Goals:

+ Gain knowledge regarding psychopharmacological interventions
+ Gain knowledge regarding empirically-based psychosocial interventions
+ Develop a deeper understanding of how bipolar disorder affects the individual in an educational environment
+ Prompt thought regarding what types of interventions specific to an educational environment might be indicated

Jin

+ 17-year-old, Chinese-American, male
+ Junior with 3.89 GPA, GATE & AP classes
+ Involved with lots of extracurriculars
+ Referred by parent due to recent hospitalization (attempted suicide). During meeting, team discovered he had been previously diagnosed with MDD (approx 11 months ago), & had attempted several antidepressants, which did not seem to help, but made him agitated, irritable, and more withdrawn. During his hospitalization, Dr.’s changed his diagnosis to bipolar I disorder and he was prescribed Lamictal (lamotrigine).
Elisa

- 8-year-old, Mexican-American female
- 2nd grade & lots of office referrals (+suspensions)
- Referred by teacher due to continued challenges with compliance in the classroom.
- Diagnosed with bipolar disorder NOS (at age 5) & comorbid ADHD (age 4) and ODD (at age 5).
- Prescribed Seroquel (quetiapine), Adderall (dextroamphetamine) & Ambien (zolpidem).

First…

some basics…

- Bipolar disorder is a spectrum of diagnoses based on the presence of manic and depressive symptoms
- …which are classified into manic, hypomanic, major depressive, or mixed episodes
- …and result in bipolar I disorder, bipolar II disorder, bipolar disorder NOS or cyclothymia.
some basics…

Symptoms of mania/hypomania:
1. Inflated self-esteem or grandiosity
2. Decreased need for sleep
3. Pressured speech or more talkative than usual
4. Flight of ideas or racing thoughts
5. Distractibility
6. Psychomotor agitation or increase in goal-directed activity
7. Hedonistic interests

Some basics…

MANIC EPISODE
A. DURATION… lasting at least 1 week (or any duration if hospitalization is necessary).
B. SYMPTOMS… three (or four if the mood is only irritable)
F. SEVERITY… marked impairment in occupational functioning or in usual social activities or relationships with others, or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.
C. & E. RULE OUTS… not meet criteria for a Mixed Episode… not due to direct physiological effects of a substance… or a general medical condition.

Some basics…

HYPOMANIC EPISODE
A. DURATION… at least 4 days.
B. SYMPTOMS… three (four if the mood is only irritable).
C, D, E. SEVERITY… unequivocal change… uncharacteristic of the person when not symptomatic… observable by others… not severe enough to cause marked impairment in social or occupational functioning or to necessitate hospitalization, and there are no psychotic features.
F. RULE OUTS… not due to the direct physiological effects of a substance… or a general medical condition.
### Some basics…

**Symptoms of Major Depression:**
1. Depressed mood (in children can be irritable)
2. Diminished interest in activities
3. Significant weight loss or gain
4. Insomnia or hypersomnia
5. Psychomotor agitation or retardation
6. Fatigue/loss of energy
7. Feelings of worthlessness/inappropriate guilt
8. Diminished ability to think or concentrate/indecisiveness
9. Suicidal ideation or suicide attempt

### Some basics…

**MAJOR DEPRESSIVE EPISODE**

A. **SYMPTOMS & DURATION**… five (or more)… present during same 2 week period… at least one of the symptoms is either depressed mood or loss of interest or pleasure.

C. **SEVERITY**… clinically significant distress or impairment in social, occupational, or other important areas of functioning.

B. D, & E. **RULE OUTS**… do not meet criteria for a Mixed Episode… not due to the direct, physiological effects of a substance… or a general medical condition… not better accounted for by Bereavement… (Rule out also with symptoms… not include symptoms clearly due to mood-incongruent delusions or hallucinations)

### Some basics…

**MIXED EPISODE**

A. **SYMPTOMS & DURATION**… both Manic and Major Depressive Episode (except for duration) nearly every day during at least a one week period.

B. **SEVERITY**… sufficiently severe to cause marked impairment in occupational, or in usual social activities or relationships with others, or to necessitate hospitalization… or there are psychotic features.

C. **RULE OUTS**… not due to the direct physiological effects of a substance… or a general medical condition.
some basics…

SUBTYPES

- Bipolar I disorder (296.xx)
- Bipolar II disorder (296.89)
- Bipolar disorder NOS (296.80)
- Cyclothymia (301.13)

some basics…

DEVELOPMENTAL ISSUES

- Adolescent vs. adult onset
- Early (prepubertal) vs. adolescent/adult onset

Treatment: Medications
Medications

- FDA Approved (youth w/bipolar disorder):
  - 10 years + = risperidone (Risperdal)
  - 12 years + = lithium
- Prescribed variety of meds "off-label"
- Polypharmacy is the rule, not exception

(McClellan et al., 2007; Vitiello, 2008; Smarty & Findling, 2007)

### Medications

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
<th>Prescriptions US (2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Seroquel</td>
<td>quetiapine</td>
<td>10,991,000</td>
</tr>
<tr>
<td>2. Risperdal</td>
<td>risperidone</td>
<td>7,654,000</td>
</tr>
<tr>
<td>3. Topamax</td>
<td>topiramate</td>
<td>7,416,000</td>
</tr>
<tr>
<td>4. Lamictal</td>
<td>lamotrigine</td>
<td>6,861,000</td>
</tr>
<tr>
<td>5. Abilify</td>
<td>aripiprazole</td>
<td>4,227,000</td>
</tr>
<tr>
<td>6. Zyprexa</td>
<td>olanzapine</td>
<td>3,849,000</td>
</tr>
<tr>
<td>7. Depakote ER</td>
<td>divalproex sodium</td>
<td>3,849,000</td>
</tr>
<tr>
<td>8. Depakote</td>
<td>divalproex sodium</td>
<td>3,484,000</td>
</tr>
<tr>
<td>9. Paxil CR</td>
<td>paroxetine</td>
<td>2,449,000</td>
</tr>
<tr>
<td>10. Geodon Oral</td>
<td>ziprasidone</td>
<td>2,226,000</td>
</tr>
</tbody>
</table>

(Vora, VONA, 2008)

Medications

- Lithium
  - Remains the most researched
  - Monotherapy may be effective in treatment of acute mixed & manic states
  - Evidence is increasing supporting its use in treatment of bipolar depression
  - Effective adjunctive therapy
  - Narrow therapeutic index

(Findling & Pavuluri, 2008; Smarty & Findling, 2007)
Medications

**Anticonvulsants:**
- Most common = divalproex sodium/valproate & carbamazepine
- Mixed results
- Lamotrigine for bipolar depression?
- Data lacking in relation to topiramate, oxcarbazepine, & gabapentin

(Corazzini et al., 2007; Smarty & Findling, 2007)

**Atypical antipsychotics**
- Quetiapine – mania
- Risperidone, olanzapine, clozapine, aripiprazole

**Antidepressants**
- No added benefit
- Concern of destabilization
- Suicidality?

(Gibbons et al., 2007; Goldberg et al., 2007; Frazier et al., 2008; Smarty & Findling, 2007)

Medications

**Symptoms to be vigilant for:**

<table>
<thead>
<tr>
<th>Symptoms to be vigilant for:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Agitation</td>
</tr>
<tr>
<td>Panic attacks</td>
<td>Insomnia</td>
</tr>
<tr>
<td>Irritability</td>
<td>Hostility</td>
</tr>
<tr>
<td>Aggressiveness</td>
<td>Impulsivity</td>
</tr>
<tr>
<td>Akathisia (Hypo) mania</td>
<td>Worsening of depression</td>
</tr>
<tr>
<td>Other unusual changes in behavior</td>
<td>Increases in suicidality</td>
</tr>
</tbody>
</table>

(FDA, 2007)
Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Adverse Effects*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>Slight nausea, stomach cramps, diarrhea, thirstiness, muscle weakness, feelings of being somewhat tired, dazed, or sleepy, hand tremor, weight gain, skin conditions (acne and psoriasis), and may produce edema, or swelling. Toxic levels can cause vomiting, severe diarrhea, extreme thirst, weight loss, muscle twitching, abnormal muscle movement, blurred vision, disorientation, confusion, agitated delirium, and fatal cases of encephalopathy.</td>
</tr>
<tr>
<td>Lamictal</td>
<td>Dizziness, ataxia, somnolence, headache, diplopia, blurred vision, nausea, vomiting, rash, Stevens-Johnson Syndrome and Toxic Epidermal Necrolyis, which can lead to death.</td>
</tr>
<tr>
<td>Depakote</td>
<td>Nausea, dyspepsia, diarrhea, vomiting, increased appetite, weight gain, sedation, anorexia, dizziness, tremor, rash, skin rash, and alopecia.</td>
</tr>
<tr>
<td>Seroquel</td>
<td>Constipation, headache, dry mouth, mild weight gain (or loss).</td>
</tr>
<tr>
<td>Zyprexa</td>
<td>Akathisia, amblyopia, dry mouth, dizziness, sedation, insomnia, impaired judgment, hearing, weight gain, Agitated states, severe agitation, and visual hallucinations.</td>
</tr>
<tr>
<td>Risperdal</td>
<td>Akathisia, anxiety, insomnia, low blood pressure, muscle stiffness, muscle pain, irritability, weight gain.</td>
</tr>
<tr>
<td>Abilify</td>
<td>Akathisia, unusual tiredness or weakness, nausea, vomiting, uncomfortable feeling in the stomach, constipation, light-headedness, tremor, shakiness, and blurred vision.</td>
</tr>
</tbody>
</table>

* Not limited to…

Medications

+ Must have knowledge about potential medications used to treat, including the effectiveness and potential related adverse effects.
+ Consider the effect of medications on student’s educational world.
+ How will communication between treatment providers look in order to enhance the opportunity for treatment success?

Treatment: Psychosocial
Psychosocial

**DEFICITS**

- Relationships (peers & family members)
- Attitudes & cognitive schemas
- Recognition & regulation of emotion
- Social problem solving
- Self-esteem
- Impulse control
- Less social rhythm regularity

(Geller et al., 2000; Goldberg et al., 2008; Goldstein et al., 2006; McClure et al., 2005; Shen et al., 2008)

Psychosocial

**Common goals of programs:** improve compliance with medications, increase awareness, promote health, & improve relationships

- Through use of:
  - Psychoeducation
  - Cognitive Behavioral Treatment (CBT) Techniques
  - Promotion of health hygiene
  - Focus on relationships

Psychosocial

**PSYCHOEDUCATION**

- Stages of grief over illness
- Basic facts
- Vulnerability-Stress Model
- Individual & Family Assessment
Psychosocial

CBT

- Emphasizes the role of thinking in what we feel & do.
- Thoughts are learned & can be unlearned causing changes in feelings and behaviors.
- Distorted cognitions & automatic thoughts
- The Triple C Method for controlling thoughts:
  - Catch
  - Control
  - Correct
Psychosocial

CBT (cont)

- Four thinking error categories:
  - Misperceptions
  - Magnification, Minimization
  - Jumping to Conclusions
    - Mind Reading, Fortune Telling, Catastrophizing, & Personalization
  - Tunnel Vision
    - Selective Perception, Mental Filtering
  - Absolutes
    - Black & White Thinking, Labeling, & Shoulds

Psychosocial

HEALTH & RELATIONSHIP HYGIENE

- Social Zeitgeber (social prompts) + Circadian Rhythms Theories
- Stressful life events & disruptions in social rhythms prompt new episodes
- Decrease stressors in the environment
- Stabilize routine

Psychosocial

- Family-Focused Treatment (FFT)
- Child- and Family-Focused Cognitive Behavioral Therapy (CPP-CIFT or RAINBOW)
- Multi-Family Psychoeducation Group (MFPG) & Individual Family Psychoeducation (IFP)
- Dialectical Behavior Therapy (DBT)
Psychosocial

FAMILY-FOCUSED TREATMENT (FFT)

• Originally designed for use in families of individuals with schizophrenia.
• Episode of bipolar disorder = disruption in entire family system.
• Purpose of treatment is to attain a new state of equilibrium.
• “Expressed Emotion” is a critical element

(Miklowitz et al., 2007)

Psychosocial

FAMILY-FOCUSED TREATMENT (FFT)

• Components = psychoeducation, communication enhancement training (CET) & problem solving training
• 21 sessions
• Goals:
  • Increase adherence to medication & decrease relapse
  • Enhance knowledge of bipolar disorder
  • Enhance communication and coping skills
  • Minimize the psychosocial impairment

(Miklowitz 2008)

Psychosocial

FAMILY-FOCUSED TREATMENT (FFT)

• Communication Enhancement Training (CET) targets four basic communication skills:
  • Expressing positive feelings
  • Active listening
  • Making positive requests for change
  • Expressing negative feelings about specific behaviors

• Solving problems:
  • Agree on the problem
  • Suggest several possible solutions
  • Discuss pros & cons
  • Plan & carry out best solutions
  • Praise efforts; review effectiveness
Treatments and Interventions for Youth with Bipolar Disorder
Shelley R. Hart & Stephen E. Brock

Psychosocial

FAMILY-FOCUSED TREATMENT (FFT)
+ Primarily with adults.
+ Positive results = children & adolescents
+ Large RCT nearing completion.

(Miklowitz et al., 2007; Yung & Fristad, 2007)

CBT-CFT (RAINBOW)
+ Adaptation of the FFT model to address needs of younger children & their families (8-12).
+ 12 sessions
+ Goal - identifying, evaluating, and changing maladaptive belief systems & dysfunctional styles of information processing
+ Open trial = promising results

(Basco & Rush, 2005; Pavuluri et al., 2004)

CFF-CBT/RAINBOW
Program Components

R = Routine
A = Affect regulation
I = I can do it!
N = No negative thoughts & live in the Now!
B = Be a good friend
O = Oh, how can we solve the problem?
W = Ways to get support

(Pavuluri et al., 2004)
Psychosocial

MFPG/IFP

- Like FFT & CFF-CBT focus on psychoeducation
- MFPG = 8 (90 min) concurrent group sessions;
- IFP = 24 (50 min) sessions
- Currently large, randomized trial underway
- Pilot studies of both delivery methods are positive

(Young & Fristad, 2007)

Psychosocial

MFPG/IFP

- Healthy Habits
- Thinking, Feeling, Doing

(Fristad et al., 2007; Young & Fristad, 2007)

Psychosocial

MFPG/IFP

( Goldberg & Fristad, 2003; Fristad et al., 2007; Young & Fristad, 2007)
Psychosocial

DBT

- Originally established to work with highly emotional individuals (e.g., Borderline Personality, suicidal)
- Main focus is on emotional dysregulation
- 24 weekly sessions w/12 additional sessions over the course of 1 year
- Preliminary results are encouraging

(Calhoun et al., 2007)

Psychosocial

- What might be some behavioral goals for Jin?
- For Elisa?
- What techniques might be beneficial for Jin & Elisa?
- What are some things we need to consider when planning counseling interventions in the school for these students?

Psychosocial

- Most treatment programs for use with children and adolescents share similar components &/or theoretical models.
- Many of the techniques can be useful in an educational setting.
- Knowledge about these programs can provide help to families looking for resources.

Boston, MA: NASP Conference
February 27, 2009
Interventions

COGNITIVE DEFICITS

- Cognitive deficits are believed to be a better predictor of outcome than are symptoms.
- Neuropsychological functioning has been shown to be an important predictor of reading, writing & math.

  Attention:
  - selective, sustained, & set-shifting
  - Memory
  - verbal, working, visuospatial

(Pavuluri et al., 2006; Dickstein et al., 2004)

Interventions

Comorbidity (in youth)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Weighted Rate</th>
<th>(95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADHD</td>
<td>62%</td>
<td>(29-87)</td>
</tr>
<tr>
<td>ODD</td>
<td>53%</td>
<td>(28-79)</td>
</tr>
<tr>
<td>Psychosis</td>
<td>47%</td>
<td>(24-62)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>27%</td>
<td>(15-43)</td>
</tr>
<tr>
<td>CD</td>
<td>19%</td>
<td>(11-30)</td>
</tr>
<tr>
<td>Substance</td>
<td>12%</td>
<td>(5-29)</td>
</tr>
</tbody>
</table>

(Kowatch et al., 2005)
Interventions

**ETIOLOGY**

- **Neuroanatomical differences**
  - White matter hyperintensities
  - Small abnormal areas in the white matter of the brain (especially in the frontal lobe).
  - Smaller amygdala
  - Decreased hippocampal volume

Hajek et al. (2005); Pavuluri et al. (2005)

Interventions

**ETIOLOGY**

- **Neuroanatomical differences**
  - Reduced gray matter volume in the dorsolateral prefrontal cortex (DLPFC)
  - Bilaterally larger basal ganglia
  - Specifically larger putamen

- **Neurotransmitter & metabolitic differences**
  - Cortisol
  - BDNF
  - N-Acetyl Aspartate
  - Myo-Inositol
  - Choline
  - Creatine
  - GABA

Geller & DeBellis (2008); Hajek et al. (2005); Pavuluri et al. (2005)

Interventions

**TREATMENT PLANNING**

- Prioritize needs
- Build on assessment data
- Utilize strengths
- Address challenges
- Understand difference between symptoms & choices
- Incorporate staff development
- Develop crisis plan
Interventions

ACCOMMODATIONS/MODIFICATIONS

+ Mood
+ Medications
+ Relationship/Friendships
+ Executive Functions
+ Comorbidities
+ Sleep disturbances

Interventions

STRATEGIES/IDEAS

+ Inattentive/Hyperactive Behaviors
+ Antecedent Interventions
+ Token Reinforcement/Response Cost/Contingency
  Contracting/Self-Management
+ Disruptive Behaviors
  + CBT
  + Skills Training

(Bloomquist, 2006; Mennuti et al., 2006; Morris & Marlow, 2008)
Interventions

STRATEGIES/IDEAS

- Anxious Behaviors
- CBT (Coping Cat)
- Modeling
- Desensitization
- Friendship Challenges
- Social Skills Training
- Peer Mediated Interventions/Peer Tutoring

(Morris & Mathac, 2007)
Take home messages...

+ Medications are recommended as first-line treatment, however, many concerns remain & more research is needed.
+ Many of the psychosocial interventions proposed share many common elements, such as psychoeducation, development & maintenance of a healthy schedule, skill-building, and problem-solving.
+ Many educational interventions appropriate with other populations can be appropriate when working with youth diagnosed with bipolar disorder. However, it is important to remember the distinction between choice & symptom.

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