

# Maternal Depression Pilot (MDP) Screening, Assessment, and Treatment Feasibility and Challenges of Successful Project Implementation

## Family Health Centers San Diego

### Presenters

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# Teen Mom

- Mom/infant seen for first newborn check up during the first week of life.
- Newborn was jaundiced with weight loss; mom was tearful and crying.
- Depression screens were administered during this initial pediatric visit; mom scored within pilot range.
- Mom/infant were referred into the pilot for treatment services.



# Homeless Mom

- Mom and her 17 month old child arrive at the pediatric clinic on a Friday afternoon; this is the last patient for the day.
- Mom has her belongings tied together in a blanket.
- Screening tools were administered and found to be above the range of the pilot.
- Mom was referred to FHCS D Mental Health Department for treatment services.



# The Partnership



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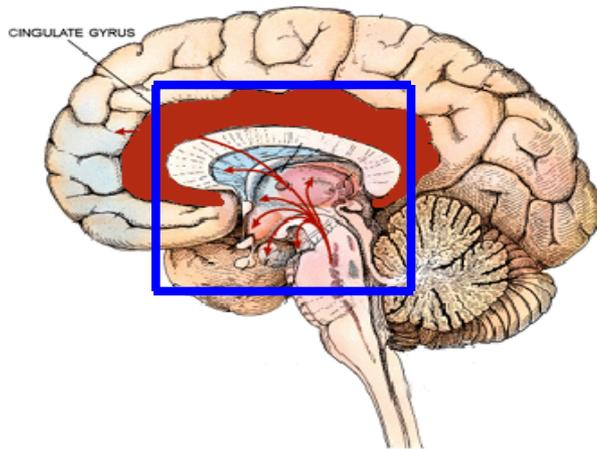
# Family Health Centers of San Diego



- Total Sites: 35
- Primary Care Clinics: 18
- Dental Clinics: 6
- Mental Health Clinics: 2
- Lead Agency for Healthy Development Services: 2 Regions, Central & East

# Newton Center for Affect Regulation

NCAR is specialized in the use of Integrative Regulation Therapy (iRT) an evidenced informed, neurobiological limbic system scaffolding therapy for all ages.



Newton, 2009, 2013





# How Is This Dyad Doing?



# What is Postpartum Depression?

## Postpartum Depression (PPD)

- Symptoms occur nearly every day
- Mood swings, feeling sad, crying, hopeless, feeling worthless
- Lack of interest or pleasure
- Inappropriate guilt feeling, suicidal ideation
- Diminished ability to think, agitation
- Change in appetite/sleep pattern
- Meta-analysis of over 14,000 subjects with 10,000 additional subjects from newer studies reported



# What is Postpartum Depression?

- Strongest predictors of PPD were
  - depression during pregnancy
  - anxiety during pregnancy
  - stressful life events during pregnancy or early newborn period
  - Low social support
  - Previous history of depression

Robertson, Grace, Wallington, & Stewart, 2004

- Older meta-analysis found additional factor
  - Poor marital relationship

O'hara & Swain, 1996

- Unrecognized and undertreated



# This Mom and Infant, How Are They Doing?



# Depressed Moms

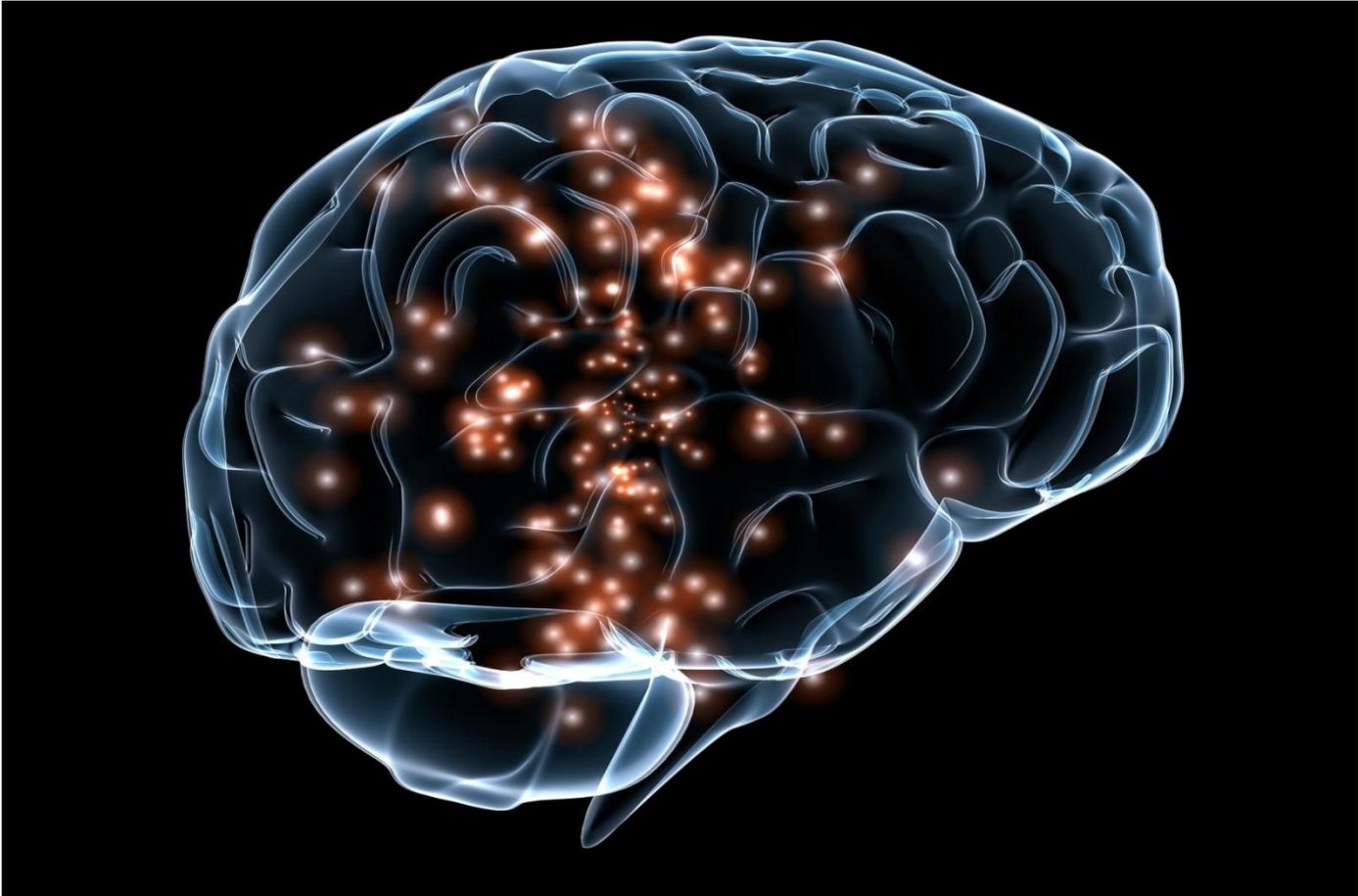
- Depressed moms perceived their infants as having more difficult temperaments than did non-depressed moms. McGrath, Records, & Rice, 2008
- Depressed moms have increased negative affect which decreases infant motivation; they use less infant-directed speech, less facial and vocal expressions, less animation; they are more likely to speak in a flat tone, and touch their infants less. Sohr-Preston & Scaramella, 2006
- Interactional patterns of depressed moms with their infants tend to be uncoordinated, unresponsive, and noncontingent. Hay, 1997; Sohr-Preston & Scaramella, 2006



# Depressed Moms

- Depressed moms have more difficulty maintaining joint attention and providing synchronized interactions for child's learning. Sohr-Preston & Scaramella, 2006
- Depression affects mom's ability to attune and affects judgment, distorts thinking, and affects sensitivity. Lefkovic, Baji, & Rigo, 2014





# Depressed Moms

- fMRI study of depressed versus nondepressed moms listening to the sounds of their 18 month old infant crying versus an unknown infant crying and a control sound. Nondepressed moms had activation in limbic/prefrontal regions. Depressed moms (as a group) failed to show activation. Laurent & Ablos, 2012
- fMRI study of depressed versus nondepressed moms were shown images of their 18 month old infant's joy and distressed face versus the face of an unknown infant. Depressed moms showed blunted responses to their own infant's distress faces. Moms with higher levels of depression showed reduced responses to their own infant's joy state. Laurent & Ablos, 2013
- In the toddler years, depressed moms read less to their children and tend to let their children play by themselves. Bigatti, Cronan, & Anaya, 2001; Sohr-Preston & Scaramella, 2006



# Children of Depressed Moms

- Infants born to depressed or co-morbid depressed and anxious women had higher cortisol and lower dopamine and serotonin and greater right frontal EEG signatures (N=911). Greater incidence of premature birth in co-morbid moms. Field et al., 2010.
- Infants of depressed moms have poorer outcomes on the Brazelton Neonatal Behavior Assessment Scale and were more likely to be premature and have low birth weight. Robertson et al., 2012.



# Postpartum Anxiety (PPA)

- Is not as well researched as postpartum depression.
- Community sample found that it is more prevalent than postpartum depression.
- Symptoms more days than not can include:
  - Excessive worry
  - Fear
  - Anger and irritability
  - Low self esteem
  - Difficulty concentrating
  - Muscle tension
  - Sleep disturbances
  - Panic



# Postpartum Anxiety (PPA)

- Australian community sample of 4,366 women at 6 months postpartum found:
  - 12.7% had anxiety
  - 17.4% had depression
  - 8.1% had both anxiety and depression
- Half the sample reported one or more stressful life events during the first 6 months postpartum (47.6%)  
Yelland, Sutherland, & Brown, 2010



# Anxious Mom with Infant

- 24 yr. old mom and 4 month old infant
- Mom living with husband and 4 yr. old daughter
- PHQ-9: 10 moderate
- Beck Depression Inventory: 16 mild
- Beck Anxiety Inventory: 40 severe
- PSI-4 scores
  - Parental Distress: Borderline
  - Parent/Child Dysfunction: Clinical
- Mom reports being anxious when infant cries



# Summary of Effects of Depression on Child Development

## **Prenatal Period**

- Inadequate prenatal care
- Poor nutrition
- Pre-eclampsia
- Spontaneous abortion
- Higher preterm birth
- Low birth weight

## **Infancy Period**

- Cognitive: Lower cognitive performance, may learn to talk later.
- Emotional: Insecure attachment(s), more difficulty with separations, anxious/fearful

Adapted from Position Statement, Canadian Paediatric Society, 2004



# Summary of Effects of Depression on Child Development

- Impact on Behavior: Angry and protective style of coping; passive; withdrawal of self-regulatory behavior; dysregulated attention and arousal

## Toddler Period

- Cognitive: Less creative play and lower cognitive performance, can learn to talk later
- Emotional: Insecure attachment(s), less able to tolerate separation, anxious/fearful, compromised emotional expression
- Impact on Behavior: Passive noncompliance; less mature expression of autonomy; internalizing & externalizing problems; lower interaction, less physical play; more temperamental, less cooperative



# Birth of the Maternal Depression Pilot

- Delayed developmental outcomes observed in children with depressed moms.
- Timely identification and management of maternal depression is important for child's early brain development and school readiness.



# Planning Support for Families

What do families need?



# The Maternal Depression Pilot



# What Do You Feel When Looking at These Pictures?



# Program Implementation



# PHQ Screening and Clearance Guidelines

## Administer PHQ2

- If negative, provide list of resources
- If positive, administer the PHQ 9

## Any positive answer on Question 9 (Suicidal Ideation), regardless of the total score on the PHQ9

- A call to MH (Therapist at ext. 4496 or 2769) immediately for a **warm handoff** while patient is present in the clinic.
- MH will assess and determine the plan of care for the patient

### If MH is not available:

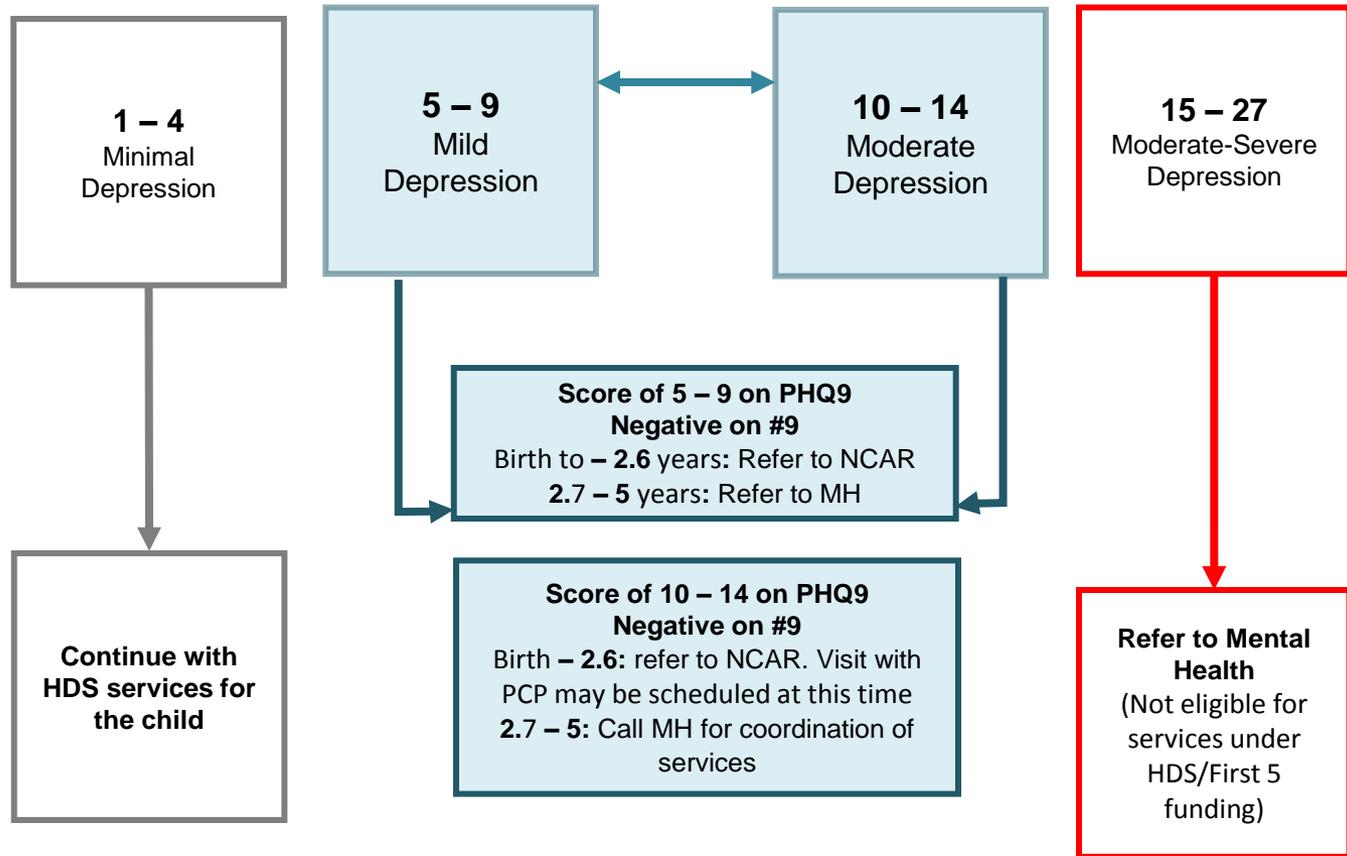
- ① Contact PERT by calling 911
- ② Consider contacting CWS (800)344-600, and file a report.

Crisis Line: (888)724-7240 while in the clinic

**In both cases, a referral to MH is initiated once the call is made.**



# Target Population: Moms with Mild-to-Moderate Needs



# Implementing PHQ Screenings in a Pediatric Setting

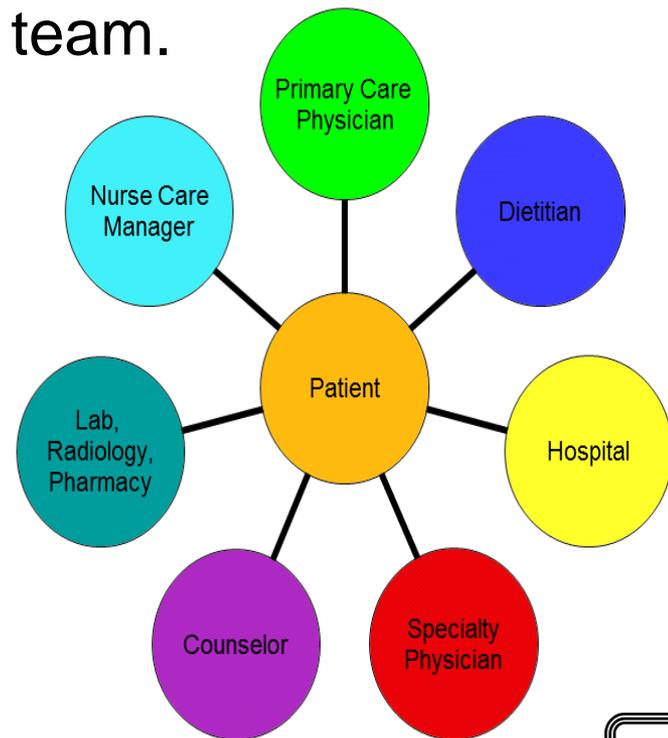
## Primary Care Medical Home

Comprehensive care for physical and mental health care provided by a team.

### Patient-Centered Care

- Coordinated
- Accessible Services

Pediatricians see new moms at least 4-6 times during first year of well-baby visits.



# PHQ Screening Challenges

- Staff discomfort
- Work flow
- Consent
- Confidentiality
- Documentation
- Screening and service integration
- Communication
- Mental Health support services



# Barriers to Engagement

- Stigma
- Reluctance to share personal information
- Limited access to healthcare
- Limited self-care
- Inadequate childcare support
- Lack of transportation



# Solutions

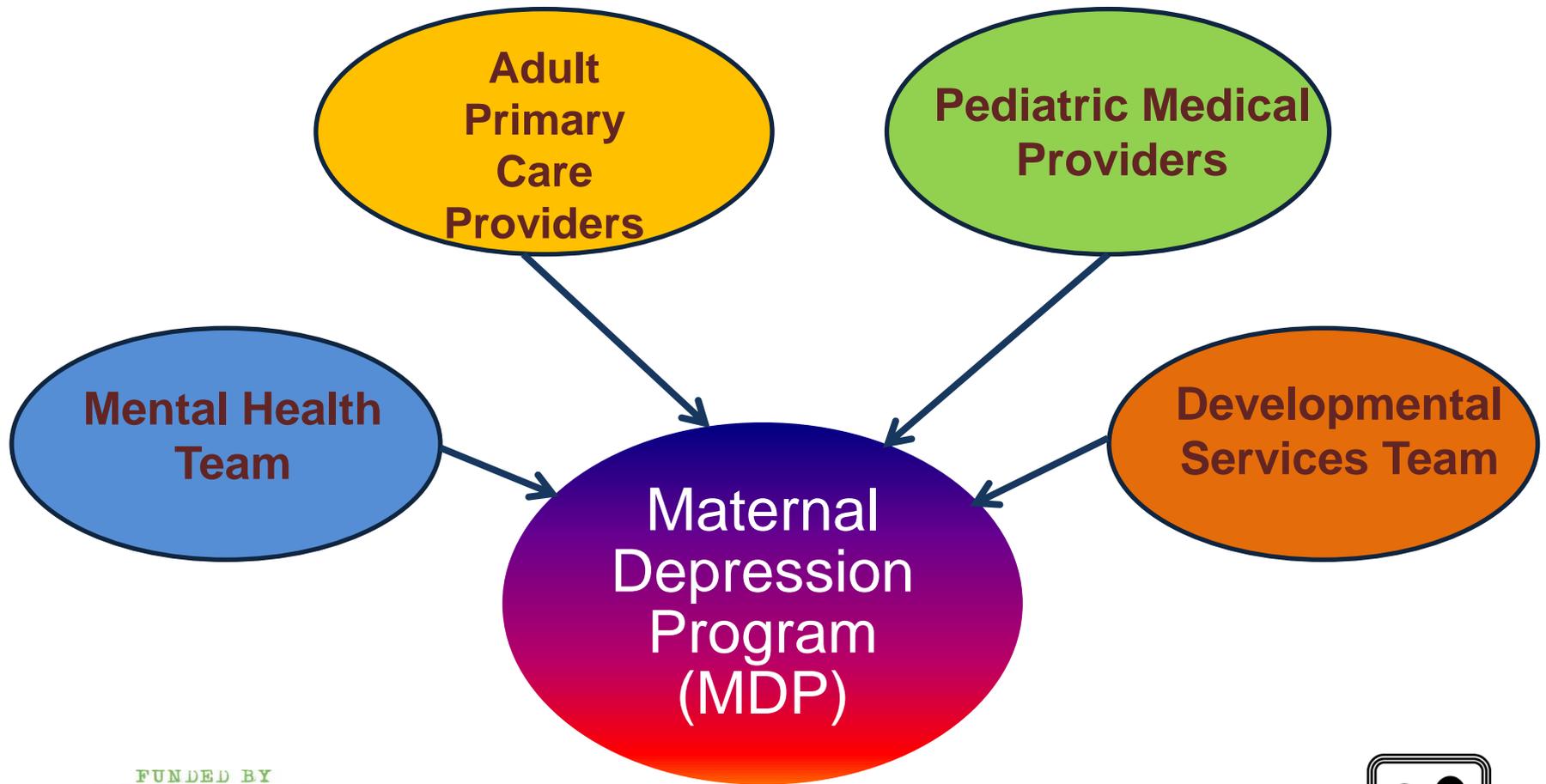


# Organizational Changes

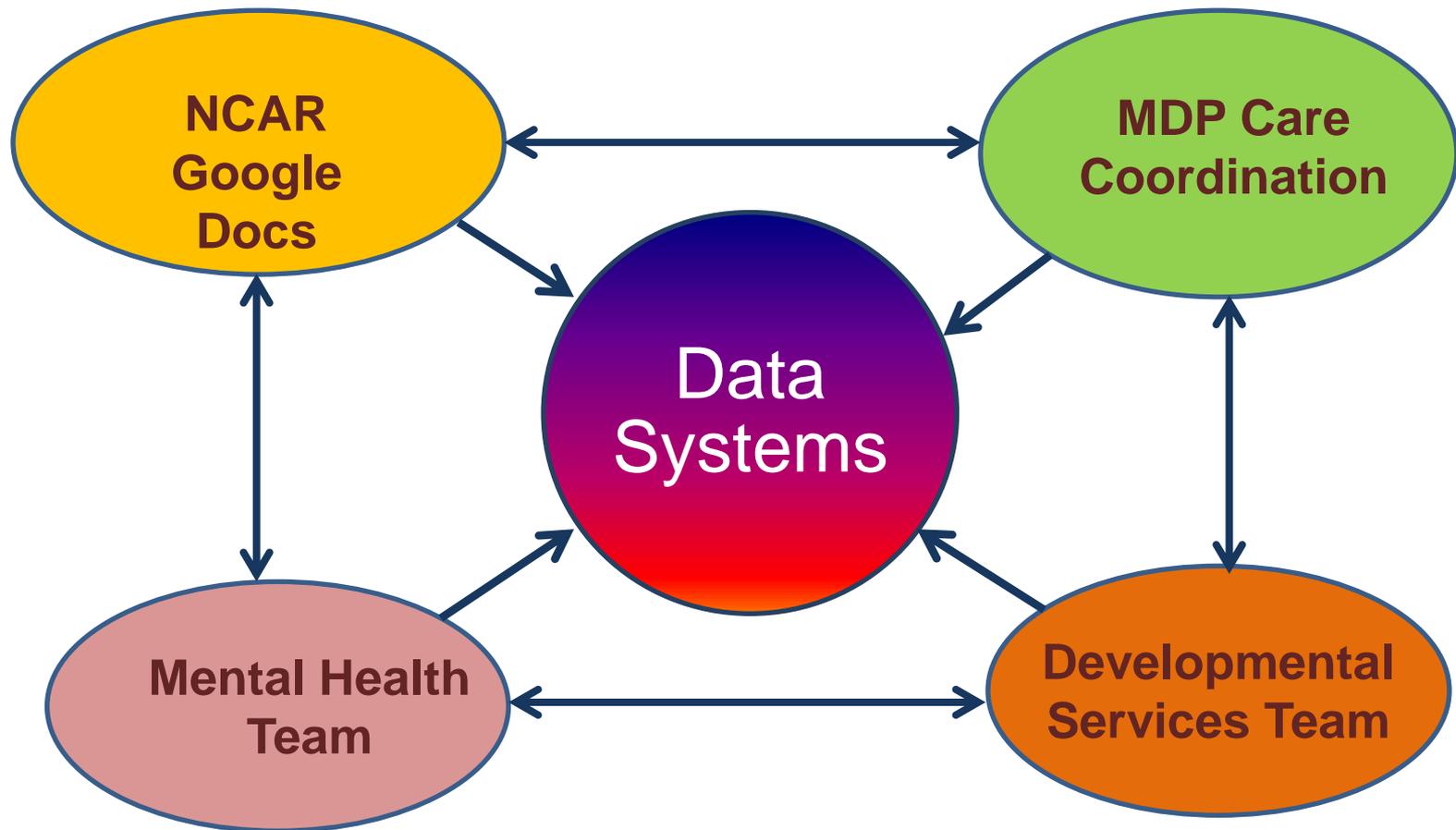
- Leadership support and in-kind contribution
- Creation of a planning and implementation committee team
- Identify and educate all stakeholders
- IT support and infrastructure development
  - Staff training at the multiple sites prior to project implementation
- Nursing support and training
- Communication through ongoing meetings



# From Silo to Integrative Relational Care



# From Silo to Integrative Relational Care Data System & Communication



# Program Improvements

- Education of front-line medical providers
- Hiring additional mental health support staff with expertise in maternal-infant dyadic therapy
- Strengthen the availability and integration of mental health professionals' support for clearance
- Set protocols and clinical guidelines to medical providers diagnose and treat moms with PPD
- Build an infrastructure electronically to modify the existing Electronic Health Record system to create efficient processes within the existing guidelines
- Enhanced Care Coordination (CC)



# Enhanced Care Coordination

- Referrals are received electronically
- CC initial appointment (within 24 hours)
- CC provides resource information/referrals as needed
- Follow-up with client and provider



# Treatment



# Service Flow

MDP Care Coordinator

moms with children age  
birth to 2.6 years

moms with children age  
2.7 to 5.11 years

**NCAR**

**FHCSD**



# Clinical Treatment

## Assessment Tools

- Beck Depression Inventory II (BDI-II)
- Beck Anxiety Inventory (BAI)
- Parent Stress Index (PSI-4)
  - Parent Distress
  - Parent/Child Difficult Interaction
  - Difficult Child

## Therapeutic Approach

- 7 Individual Sessions
  - Individual Psychotherapy (IP)
  - Cognitive Behavioral Therapy (CBT)
- 7 Dyadic Sessions
  - Child/Parent Psychotherapy (CPP)
  - Integrative Regulation Therapy (iRT)



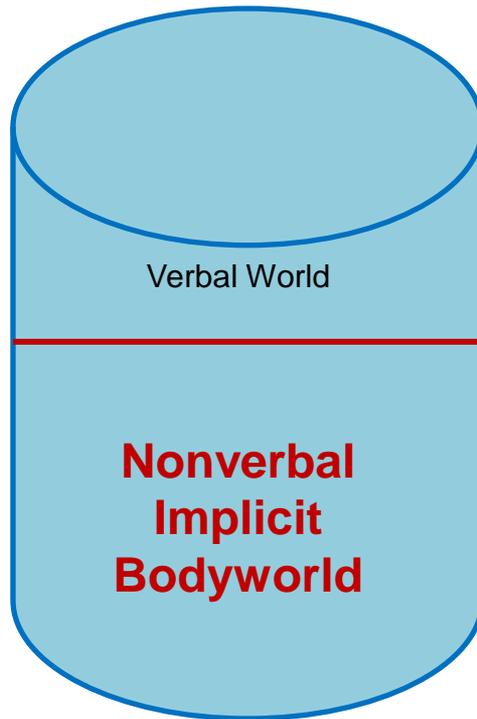
# Integrative Regulation Therapy (iRT)

- Focuses on
  - Limbic ANS regulation
  - Strengthening and/or facilitating connection of the regulatory centers in the right hemisphere
  - Restructuring left hemisphere conceptual platform to fit the true self
  - Improving inter-hemispheric transfer for a whole brain/body/system approach

Newton 2009, 2013



# Nonverbal Implicit Bodyworld Language



- Facial expressions
- Eye contact
- Voice prosody
- Gestures
- Touch
- Body Posture
- Scent and Smell

Burgoon, Guerrero, & Floyd, 2010



# Support Groups

- Weekly support groups for depressed moms
- Quarterly psychoeducational classes for moms, family members, and/or friends



# Dyadic Play Group

- Based on the principles of Integrative Regulation Therapy (iRT) Newton, 2009, 2013
- Sessions focused on improving mom/child attachment using 6 learning/experiential modules:
  - Eye contact
  - Facial expression
  - Voice prosody
  - Touch
  - Smell
  - Supporting developmental stages by using knowledge of infant brain development.



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**BEBÉ**  
*Babies Enjoying Being Enjoyed*

**Come Play** with your Baby  
**Come Learn** what your Baby wants most from you  
**Come Meet NCAR** specialists in infant/parent bonding

**Wednesdays 10:00 to 11:15 AM at FHCS Toddler School**  
1861 Newton Ave San Diego CA 92113

Created and Facilitated by  
Newton Center For Affect Regulation

Facilitators: Susanna Vakil, IMF & Luis A. Velasco, IMF  
Supervised by Ruth P. Newton, Ph.D., PST 12117

For more information:  
Contact your FHCS  
Care Coordinator





# Results and Treatment Outcomes



# Our Clients

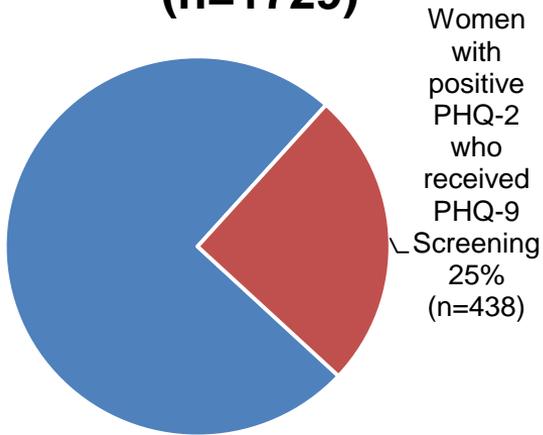
Language	
Spanish	149 (66%)
English	77 (34%)

Ethnicity	
Hispanic	192 (85%)
Black	18 (8%)
White	13 (6%)
Asian	3 (1%)

***Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014***

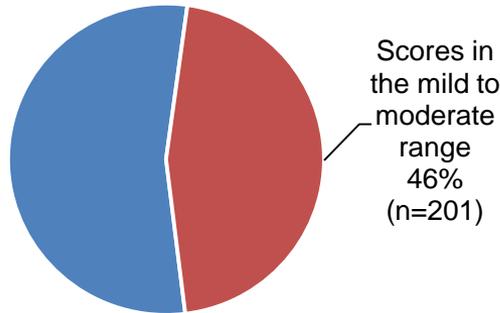
# Client Screenings

**Women Screened with PHQ-2 (n=1729)**



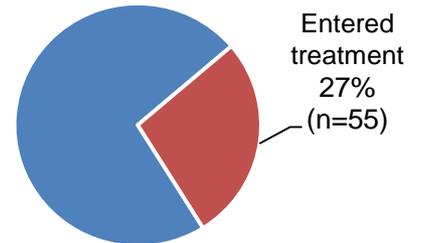
Women with positive PHQ-2 who received PHQ-9 Screening 25% (n=438)

**Women Screened with PHQ-9 (n=438)**



Scores in the mild to moderate range 46% (n=201)

**Women with PHQ-9 Scores in the Mild to Moderate Range (n=201)**



Entered treatment 27% (n=55)

*Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014*



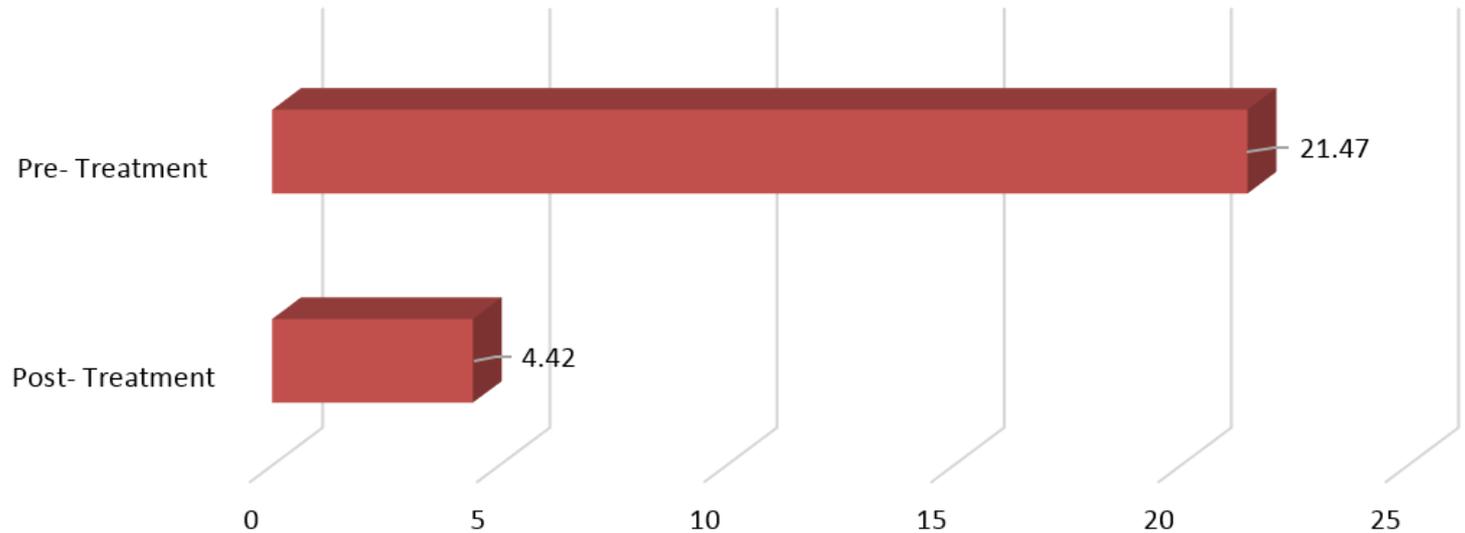
# Summary of PHQ-9 Results and Services Offered

Depression Severity (Score Range)		Total Women	Services and Resources Offered through MDP	HDS and FHCSO Programs Offered
Minimal (0-4)	(0)	39	Psycho-education and list of community resources	Women are additionally linked to all appropriate services including: HDS Global Development Class, HDS Infant Massage, and FHCSO development screening and surveillance program.
	(1-4)	167		
Mild (5-9)		143	Psycho-education, invitation to participate in MDP, and Care Coordination services	
Moderate (10-14)		58		
Moderately Severe (15-19)		23	Psycho-education and linkage to intensive treatment services	
Severe (20-27)		8		
Women with Suicidal Ideation (of Total Screened with PHQ-9 )		6	Psycho-education and linkage to emergency treatment services	



## Beck Depression Inventory (BDI-II)

Mothers' Total Depression scores decreased from "moderate" to "minimal" after Maternal Depression Project services.



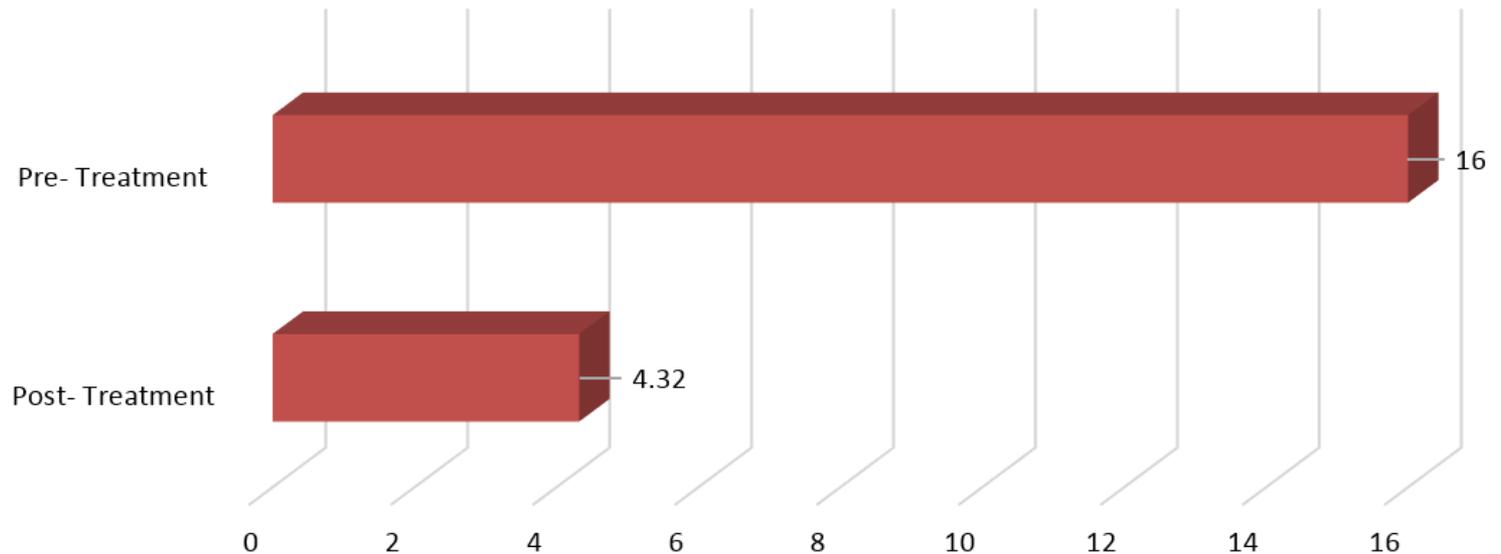
Pre-assessments (M = 21.47, SD = 8.16) compared to post-treatment assessments (M = 4.42, SD = 4.65),  $t(18) = 7.87, p < .001$ .

Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014



## Beck Anxiety Inventory (BAI)

**Mothers' Total Anxiety scores decreased from "moderate" to "minimal" after Maternal Depression Project services.**



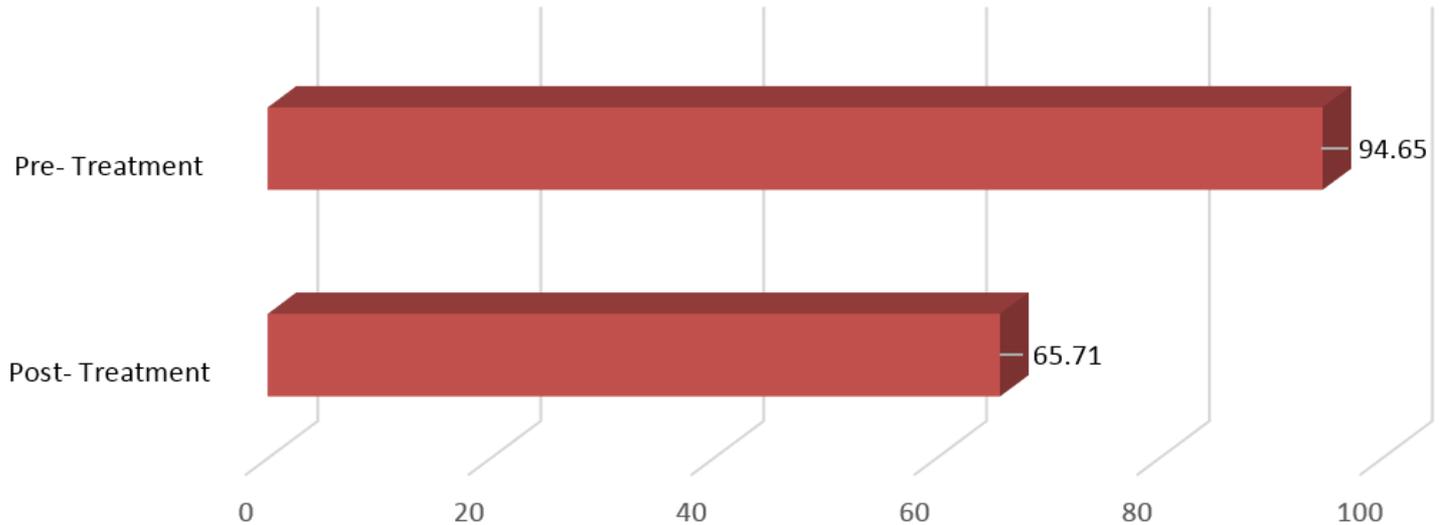
Pre-assessments (M = 16, SD = 9.59) compared to post-treatment assessments (M = 4.32, SD = 3.93),  $t(18) = 5.33$ ,  $p < .001$ .

*Note: Nineteen female participants; 84% Spanish speaking; 16% English speaking; Mean age 34 yrs. (Min 23 yrs. -- Max 53 yrs.)*



## Parenting Stress Index (PSI-IV): Total Stress

**Mothers' Total Stress scores decreased after Maternal Depression Project services.**



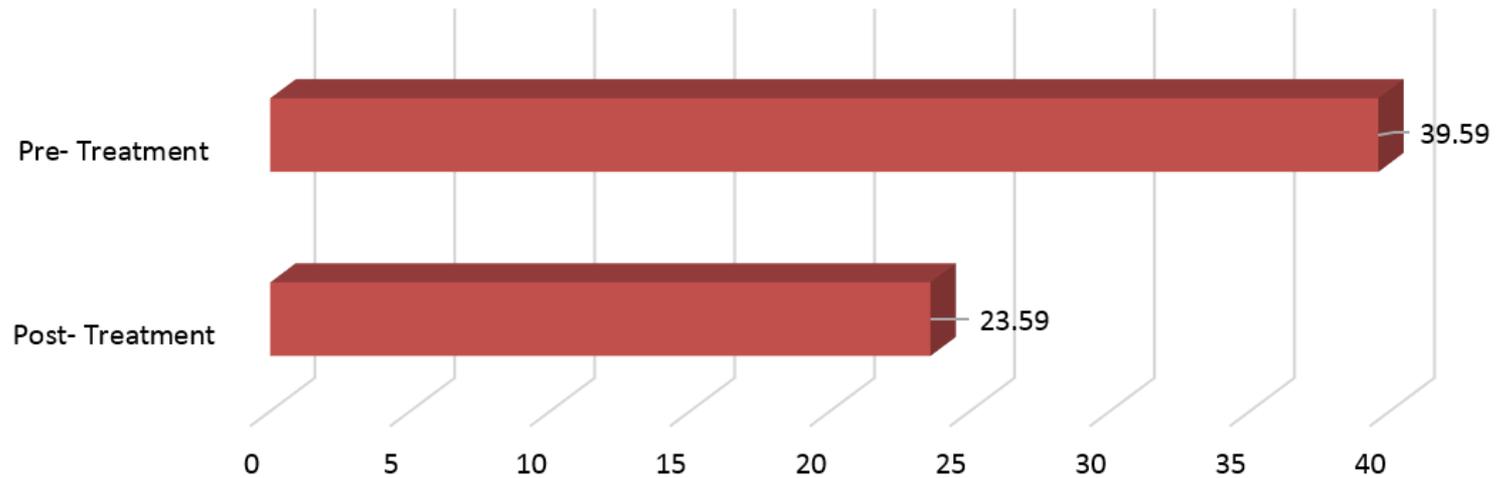
Pre-assessments (M = 94.65, SD = 17.74) compared to post-treatment assessments (M = 65.71, SD = 19.76),  $t(16) = 6.95, p < .001$ .

*Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014*



## Parenting Stress Index (PSI-IV): Parental Distress

**Mothers' Parental Distress scores decreased from "clinically significant" to "normal" after Maternal Depression Project services.**



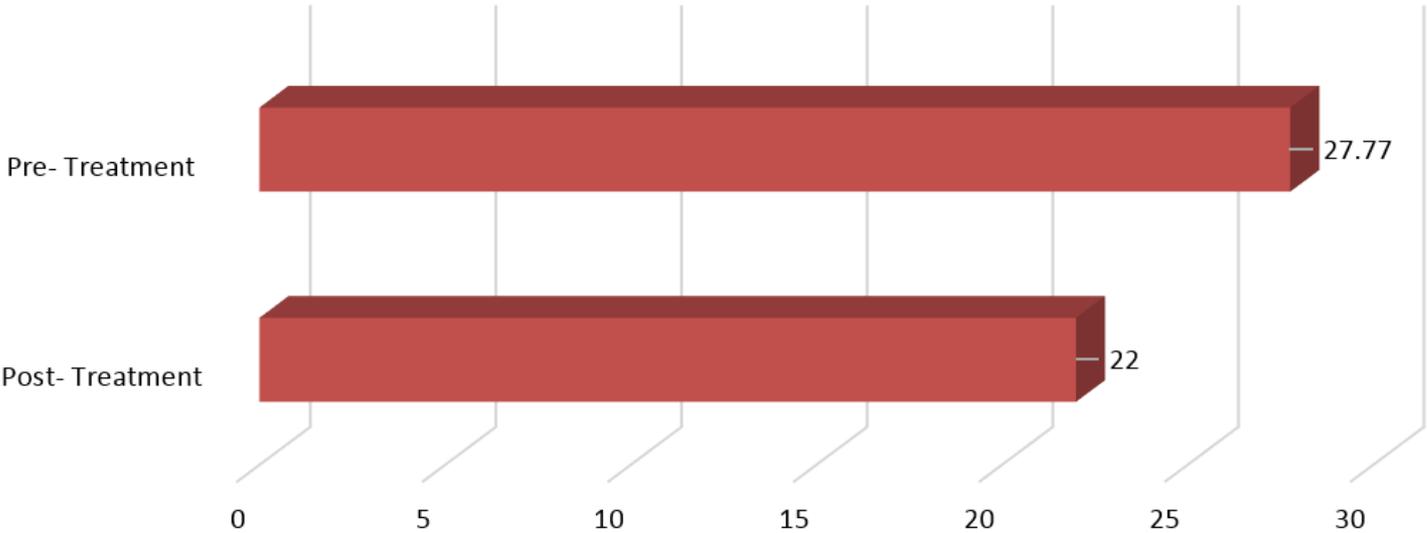
Pre-assessments (M = 39.59, SD = 6.96) compared to post-treatment assessments (M = 23.59, SD = 8.76),  $t(16) = 6.75$ ,  $p < .001$ .

*Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014*



# Parenting Stress Index (PSI-IV): Difficult Child

**Mothers' Difficult Child scores decreased after Maternal Depression Project services.**



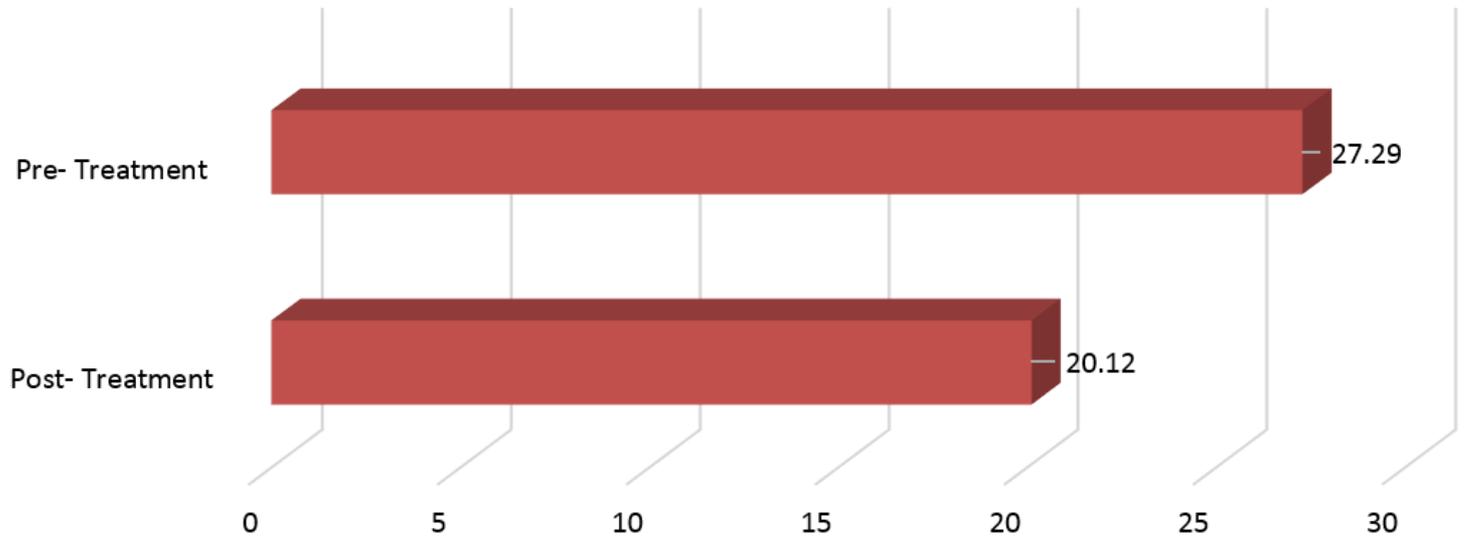
Pre-assessments (M = 27.77, SD = 8.05) compared to post-treatment assessments (M = 22, SD = 7.64, t (16) = 3.11, p < .05).

*Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014*



## Parenting Stress Index (PSI-IV): Parent-Child Dysfunctional Interaction

**Mothers' Parent-Child Dysfunctional Interaction scores decreased after Maternal Depression Project services.**



Pre-assessments (M = 27.29, SD = 8.30) compared to post-treatment assessments (M = 20.12, SD = 5.61),  $t(16) = 4.58$ ,  $p < .001$ .

*Reporting Period: July 1<sup>st</sup> 2013-December 31, 2014*





# Questions?



# Thank you

