

## Child Psychiatry: Clinical Challenges

Mick Storck, MD

[storck@u.washington.edu](mailto:storck@u.washington.edu)  
(206)469-6282  
University of Washington



"you suffer captivity...but you will have  
contributed a word to the poem..."  
*Inferno 1, 32 - Jorge Luis Borges*

## Objectives

- Appreciate the explanatory and intervention challenges in child mental health
- Appreciate problem prevalence and research status of interventions
- Discuss case scenarios
- "Boosting Adaptation" ... that's what clinicians do...

## Child Psychiatry: Epidemiology

- 5 to 15 percent with clinically significant disorders
- Below age 12 years: Boys outnumber girls,  
⇒ Higher rates of  
behavioral/learning/developmental disorders
- 12 to 18 years: Girls outnumber boys,  
> Higher rates of anxiety/affective disorders

## Childhood diagnostic categories:

- Disruptive behavior disorders
  - ADHD
  - Oppositional Defiant Disorder/ Conduct disorder
- Mood and anxiety disorders
  - Major depression, Dysthymic disorder, Bipolar Spectrum
  - Post Traumatic Stress, Obsessive Compulsive Disorder
- Thought disorders
  - Schizophrenia, Schizophreniform Disorder, Psychotic Disorder NOS
- Autistic spectrum disorders
  - Autism, Pervasive Developmental Disorder, Asperger's Disorder
- Eating disorders
  - Anorexia nervosa, Bulimia nervosa
- Substance use Disorders

...but we treat individuals

...who have customized/individualized symptom clusters:

Perhaps, in child psychiatric diagnoses we should be less "categorical" than in adult psychiatry. Children, perhaps more so than adults, lead us to considering ecologic and "biopsychosocial" variables.

- Dysphoria/anxiety
- Anger/anxiety
- Distractibility/disruptiveness
  
- What are the biggest worries?

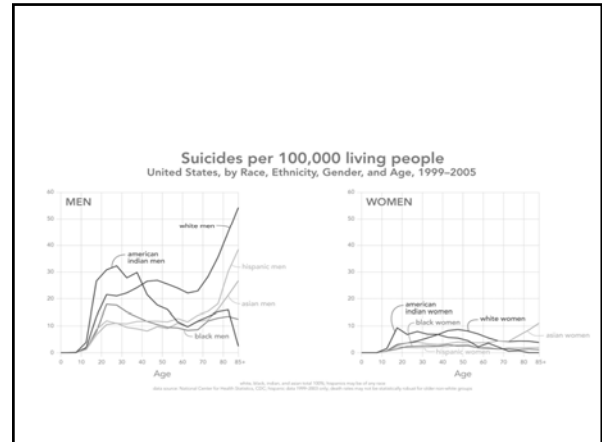
## In the matrix...

These can "co-occur"... and "fuel" each other:

- depression and evolving bipolar disorder
- anxiety (including separation anxiety and obsessive compulsive anxiety)
- post-traumatic stress response (models)
- disruptive behavior problems
- substance use
- psychosis / prodromal schizophrenia
- reciprocal relatedness difficulties (Autistic--Asperger's spectrum ... its tough to be different)
- attentional and specific learning differences (verbal and non-verbal)
- organic response to "injury" (e.g. FAS, ARND, sha ken baby)
- mental retardation
- cultural passages, identity crisis, "antisocial" or "alternative social" modeling

## SUICIDE...

1. A leading cause (2<sup>nd</sup> or 3<sup>rd</sup>) of death in adolescents:
2. 12% of teen deaths are suicide
3. Suicidal ideation very common in adolescents: 20% per year
4. Suicide attempts: 10% per year
  - a. More common in females
  - b. More often completed in males
5. What do you say to a teen who reports suicidal feelings?
6. What are some major worries/ "red flags"?



## Treatment dialectics: complex databases...

All "psychologic" interventions are "physiologic".

- sleep hygiene
- activities change cortisol/testosterone levels
- fresh air and romping around
- diet
- meal milieu
- the phone call from grandma
- one song versus another
- What is biofeedback?

All "physiologic" issues are "psychologic"...

- What are the thoughts that accompanied the swallowing of the pill?
- What do the *target* symptoms mean to the parents? The kid? Peers? The teacher?
- Media images?
- Informed consent and informed collaboration for even second graders...

## Evidence Based Treatments in Child and Adolescent Psychiatry

McClellan and Werry, *JAACAP*, 2003;42:1388-1400

### Psychopharmacology:

- Most medication practices for psychiatric illnesses in youth based on anecdotal reports and/or adult literature
- Essentially no literature examining combined therapies and polypharmacy
- Limitations include small sample sizes, lack of controls, narrow diagnostic inclusion criteria and/or short duration of treatment
  - ⇒ Most prescriptions for psychiatric indications in juveniles considered off-label (nonFDA approved)
  - ⇒ NIH promoting large cooperative multisite trials to address these concerns

## Pediatric Psychopharmacology

- Increased Public Concern
  - Questions of over-medication and over-diagnosis
- Since 2003, FDA has issued separate warnings regarding
  - Antidepressants (suicidality)
  - Atypical antipsychotics (metabolic problems)
  - Stimulants (potential for sudden death and cardiovascular problems)
  - Atomoxetine (suicidality)
  - Antiepileptics (suicidality)
- Washington State passed a law requiring DSHS to establish a monitoring system for psychotropic agents in youth (House Bill 1088)

## Stimulant Medications

- Short Term Effectiveness of Stimulants for ADHD well documented
  - > 160 published RCT, including studies with preschoolers and adults
  - 65 - 75 % response rate, compared to 5 - 30 % placebo response
  - Most Trials 12 weeks or less
  - Methylphenidate best studied, followed by dextroamphetamine, pemoline and mixed amphetamine salts (Concerta, Adderall, Metadate, etc)
  - FDA approved for ADHD (age 6 for MPH, age 3 for DEX)
    - ... now FDA "Black Box" warning for amphetamine salts: *cardiotoxicity*

## Other Treatments for autonomic reactivity... can include ADHD, conduct dysregulation and PTSD

- Clonidine/Guanfacine
  - α<sub>2</sub> – adrenergic agonists
  - Several small RCT’s support use for ADHD
    - FDA recently approved (9/09) long acting guanfacine (Intuniv) for ADHD
  - Tourettes Syndrome Study Group
    - MPH vs Clonidine vs Combination vs Placebo
    - Multisite RCT (n = 136): ADHD plus Chronic Tic Disorder
    - Both agents and combination effective for ADHD, tics generally got better as well
  - Other Trials for Tourettes produced Mixed Results
- Prazosin
  - α<sub>1</sub> – adrenergic antagonist
  - Used mostly, in psychiatry, for sleep stability, particularly for nightmares in PTSD
  - Mostly case-study validation at this point...

## Selective Serotonin Re-Uptake Inhibitors

- Sampling of the data...
- Fluoxetine
  - Emslie et al., 1997: Fluoxetine (n = 96)
    - Moderate to severe depression,
    - 58% vs 33% placebo response.
  - Emslie et al., 2002: Fluoxetine (n = 219),
    - Significant improvement, but 53% placebo response rate
  - Simeon et al., 1990. Fluoxetine (n = 40 adolescents)
    - No difference, both groups had ~ 66% response rate
- Fluoxetine FDA approved for Depression in Youth (the only medication approved for depression in kids)

## Selective Serotonin Re-Uptake Inhibitors

### FDA Block Box Warning For Increased Risk of Suicidality

- FDA Public Health Advisory (10/04): Risk for suicidality examined for 9 drugs in 24 RCT short-term trials (up to 4 months of treatment) (total n = 4400 children and adolescents)
  - Increased risk of suicidality during the first few months of treatment
    - 4% for active medication vs 2% for placebo
- Black box (good or bad??) warning issued for all antidepressants
  - Recommendations include weekly visits for 4 weeks, followed by visits every two weeks for 4 weeks, when medications started

## Selective Serotonin Re-Uptake Inhibitors: *other indications*

- OCD/Anxiety:
  - 4 Positive RCT’s, including two multisite trials
  - Fluvoxamine, Sertraline and Fluoxetine studied
  - All three agents:  
FDA approved for OCD in youth

## Tricyclic Antidepressants

### Imipramine, Amitriptyline, Nortriptyline, Clomipramine, Desipramine the old guard....

- Depression: 13 studies, > 300 subjects: none were superior to placebo (50 – 60 % placebo response rates)
  - ADHD: several positive RCT’s, although not as effective as stimulants
  - Enuresis: several positive RCT’s for Imipramine
  - OCD: 3 positive RCT’s for Clomipramine, 1 RCT found Clomipramine helpful for repetitive behaviors in autism
- ⇒ Best Indications: Imipramine for enuresis, Clomipramine for OCD.  
⇒ Not indicated for Depression/Anxiety

## The Uses for “Antidepressants” in Kids

- Depression
- Dysthymia
- Bi-polar Depression
- Generalized Anxiety (including Separation Anxiety Disorder)
- Panic Disorder
- Obsessive Compulsive Disorder
- Post-Traumatic Stress Disorder
- Enuresis
- Autism/Aspergers
- Attention Deficit Hyperactivity Disorder
- Headache/Chronic Pain

## Mood Stabilizers

### ■ Lithium

- One RCT (Geller et al., 1998) found lithium improved bipolar mood symptoms and substance abuse
- Two positive, one negative RCTs for Disruptive Behavior/Aggression
- Large Open Label Trial (Kafantaris et al., 2003) (n = 100) had a 63% response rate in adolescents with Bipolar I Disorder
- Open trials of combination lithium plus other mood stabilizers or antipsychotics support benefit (Kafantaris et al., 2001; Findling et al., 2003; Pavuluri et al., 2004)

- NICHD funded Multisite COLT Trial underway for youth with Bipolar I Disorder (ages 7 – 17)

- Lithium FDA approved for Bipolar (ages 12 years and older)

## Anticonvulsants / Mood Stabilizers

- FDA warnings about suicidality
- Valproate – weight gain/rash/PCO disease/liver & heme SEs
  - limited efficacy...maybe some benefit for borderline personality regulation
- Lamotrigine
  - Effective In Adult Studies of Bipolar Depression
  - Open label study supports use in adolescents with bipolar depression (Chang et al., 2006) worry about Stevens Johnson syndrome/rash
- Oxcarbazepine
  - Few Adult Studies Show Efficacy
  - Negative Trial in Youth (Wagner et al. 2006)
- Carbamazepine
  - Adult Studies Not as Robust as for VPA
- Topiramate
  - Negative adult trials, .....cognitive blunting
  - Inconclusive support for youth (Delbello et al, 2005)
- Gabapentin
  - Large Controlled Trial in Adults was negative

## Antipsychotic Agents

### ■ Schizophrenia

- Two Small RCT's with haloperidol, loxapine
- Clozapine superior to Haloperidol (Kumra et al., 1996)
  - On Clozapine (n = 21), 5 had neutropenia and 2 had seizures
  - Tx of Early Onset of Schizophrenia/Schizophreniform DO: NIH Multisite RCT comparing risperidone, olanzapine and molindone... (AJP 10/08) molindone is as effective, has less metabolic SEs...and is 1/10<sup>th</sup> as expensive...

### ■ Conduct Disorder

- Positive trials for risperidone, haloperidol and molindone

### ■ ADHD

- Older trials of haloperidol, thioridazine and chlorpromazine
- Generally not recommended for ADHD

### ■ Autism and Mental Retardation: some decrease in stereotypies, disruptiveness, self-injurious behaviors

## Atypical Antipsychotics

### FDA indications for Pediatrics

- Risperidone
  - ◆ Irritability for children and adolescents with Autism
  - ◆ Adolescents with Schizophrenia
  - ◆ Adolescents with Bipolar Disorder
- Aripiprazole
  - ◆ Adolescents with Schizophrenia
  - ◆ Adolescents with Bipolar Disorder

## Pediatric Psychopharmacology: Summary

We treat symptom clusters that often span a variety of domains of functioning...

*(across attentional, emotional, mood, anxiety, arousal, social relatedness, conduct/risk regulation, and learning system variables)*

Substantial Empirical Evidence Currently Supports

- Stimulants for ADHD
- SSRIs for OCD, anxiety

Some RCT evidence for:

- Lithium
- Antipsychotics
- Alpha-agonists

Very little study of polypharmacologic interventions

## Psychotherapeutic Interventions

- Existing Evidence Suggests Traditional Therapies Most Often Used are Not Effective ...but DBT and MI and TF-CBT are coming along...
  - Four Meta-Analytic Studies of Psychotherapy Research
    - > 300 studies, subjects 2 – 18 years of age
    - Medium to Large Effect Sizes in Comparison to No Treatment or Active Controls
    - "Behavioral" Therapies Generally Superior
      - ?easier to measure study variables...more "reductionistic" study variables?
      - How would *you* design a study?
- ⇒ Effective Therapies Available, But Generally Not Used "by the book" in Clinical Settings

## Cognitive-Behavioral Therapy

- Depression
  - At least 10 Positive RCTs for Depression in Children and Adolescents
    - Comparison arms included wait list controls and nondirective supportive psychotherapy
- Anxiety
  - Individual and Family CBT approaches found useful for Separation Anxiety and Generalized Anxiety Disorders
  - Behavioral Strategies useful for Phobias
- OCD
  - some positive trials in kids, well established efficacy in adults
  - more robust support for “combination therapies”
- PTSD
  - Positive Trials, includes youth exposed to maltreatment
  - “Trauma-focused CBT” – strong momentum as Evidence-based Treatment (EBT) for children...must customize...

## Other Behavioral Strategies

- Conduct/Disruptive Behavioral Disorders ...
  - Problem-Solving Training
  - Anger Management
  - Assertiveness Training
- ADHD – specific interventions
  - Inconsistent Findings with strategies designed to improve self control
  - Not much data on “neurofeedback” (fun to think about though)...
  - Contingency Management and Behavioral Interventions helpful
    - Generally not as effective as stimulants.
    - Time Consuming, difficulty with compliance
    - Don't always generalize to other settings or beyond the treatment

## Rising stars in therapy for kids

- Trauma focused-Cognitive Behavioral Therapy
  - Sponsored locally by the Harborview Sexual Assault Center
  - Customizable modules...core construct: boosting resilience through the “trauma narrative”
- Motivational Interviewing:
  - Mentoring child and adolescent forays through their risk grids
  - Showing up in a range of pediatric challenges including
    - Diabetes co-management, toddler sleep cycles, breast-feeding challenges
- Dialectical Behavioral Therapy:
  - Individual and group components
    - Modified to fit for early teens, kids with developmental disabilities ...
  - Distress tolerance strategies
  - Mindful practice

## Parenting Training Programs

- Oppositional/Conduct Disorder
  - Interventions Designed to enhance parenting effectiveness, decrease coercion and improve parent-child interactions, including
    - Behavioral Family Intervention (Patterson 1974)
    - Videotaped Modeling Parent Training (Webster-Stratton 1994)
- Parenting Interventions and Family Therapy also helpful for
  - Anxiety Disorders
  - Eating Disorders
  - Early childhood parent-child challenges...
    - Go see PCIT (Parent Child Interactive Therapy) if you can...

## Multisystemic Therapy

- Aggressive case management, Comprehensive Psychiatric services and Targeted Family Interventions used to maintain youth in their homes and community systems
- MST has better outcomes (including reduced substance abuse) and more cost-effective than
  - Hospitalization
  - Incarceration
- However, effects may dissipate over 12 - 16 months (Henggeler et al., 2003)

## Psychotherapy In Children and Adolescents: Summary

- Best Evidence for
  - CBT for Depression, Anxiety, PTSD
  - CBT/Behavioral Strategies for Conduct Problems
  - Parent Training for preschool challenges and Conduct Problems
  - MST for Conduct Problems
- Despite the availability of these Interventions
  - Most Clinicians Not Trained to Use Them
  - Most Psychotherapy done in Community Settings is supportive in nature, and may not be effective

## ADHD Criteria: Inattention

- Six or more of the following for >6 mos
- (Must be maladaptive and inconsistent with developmental level)
  - careless with details
  - can't keep on task
  - doesn't seem to listen when spoken to
  - doesn't follow through with instructions
  - difficulty organizing
  - reluctant to put in effort for school or homework
  - often loses things necessary for activities
  - is easily distracted
  - is forgetful

## ADHD Criteria: Hyperactivity-impulsivity

- Six or more of the following for >6 mos
  - Must be maladaptive and inconsistent with developmental ( level)
- Hyperactivity
  - often fidgets with hands or feet or squirms in seat
  - often climbs or runs about ... or feels restless
  - difficulty playing or engaging in leisure
  - often leaves seat when expected to remain in seat
  - often is "on the go" or acts as if "driven by a motor"
  - often talks excessively
- Impulsivity
  - often blurts out answers before questions completely asked
  - has difficulty awaiting turn
  - often interrupts or intrudes on others

## Early Onset Bipolar Disorder *Specificity of Symptoms*

### Mania

### ADHD

- |                     |                     |
|---------------------|---------------------|
| ⌘ Irritability      | ⌘ Grumpy            |
| ⌘ Increased Energy  | ⌘ Hyperactive       |
| ⌘ Pressured Speech  | ⌘ Talking Fast      |
| ⌘ Reckless Behavior | ⌘ Reckless Behavior |
| ⌘ Grandiosity       | ⌘ Bragging          |
| ⌘ Distractibility   | ⌘ Distractibility   |
| ⌘ Decreased Sleep   | ⌘ Restless Sleeper  |

## Conduct /Oppositional Defiant Disorder

- ODD: ...for six months
  - Negativistic
    - Loses temper, argues
    - Defies
    - Deliberately annoys/easily annoyed
    - Angry, resentful, spiteful
- CD: 3 or more in the last 12 mos.
  - Aggression to people animals
  - Destruction of property
  - Deceitfulness/theft
  - Serious violations of rules

## Clinical Features of Depression in Kids

Children/Adolescents

- Somatic complaints
- Irritability: can be primary mood symptom
- Guilt
- Low self-esteem
- Suicide attempts
- Oppositionality
- Withdrawal

40% to 70% have "comorbid dx":

Most common:

- Anxiety disorders-20% to 40%
- Disruptive - (incl. CD/ADHD) 10% to 80%
- Substance abuse-20% to 30%

Natural History:

- ?7-9 mos.
- ?recurrent

## Posttraumatic Stress Disorder

### Traumatic Event

- Trauma may be acute or chronic
- Abuse a major factor in youth

### Persistent Re-experiencing of the Event(s)

- Repetitive Play
- Nightmares
- Flashbacks/Intrusive Thoughts

### Avoidance

### Increased Arousal

## Psychosis in children and adolescents

- Schizophrenia is much rarer than in adults
- Hallucinations in pre-adolescents are often anxiety phenomena (until "proven" otherwise)
- Brief reactive psychosis
  - Obsessionality/anxiety
  - Post-traumatic stress disorder
- Psychosis frequently occurs in bi-polar mania .... and adolescent depression
- Organic contributors
  - Neurologic/endocrine
  - Eating disorders
  - Autistic spectrum struggles
  - mental retardation

## Asperger's Disorder

- *sometimes called "high-functioning Autism"*
- Impairment in Social Interaction
  - Impaired Nonverbal Communication Skills
  - Failure to develop appropriate peer relationships
  - Lack of social interests/reciprocity
- Restricted repetitive and stereotyped patterns of behavior
  - Preoccupation with idiosyncratic interests
  - Inflexible adherence to routines/rules
  - Stereotypic motor mannerisms
- If Clinically Significant Delays in Language, Cognitive Development and/or Adaptive Skills: "Pervasive Developmental Disorder"

## Jokes - by Ralph (age 12)

WHY did the pig cross the road?  
To have some bacon and eggs.

WHY did the boy throw the clock out the window? Because it woke his parents up, and now he has consequences!

WHERE'S boogie world?  
Its all up your nose!

WHAT'S black and white and red all over?  
A newspaper that you spilled ketchup on!

## Anorexia and Bulimia

- Anorexia Nervosa
    - Intense fear of gaining wt
    - Disturbance in way body wt is experienced
    - Absence of > 2 menstrual cycles
  - Bulimia Nervosa
    - Bingeing
    - Sense of loss of control
    - At least twice a wk
    - Self-evaluation is unduly influenced by body shape/weight
- ...watch the web...  
*"Ana's Cabana, Dying to be thin"*  
**Treatment approaches:**  
meal support, activity restriction, monitor electrolytes, EKG

## Resilience

- What protects some kids?
  - temperament (arousal patterns/mood template)
  - cognitive profile
  - birth order
  - specific ties inside or outside the "family"
  - locus of control, well played age-specific defenses
  - finding someone at the right time
  - luck at avoiding the poorly timed risk (the beer, the peer insult, the shaming moment etc)
  - what seems like resilience now may correlate with problems later...and vice versa

## You're the doctor...

1. Build alliance (get alongside, get permission frequently, consult with team...)
2. Ask "What is right for you?" and "What are you worried about?"
3. Look at the matrix...then at Dx...then the Rx
4. Assess risk management skills (motivational techniques)
5. Enhance internal/external surveillance/security
6. Individual/family psychotherapy (examples)
  - narrative
  - cognitive behavioral
7. Specialty groups (examples)
  1. dialectical behavioral therapy (DBT)
  2. adventure based therapy
8. Maintain alliance (check in!): treat cautiously with medications, find out the attributions/meanings
9. Be creative with "Wraparound" supports