Postpartum Depression: Why We Need to Aim for Prevention

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Presenter Disclosures

Elizabeth Howell, MD, MPP

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

Key Messages

- Depressive symptoms (even if they don't meet criteria for major depression) are detrimental to moms, babies, and families
- Burden of postpartum depression extremely high for low-income women of color
- Effective interventions aimed at prevention exist

Outline

- Postpartum Depression
  - Prevalence
  - Disparities
  - Risk Factors
  - Spectrum of Symptoms
- Review Psychosocial Interventions that Prevent Postpartum Depression
- Our Research – Mothers Avoiding Depression Through Empowerment (MADE IT)


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Brooke Shields Lashes Out at Tom Cruise

UPDATED 06/02/2005 at 08:00 AM EDT • Originally published 06/01/2005 at 04:00 PM EDT

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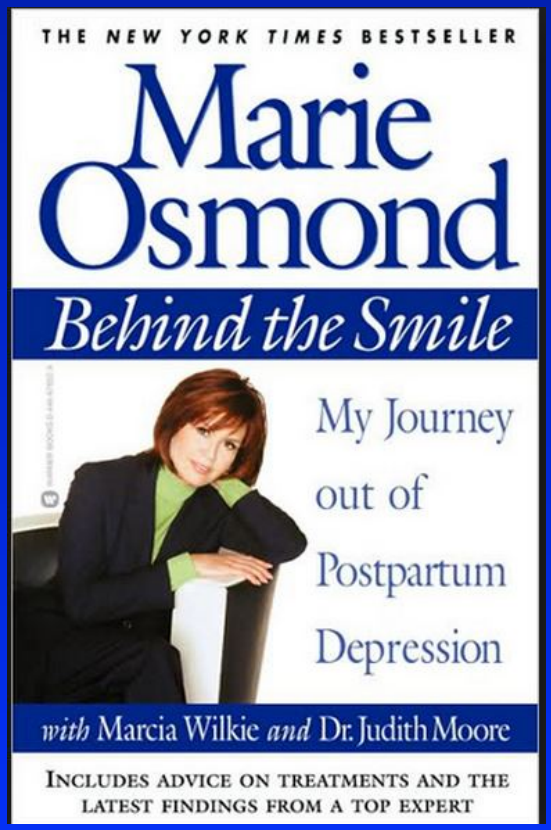

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Posted 2/11/2005 11:57 AM

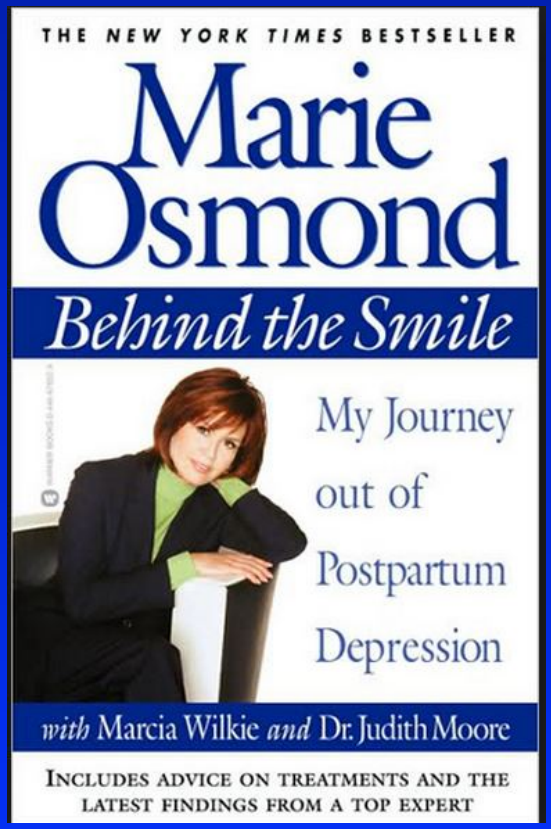
N.J. governor's wife getting support

TRENTON, N.J. (AP) — When a radio shock jock insulted acting Gov. Richard Codey's wife, making fun of her bout with postpartum depression, it catapulted the former kindergarten teacher and mother of two onto a national stage.

Mary Jo Codey is helping to raise awareness about postpartum depression.

By Mike Derer, AP

Mary Jo Codey, 49, is using the platform well, mental health advocates say.



The Burden of Depression

- One of most disabling disorders for women
- Reduces quality of life and functioning
- Leading cause of non-obstetric hospitalizations among women (18-44)
- Enormous societal costs
- Peaks during childbearing years

(O;Hara J Clin Psych 2009; ; Jiang 2002; Goodman, 2007)

Treatment

- Effective Treatment Available
  - Medication Therapy: 2/3 of patients respond to first antidepressant initiated
  - Cognitive Behavioral Therapy
  - Interpersonal Psychotherapy
  - Alternative Medicine (studies in progress)
- However vast majority are not treated

(Institute of Medicine: Depression in Parents, Parenting, and Children; National Academies 2009)

Postpartum Depression

- Occurs in up to 20% of women
- Experienced by women of all racial/ethnic backgrounds, but burden higher for low-income women of color
- Recurs in 40% of mothers
- Under diagnosed and under treated

(AHRQ Evidence Report 2005; Wisner JAMA 2006; Wisner J Affect Disord 2004; Howell Obstet & Gynecol 2005; Goodman J of Women's Health 2010)

Disparities in Prevalence

- Rates of postpartum depression are higher among low-income women
- Increased exposure to social stressors – e.g., marginal neighborhoods, violence poverty
- Data on racial/ethnic disparities in prevalence are inconclusive

(Kozhimannil, Psychiatric Services 2011; Institute of Medicine: Depression in Parents, Parenting, and Children; National Academies 2009)

Disparities in Care

- Racial/ethnic and SES disparities in care exist
- Traditional barriers to care: lack of insurance, language, cultural norms, patient/clinician communication, stigma
- Specific postpartum barriers to care: fear of losing one's baby, tendency to normalize symptoms, overlap with postpartum symptoms

(Kozhimannil, Psychiatric Services 2011; Institute of Medicine: Depression in Parents, Parenting, and Children; National Academies 2009)

Disparities in Care

- Overall treatment rates are very low for postpartum depression
- Black and Latinas versus whites are less likely to
  - Initiate treatment
  - Receive timely treatment
  - Receive follow-up care

(Kozhimannil, Psychiatric Services 2011; Goodman J of Women's Health 2010)

Risk Factors Postpartum Depression

- Previous postpartum depression
- History of depression, anxiety, or stress during pregnancy
- Stressful life events (e.g. physical and sexual abuse, loss, illness)
- Poverty, low SES
- Lack of social support/ low self esteem
- Obstetric complications (evidence less strong)

Distinct from Baby Blues

- Baby blues occurs in 50-80% of mothers
- Transient mood disturbance
  - weeping, sadness, irritability, anxiety, and confusion
  - peaks day 4, resolves day 10 postpartum
- Does not affect ability to function

(Wisner, NEJM 2002)

Diagnosis of Postpartum Depression

- Patients must report 5 of 9 symptoms
  - Must include depressed mood or anhedonia
  - Weight loss, sleeping problems, lack of energy, psychomotor agitation/retardation, inability to concentrate, feelings of worthlessness, suicidal

  (DSM IV)
- May occur up to one year postpartum

Spectrum of Depression

- Postpartum Depressive Symptoms
  - Positive depression screen but may not meet criteria for major depression
- Occurs in up to 50% of mothers
- Majority do not seek help
- Less than 50% of positive screens referred for follow-up care

(Howell et al, Obstet Gynecol 2005; Lumley J et al, Curr Opin Obstet Gynecol 2001)

Postpartum Depressive Symptoms

- Screening positive for depressive symptoms, whether or not meet criteria for major depression, is associated with multiple negative consequences for mothers and infants

(KT, Arch. of Pediatr Adolesc Med. 2006; Chung EK Pediatrics 2004)

Impact of Postpartum Symptoms of Depression on Moms

- Decreased emotional and physical functioning
- Reduced quality of life
- Reduced mother–infant attachment
- Increased use of health services

(Dennis CL, Archives of Women's Mental Health 2004; KT, Arch. Of Pediatr Adolesc Med. 2006; Chung EK Pediatrics 2004)

Impact of Depressive Symptoms on Parenting

- Reduced maternal–infant bonding
- Maternal withdrawal and disengagement
- Less likely to initiate or continue to breastfeed
- Less involvement of mothers with important developmental behaviors

  (e.g. playing and talking, showing picture books, following daily routines)

(McLearn KT et al, Archives of Pediatr Adolesc Med. 2006)

Impact of Depressive Symptoms on Parenting

- Maternal disengagement leads to greater prevalence of adverse maternal behaviors:
  - smoking and alcohol use
  - not restraining children in car seats
  - not having smoke alarms in homes
  - not using the back sleep position for infants

(McLearn KT et al, Archives of Pediatr Adolesc Med. 2006; Chung EK Pediatrics 2004)

Impact on Infants

- Excessive crying, colic, sleep problems
- Temperamental difficulties
- Less secure attachment
- Bidirectional, vicious cycle

(Pearlstein et al AJOG 2009)

Impact on Families

- Paternal postpartum depression occurs in 10% of dads
- Positive correlation between maternal and paternal depression
- Paternal depression associated with adverse emotional and behavioral outcomes in children

(Paulson, JAMA 2010)

Impact of Untreated Maternal Depression on Child Outcomes

- Children of Depressed Mothers at increased risk for:
  - Developmental delay
  - Poor cognitive function
  - Behavioral problems
  - Poor academic performance
  - Depression, Anxiety

(Institute of Medicine: Depression in Parents, Parenting, and Children; National Academies 2009)

Prevention of Postpartum Depression

- Few effective psychosocial interventions:
  - Telephone based peer support
  - Group CBT and home visitation
  - Health visitor trained in basic counseling skills and detection of postpartum depression

(Dennis BMJ 2008; Tandon, Matern Child Health J 2013; O'Hara Annu Rev Clin Psychol. 2013; Brugha Psychological Medicine 2011)

Summary

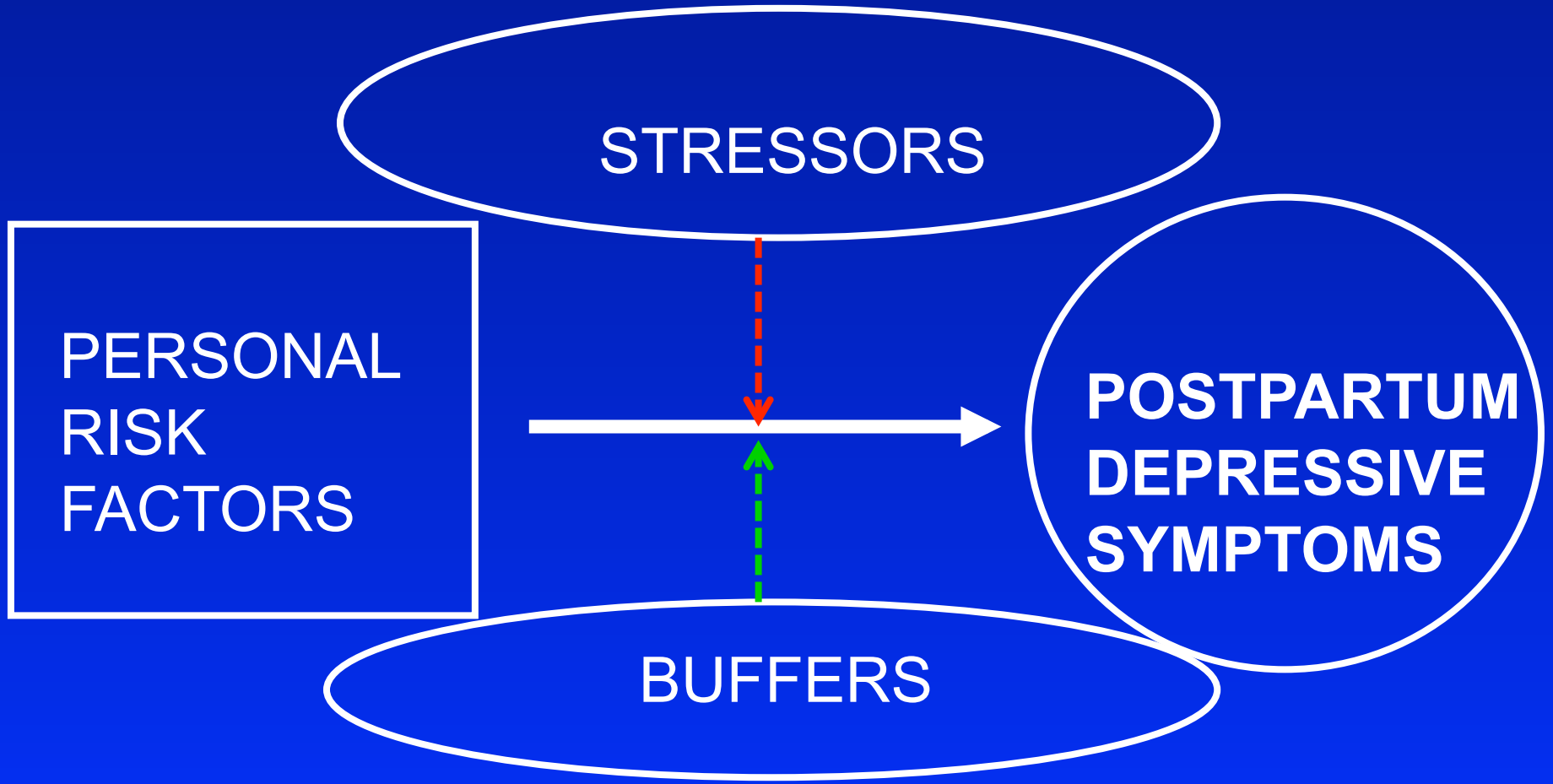
- Postpartum depressive symptoms are common
- Negatively impact mothers, babies, and families
- Particularly burdensome for low-income women of color
- Preventive interventions needed

Research

- IMSSM Maternal Outcomes Study
  - Focus group studies describing the postpartum experience
  - Longitudinal surveys to measure prevalence and severity of adverse postpartum outcomes including depression
- NIH-Funded Intervention Trials

  Mothers Avoiding Depression Through Empowerment

CONCEPTUAL MODEL



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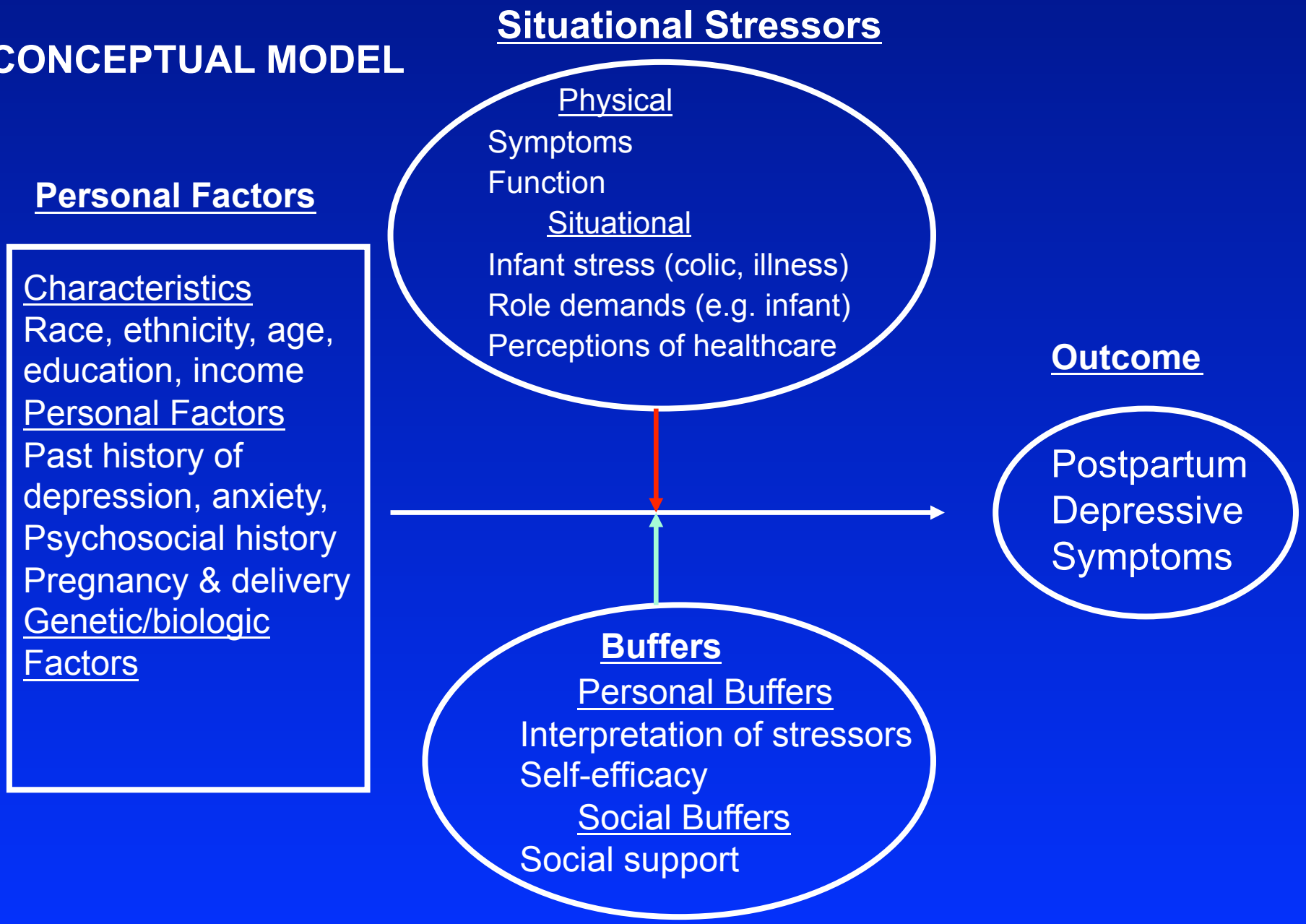

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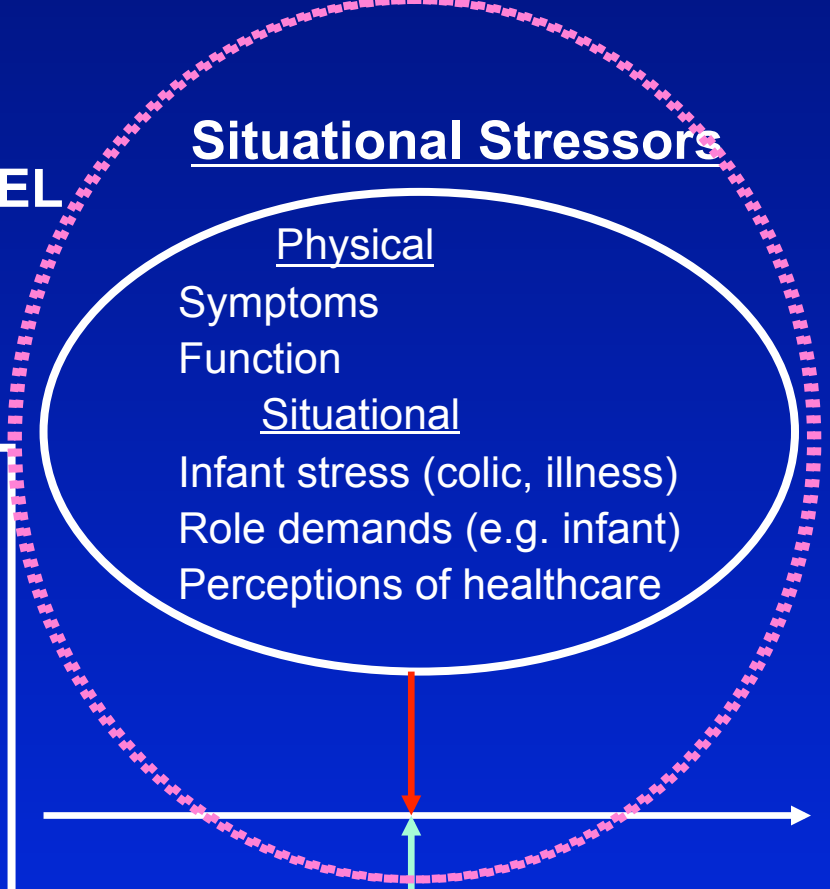


Personal Factors

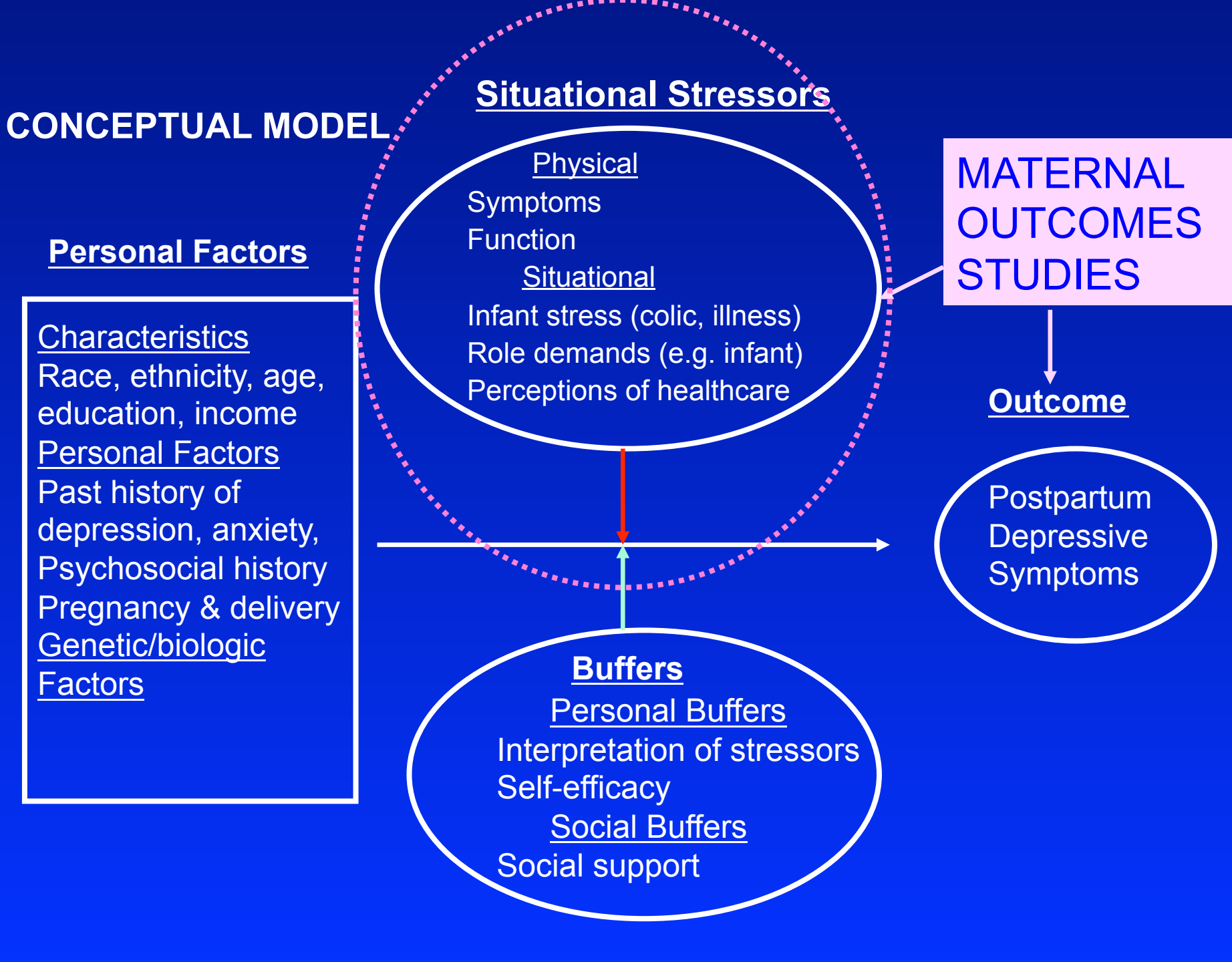
Characteristics
Race, ethnicity, age, education, income
Personal Factors
Past history of depression, anxiety,
Psychosocial history
Pregnancy & delivery
Genetic/biologic Factors

Outcome

Postpartum Depressive Symptoms

Buffers

Personal Buffers
Interpretation of stressors
Self-efficacy
Social Buffers
Social support


CONCEPTUAL MODEL
Situational Stressors
Physical
Symptoms
Function
Situational
Infant stress (colic, illness)
Role demands (e.g. infant)
Perceptions of healthcare
Personal Factors
Characteristics
Race, ethnicity, age, education, income
Personal Factors
Past history of depression, anxiety,
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Pregnancy & delivery
Genetic/biologic Factors
MATERNAL OUTCOMES STUDIES
Outcome
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Social support

Maternal Outcomes Study

- Phase 1: Focus groups with providers and patients to identify adverse outcomes and potential stressors and buffers for depression
- Phase 2: Develop patient surveys to measure these outcomes and function
- Phase 3: Conduct surveys at 3 time points; cohort of 720 postpartum mothers
- Phase 4: Analyze data; develop intervention

Focus Group Results

- Common postpartum adverse outcomes:
  - Physical sx: vaginal bleeding, pain, incontinence, hair loss, exhaustion, breastfeeding problems
  - Emotional sx: depression, anxiety
- Themes:
  - lack of knowledge about postpartum health
  - lack of continuity and trust of providers
  - disconnect between providers and patients

Emotional Symptoms

- Depressed Mood, Anxiety, Loneliness

  "And the depression was just awful. I went through postpartum {for} about 2½ months where … I felt like I'm going to cry now. It would be about 10:30 at night when I was finally able to take a shower. And you stand in the shower and you just cry and cry and cry because you just feel so overwhelmed …"

Survey Results

- 50% of mothers screened positive for depression during 1st 6-months postpartum
- High prevalence of depressive symptoms among low-income black and Latina mothers

(Howell Obstet Gynecol. 2005; Howell, Matern Child Health J. 2006)

Survey Results

- Correlates of depressive symptoms:
  - Stressors (physical symptoms, infant colic)
  - Buffers (social support, self-efficacy)
  - Associated with similar factors (stressors and buffers) for blacks, Latinas, and whites

(Howell Obstet Gynecol. 2005; Howell, Matern Child Health J. 2006)

Survey Results

- Postpartum depressive symptoms are impacted by preparation/expectations for postpartum experience

(Howell J. of Women's Health, 2010)

Symptom Prevalence and Preparation

Common Symptoms	N	Symptom Prevalence	Prepared for Symptoms
Vaginal bleeding	711	97%	86%
Breast pain	708	82%	60%
Pain	719	79%	79%
Breastfd problems	594	60%	37%
Urinary incontinence	697	32%	24%
Anxiety re baby	718	62%	41%
Depression	714	39%	63%

(Howell et al. Obstet Gynecol. 2010)

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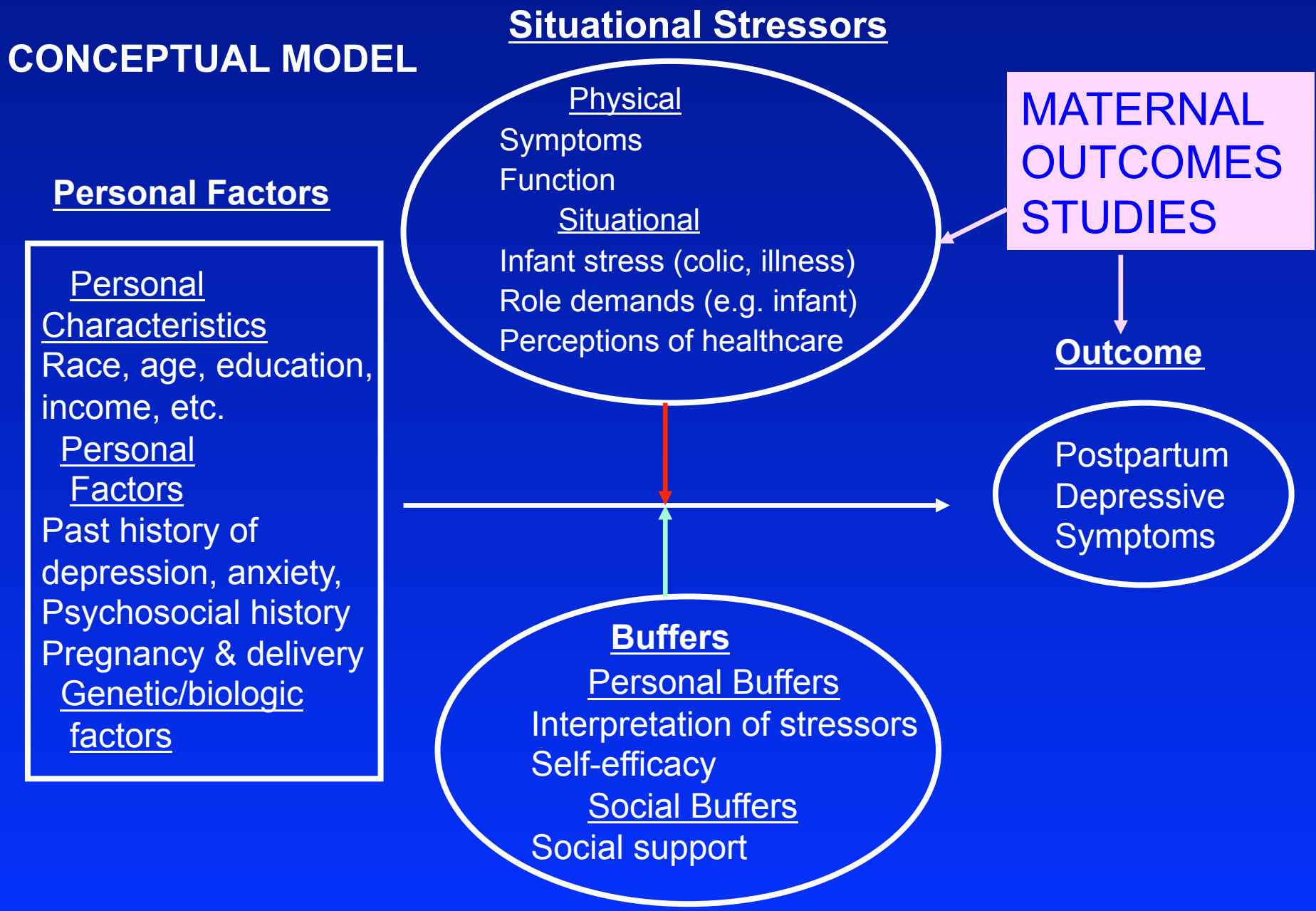
Lessons Learned: Depressive Symptoms in Mothers

- Personal/ Fixed Factors : History of depression, stressful life events, poverty
- **Modifiable Factors**
  - Physical symptoms
  - Infant colic
  - Social support
  - Preparation for postpartum experience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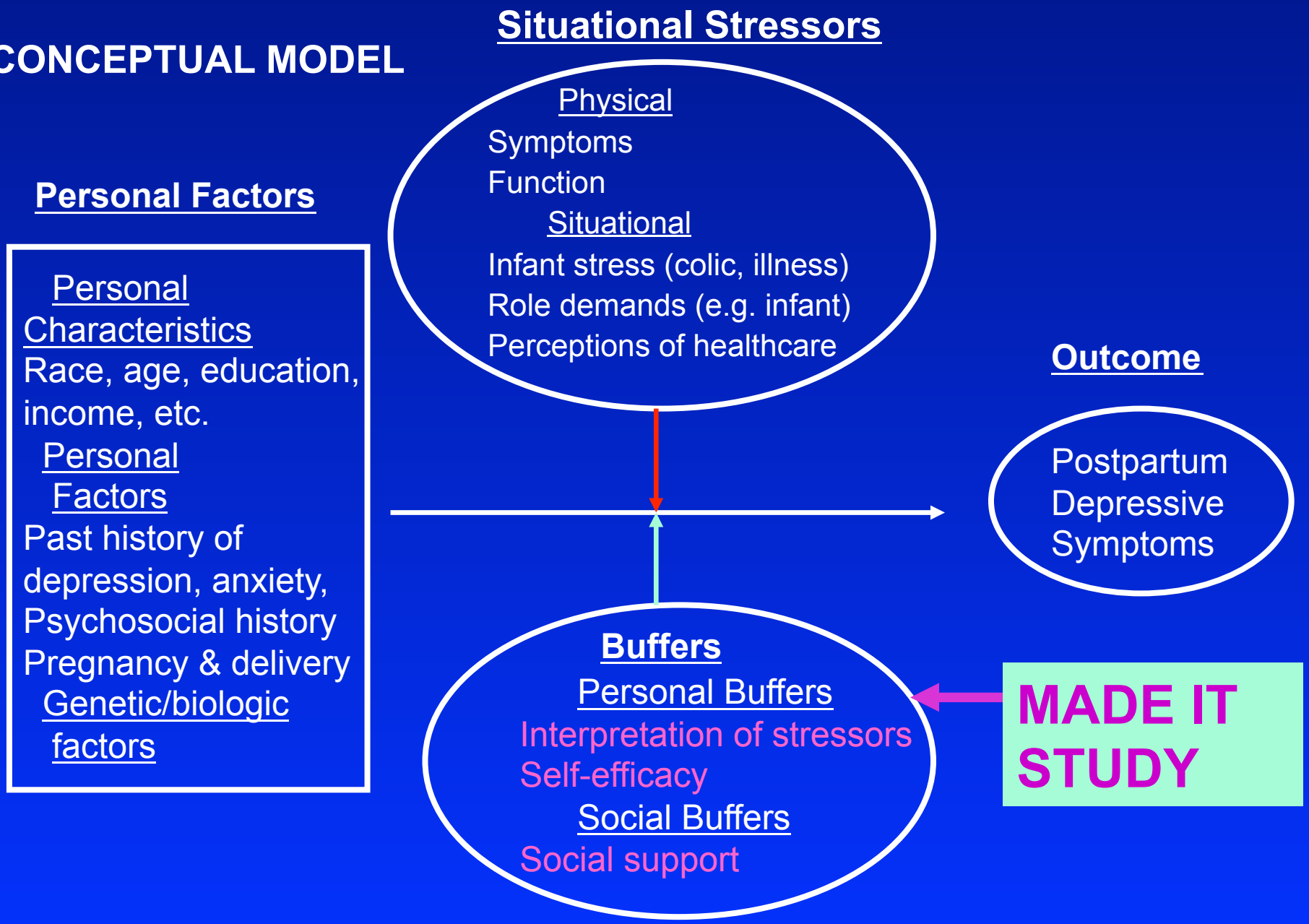

Mothers Avoiding Depression Through Empowerment (MADE IT)

Mount Sinai School of Medicine

Funded by NIMHD (2P60MD000270-6) and NIMH (5R01MH077683-02)

MADE IT – The Intervention

- Targets modifiable factors associated with postpartum depressive symptoms
- Activates mothers with practical approaches to common postpartum problems
- Culturally tailored; Pilot tested; reviewed with focus groups; community members
- Implemented by social workers trained in maternal child health

Study Objective

- To test in a randomized controlled trial effectiveness of an intervention targeting **modifiable factors** to prevent postpartum depressive symptoms among black and Latina mothers.

INTERVENTION

Step 1: In-Hospital:	Step 2: 2-week follow up
Pamphlet	Needs assessment
Partner summary sheet	Tailored resource list
Social worker session	

Randomization

INTERVENTION

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Social worker session	

Randomization

ENHANCED USUAL CARE

Routine care

2-week call

Generic resource list

Eligibility

- Inclusion Criteria
  - Self-identified black or Latina
  - Mothers who delivered infants at Mount Sinai (April 2009 - March 2010)
  - Maternal age≥18, infants ≥2500gms with 5 min. Apgar >6; had working phone
  - English or Spanish-speaking

Outcomes

- Primary Outcome: Depressive Symptoms
  - Edinburgh Postnatal Depression Scale (EPDS≥10)
  - Most widely used depression screen postpartum, validated in multiple languages
- Secondary Outcome: Breastfeeding Duration

**Mothers with severe symptoms, EPDS≥13, referred for psychiatric evaluation / treatment*

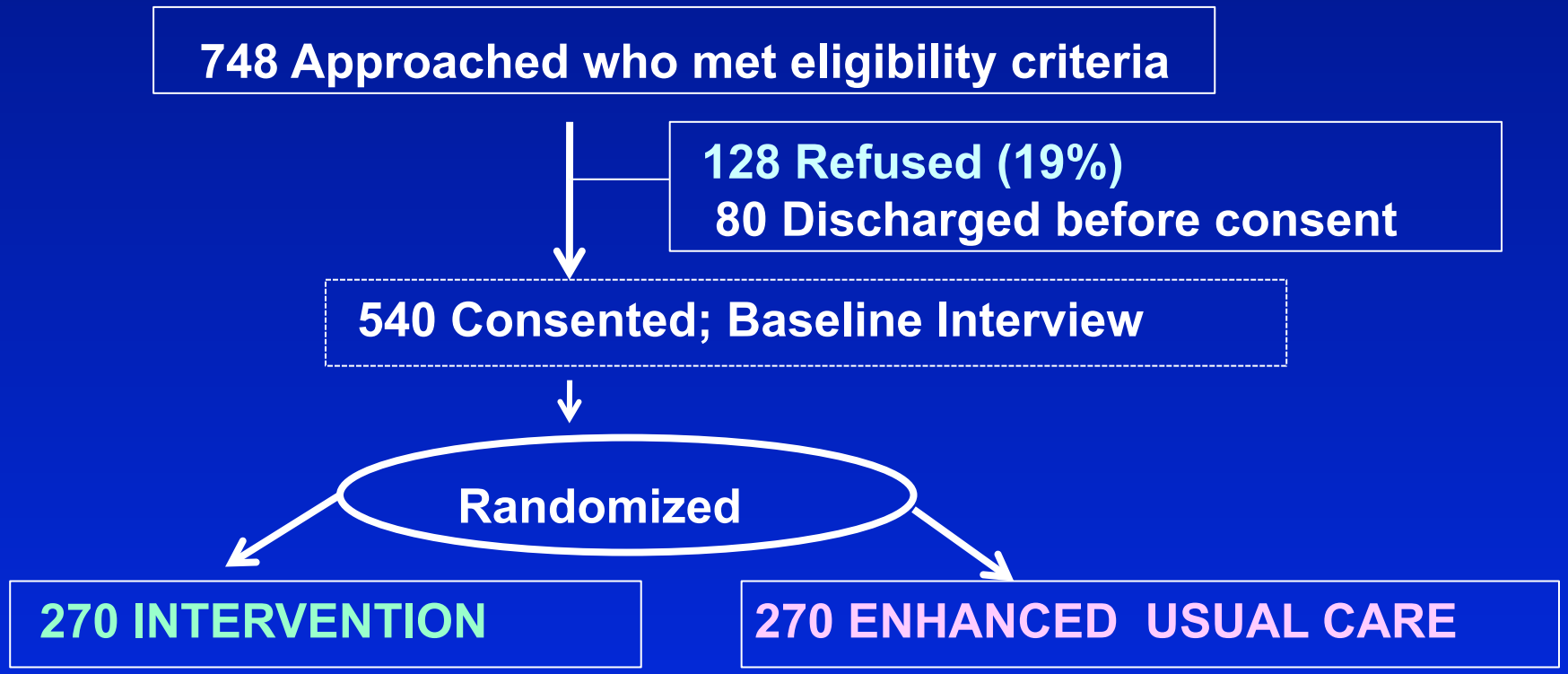
Survey Assessments

- Telephone surveys: 3 weeks, 3 months, and 6 months postpartum
- Domains:
  - Physical symptoms
  - Emotional symptoms
  - Self-efficacy
  - Infant factors (colic)
  - Treatment preferences
  - Function
  - Breastfeeding
  - Social support
  - Parenting practices
  - Dr./Patient interaction

Planned Analyses

- Cross sectional and longitudinal:
  - All trial participants (Intention to Treat)
  - Mothers without severe depressive symptoms at baseline

Results: Recruitment Flow



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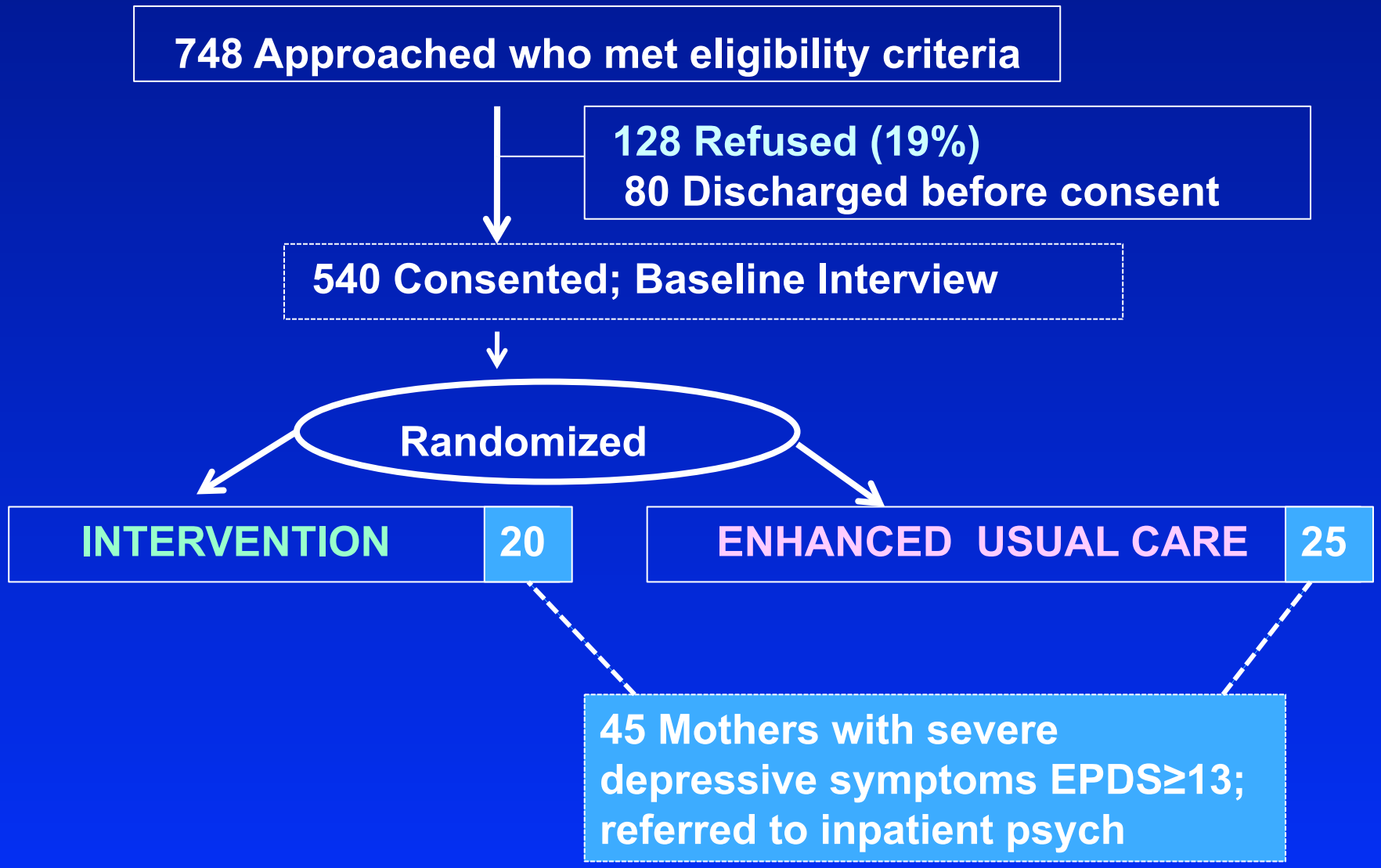

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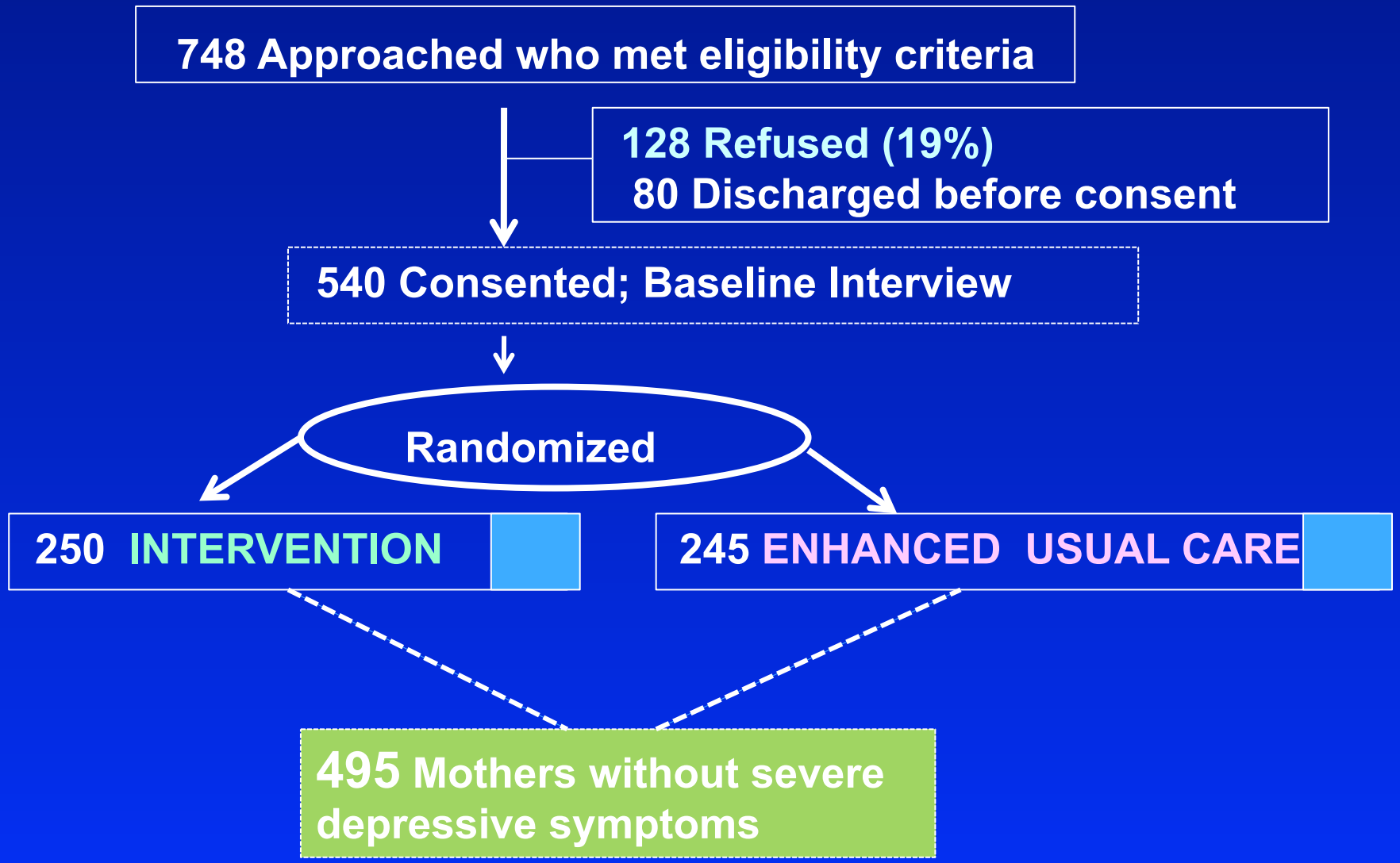


Follow-up

- Blinded assessments of intervention and enhanced usual care groups:

Postpartum	Survey Completion
3 weeks	87%
3 months	89%
6 months	78%

MADE IT Baseline Characteristics

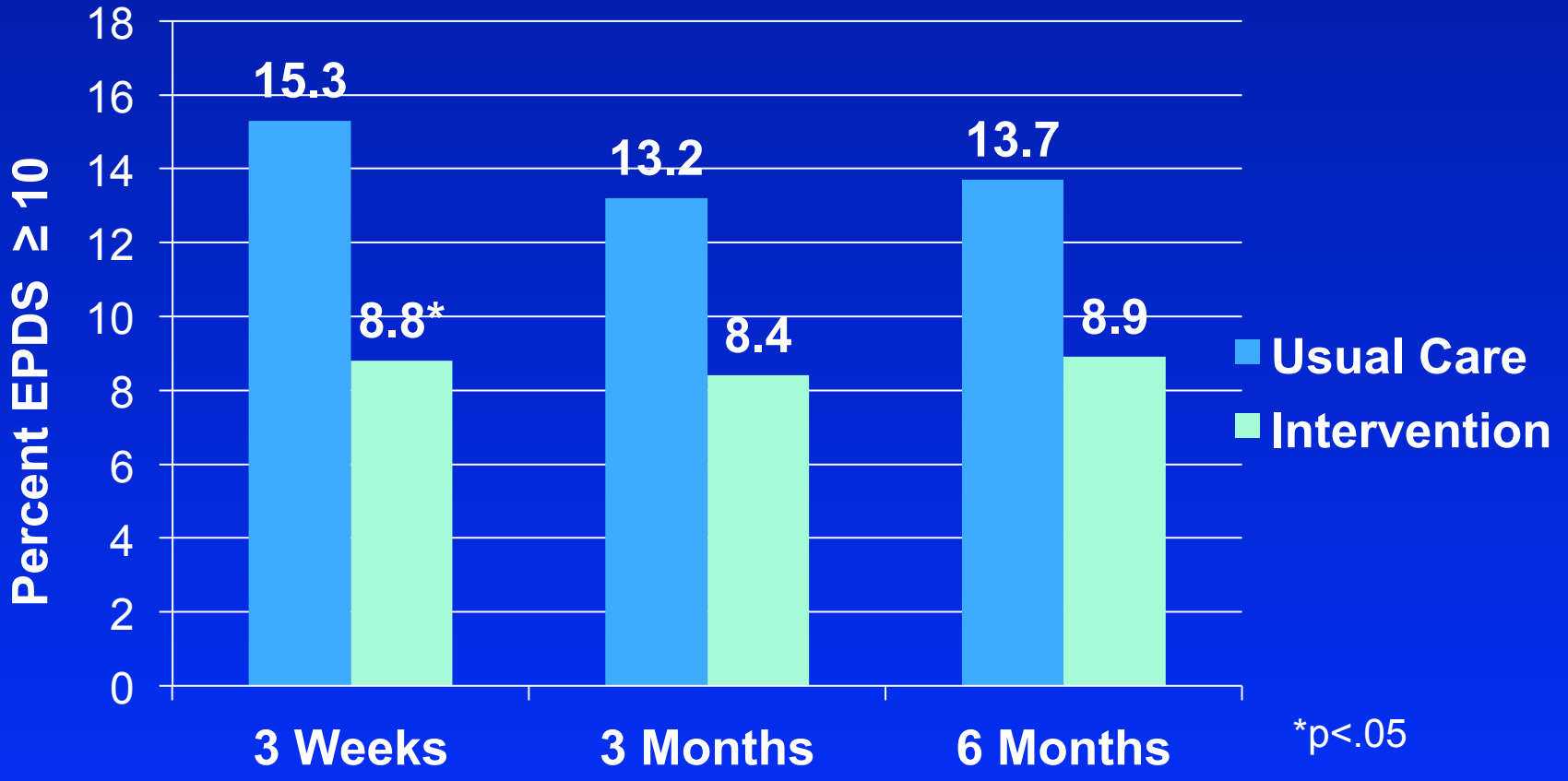
	Intervention	Usual Care
Mean age (± s.d.)	28 (6)	27 (6)
Latina	64%	60%
Black	36%	40%
1° Spanish-speaking	22%	20%
Born outside of US	37%	34%
Educ. ≤ high school	43%	48%
Medicaid	63%	63%

MADE IT Baseline Characteristics

	Intervention	Usual Care
1st child	41%	42%
Vaginal delivery	61%	62%
Comorbid condition*	**20%**	**27%**
Past hx depression	16%	18%
High social support	67%	69%
EPDS ≥10	14%	17%

*$p<.05$

Rates of Positive Depression Screens Over Six Months for All Mothers (MADE IT 1)



MADE IT Longitudinal Analyses

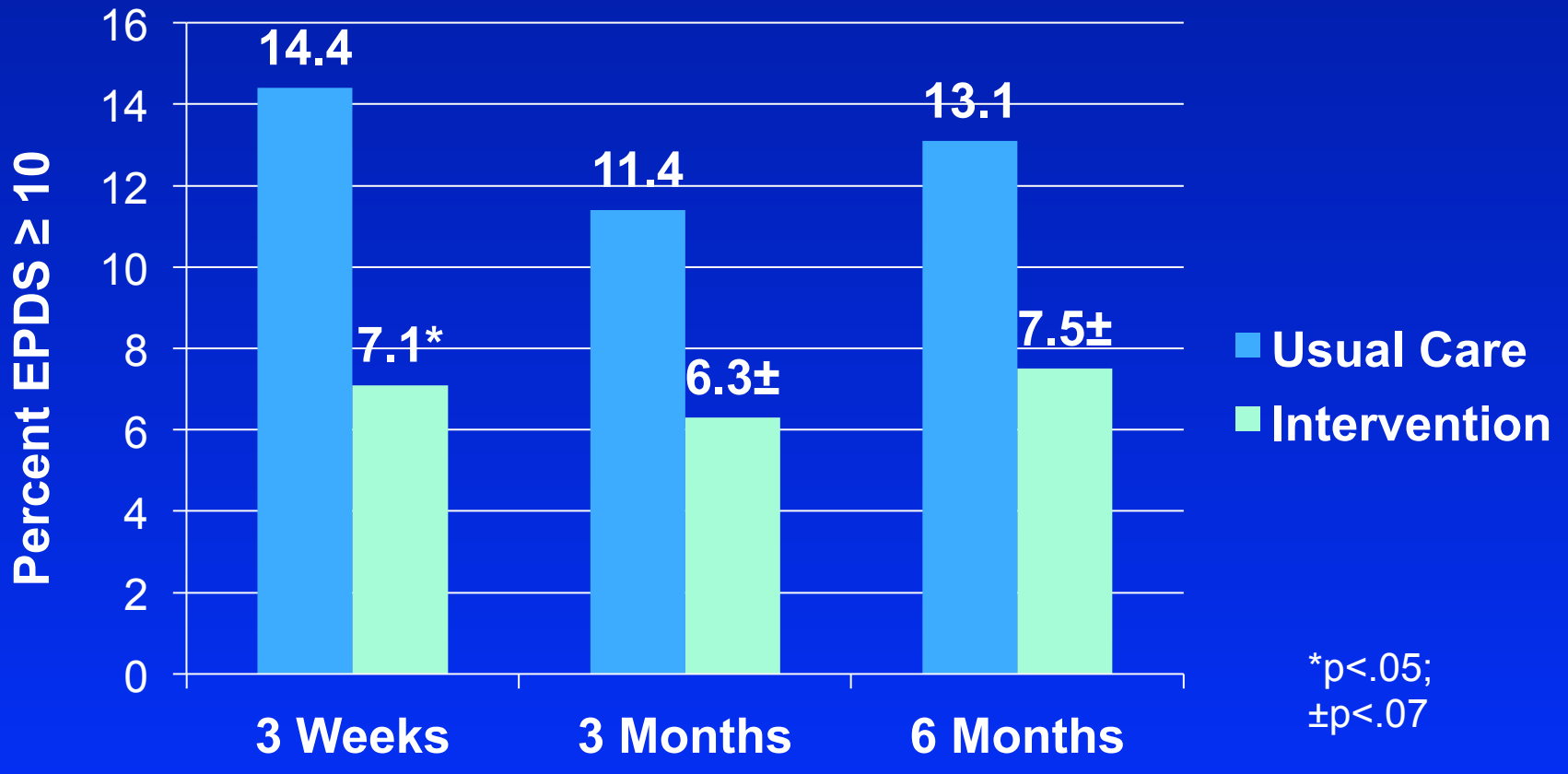
Risk of Positive Depression Screen for up to 6-months of follow-up

Intervention vs. Enhanced Usual Care

Odds Ratio (95% CI) = 0.67 (0.47-0.97)

(Howell Obstet Gynecol 2012)

Rates of Positive Depression Screens Over Six Months for Mothers (without Severe Depressive Symptoms at Baseline)



Odds Ratios: Positive Depression Screen (Mothers without Severe Symptoms)

Intervention vs. Enhanced Usual Care		
	Unadjusted Odds Ratio (95%CI)	Adjusted Odds Ratio* (95% CI)
3 weeks	0.45 (0.24-0.86)	0.37 (0.17-0.79)
3 months	0.52 (0.26-1.03)	0.45 (0.21-0.92)
6 months	0.54 (0.27-1.06)	0.51 (0.24-1.07)

*Multivariable models also included baseline EPDS, country of birth, language, comorbid condition, past depression history, and social support

MADE IT Longitudinal Analyses (Mothers without Severe Symptoms)

Risk of Positive Depression Screen for up to 6-months of follow-up

Intervention vs. Enhanced Usual Care

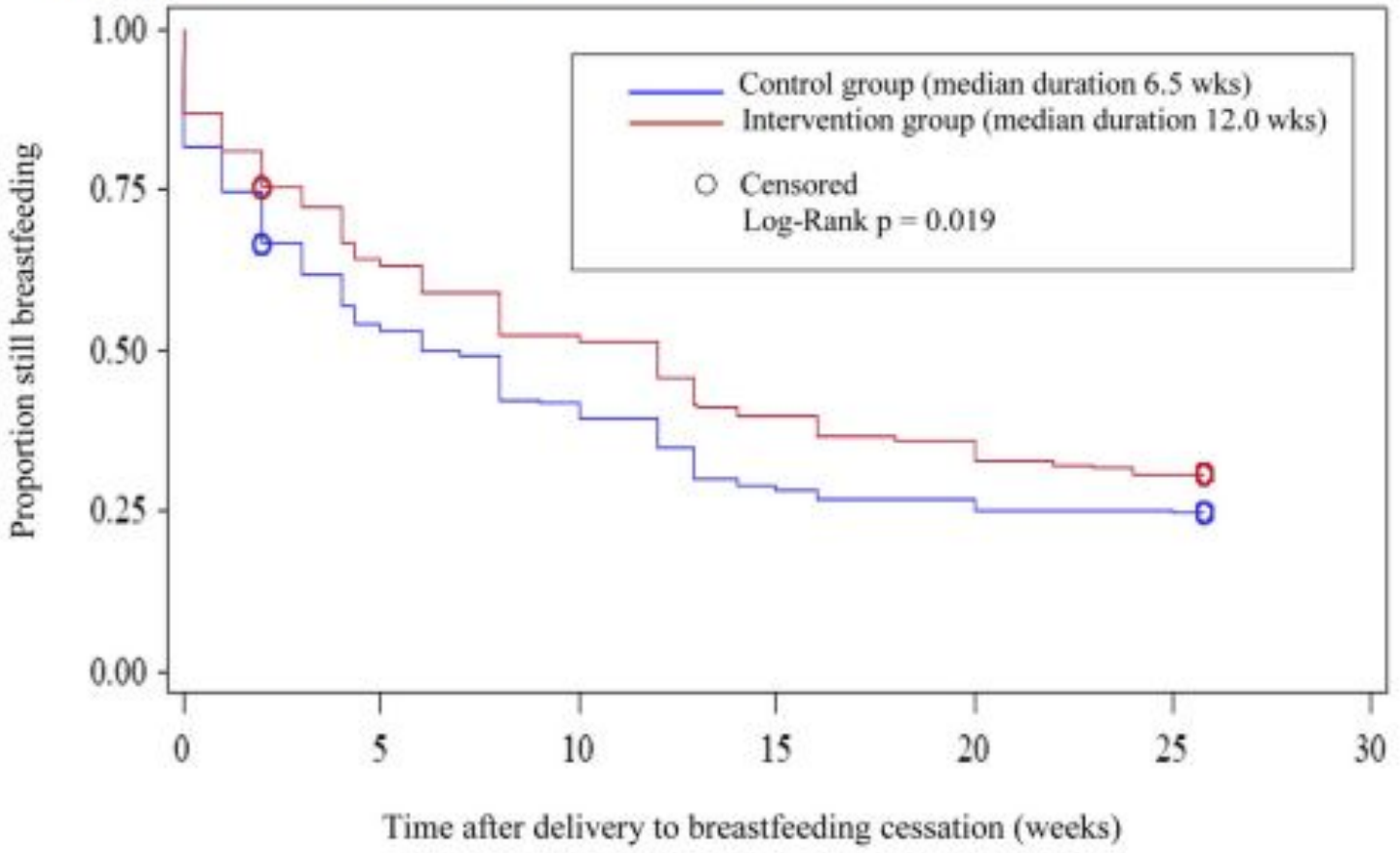
Odds Ratio (95% CI) = 0.57 (0.37-0.88)

(Howell Obstet Gynecol 2012)

Breastfeeding Results

FIGURE 2

Breastfeeding duration for intervention vs control

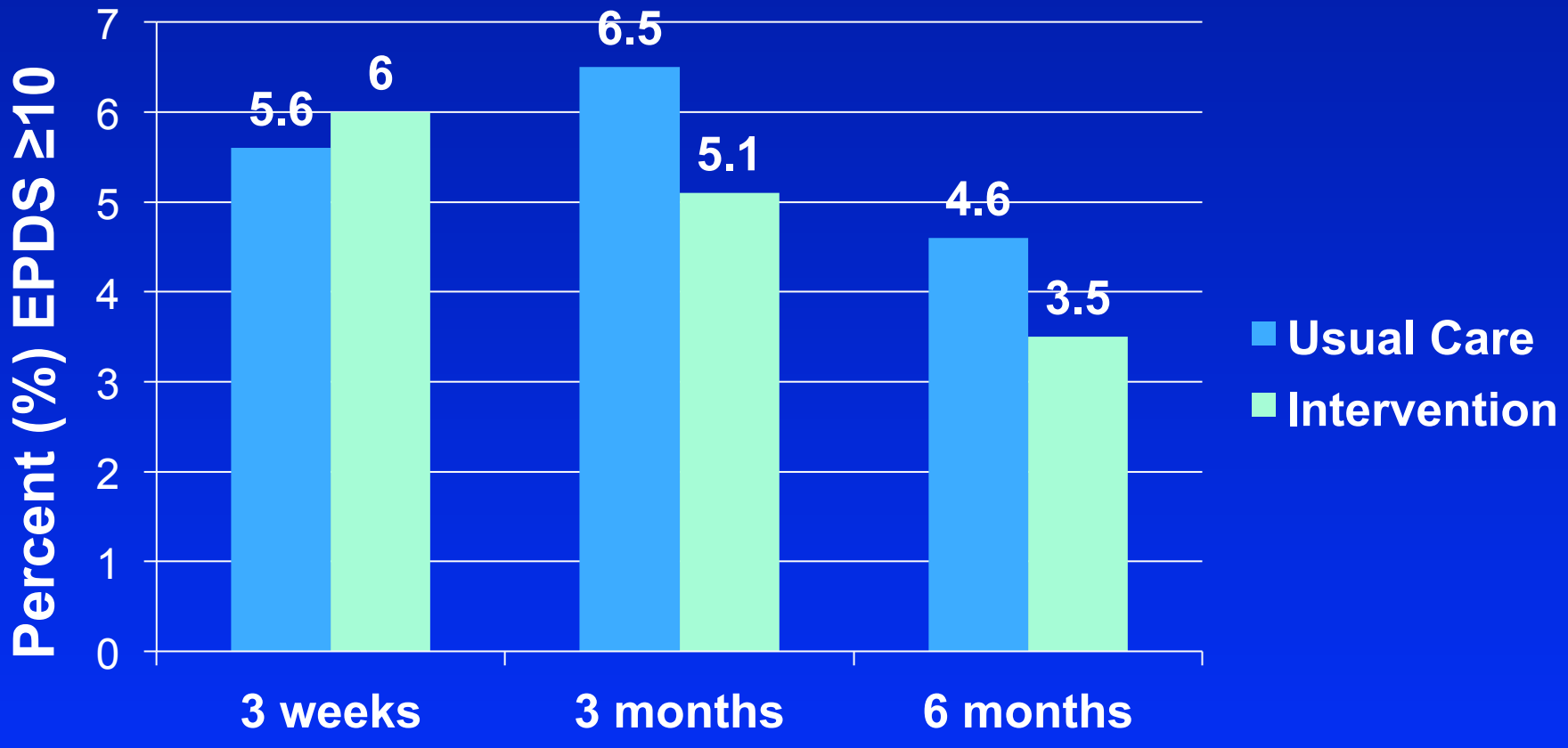


Howell. Extending breastfeeding among minority mothers. Am J Obstet Gynecol 2014.

MADE IT 2

- Simultaneously conducted randomized trial testing a nearly identical intervention
- Vast majority of study sample was white, privately insured, and educated
- Enrolled 540 and had excellent follow-up rates

Positive Depression Screens Over Time (MADE IT 2)



(Howell , Arch of Women's Mental Health, 2013)

Conclusion

- A simple culturally tailored intervention that focused on modifiable factors reduced positive depression screens among black and Latina postpartum mothers for up to 6-months of follow-up
- It also extended breastfeeding duration

Limitations

- Depressive symptoms were lower than published rates therefore our power to detect a difference was less than expected

Challenges

- Lack of adequate resources to address women with severe depressive symptoms
- Clinicians often fear patients with postpartum depression
- Lack of training of obstetric clinicians

Implications

- We should consider expanding in-hospital and follow-up postpartum care to include addressing modifiable factors via culturally tailored health intervention
- Need more research on prevention and dissemination of effective interventions

Take Home Points

- Depressive symptoms (even if they don't meet criteria for major depression) are detrimental to moms, babies, and families
- Burden of postpartum depression extremely high for low-income women of color
- Effective interventions aimed at prevention exist

Happy Families

Team:

Dr. Howard Leventhal

Dr. Caron Zlotnick

Dr. Kim Klipstein

Dr. Holly Loudon

Ms. Amy Balbierz

Ms. Norma Lopez

Ms. Elizabeth Kaplan