Early Intervention for Young Children At-Risk for ADHD

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DSM-IV CRITERIA FOR ADHD

- Significant problems with inattention
- Significant problems with hyperactivity-impulsivity
- Symptoms present for at least 6 months
- Symptoms that caused impairment before age 7
- Some impairment in two or more settings
- Impairment in social, academic, or occupational functioning
- Not due to another disorder
- Subtypes: Combined, Predominantly Inattentive, Predominantly Hyperactive-Impulsive

American Psychiatric Association (2000)
Rationale for Early Intervention

- Symptoms of ADHD emerge at a very young age (Egger et al., 2006; Wolraich, 2006)
- ADHD tends to be chronic for at least 50% of young children with early symptoms
- Approx. 2% of 3-4 year-olds are diagnosed with ADHD
- Symptoms in young children associated with significant impairment both short- and long-term (e.g., Lahey et al., 1998)
- Few studies of early intervention beyond stimulant medication
- Primarily studies of one treatment in one setting (e.g., parent education for home-based management)
Goals for Early Intervention

- Reduce problem behaviors
- Improve early academic skills
- Reduce accidents and injuries
- Prevent or delay use of psychotropic medication
- Evaluate support needed to maintain initial gains
Three-Tiered Approach to Early Intervention

- Continuum of supports depending on child need
- Tier 1: Universal intervention for all children at-risk for ADHD
- Tier 2: Secondary intervention for those not responsive to universal intervention; includes some specialized intervention or instruction
- Tier 3: Tertiary intervention for small percentage of children exhibiting intensive and intransigent difficulties not responsive at Tier 2; includes individualized, assessment-based intervention
Home-Based Early Intervention

From DuPaul & Kern (2011)
Preschool-Based Early Intervention

- Tier 3: Assessment-Based Intervention
- Tier 2: Small Group Skills Instruction
- Tier 1: Class-wide or Building-wide Intervention

From DuPaul & Kern (2011)
Early Intervention Project Overview

- **Purpose:**
  - Examine two types of early intervention for preschool age children with or at-risk for ADHD
- **Funded by NIMH (Grant R01-MH61563)**
- **Co-PIs:** George DuPaul and Lee Kern
- **Co-Investigators:** John Van Brakle, Rob Volpe
- **Project Coordinators:** Lauren Arbolino, Suzanne Irvine
- **http://www.lehigh.edu/education/adhd/**
PARTICIPANTS

- Total: 135

Characteristics:
- Age 3-5
- 78% male; 69% Caucasian
- Multi-tiered screening process
  - symptoms of ADHD (any subtype) determined by preschool teacher and parent standardized ratings (above 93rd percentile)
  - excluded children with autism, cognitive delays, or emotional/behavioral disorders
- 63% combined, 26.5% hyperactive-impulsive; 10.5% inattentive
- 76% ODD
Groups

- Random assignment to:
  1. Multi-component Early Intervention Group (MCI)*
  2. Parent Education Group (PE)**

* Equivalent to Tier 3
** Equivalent to Tier 1
Children Meeting Symptom + Impairment Criteria

Percentage

Pre-Tx Year 1 Year 2

MCI PE Lahey et al. (2004)
Children Meeting Initial Inclusion Criteria

DISC + Impairment + P&T Ratings

>= 65
ODD Diagnosis Across Groups

Based on Parent DISC
Conduct Disorder Diagnosis Across Groups

Based on Parent DISC
Receipt of Psychotropic Medication Across Groups

Percentage

- Pre-Tx
- Year 1
- Year 2

MCI
PE
Lahey et al. (2004)
Conclusions

- Early intervention has potential to alter trajectories for young children with or at-risk for ADHD
- Tiered model of intervention may be both effective and cost-efficient
- More research needed regarding
  - Methods to engage parents and teachers in universal intervention
  - Most effective components at each tier
  - Feasible methods to assess individual response at each tier

*For further information about ADHD see www.chadd.org