



# Evidence-Based Practice and Everyday Clinical Care

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and  
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Children, Youth, Families, & Schools  
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# CHILD STEPs

## **The Network on Youth Mental Health**

Based at the **Judge Baker Children's Center**

Sponsored by the **John D. and Catherine T. MacArthur Foundation**

•**Members:** [Bruce Chorpita](#), Ann Garland, Robert Gibbons, Charles Glisson, Evelyn Polk Green, Kimberly Hoagwood, Larry Palinkas, Kelly Kelleher, John Landsverk, Steve Mayberg, Jeanne Miranda, Sonja Schoenwald, John Weisz (Director, PI)

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## **Mission Statements**

**Judge Baker:** To promote the best possible mental health of children through the integration of science, practice, training, and advocacy.

**Harvard:** [in part]... to identify and to remove restraints ... so that individuals may explore their capabilities and interests and may develop their full intellectual and human potential.

**John:**

## Goals for Today's Talk

- Summarize recent evidence on treatment effects in clinical trials (some of it is surprising)
- Summarize recent evidence on EBTs when compared to Usual Clinical Care
- Describe a *deployment-focused model* designed to generate practice-ready EBTs
- Show need for the model by noting some specific problems EBTs encounter when used in practice
- Describe a new (modular) approach designed to address those problems and make EBTs more practice-friendly
- Present a case example showing how the modular approach works in clinical practice.

### FIVE BROAD-BASED META-ANALYSES : DETAILS

	CASEY & BERMAN (1985)	WEISZ ET AL. (1987)	KAZDIN ET AL. (1990)	WEISZ ET AL. (1995)	WEISZ ET AL. (2008)
NO. STUDIES .....	64	105	64/41	150	298
AGE RANGE .....	3-12	4-18	5-18	2-18	3-18
STUDY YEARS .....	1952-83	1958-84	1970-88	1967-93	1963-02
MEAN % MALES ..	60%	66%	67%	62%	64%

## **REPRESENTATIVE TREATED PROBLEMS**

### **EXTERNALIZING/UNDERCONTROLLED**

**AGGRESSION**

**NONCOMPLIANCE**

**DELINQUENCY**

### **INTERNALIZING/OVERCONTROLLED**

**PHOBIAS/ANXIETY**

**DEPRESSION**

**SOMATIC PROBLEMS**

### **OTHER PROBLEMS**

**COGNITIVE SKILL DEFICITS**

**LOW SOCIOMETRIC/PEER REJECT**

## **REPRESENTATIVE TREATMENTS**

### **BEHAVIORAL THERAPIES**

#### **OPERANT**

**PHYSICAL REINFORCERS, PRIVILEGES**

**SOCIAL VERBAL REINFORCERS**

#### **CLASSICAL**

**SYSTEMATIC DESENSITIZATION**

**BIOFEEDBACK, RELAXATION TRAINING**

#### **MODELING**

**LIVE PEER MODEL, PARTICIPANT MODELING**

**FILM/VIDEO PEER MODEL**

#### **COGNITIVE/COGNITIVE BEHAVIORAL**

**BEHAVIORAL PARENT TRAINING**

### **NONBEHAVIORAL THERAPIES**

**CLIENT-CENTERED/NONDIRECTIVE**

**INSIGHT ORIENTED**

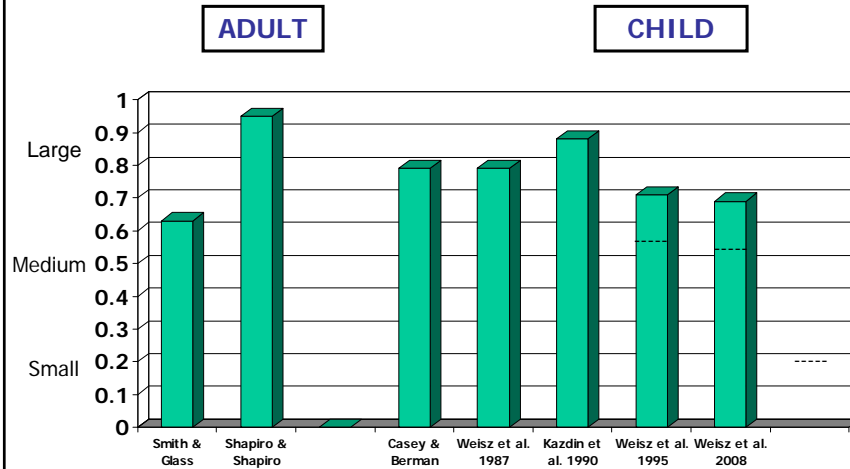
## REPRESENTATIVE OUTCOME MEASURES

1. PARENT RATINGS (e.g. CBCL, SDQ)
2. CHILD REPORTS (e.g. YSR, SPECIF)
3. TEACHER REPORTS (e.g. TRF)
4. TRAINED OBSERVER RATINGS
5. PEER OBSERVER RATINGS
6. PEER SOCIOMETRIC CHOICES
7. CHILD PERFORMANCE/TASK/TEST
8. DIAGNOSTIC INTERVIEW - P/C
9. GLOBAL ASSESSMENT RATINGS/MH

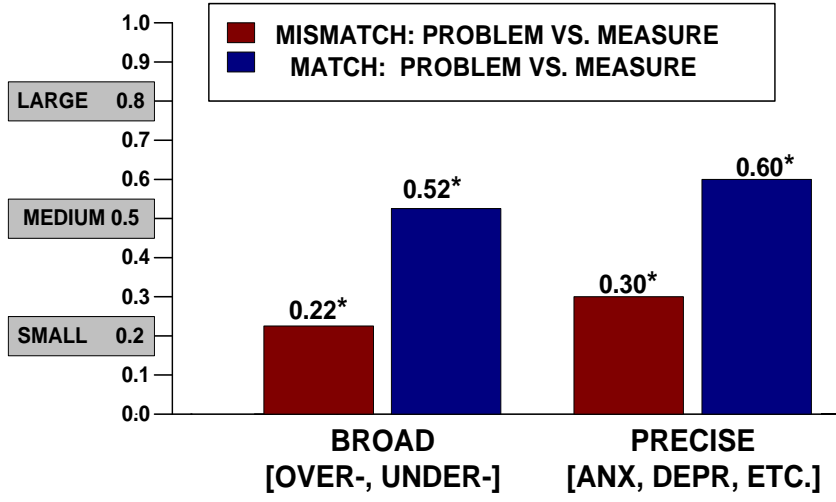
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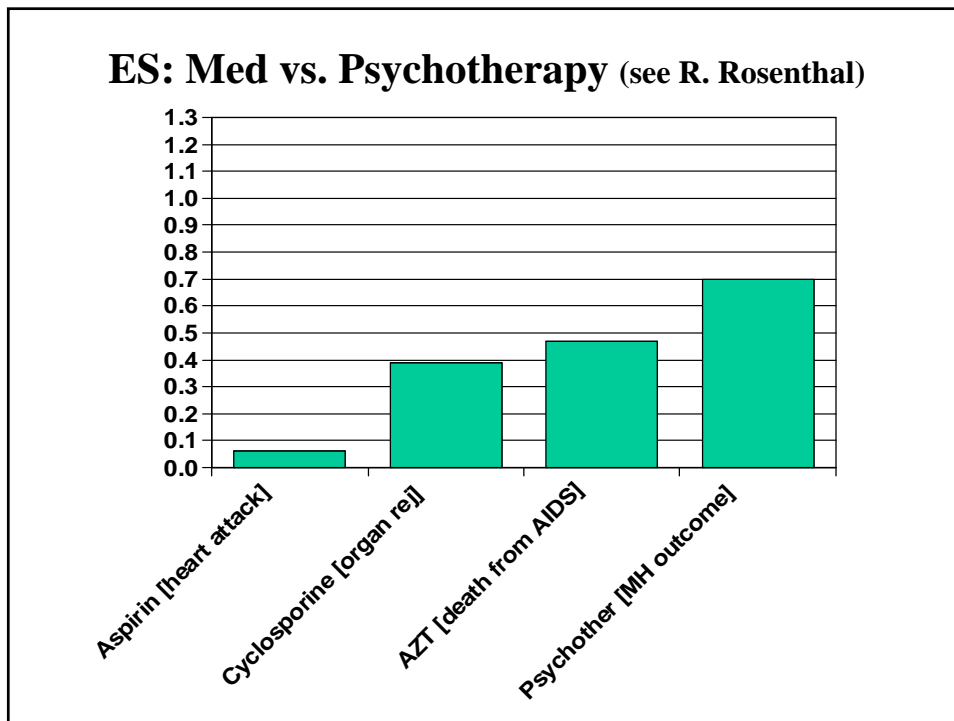
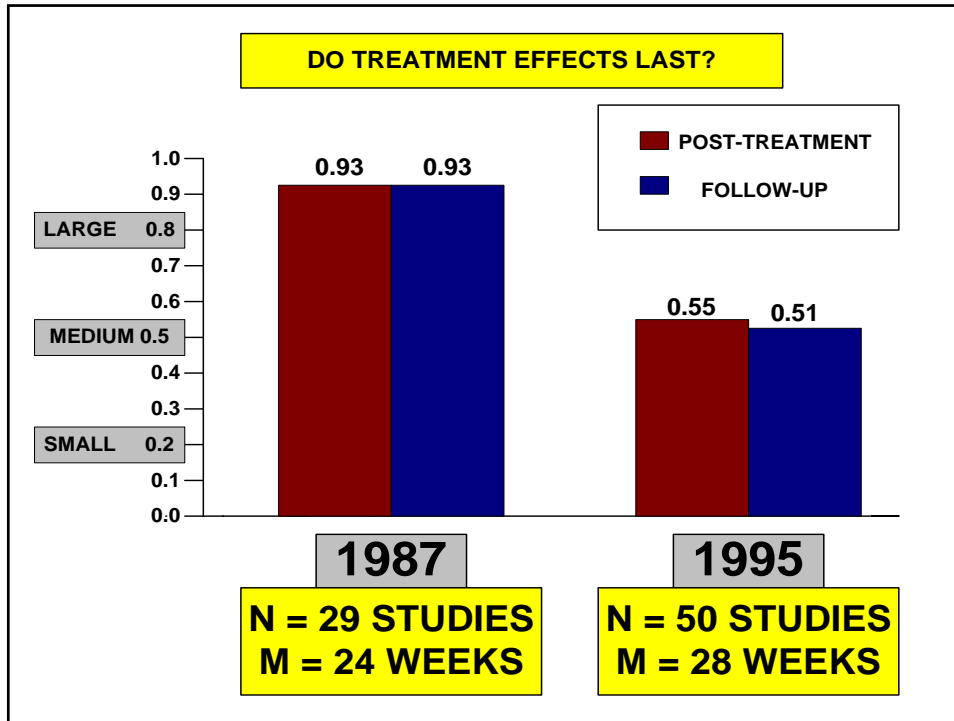
### MEAN EFFECT SIZES IN META-ANALYSES OF ADULT AND CHILD STUDIES



### SPECIFICITY OF TREATMENT EFFECTS



\* WLS MEANS



## **CHILD & ADOLESCENT FINDINGS IN A NUTSHELL**

### **EMPIRICALLY TESTED TREATMENTS**

- “MEDIUM” TO “LARGE” EFFECTS
- SPECIFIC TO TREATED PROBLEMS
- HOLDING POWER OVER TIME
- LARGER EFFECTS THAN MANY MEDICAL

**BUT WHAT ARE THE TREATMENTS SUPPORTED IN THIS WORK?**

**TWO WAYS TO ANSWER:**

- **TASK FORCE REVIEW** [see JCCAP update in 2008]
- **TARGETED META-ANALYSIS**

## **TARGETED META-ANALYSIS**

**We Use Mean ES and N-Group Comps to Identify Promising EBTs. Our Criteria.....**

- **Treatment vs. Control Group Design**
- **Random Assignment**
- **Target Problem/Disorder Identified**
- **Anxiety, Depression, Conduct, ADHD**
- **At Least 1 Measure of Target Problem**
- **Ages 4-18**
- **[Initially 4000+ studies; W/criteria: 233]**
- **[Note: Omit M-baseline, ABAB, etc.]**



New Anxiety Findings,  
Not Peer-Reviewed

- To be shown in presentation

New Depression Findings,  
Not Peer-Reviewed

- To be shown in presentation

New ADHD Findings,  
Not Peer-Reviewed

- To be shown in presentation

New Conduct Problem/Disorder  
Findings, Not Peer-Reviewed

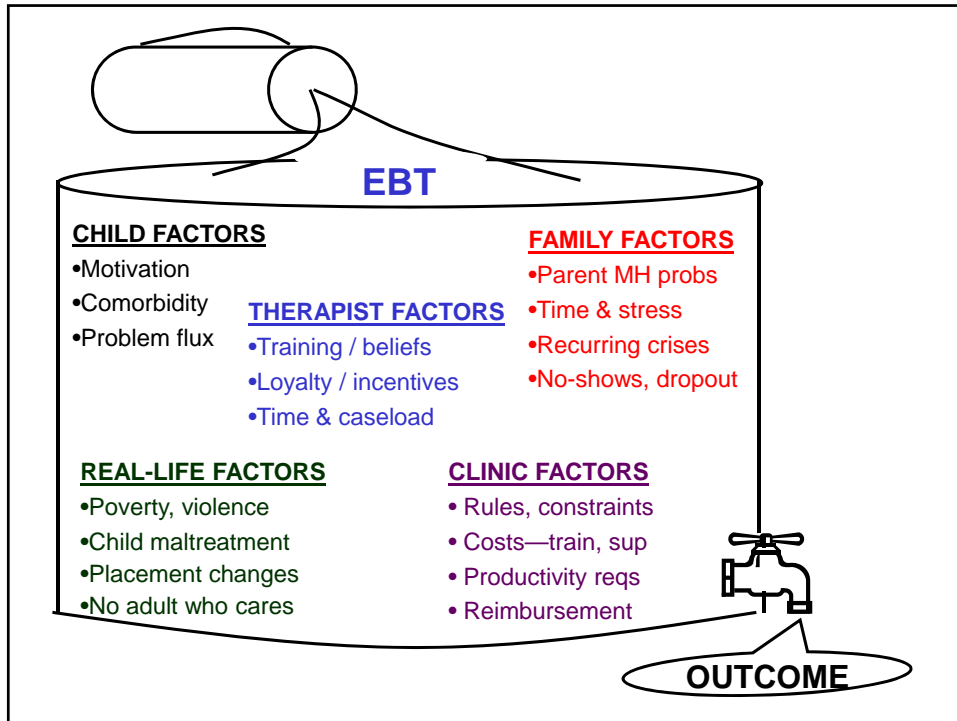
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## **In Sum....**

- Tested therapies show medium-large ES in RCTs, variable ES across problems, treatments
- On average, larger effects than some famous medical treatments, and with specificity & holding power
- Targeted meta-analysis, plus task force work, is identifying specific types of treatments that show best effects for specific disorders and problems.
- So, good news, at least in terms of...
  - Mostly university RCTs under ideal (efficacy) conditions with experimentally-created comparison groups)
  - Presented to the faithful--researchers & fans of research

## **But in the worlds of policy & practice...**

- **The audience is different: state officials, clinic CEOs, practitioners, payers, consumer families**
- **These groups have important questions for us—e.g...**
  - 1. Can your EBT work in real-world treatment settings?**
  - 2. Can your EBT work with referred kids (complex life situations, co-occurring problems, flux in problems during treatment, irregular attendance & no-shows)?**
  - 3. Can busy practitioners learn to use your EBT well?**
  - 4. Is your EBT better than what's already being done?**



## In General...

- We EBT researchers have not done a very good job of addressing these real-world issues.
- Lots of work needed to answer the hard questions posed by policy-makers, the practice community, payers, families
- To illustrate....

## Most EBP Studies are Not Clinically Representative

Weisz, Jensen-Doss, & Hawley (2005) *Annual Review of Psychology*

	Anxiety	Depression	ADHD	Conduct	All studies
<b>How <u>YOUTHS</u> were enrolled in the study</b>					
Recruited, not treatment-seeking	90.24	77.78	87.50	60.42	76.69
Treatment-seeking, clinic-referred	3.66	16.67	12.50	19.79	12.71
Required via court/justice system	1.22	0	0	17.71	7.63
Studies not reporting	4.88	5.56	0	2.08	2.97
<b><u>THERAPISTS</u> who delivered the treatment</b>					
With any researchers/grads	57.32	47.06	45.00	38.54	47.21
With any paraprofessionals	20.73	11.11	12.50	22.92	19.49
With any practicing clinicians	1.22	55.56	10.00	30.21	18.64
Studies not reporting	28.05	11.11	40.00	19.79	25.42
<b><u>SETTINGS</u> where treatment took place</b>					
Research settings	50.00	44.44	42.50	48.96	47.88
Clinical service settings	2.44	5.56	0	7.29	4.24
Correctional settings	1.22	0	0	7.29	3.39
Studies not reporting	46.34	50.00	55.00	37.50	44.49
<b>Representativeness sum (youths, therapists and settings)</b>					
Reporting no representativeness factors	92.68	38.89	77.50	55.21	70.76
Reporting one representativeness factor	7.32	50.00	22.50	34.38	24.15
Reporting two representativeness factors	0	5.56	0	8.33	3.81
<b><u>YOUTHS, THERAPISTS &amp; SETTING</u></b>	<b>0</b>	<b>5.56</b>	<b>0</b>	<b>2.08</b>	<b>1.27</b>

\*All values are noted in percentages

## Most EBP Studies Can't Tell Us Whether EBP>Usual Clinical Care

Weisz, Jensen-Doss, & Hawley (2005) *Annual Review of Psychology*

	Anxiety	Depression	ADHD	Conduct	All Studies
Mean sample size of treatment groups	18.23	30.41	12.38	26.31	21.95
Mean sample size Of control groups	16.78	31.41	11.66	24.36	20.62
<b>Types of control groups</b>					
Studies using no treatment/waitlist	64.63	77.78	42.50	64.58	61.86
Studies using attention/placebo	39.02	27.78	70.00	29.17	39.41
Studies using medication placebo	0	0	0	0	0
<b>Studies using usual care*</b>	<b>4.88</b>	<b>0</b>	<b>0</b>	<b>14.58</b>	<b>7.63</b>

\*Even these EBP vs. UC studies are not generally clinically representative (e.g., they used specially selected therapists, hired & paid by the researchers), but their findings are revealing, nonetheless..... An updated search identified 32 RCT comparisons EBT to UC →



## The EBT vs. Usual Care Meta...

- Suggests that EBTs *are* more effective, on average, but not dramatically so
- Instead, just a modest advantage, and *no* advantage for several “EBTs”
- Gets even more modest if we exercise careful control—e.g., similar dose of treatment (see next point & next slide)
- And most of the studies were not fully clinically representative (i.e., referred children, usual clinicians, & practice settings; more like “*our* hand-picked therapists vs. *your* usual ones”)
- Clearly not safe to simply assume that all “EBTs” are superior to what clinicians are currently doing.

## In Two Recent Studies...

- **Treating depression** [Weisz, Southam-Gerow et al., 2009 *Journal of Consulting & Clinical Psychology*]
- **Treating anxiety** [Southam-Gerow, Weisz et al., under review]
- **Design features:**
  - Treatment in CMHCs in LA County
  - Normal referral pathways (no ads, no recruiting)
  - Very diverse, very comorbid sample, aged 8-15, anx or dep focus
  - Treated by CMHC-employed clinicians (not research staff)
  - Clinicians randomized to EBT or UC (not “best” for EBTs)
  - Children randomized to EBT or UC
  - Only Anx/Dep study to use double randomization
- **Results....**

### **The Low Level of Clinical Representativeness, and Low Mean ES for EBT vs. UC...**

- ....Suggest 2 rather basic problems in our strategy for developing EBTs.
  1. We don't know much about how many EBTs would fare in everyday clinical conditions
  2. In the few studies designed to tell us, we have not been consistently able to outperform UC
- One causal factor may be the model that has guided most EBT treatment development— derived largely from biomedical research
- Let's call it the *Serial Efficacy Model*

#### **PREVAILING MODEL—SERIAL EFFICACY**

- Efficacy 1
- Efficacy 2
- Efficacy N
- Dismantling
- Moderators
- Add-ons
  - Family component, parents learn the skills
  - Booster sessions
  - Etc.
- Mediators
- [Effectiveness]



## **Serial Efficacy Model--Pros**

- Derived in part from med-pharmaceutical research tradition, which has successes.
- Provides good experimental control
- May work for interventions that operate directly on the biological system (e.g., psychopharm, cancer drugs) where diffs between research and practice conditions may not greatly alter the intervention effect

## **Serial Efficacy Model--Cons**

- For psychotherapies, leaves a lot of bridging to be done at the last step (characteristics of youths, families, therapists, settings, tx conditions)
- Answers to questions (moderators, mediators, dismantling/components, add-on effects) found in efficacy studies may differ from practice
- Delays info on treatment effects in practice
- Delays info on target tx vs. UC
- AND, in truth...The effectiveness step doesn't actually happen for most treatments

## WHAT IF WE TOOK A DIFFERENT APPROACH...?

- Efficacy 1
  - Efficacy 2
  - Efficacy N
  - Dismantling
  - Moderators
  - Add-ons
    - Family component
    - Booster sessions
    - Etc.
  - Mediators
  - [Effectiveness]
- 

## DEPLOYMENT-FOCUSED TREATMENT DEVELOPMENT MODEL:

1.PROTOCOL/MANUAL

2.EFFICACY TEST

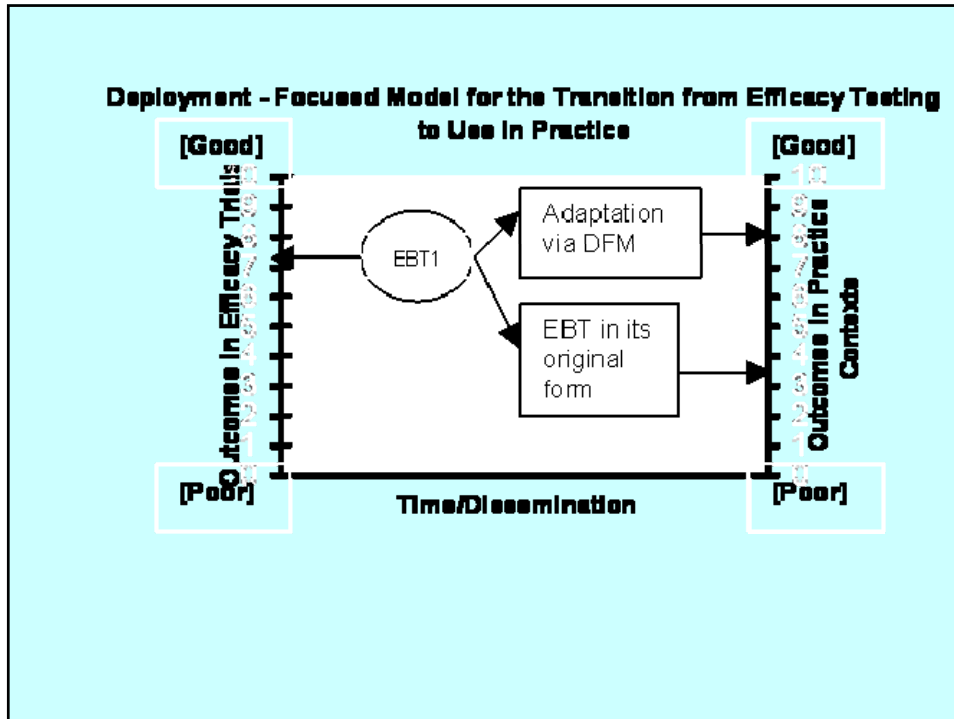
3.FIELD CASES/adaptation

4.EFFECTIVENESS I *vs UC*

5.EFFECTIVENESS II *vs UC*

6.STAYING POWER

- Components
- Moderators
- Mediators/mech
- Cost/benefit
- System factors
- Fit Issues



### Our Team has Used the DFM in 4 Contexts

- NIMH-supported implementation trials in Los Angeles
- Child STEPs HIMA: MacArthur Foundation Network trial in Boston & Honolulu
- Judge Baker Children's Center (EBP while meeting payroll & balancing budget)
- Child STEPs Maine: MacArthur, Casey Family Programs, and Annie E. Casey Foundation. Network trial focused on Child Welfare youth.

## **By Diving into Everyday Clinical Care Settings....**

...we've been forced to confront real-world issues related to EBP in clinical practice—examples...

- Comorbidity
- Flux during treatment
- Little info on treatment impact (until it's too late)
- How clinicians actually *use* EBTs when free to choose

## **How to use EBP in the Face of Comorbidity and Co-Occurrence of Probs, Disorders?**

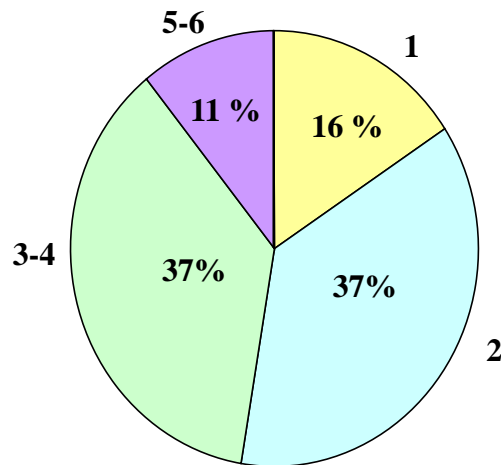
**Co-occurring problems and change during treatment may complicate standard EBT use**

- Most EBTs are for a single disorder or single problem
- Most children in care aren't so neatly packaged (next)

## Co-morbidity in Outpatient Youth [N=436]

DISORDER	% With That Disorder	% With ONLY that Disorder	% With That Disorder + Others
Depression	23%	3%	20%
Anxiety	39%	12%	27%
Conduct Disorder	18%	2%	16%
Opp Defiant Dis	42%	9%	33%

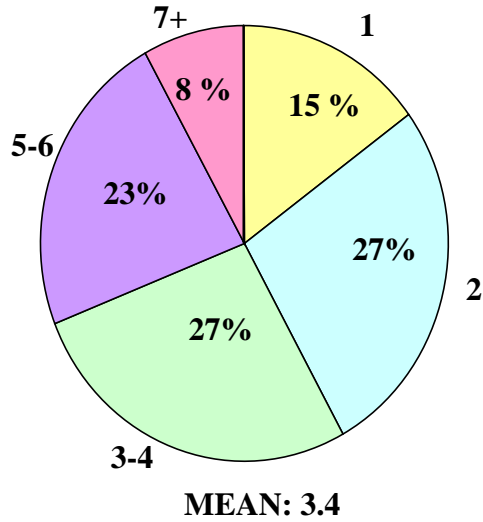
## # DIAGNOSES: ANXIOUS YOUTH



MEAN: 2.7

+ ODD, CD, ADHD: 68%

### # DIAGNOSES: DEPRESSED YOUTH



+ ODD, CD, ADHD: 81%

## Modular Manual for 3 Problem Clusters

Chorpita & Weisz (2009) *MATCH-ADC*—now includes *PTS*



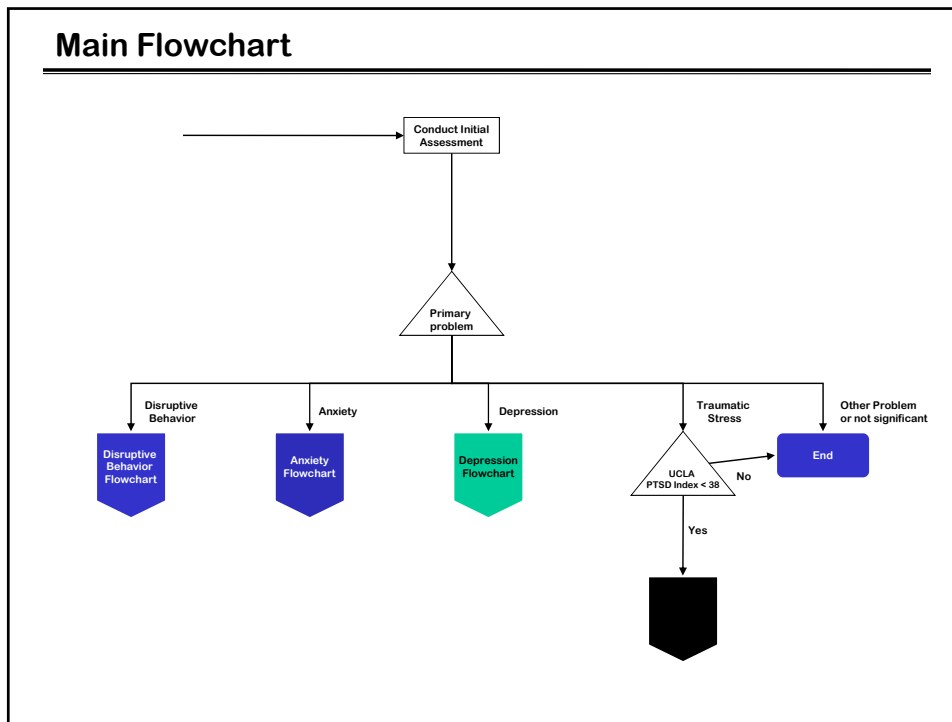
**CBT for Anxiety Disorders**



**CBT for Depression**



**BPT for Conduct**

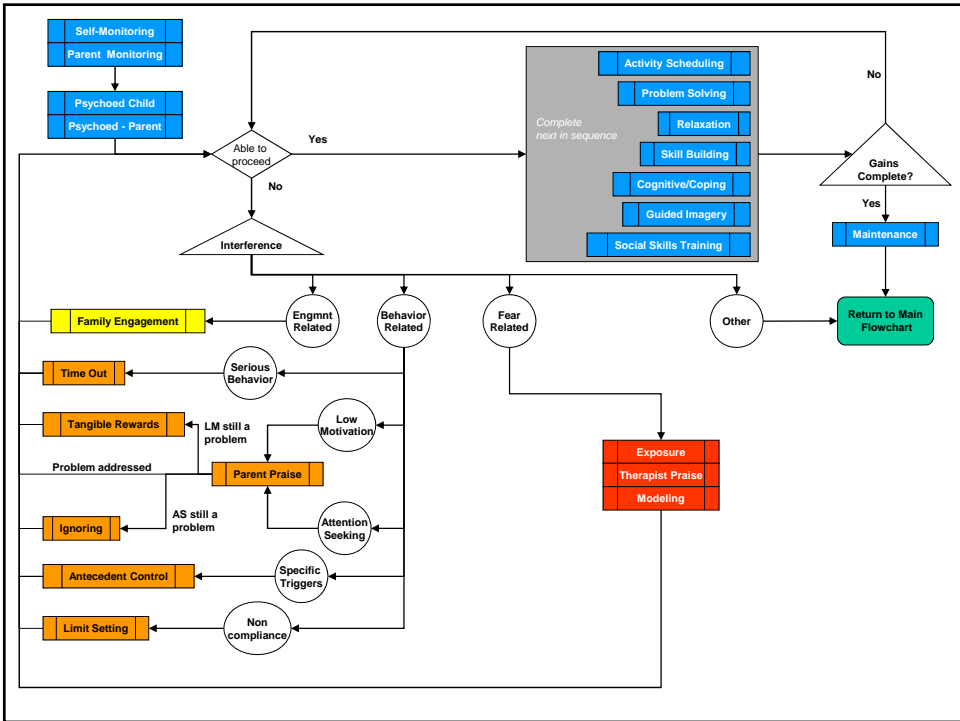


## How to Handle Flux in Problems During Treatment Episodes?

### Change during treatment can complicate standard EBP use

- Problems & treatment needs may change during treatment (e.g., 2 AM case, anxiety becomes depr)
- Ex: therapist who says “New problems/crises—must stop doing EBT”
- **Thus**, may need to not only learn multiple EBTs, but also to learn skills in adjusting treatment—across EBTs—as problems and needs change
- Our approach: Modular treatment via MATCH manual, with flowcharts to guide shifts in tx plan

<p><b>Introduction</b>  About Anxiety  About Depression  About Disruptive Behavior  Cognitive Behavior Therapy  Behavior Management Training  Modular Cognitive and Behavior Therapy  References</p> <p><b>Flowcharts</b>  Main  Anxiety  Depression  Disruptive Behavior</p> <p><b>Therapist Modules: General</b>  1.Home Visit (<i>shared across all 3 areas</i>)  2.School Visit (<i>shared across all 3 areas</i>)</p> <p><b>Therapist Modules: Anxiety</b>  1.Getting Acquainted  2.Fear Ladder  3.Learning About Anxiety – Child  4.Learning About Anxiety – Parent  5.Practicing  6.Maintenance and Relapse Prevention  7.Cognitive Restructuring: FEAR  8.Wrap-up (<i>shared by anxiety and depression</i>)</p>	<p><b>Therapist Modules: Depression</b>  1. Learning About Depression – Child, Parent  2. Problem Solving  3. Activity Selection  4. Relaxation  5. Secret Calming  6. Talents and Skills  7. Positive Self  8. Cognitive Coping (BLUE)  9. Cognitive Coping (FUN)  10. Three Step Plan  11. Wrap-up (<i>shared by anxiety and depression</i>)</p> <p><b>Therapist Modules: Conduct</b>  1. Engaging Parents  2. Why Children Misbehave  3. Paying Attention  4. Commands  5. Praise  6. Active Ignoring  7. Rewards  8. Time Out  9. Anticipating Problems  10. Handling Future Problems</p> <p><b>Therapist Modules: PTS</b>  1. Learning About Trauma – Child, Parent  2. Trauma Narrative  3. Safety Planning</p>
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## How to Tell if the EBP is Working?

- When you can't tell, low motivation to change current tx
- When you can't tell, feels safer to stick with familiar tx
- Ex: Therapist decides behavioral parent training isn't working, b/c it "just doesn't feel natural to me."
- Ex: Therapist decides CBT is "not appropriate for this case"
- **Thus**, need a system for gathering & displaying info on how treatment is working, throughout a treatment episode
- Invaluable guide to supervision & treatment planning

## Parent Weekly Checklist: Conduct Problems

How true of your child during the past week?

0=Not true      1=Somewhat true      2=Very true

1. Argues a lot.....0 1 2
2. Destroys things belonging to his/her family or others.....0 1 2
3. Disobedient at home or at school.....0 1 2
4. Stubborn, sullen, or irritable.....0 1 2
5. Temper tantrums or hot temper..... 0 1 2
6. Threatens people.....0 1 2

## Parent Weekly Checklist: Internalizing Problems (Depression, Anxiety) How true of your child during the past week?

0=Not true      1=Somewhat true      2=Very true

- 1. Feels too guilty.....0 1 2
- 2. Feels worthless or inferior.....0 1 2
- 3. Self-conscious or easily embarrassed.....0 1 2
- 4. Too fearful or anxious.....0 1 2
- 5. Unhappy, sad, or depressed.....0 1 2
- 6. Worries.....0 1 2

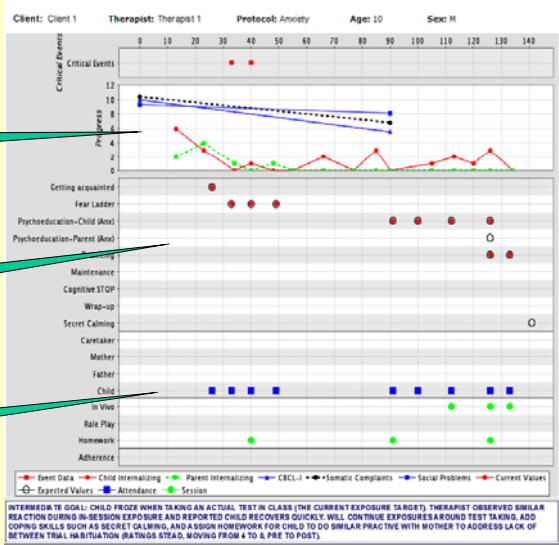
### Individual Child Dashboard (Internalizing)



Are results on track?

Do the practices fit the problem?

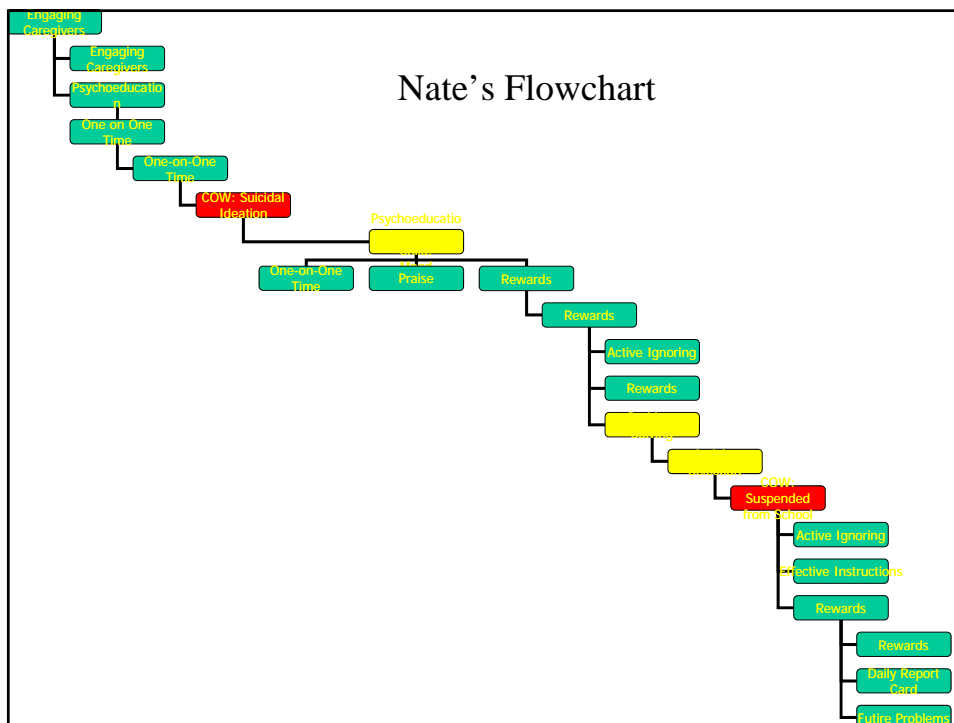
Is family engagement OK?

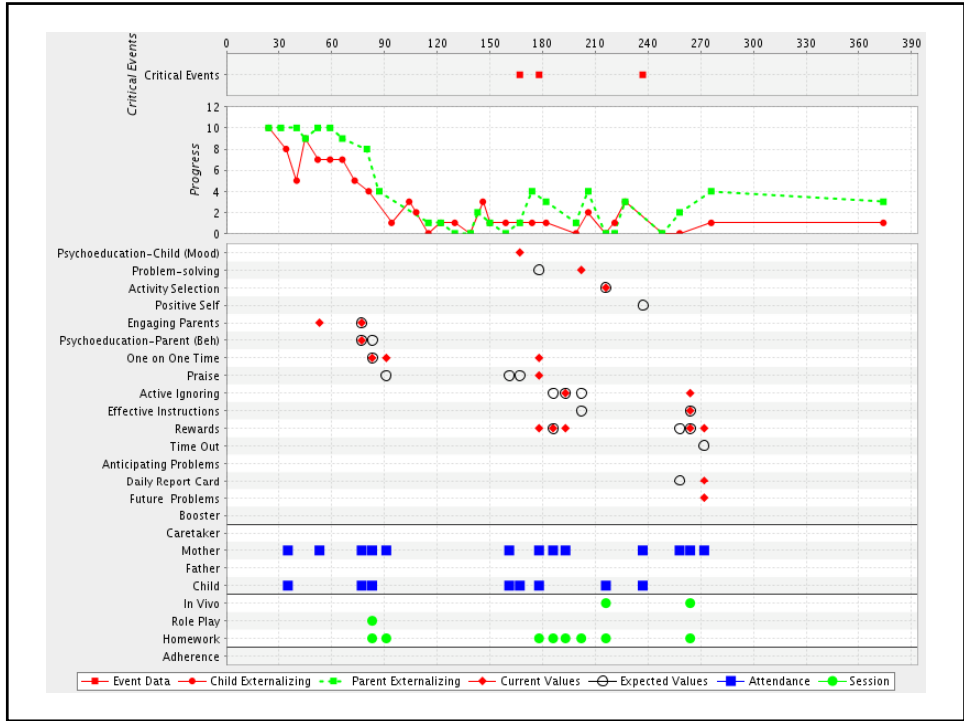


## Nate (9-year-old, Caucasian, Male)

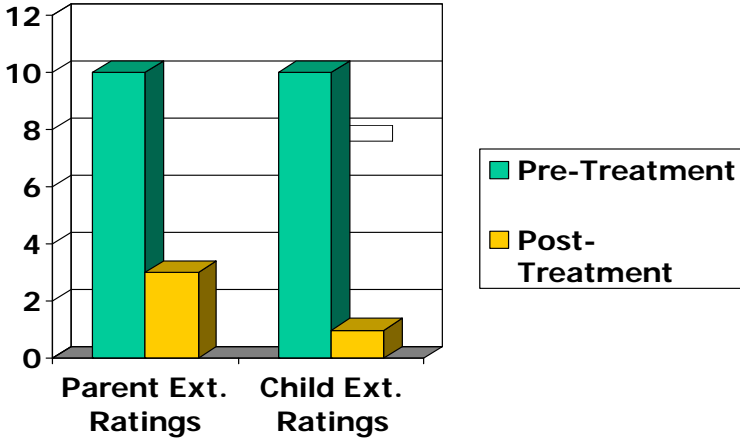
- Axis I:
  - CD (6)
  - ADHD combined (6)
- Axis II: none
- Axis III: none
- Axis IV: primary support problems, educational problems
- Axis V: 60

\*child's top problem area was MDD  
 Suicidal behavior emerged during tx





# Nate's Clinical Gains



## Clinic Treatment Project Design

- **Therapists** in MA & HI clinics randomized to
  - A. Standard Manual Treatment (**SMT**; what researchers stress, true to evidence base)
  - B. Modular Manual Treatment (**MMT**) (what clinicians say they want/do, but we help via modules, flow charts)
  - C. Usual Care (UC)
- **Children** (8-13 yr.) randomized to SMT, MMT, or UC
- **Assessments:** intake, weekly (short checklist), quarterly CBCL/YSR), post-treatment, 15 mo.
- **Outcomes:** Problems and disorders, home & school functioning, consumer satisfaction, environmental/parent impact, cost

## In the World of Clinical Care...

- We face the questions of policy-makers, clinic CEOs, clinicians and payers ...
  1. Can your EBP work in real-world treatment settings?
  2. Can your EBP work with referred kids (complex life situations, co-occurring problems, flux in problems during treatment, irregular attendance & no-shows)?
  3. Can busy practitioners learn to use your EBP well?
  4. Is your EB treatment > Usual Care (not just WL)?
  5. Will using EBPs threaten financial stability in my clinic?

## **Stated Simply...**

- If we want EBPs to move from the research community into the clinical care community, we may need to embed EBP development and research within that broader world.
- The Deployment-Focused Model is one way to do that.
- Applying the model may lead to treatments that (a) build on the rich history of EBT development while (b) engineering practice-friendly treatments that meet the needs of practitioners, policy makers, and families who seek care for their children.