version

- Six weekly **group** sessions lasting 2 hours
 - Three modules (that map onto CBT principles) each with two sessions:
 1. Pleasant activities
 2. Thoughts
 3. Support from others
- Home visitor conducts **individual** reinforcement between weekly group sessions

MB Exercises and Skills

What pleasant activities do you like to do?



- What are the obstacles to doing pleasant activities?
- Personal project:
 - Women asked to “schedule” 1-2 pleasant activities between first two intervention groups

MB Exercises and Skills



Support from Others

- Identifying different ways that people can provide support (e.g., tangible, emotional)
 - Focus on expanding conceptualization of who can be helpful
- Developing effective communication approaches to ask for support
 - Understanding how communication style can affect mood
 - Promoting an assertive communication style (instead of passive or aggressive)

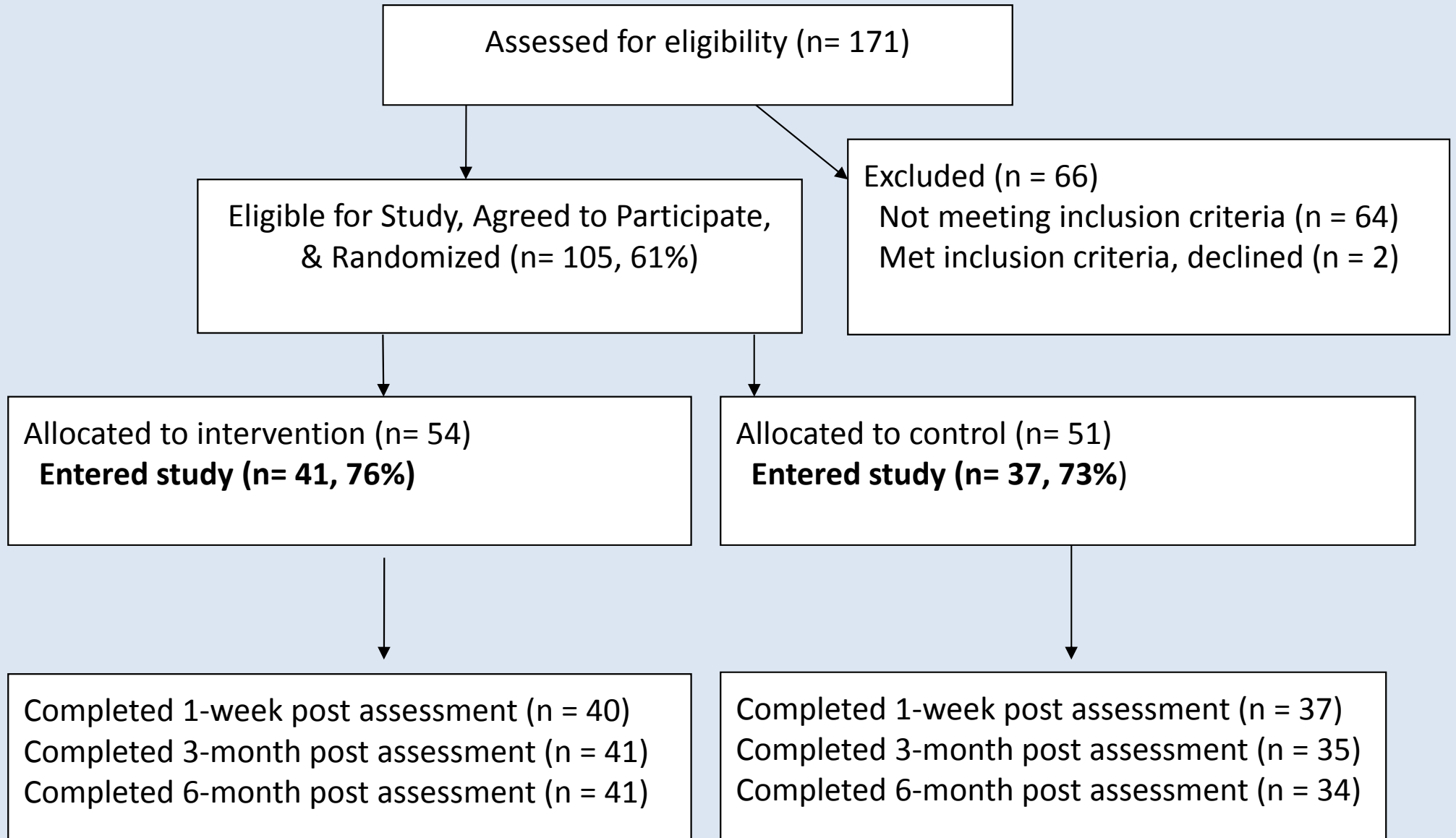
MB Exercises and Skills: Quick Mood Scale

- Done at every session
- Excellent tool for tracking mood over the course of a week and making links between MB material and one's mood

RCT to Determine Efficacy of MB Course in HV Programs

- Study population: pregnant women and women with child < 6 months
- Setting: Four Baltimore HV programs; 2 paraprofessional, 2 professional (social workers)
- Inclusion criteria:
 - Elevated depressive symptoms (CES-D \geq 16) and/or personal history of major depressive disorder (MDD)
 - Pregnant or child < 6 months
- Exclusion criteria:
 - Current MDD (referred to HV programs)

Consort Diagram of Participant Flow



Sample Characteristics at Baseline

	Intervention (n = 41)	Control (n = 37)
Age (Mean, SD)	24.4 (6.4)	23.8 (5.9)
Part- or full-time employment at baseline (%)	29	29
HS Diploma/GED or greater (%)	61	57
Race/ethnicity (%)		
African American	80	84
Caucasian	12	11
Other	8	5
Married (%)	17	14
Pregnant (%)	38	34
First time mother (%)	27	27

RCT: Study Conditions

- Control group:
 - Usual home visiting services and postpartum depression information
- Intervention group:
 - 6-session Mothers and Babies intervention delivered in group format by clinical social worker or clinical psychologist
 - Three 2-session modules: pleasant activities, thoughts, and contact with others
 - Home visitors reinforced key points and reviewed personal projects between each group session
 - 3-month booster
 - Transportation and childcare provided

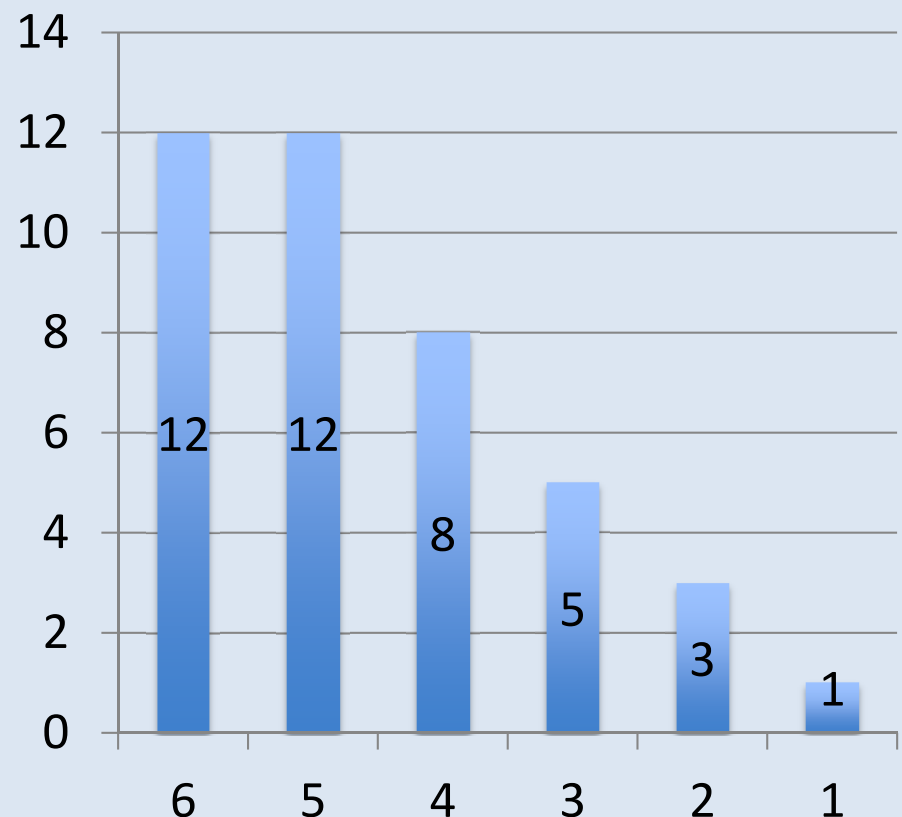
RCT: Data Collection

- Interviews conducted at baseline and 1-week, 3 months, and 6 months post-intervention
- Depressive symptoms: BDI-II (Beck et al., 1996)
- Depressive episodes:
 - 6mo: Structured Clinical Interview for DSM-IV Axis I Disorders Research Non-Patient Version (SCID-I) (First et al., 2002)
- Mood Regulation: Negative Mood Regulation Scale (Catanzaro & Means, 1990)
- Social Support: Interpersonal Support Evaluation List (Cohen & Hoberman, 1983)
- Coping: Brief COPE (Carver, 1997)

RCT Findings: Acceptability & Feasibility

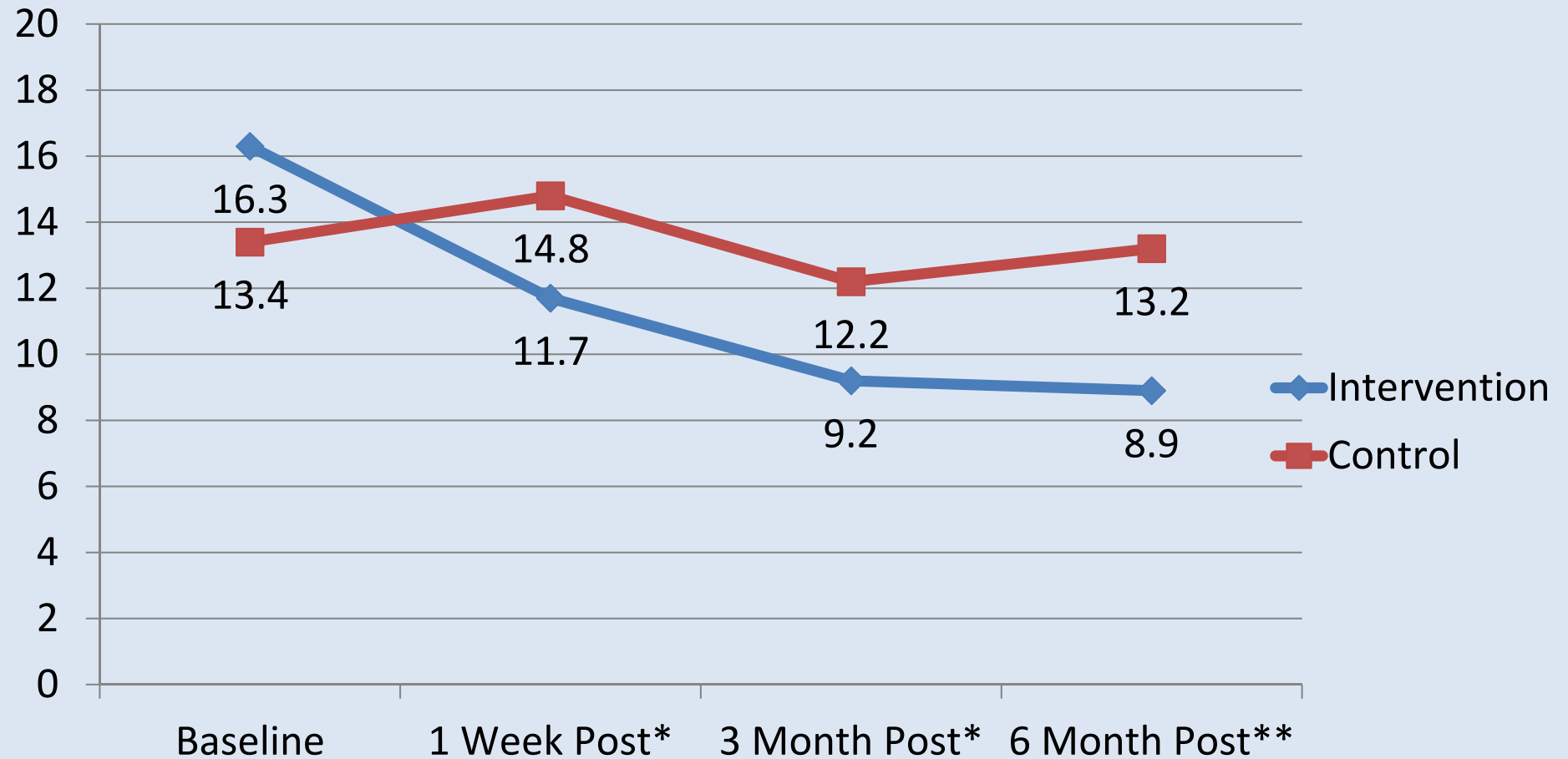
- Very good participant attendance (mean = 4.5)
- Excellent participant ratings on:
 - Enjoyment of sessions
 - Comprehension of material
 - Ability to use skills
- Excellent implementation fidelity (via coding of videotaped sessions)

Number of Intervention Sessions Attended (n = 41)



RCT Findings: Depressive Symptoms

BDI Score



* $p < .01$

** $p < .001$

Tandon et al. (2011). *Journal of Consulting & Clinical Psychology*

Tandon et al. (2013). *Maternal and Child Health Journal*

RCT Findings: Major Depressive Disorder

Major Depressive Disorder New Cases	Intervention	Control
6 Months Post- Intervention*	6/41 (15%)	11/34 (29%)

* $\chi^2 = 3.3$, $df = 1$, $p = .07$

RCT Findings: Secondary Outcomes

Results of Random Intercept Multilevel Models Secondary Outcomes	Coefficient (SE)	z
Mood regulation expectancies		
Condition * 1 week post-intervention	0.04 (0.03)	1.28
Condition * 3 months post-intervention	0.06 (0.03)	1.86
Condition * 6 months post-intervention	0.16 (0.03)	4.83*
Social Support		
Condition * 1 week post-intervention	-0.62 (3.52)	-0.18
Condition * 3 months post-intervention	-0.76 (3.50)	-0.22
Condition * 6 months post-intervention	6.67 (3.53)	1.89*
Active Coping		
Condition * 1 week post-intervention	0.35 (2.43)	0.14
Condition * 3 months post-intervention	3.41 (2.43)	1.40
Condition * 6 months post-intervention	3.30 (2.45)	1.35

Mendelson, Leis, Perry, Kemp, & Tandon. (2013). Impact of a preventive intervention for perinatal depression on mood regulation, social support, and coping. *Archives of Women's Mental Health*.

* P < .05

MB Current & Future Directions

MB Current Work & Future Directions

- RCT in home visiting among diverse Asian-American/Native Hawaiian population in Hawaii
 - Enrollment started spring 2013
 - Implementation by HV clinical supervisors who are licensed clinical social workers

MB Current Work & Future Directions

- How can we deliver the MB Course to as many perinatal women in HV programs as possible?
 - Very few HV programs have on-site mental health clinicians who can lead MB groups
 - A larger number of HV programs have clinical supervisors but these individuals tend to be overburdened
 - Constraints to implementing groups (e.g., transportation costs, geography)

MB Current Work & Future Directions

- **Home Visitor Led Implementation of MB Groups**
 - Training and ongoing supervision for paraprofessional home visitors
 - 3 pilot cohorts (n = 21)
 - Over two-thirds of curriculum modules were either “adequately” or “excellently” covered by home visitors indicating good implementation fidelity
 - Trend toward a significant decline in depressive symptoms from baseline to 3-month FU
(baseline BDI = 15.0, 3 month = 9.3, $p = .09$)

MB Current Work & Future Directions

- **Home Visitor Led “1-on-1” version of MB**
 - Curriculum translated into 16 sessions of approximately 15-20 minutes each
 - New instructor manual created that provides quick reference guides for home visitors
 - Training four HV programs in Maryland in January 2014; implementation to begin immediately afterward

MB Current Work & Future Directions

- **PCORI grant application**
 - HV programs in Maryland and Illinois
 - Cluster randomized trial
 - Usual home visiting and MB (intervention) arms
 - Within MB arm, clients select MB group or 1-on-1 version
 - Fit for PCORI
 - HV led versions of MB Course of considerable interest to HV programs and clients
 - Variety of patient-centered outcomes identified by an advisory board of HV clients who are working with our team on an ongoing NIMH grant
 - Will allow for patient preference in determine which version of intervention they receive

MB Current Work & Future Directions

- Are there other settings in which the group or 1-on-1 version of the MB Course could be useful?
 - NICU (R34 under review)
 - WIC (colleagues in Washington DC)
 - Pediatric Primary Care (pilot study at Hopkins)
- How can we use the internet and mobile technologies to deliver or reinforce MB messages?

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