# Evidence for Synergy Between Home Visiting and Maternal Depression Treatment

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*The Collaborative Science of Home Visiting Meeting*

*Washington, D.C.* *May 6, 2015*

# Research infrastructure in ECS

eECS
23,000
families
575,000
HVs

Staffing & integration
SAC Committee
Stakeholder participation

CCHMC
Behavioral Medicine,
Neonatology, Epidemiology,
Community Pediatrics, QI

NIMH R34 & R01:
Treatment of Maternal Depression in Home Visitation: Mother and Child Impacts
(PI: Ammerman)

NICHD R01:
Engaging Fathers in Home Visitation: Incorporation of a Co-Parenting Intervention
(PI: Ammerman)

NICHD R01:
Cincinnati Home Injury Prevention Project
(PI: Phelan)

K12 BIRCHW Award (PI: Goyal); Ohio Dept. of Public Safety (PI: Folger)

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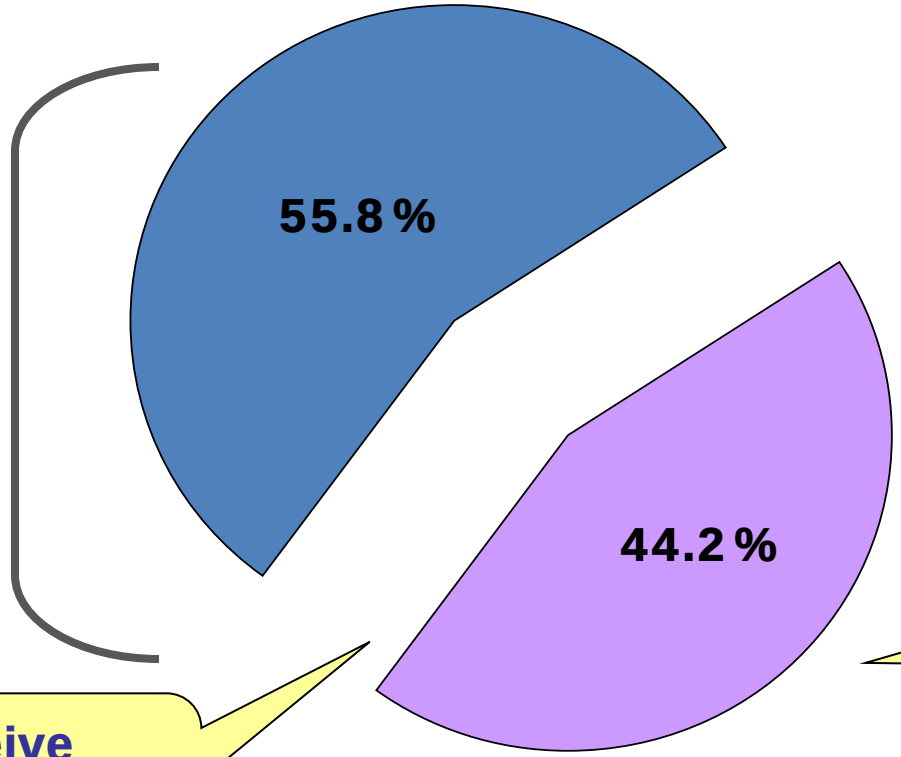
# Course of Depression (BDI > 13 @ enrollment and/or 9 months) in home visitation (N = 806)

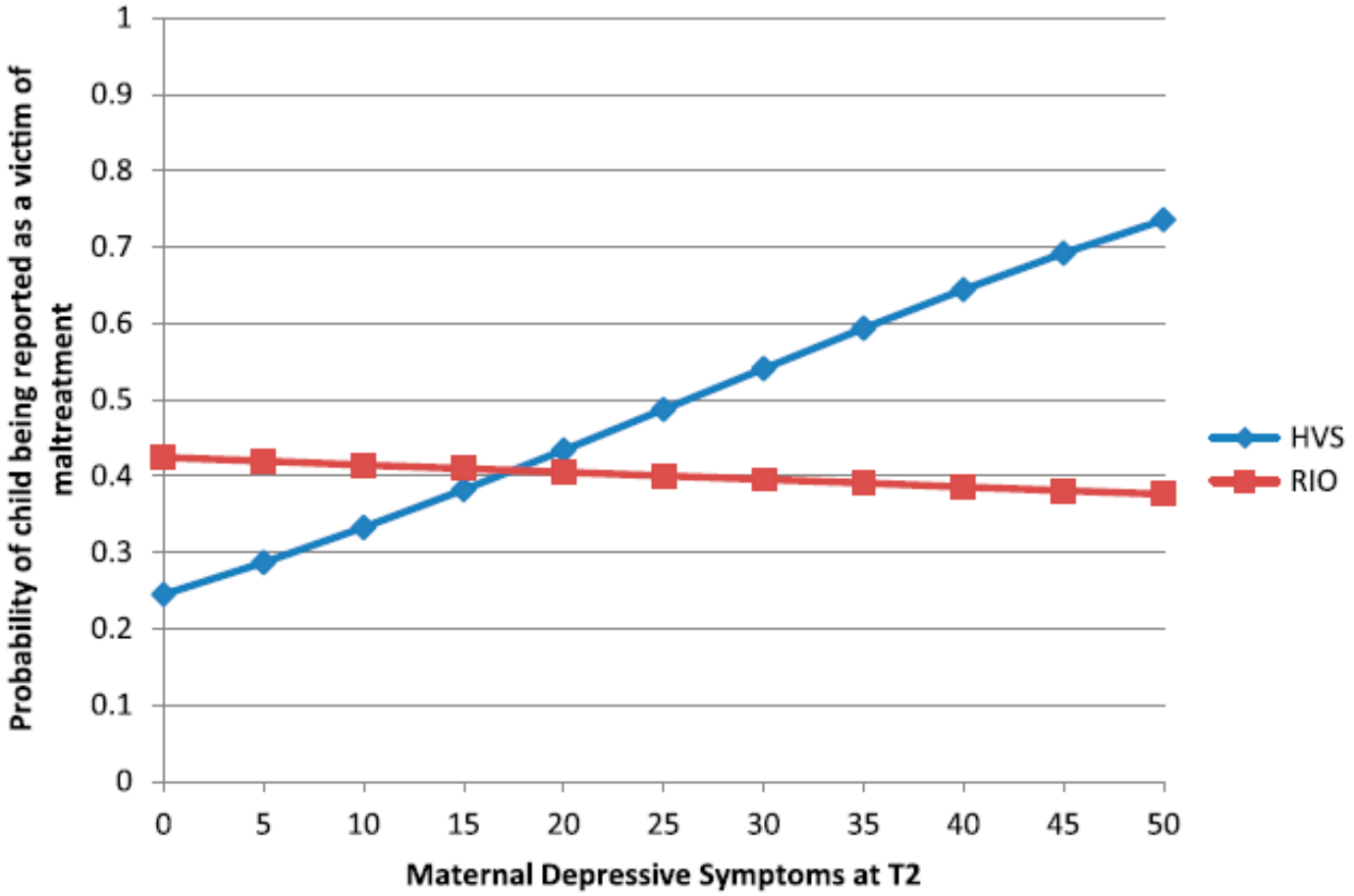



74.8% with trauma history

Home visiting alone has no impact on depression

12% receive mental health treatment

# Maternal depression & child maltreatment




*From Easterbrooks et al., 2013*

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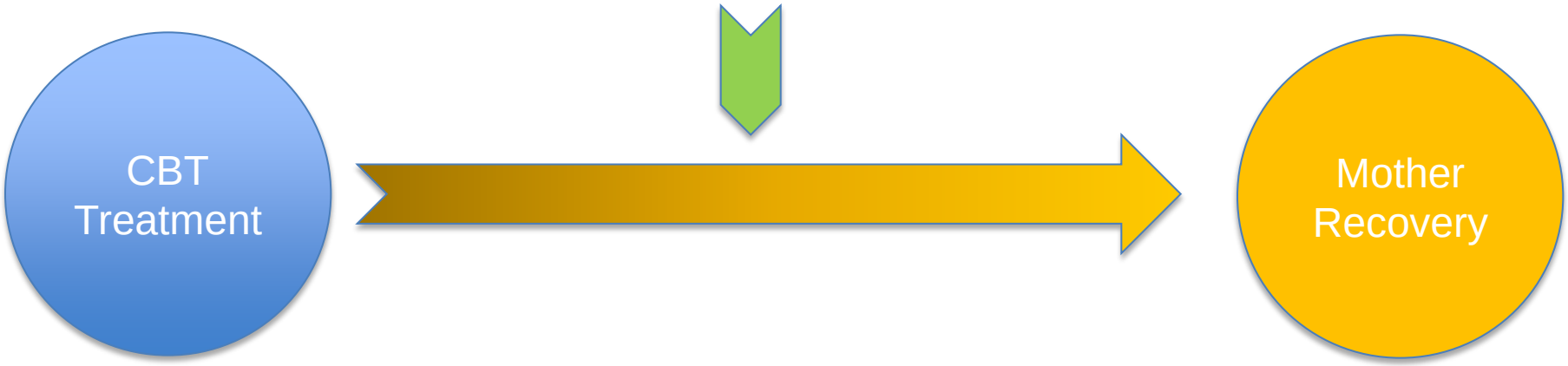
# Unique Opportunities

- Reach mothers who might not otherwise receive treatment.
- Appeal to mothers' interest in their baby's development.
- Lower barriers to treatment.
- Identify mothers early in the MDD episode.
- Leverage relationship between mother and home visitor.
- Leverage ongoing and lengthy home visiting services to optimize outcomes.

# Adaptations and scaffolding: Avoiding the real world “cliff”

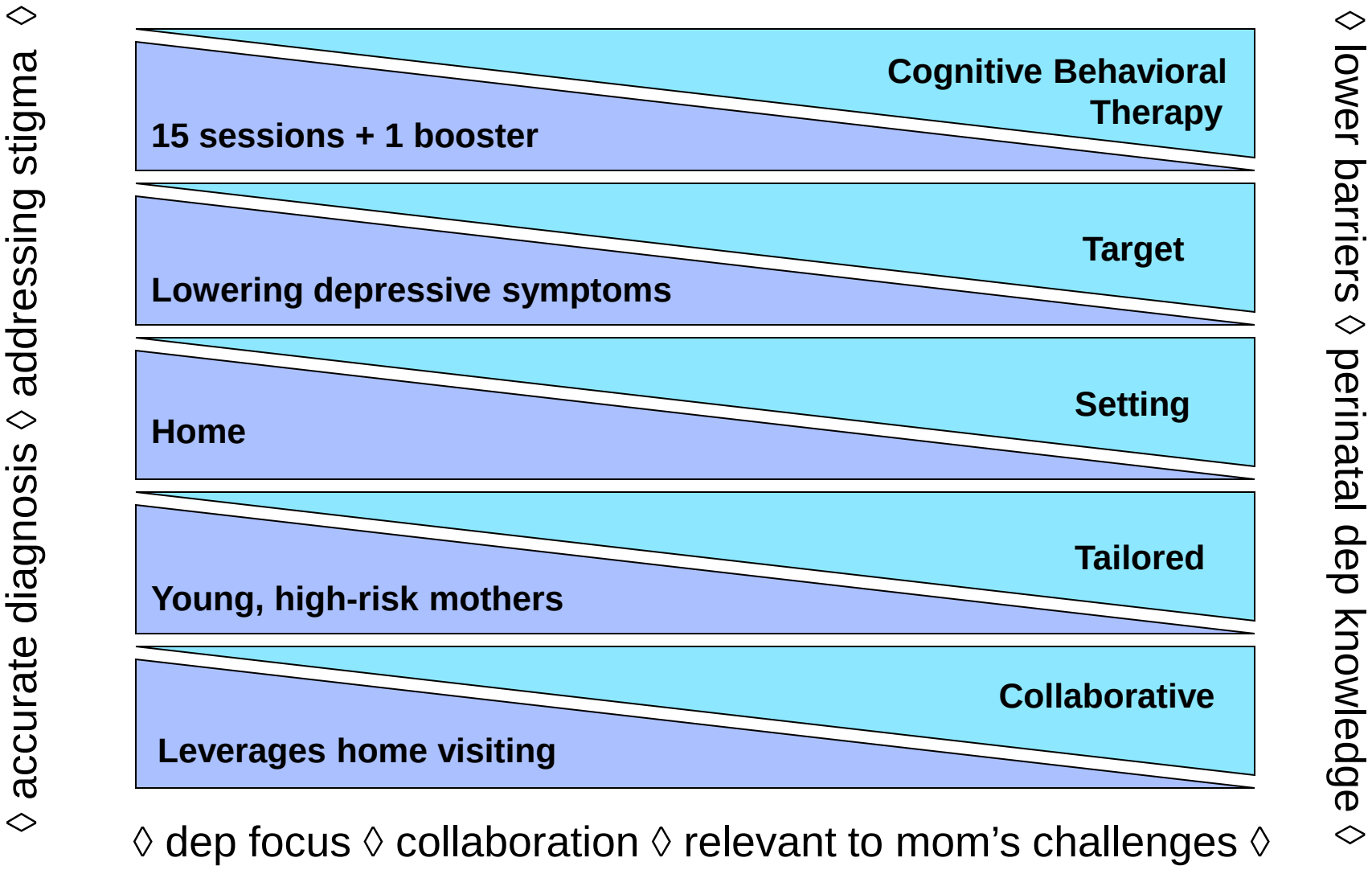

Expected outcome from transfer of laboratory-based treatments to real world settings

- Stigma and obtaining treatment
- Poor understanding of depression
- Negative history with treatment
- Transportation barriers
- Misidentification and diagnosis
- Diffuse treatment focus
- Inadequate training in perinatal depression
- Inadequate appreciation for mom's issues
- Insufficient collaboration and coordination




Observed outcome from transfer of laboratory-based treatments to real world settings

# *In-Home Cognitive Behavioral Therapy*




*From Ammerman et al., 2014*

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# What demographic, clinical, and program characteristics best predict ideal an depression outcome?

WHY?

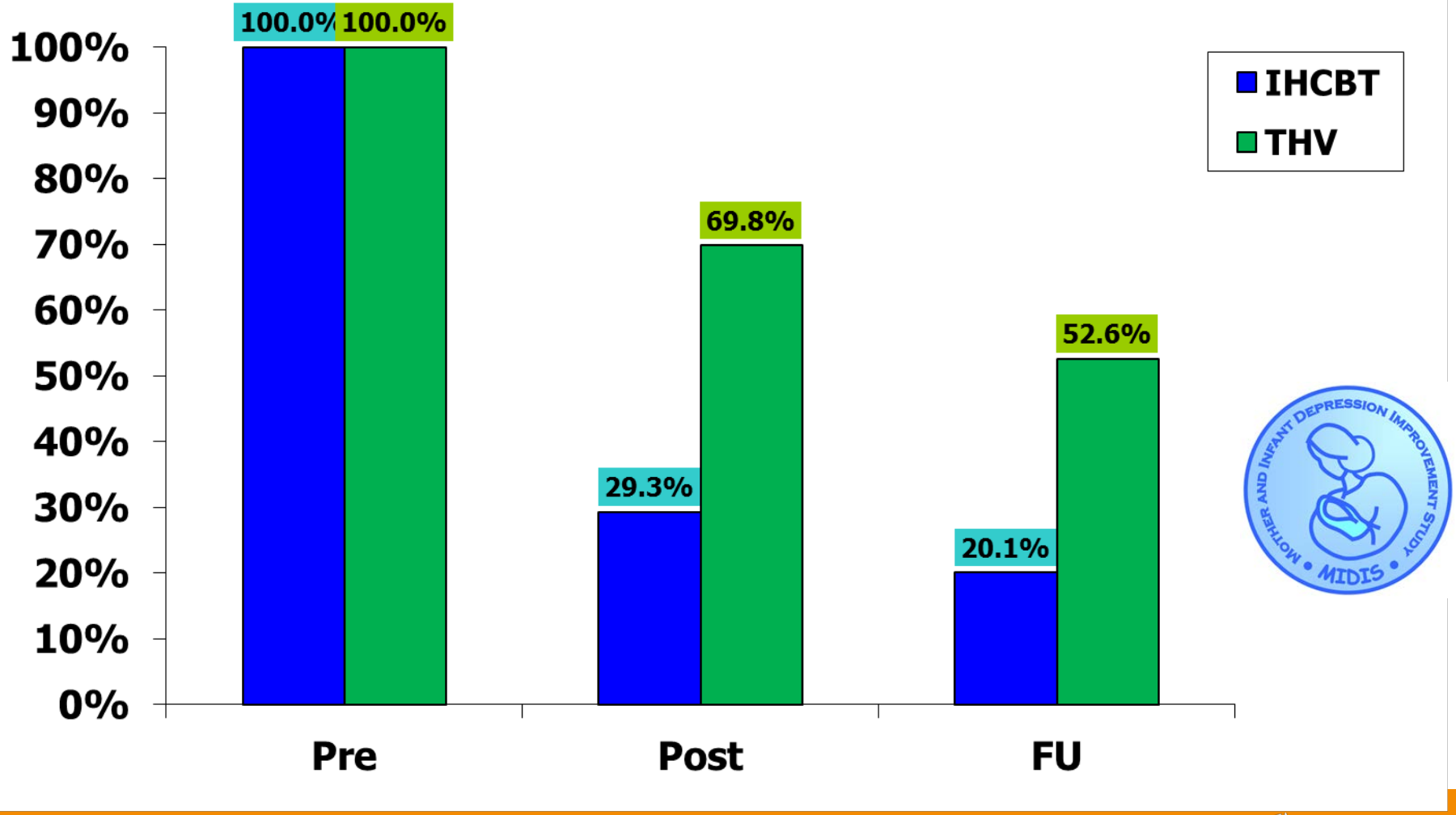
- Mothers in home visiting have many of the characteristics associated with poorer outcomes. What differentiates them?
- Who is most likely to benefit from treatment?
- Can we improve treatment?

Beck Depression Inventory-II at Post-treatment:

Asymptomatic: ≤8

Symptomatic:≥9

# MDD diagnosis at pre- & post-treatment & follow-up (n = 93)




$X^2=19.0$, $p<.001$

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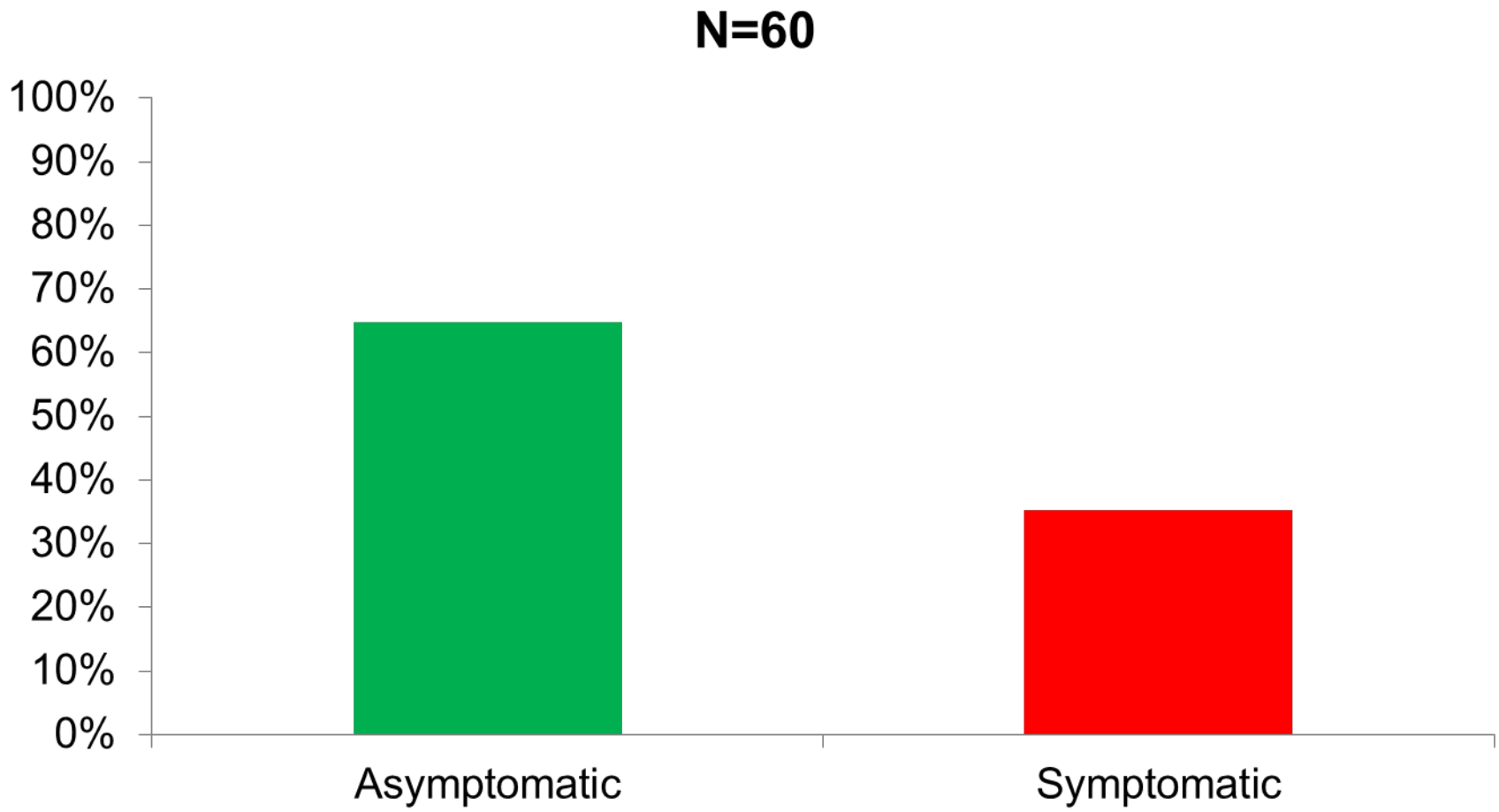
# Sample Demographics (N=60)

| Variable | M (SD) or N (%) |
|---|---|
| *Mother age (years)* | 22.4 (5.0) |
| *Mother Race* | |
| White | 37 (61.6%) |
| African American | 20 (33.3%) |
| Native American | 1 ( 1.7%) |
| Native Hawaiian or other Pacific Islander | 1 ( 1.7%) |
| Bi-racial | 1 ( 1.7%) |
| *Mother Ethnicity* | |
| Latina | 4 ( 6.7%) |
| None | 56 (93.3%) |

| Variable | M (SD) or N (%) |
|---|---|
| *Marital Status* | |
| Single, Never Married | 52 (86.7%) |
| Married | 8 (13.3%) |
| *Education (years)* | 11.5 ( 1.9%) |
| *Income* | |
| $ 0- 9, 999 | 33 (55.0%) |
| $10, 000-19,999 | 12 (20.0%) |
| $20, 000-29,999 | 11 (18.3%) |
| $30, 000-39,999 | 3 ( 5.0%) |
| $40, 000-49,999 | 0 ( 0.0%) |
| >$50,000 | 1 ( 1.7%) |
| *Child's age (days)* | 152.0 (73.0) |
| *Child Gender* | |
| Male | 28 (46.7%) |
| Female | 32 (53.3%) |

# Asymptomatic & symptomatic outcomes



# Variables considered in model

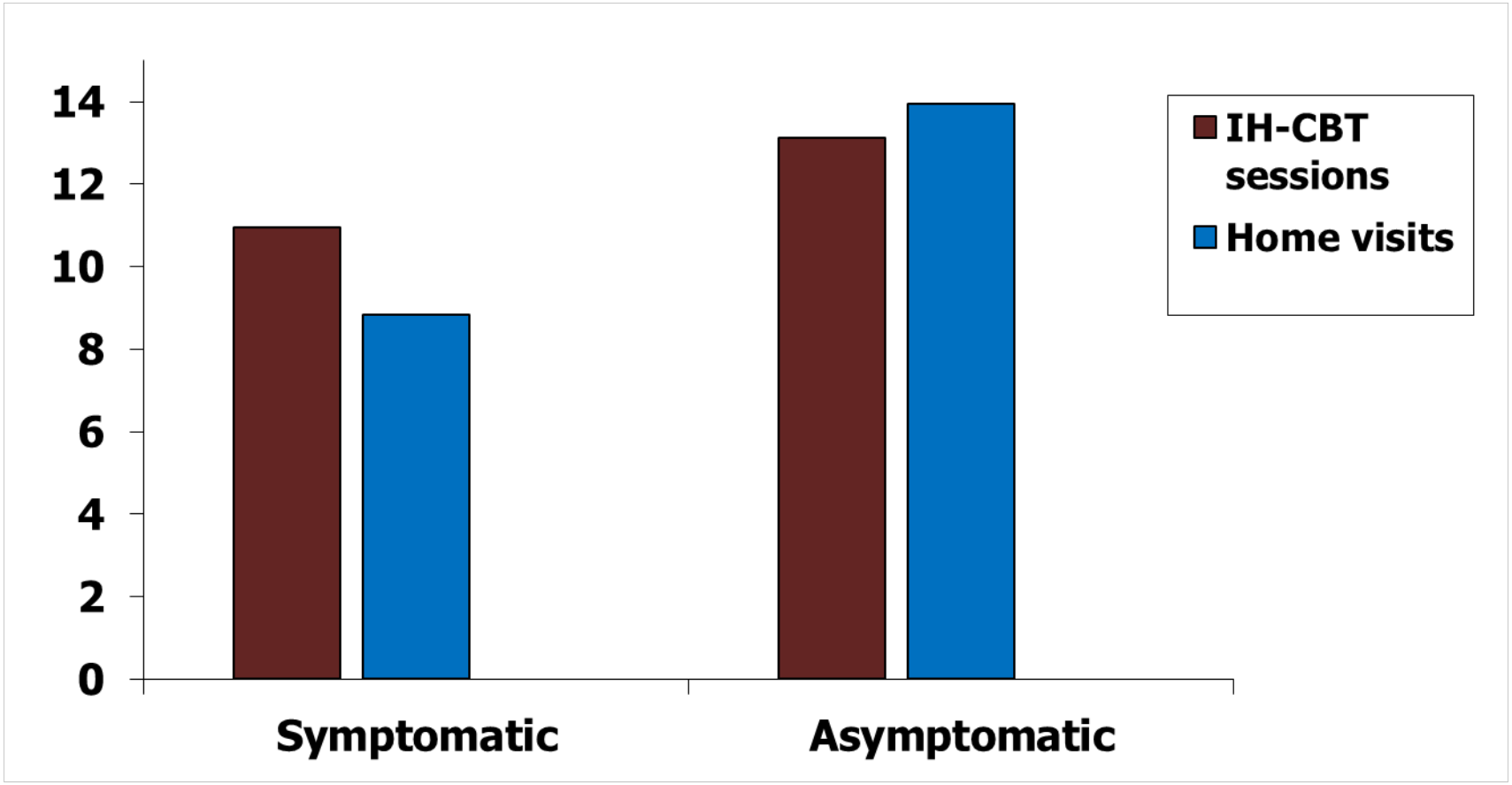
- Mother age and education
- Childhood trauma
- # MDD episodes, age of 1st episode, # comorbidities
- Pre-treatment BDI-II
- Personality DO symptoms
- # IH-CBT visits and # home visits

# MANOVAs on variables

| Variable | Asymptomatic | Symptomatic | Wald *Z* |
|---|---|---|---|
| Mother age | 22.30 (4.72) | 23.50 (4.85) | -1.67* |
| Mother education | 11.61 (3.41) | 11.56 (3.40) | 0.27 |
| CTQ | 59.18 (7.69) | 61.56 (7.65) | -0.66 |
| Age 1st episode | 15.06 (3.88) | 14.80 (3.85) | 0.19 |
| # MDD episodes | 2.74 (1.65) | 3.18 (1.78) | -2.77** |
| # diagnoses | 1.85 (1.36) | 2.00 (1.41) | -1.19 |
| BDI-II pre-txt | 33.46 (5.78) | 36.39 (6.03) | -2.04* |
| IPDS | 4.67 (2.16) | 5.83 (2.42) | -2.73** |
| # IH-CBT sessions | 13.12 (3.62) | 10.94 (3.31) | 2.83** |
| # Home visits | 13.94 (3.73) | 8.83 (3.97) | 9.37** |

*Note: ** = $p < .01$; * = $p < .05$*

# Predictors of BDI-II symptoms at post-treatment

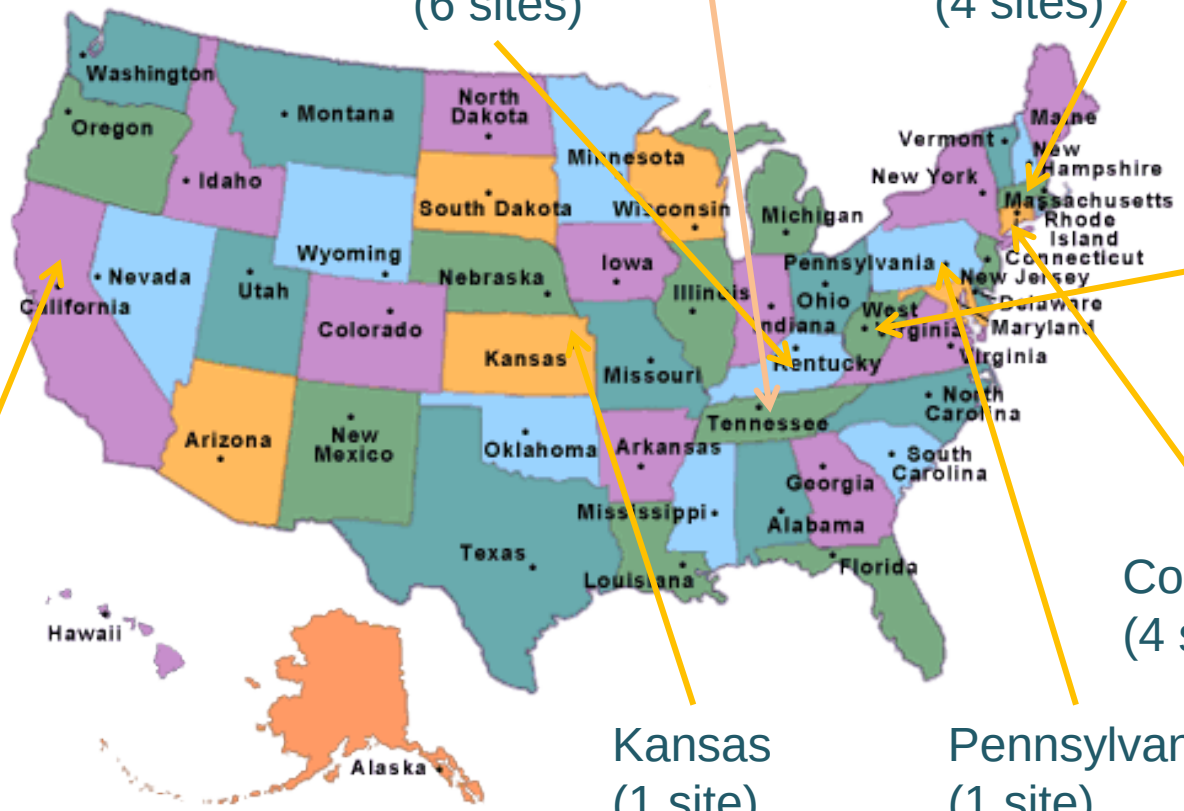


# Conclusions

- Most, but not all, mothers achieve post-treatment BDI-II scores indicative of clinically significant response
- Post-treatment scores are predicted by age, clinical severity and program intensity
- Home visits, particularly in the first half of IH-CBT treatment, predict more robust depression outcomes consistent with the theoretical importance of close collaboration between IH-CBT treatment and home visiting

# MBD Nationally

8,600 mothers in HV




Tennessee
(3 sites)

Kentucky
(6 sites)

Massachusetts
(4 sites)

West Virginia
(2 sites)

California
(1 site)

Connecticut
(4 sites)

Kansas
(1 site)

Pennsylvania
(1 site)

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- Kentucky H.A.N.D.S. & Ohio Help Me Grow
- United Way of Greater Cincinnati


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