

**Best Practices for Outpatient Program in  
Bipolar Disorder:  
Pediatric Mood Disorders Program at the  
University of Illinois at Chicago**  
Julie A. Carbray PhD, PMHN-CNS



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## Introduction

- five fold increase in diagnosis of PBD in last 5 years
- complex presentation
- limited research, treatment efficacy research
- vast skill set needed
- limited empirical base to guide mental health nursing practice

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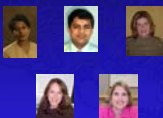
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## PMDC Team

### Core Team



Pavuluri et al. 2004

- Mani Pavuluri MD, PhD
- Tahseen Mohammed MD
- Julie Carbray PhD, APN, PMHN-CNS
- Amy West PhD
- Jodi Heidenreich LCSW
- Clinical Coordinator
- Research Coordinator
- Fellows, Interns, Nursing students, Volunteers
- RAs

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## What is Integrated Treatment?

### Multimodal Treatment of Youth with Bipolar disorder (MITY-BD)

- Clinical Assessment
- Pharmacotherapy
- Psychosocial treatment
- Maintenance treatment

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## Synergy



- Each aspect informs others
- keeping the motion going
- tools/reminders
- action orientation
- action moving forward

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## A Pharmacotherapy Algorithm for Stabilization and Maintenance of Pediatric Bipolar Disorder

Pavuluri et al 2004

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# Combination Trial: Risperidone with Lithium or DVPX in Pediatric Mania

Pavuluri et al 2005

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## Role and Function of Psychiatric Nurse

- Administrative Director of Program
- Clinic Administrator
- Development of trials, CMRS, RAINBOW
- Leader of parent group
- Teaching of others in RAINBOW
- Consultant to others on establishing clinics
- Leadership in field

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## Child Mania Rating Scale (CMRS)

- 21 Items
- Rated on 4-point Likert-type Scale
  - 0 = Never
  - 1 = Sometimes
  - 2 = Often
  - 3 = Very Often
- Range: 0 to 63
- Internal consistency: .91 by Cronbach's *alpha*.

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## Child Mania Rating Scale, Parent Version

Pavuluri et al 2006

The following questions concern your child's mood and behavior in the past month. Please place a check mark or an 'X' in a box for each item. Please consider if a problem is causing trouble and is beyond what is normal for your child's age. For example, check "never" if the behavior is not causing trouble.

Never Sometimes Often Very Often

- |  |                            |                            |                            |                            |
|--|----------------------------|----------------------------|----------------------------|----------------------------|
| 1. Have periods of feeling super happy for hours or days at a time, extremely wound up and excited, such as feeling "on top of the world?"                                   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |
| 2. Feel irritable, cranky, or mad for hours or days at a time  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |
| 3. Think that he or she can be anything he or she wants to be, such as a leader, best basketball player, car racer, millionaire, princess beyond what is normal for that age | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |
| 4. Believe that he or she has incredible abilities or powers that are magical and can try to act upon them, which causes trouble   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 |

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## Unique Characteristics of Pediatric Bipolar Disorder (PBD)

- c Extreme Mood lability – from irritable, excitable, impulsive, intrusive and loud to sullen, withdrawn, and weepy – leads to significant interpersonal problems
- c Ultradian cycling
- c Significant irritability
- c Mixed depression and mania
- c Comorbid disorders
  - c ADHD
  - c ODD
  - c Anxiety

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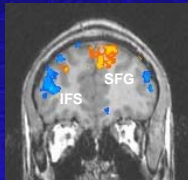
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## Affective Circuitry Dysfunction



- c Dorsolateral prefrontal cortex related to problem-solving
  - c Underactivated in PBD
- c Amygdala and orbitofrontal cortex related to affect regulation
  - c Overactivated in PBD
- c Overall effect: decreased problem-solving during excessive emotional states

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## Interpersonal/Environmental Stressors

- Peer rejection
- Family conflict
- Low self-esteem and feelings of worthlessness
- Exhaustion and strain in parents
- Confusion at school

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## RAINBOW

**R**OUTINE

**A**FFECT CONTROL

**I** CAN DO IT

**N**O NEGATIVE THOUGHTS; LIVE IN THE NOW

**B**E A GOOD FRIEND: BALANCED LIFESTYLE

**O**H! HOW CAN WE SOLVE IT?!

**W**AYS TO GET SUPPORT

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### Child & Family Focused CBT for Pediatric Bipolar Disorder Rainbow Therapy




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## Study #1: Preliminary Pilot of Individual Treatment

Pavuluri, M.N., Graczyk, P., Henry, D., Carbray, J., Heidenreich, J., Miklowitz, D. (2004) *Child- and Family-focused Cognitive-Behavioral Therapy for Pediatric Bipolar disorder: Development and Preliminary Results*. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(5), 528-537.

- **Objective:** To describe and test feasibility of CFF-CBT delivered in its individual psychotherapy format to children with PBD

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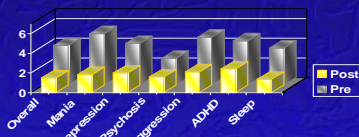
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## Pre-Post CGI-BP Severity Scale



p values < 0.0001 except psychosis p < 0.01

Translation to Practice... Psychosocial treatment may help to alleviate symptoms and improve functioning. It is likely an imperative ingredient of treatment model.

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## Study #2: Preliminary Pilot of Group Treatment

- **Objective:** To develop and test a group adaptation of the child- and family-focused cognitive-behavioral program for pediatric bipolar disorder (PBD).
- CFF-CBT group treatment is comprised of 12 weeks of parallel child and parent group therapy sessions.

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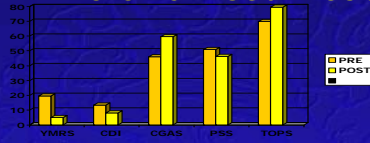
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## Pre and Post Measures



YMRS = Young Mania Rating Scale; CDI = Children's Depression Inventory; CGAS = Children's Global Assessment Inventory; PSS = Parenting Stress Scale; TOPS = Therapy Outcomes Parent Scale

Translation to Clinical Practice... Group psychotherapy may help alleviate symptoms, improve social and academic functioning, decrease parenting stress, increase knowledge and efficacy around disorder. Parents feel empowered and use each other as supports; children have opportunity for positive social interaction.

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## Study #3: Maintenance Model of RAINBOW Treatment

West, A., Henry, D., & Pavuluri, M. (2007). *Maintenance Model of Integrated Psychosocial Treatment: A Pilot Feasibility Study*. *Journal of the American Academy of Child and Adolescent Psychiatry*.

- Objective: To develop and test the feasibility of a maintenance model of CFF-CBT, comprised of psychosocial booster sessions integrated with medication.

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## Design

- ◆ **Measures:**
  - WASH-U-KSADS
  - Clinical Global Impressions Scale for BP (CGI-BP)
  - Children's Global Assessment Scale (CGAS)
- ◆ **Sample:**
  - 24 boys and 10 girls with PBD (I, II, NOS); ages 5-17 (M = 11.33, SD 3.0)
  - Predominantly middle-class; 68% Caucasian, 23% African American, 6% Latino, and 3% Asian.

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## Procedure

- During first six months, study clinicians met to discuss recurring themes and design specific interventions within the RAINBOW framework to address these barriers to continued progress
- After acute phase treatment, study participants transitioned into maintenance phase, comprised of medication management and psychosocial booster sessions
- Data on symptom experience and functioning was recorded at year 1, 2, and 3 during the maintenance phase of treatment

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## Results

- ◆ Three years after initial acute phase of treatment, those patients who received CFF-CBT maintenance therapy had sustained symptom improvement and functioning seen after acute phase
  - When compared to pre-treatment scores, follow-up scores on each CGI-BP scale and the CGAS maintained significance at the  $p < .0001$  level
  - No significant difference between post-treatment scores and follow-up scores on any subscale. All three follow-up scores on both measures were within the 95% CI for post-treatment scores
- ◆ Maintenance treatment was feasible to deliver; very few drop-outs (3/34) indicate that it keeps families engaged

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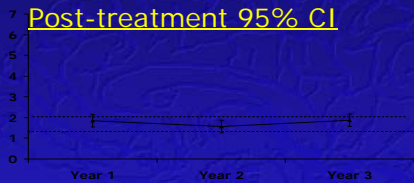
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Figure 2: CGI-BP Overall Scores at Year 1, 2 and 3 in Reference to Post-treatment 95% CI



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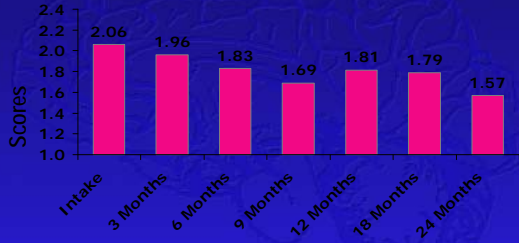
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Family-Focused Treatment for patients With Bipolar Disorder: K-SADS Depression Scores During Treatment



$F(1, 96) = 10.05, p < .002; \text{Cohen's } d = 0.87$

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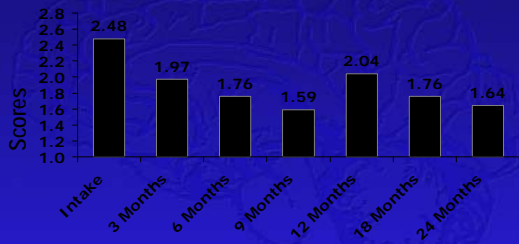
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Family-Focused Treatment for patients With Bipolar Disorder: K-SADS Mania Scores During Treatment



$F(1, 94) = 17.24, p < .0001; \text{Cohen's } d = 1.19$

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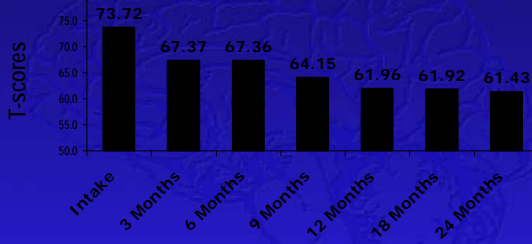
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Parents' CBCL Total Behavior Problem Ratings During and Following Family-Focused Treatment



$F(1, 142) = 20.73, p < .0001; d = 0.99$

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## Preliminary Conclusions:

- There may be key ingredients (e.g. psychoeducation or communication skills)
- Psychosocial treatments appear to provide added benefit in addition to medication in symptom improvement, functioning, and other psychosocial variables.
- Need for maintenance phase of treatment
- Important to integrate psychosocial and psychopharmacological treatment

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## Strengths

- Innovative service
- Service plus science
- Strengths based, family focus
- Psychiatric Nursing Leadership and training
- transportability

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[www.psych.uic/pmdc](http://www.psych.uic/pmdc)

What you see is what you get

Education Research Clinical Faculty/Staff Initiatives Info

UIC Home > Psych Home > Clinical > Pediatric Mood Disorders Clinic > Index

**Pediatric Mood Disorders Clinic  
Index**

- Welcome
- Overview of Mood Disorders
- Treatment Program
- Multidisciplinary Team
- Supporting Activities
- Community Connections & Resources
- Information for Families
- Research and Educational Programs
- Teaching Curriculum
- Teaching Rounds
- Media Information
- Brochure
- Psychopharmacotherapy "4 your Biggie too!"

Contact: (312) 996-2000

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