Maternal postpartum depression screening, assessment and treatment: a pilot program at Family Health Centers of San Diego funded by First 5 San Diego

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The Partnership
American Academy of Pediatrics - Director to the Health of All Children - California Chapter 2 - San Diego and Imperial Counties
Funded by First 5 San Diego

Outline
• Real Life Stories
• Neuroscience of Attachment
• Clinical Treatment
• Maternal Depression Pilot Implementation
• System Change and Integration of Services
• Dyadic Approach to Treatment
• Clinical Outcomes
Real Life Stories

Teen Mother
- Mom/infant seen for first newborn check
- Newborn was jaundiced with weight loss; mom was tearful and crying
- Depression screens were administered; mom scored within pilot range
- Referral into the pilot for treatment services

Homeless Mother
- Mom and her 17 month old toddler arrive at the pediatric clinic on a Friday afternoon
- Mom has her belongings tied together in a blanket
- Screening tools were administered and found to be above the range of the pilot
- Referral to FHCSD MH for treatment services

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

Integrative Regulation Therapy (iRT)

iRT can be used with evidence based Child/Parent Psychotherapy (CPP/iRT), and evidence based Adult Psychodynamic Psychotherapy (APP/iRT).
iRT focuses on
- Limbic autonomic nervous system (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
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)

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

Developmental Neuroscience

- Evolution builds upon past experience
- Primary entrainment of biology occurs within the attachment relationship
- Lived experience is enfolded into brain development
- Brain develops from the bottom up (subcortical to cortical)
- All future development rests upon a socioemotional base
Brain Development in Infancy

- Amygdala
- Anterior Cingulate
- Orbitofrontal Cortex
- Right Hemisphere

Sensitive Period in infancy

Two week old infants of mothers with high levels of depression had microstructural abnormalities in amygdala (associated with stress reactivity).

Rifkin-Graboi et al., 2013

Role of Mother’s Affect

The nonverbal language of infancy
- Eye contact
- Facial expressions
- Voice prosody
- Sensitive touch/holding
- Smell and Scent
- Scaffolding Learning & Developmental

fMRI study rated depressed mother’s affect when responding to their own versus unknown infant; reduced amygdala response to own infant.

Barrett et al., 2012

The Maternal Depression Pilot

- Depression
- Developmental
- Sensitivity
- Stress
- Learning
- Lambda
- Gamma
**Target Population: Moms with Mild-to-Moderate Range**

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–4</td>
<td>Minimal Depression</td>
</tr>
<tr>
<td>5–9</td>
<td>Mild Depression</td>
</tr>
<tr>
<td>10–14</td>
<td>Moderate Depression</td>
</tr>
<tr>
<td>15–27</td>
<td>Moderate-Severe Depression</td>
</tr>
</tbody>
</table>

Continue with HDS services for the child if:
- Score of 5–9 on PHQ9
- Negative on #9

1. Birth to 2.6 years: Refer to NCAR
2. 2.7–5 years: Refer to MH

**Score of 10–14 on PHQ9**

Women who entered treatment: 34% (n=109)

**Women with PHQ-9 Scores in the Mild to Moderate Range (n=324)**

**Implementing PHQ Screenings in a Pediatric Setting**

Patient-Centered Medical Home
Comprehensive care for physical and mental health care provided by a team.
- Care Coordination
- Accessible Services

Pediatricians see moms 4-6 times during first year.

**Client Demographics & Screenings**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American/Black</td>
<td>14</td>
<td>4%</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>333</td>
<td>87%</td>
</tr>
<tr>
<td>Multiracial</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td>White (non-Hispanic)</td>
<td>18</td>
<td>4%</td>
</tr>
<tr>
<td>Don’t Know/Declined</td>
<td>13</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>123</td>
<td>32%</td>
</tr>
<tr>
<td>Spanish</td>
<td>256</td>
<td>67%</td>
</tr>
</tbody>
</table>

Note: Demographic data for clients which have received MDP services (i.e., care coordination and/or treatment).

Reporting Period: July 1st, 2013—January 31st, 2016
Summary of PHQ-9 Results and Services Offered

<table>
<thead>
<tr>
<th>Depression Severity (Score Range)</th>
<th>Total</th>
<th>Women</th>
<th>Services and Resources Offered through MDP</th>
<th>HDS and FHCSD Programs Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal (0-4)</td>
<td>16</td>
<td>4</td>
<td>Psycho-education and use of community resources</td>
<td>Women are additionally linked to all appropriate services including HDS Infant Development Class, HDS Infant Massage, and FHCSD development screening and surveillance program.</td>
</tr>
<tr>
<td>Mild (5-9)</td>
<td>231</td>
<td>300</td>
<td>Psycho-education, invitation to participate in MDP, and Care Coordination services</td>
<td></td>
</tr>
<tr>
<td>Moderate (10-14)</td>
<td>93</td>
<td>93</td>
<td>Psycho-education and linkage to intensive treatment services</td>
<td></td>
</tr>
<tr>
<td>Severe (15-27)</td>
<td>32</td>
<td>32</td>
<td>Psycho-education and linkage to intensive treatment services</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>741</td>
<td>741</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Of the Women screened, 49 reported Suicidal Ideation, Women are additionally linked to all appropriate HDS and FHCSD services.

PHQ Screening Challenges and Barriers to Engagement

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

Organizational Changes:
- Leadership support and in-kind contribution
- Creation of a planning and implementation committee
- Identification and education of all stakeholders
- IT support and infrastructure development
- Staff training prior to project implementation
- Communication through ongoing meetings
From Silo to Integrative Relational Care

Maternal Depression Program (MDP)

Adult Primary Care Medical Providers
Pediatric Medical Providers
Developmental Services Team
Mental Health Team

From Silo to Integrative Relational Care Data System & Communication

NCAR Google Docs
MDP Care Coordination
Data Systems
Mental Health Team
Developmental Services Team

Program Changes

- 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 for medical providers to diagnose and manage mothers 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)
Care Coordination (CC)

- Referrals are received electronically
- CC initial appointment (within 24 hours)
- CC provides resource information/referrals as needed
- Follow-up with client and provider
- Mothers with children age birth to 2.6 years are referred to NCAR
- Mothers with children age 2.7 to 5.11 years are referred to FHCSD

Support Groups

- Weekly Mom's Coffee Time support group
- Dyadic Mommy/Daddy/Me BEBE classes
- Quarterly psychoeducational classes for moms, family members, and/or friends

Dyadic Play Group

- Based on the principles of Integrative Regulation Therapy (IRT)
- 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
Pre-assessments (M=20.3, SD=9.08) compared to post-treatment assessments (M=7.64, SD=8.25), t(46)=8.65, p <.001.

Beck Depression Inventory (BDI-II)
 Mothers’ Total Depression scores decreased after Maternal Depression Project services.

Pre-assessments (M=14.17, SD=9.82) compared to post-treatment assessments (M=5.72, SD=4.69), t(46)=6.03, p <.001.

Beck Anxiety Inventory (BAI)
 Mothers’ Total Anxiety scores decreased after Maternal Depression Project services.

Pre-assessments (M=87.69, SD=21.04) compared to post-treatment assessments (M=68.76, SD=20.17), t(48)=6.17, p <.001.

Parenting Stress Index (PSI-IV):
 Total Stress
 Mothers’ Total Stress scores decreased after Maternal Depression Project services.
Pre-assessments (M=36.55, SD=8.46) compared to post-treatment assessments (M=26.08, SD=8.83), t(48)=6.80, p < .001.

Parenting Stress Index (PSI-IV): Parent Distress

Mothers' Parent Distress scores decreased after Maternal Depression Project services.

Pre-assessments (M=25.86, SD=8.78) compared to post-treatment assessments (M=22.31, SD=7.70), t(46)=3.08, p < .001.

Parenting Stress Index (PSI-IV): Difficult Child

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

Pre-assessments (M=25.33, SD=8.40) compared to post-treatment assessments (M=20.37, SD=6.80), t(48)=4.20, p < .001.

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

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