ADHD MANAGEMENT

Psychopharmacology

Presented by:
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Learning Objectives

- Identify common medication(s) prescribed in the management of ADHD symptoms and behaviors.
- List the benefits of adhering to medication management regimens in increasing an individual's level of functioning.
- List possible adverse side effects of commonly prescribed ADHD medication.
- Assess behavioral effects and functional outcomes of medications prescribed for ADHD symptoms.
- Identify evidence to support increasing levels of independence with proper combination of medication and behavioral management strategies.

Presenter Bio

Dr. Ronald T Brown, PhD is a Professor and Dean in School of Allied Health Sciences at University of Nevada, Las Vegas, USA. He served as the Associate Vice-Chancellor for Academic (Health Affairs) at the University of North Texas System. Dr. Brown completed his Ph.D. from Georgia State University and has been the past President of the Society of Pediatric Psychology and the Association of Psychologists of Academic Health Centers. He is a board certified clinical health psychologist and has been an active clinician, teacher, advocate and investigator.

Dr. Brown has served as a member of the Behavioral Medicine study section of the NIH and chaired several special panels at NIH. Dr. Ronald Brown's area of specialization includes behavioral sciences, pediatric psychology, attention deficit disorders, neuropsychology, psychopharmacology, learning disabilities and psychosocial oncology. He is a current editor of Journal of Clinical Psychology in Medical Settings. He served as a previous editor of Professional Psychology: Research and Practice and Journal of Pediatric Psychology.

Presenter Bio

Dr. Deborah Padgett Coehlo, PhD, C-PNP, PMHS, CFLE is a certified Pediatric Nurse Practitioner and Pediatric Mental Health Specialist with a Doctoral Degree in Family Sciences and Human Development.

A developmental and behavioral specialist, Dr. Coehlo is a Founder and Director of Juniper Pediatrics, a clinic modeled after John F. Kennedy's multidisciplinary system of care. Using a holistic, integrated care model, Juniper provides counseling, medication management and family therapy for children with ASD, ADHD and other childhood mental health disorders.

Dr. Coehlo completed her Masters in Nursing with a specialty in parent-child nursing. She spent 10 years working at the Child Development Center at the University of Washington in the Genetics Clinic and Multidisciplinary Clinic. In 1999, she completed her Doctorate degree in Human Development and Family Sciences.

She has continued to teach at the undergraduate and graduate level, and has pursued research in the area of social networking, transition to out of home care for families, and child development.

Dr. Coehlo is a co-editor for the 4th and 5th edition of Family Health Nursing (F.A. Davis, 2010/2013) and has published several journal articles in the areas of families choosing residential care, families in transition, family health nursing, and care of children with special health care needs.

Presenter Bio

Ann Beirne, M.A. BCBA is a Board Certified Behavior Analyst with over two decades of experience working with individuals with autism spectrum disorder.

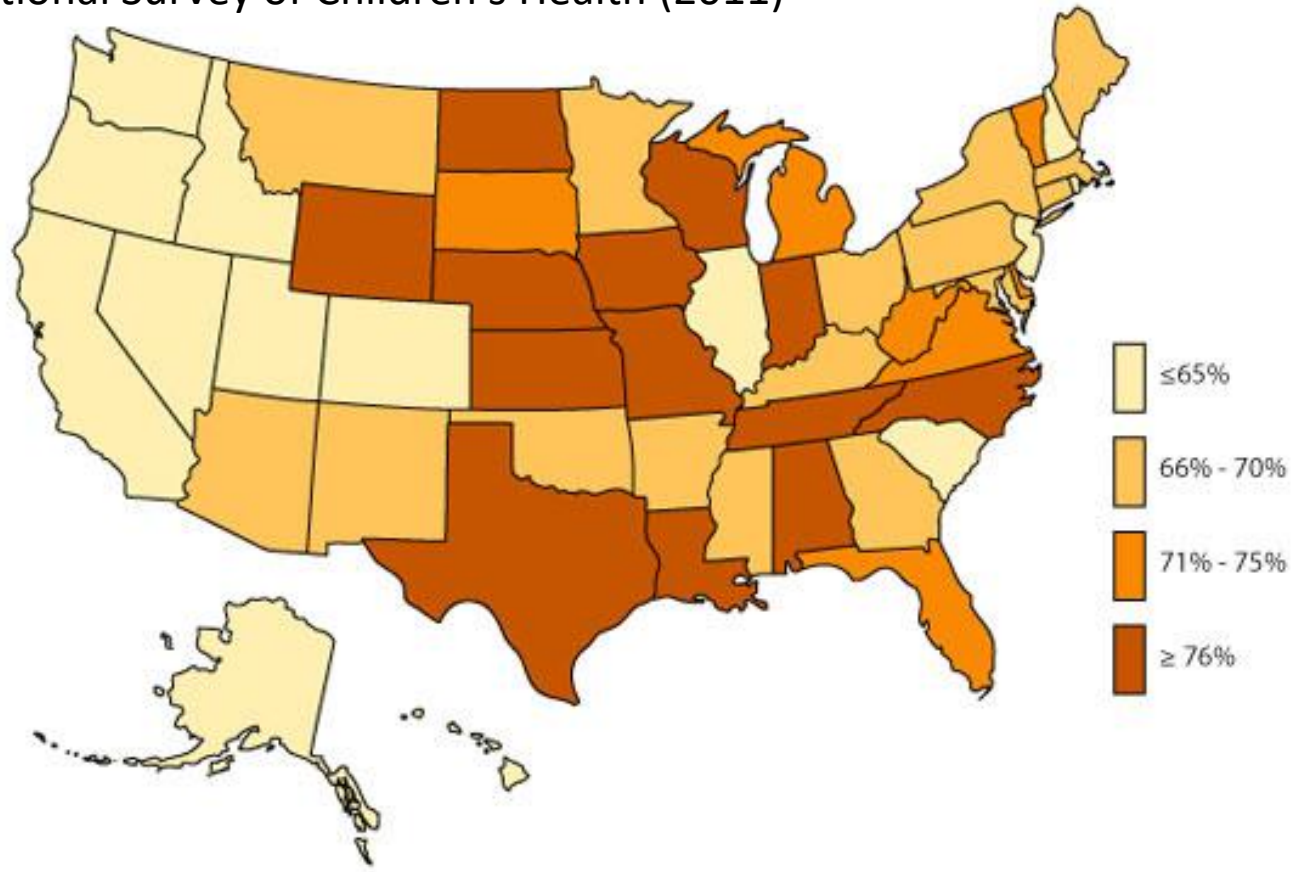
She has provided direct services to children and families in home environments, schools, and residential programs. Her work with this population has spanned the lifespan, including toddlers, young children, adolescents and adults with developmental disabilities. Through her work with the Global Autism Project, Ms. Beirne he has trained professionals on five continents in the science of behavior analysis and on evidence based practices for individuals with autism

Ms. Beirne is co-author of the textbook Understanding Ethics in Behavior Analysis: Practical Applications available from Routledge Publishing in 2019.

In addition to her professional experience, Ms. Beirne is also the mother to a twice-exceptional child--an elementary school age boy with ADHD and giftedness.

Parent Reported ADHD Medication Treatment

Percent of Youth Aged 4-17 **Currently with ADHD** Receiving Medication Treatment by State: National Survey of Children's Health (2011)



Source: Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated ADHD: United States, 2003—2011

Review of the Evidence

American Academy of Pediatrics Technical Report

Treatment of Attention-Deficit/Hyperactivity Disorder:
Summary of 2011 American Academy of Pediatrics Guidelines

Abstract

The American Academy of Pediatrics' Committee on Quality Improvement, Subcommittee on Attention-Deficit/Hyperactivity Disorder, reviewed and analyzed the current literature for the purpose of developing an evidence-based clinical practice guideline for the treatment of the school-aged child with attention deficit/hyperactivity disorder (ADHD).

This review summarized recommendations for assessment, treatment, medication considerations, and expected outcomes.

Brown, R., & Padgett Coehlo, D. (2019, April). ADHD training webinar series. In R. Brown (Chair), *ADHD Assessment and Diagnosis Across Settings.* Symposium conducted at the Special Learning, Inc. CEU LIVE event, Virtual.

Findings

ADHD is considered a **chronic condition** and should be approached as such.

The evidence strongly supports the use of **stimulant medications** for treating the core symptoms of children with ADHD to improve functioning.

Behavior therapy alone has some effect on symptoms or functioning of children with ADHD, although combining behavior therapy with medication seems to improve functioning and may decrease the amount of (stimulant) medication needed.

Comparison among stimulants (mainly methylphenidate and amphetamines) did not indicate that one class outperformed the other.

Attention deficit hyperactivity disorder is best treated with a **combination** of stimulant medication, multimodal treatment, behavior management, parent counseling, and assessment and treatment of co-occurring conditions (i.e., anxiety, oppositional defiant disorder, Autism Spectrum Disorder, mood disorders).

Diagnostic Process and Tools

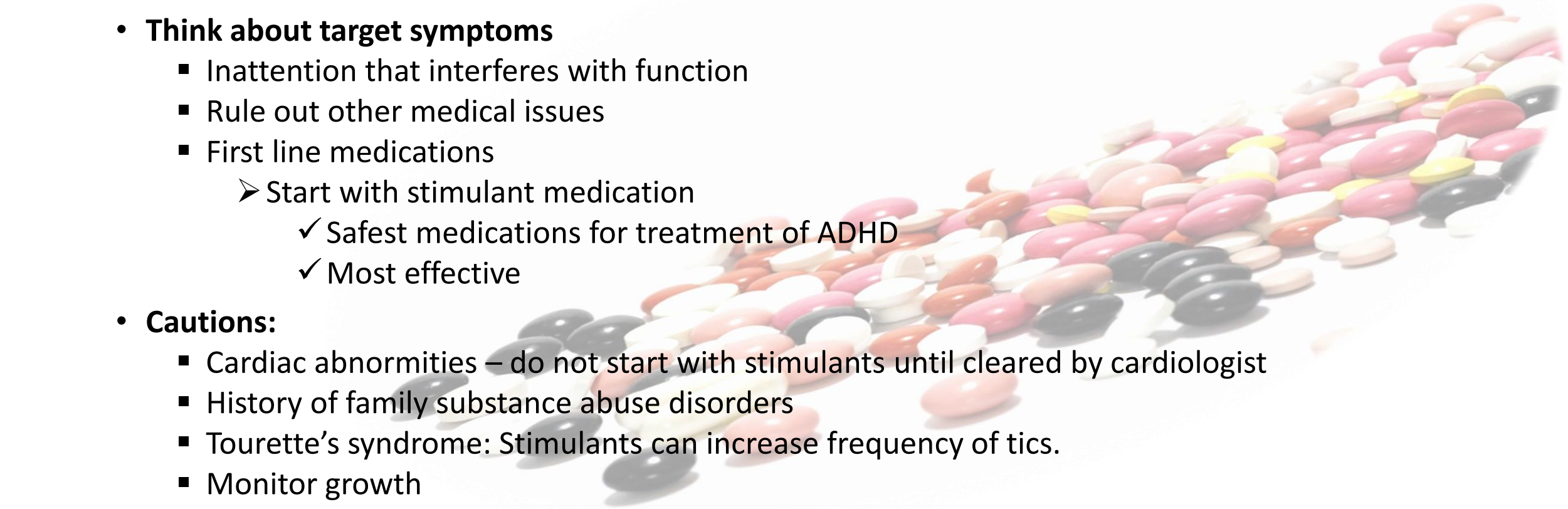
Assessment:

- ***Standard assessment tool:*** Conner's Complete Behavioral Rating Scale
  - Parent
  - Teacher
  - Child if over age 8 years
- ***History***
  - Onset of symptoms
  - Target symptoms
  - Possible co-morbidities and general health
    - Hearing, vision
  - Social history
  - School performance
  - Family history

- ***Physical examination***
  - Cardiac
  - Neurological
  - Behavioral
- ***Laboratory testing (to rule out)***
  - Baseline labs
  - Thyroid screening
- ***Consider academic testing***
- ***Functional assessment***
  - Academic
  - Social
  - Home/behavioral

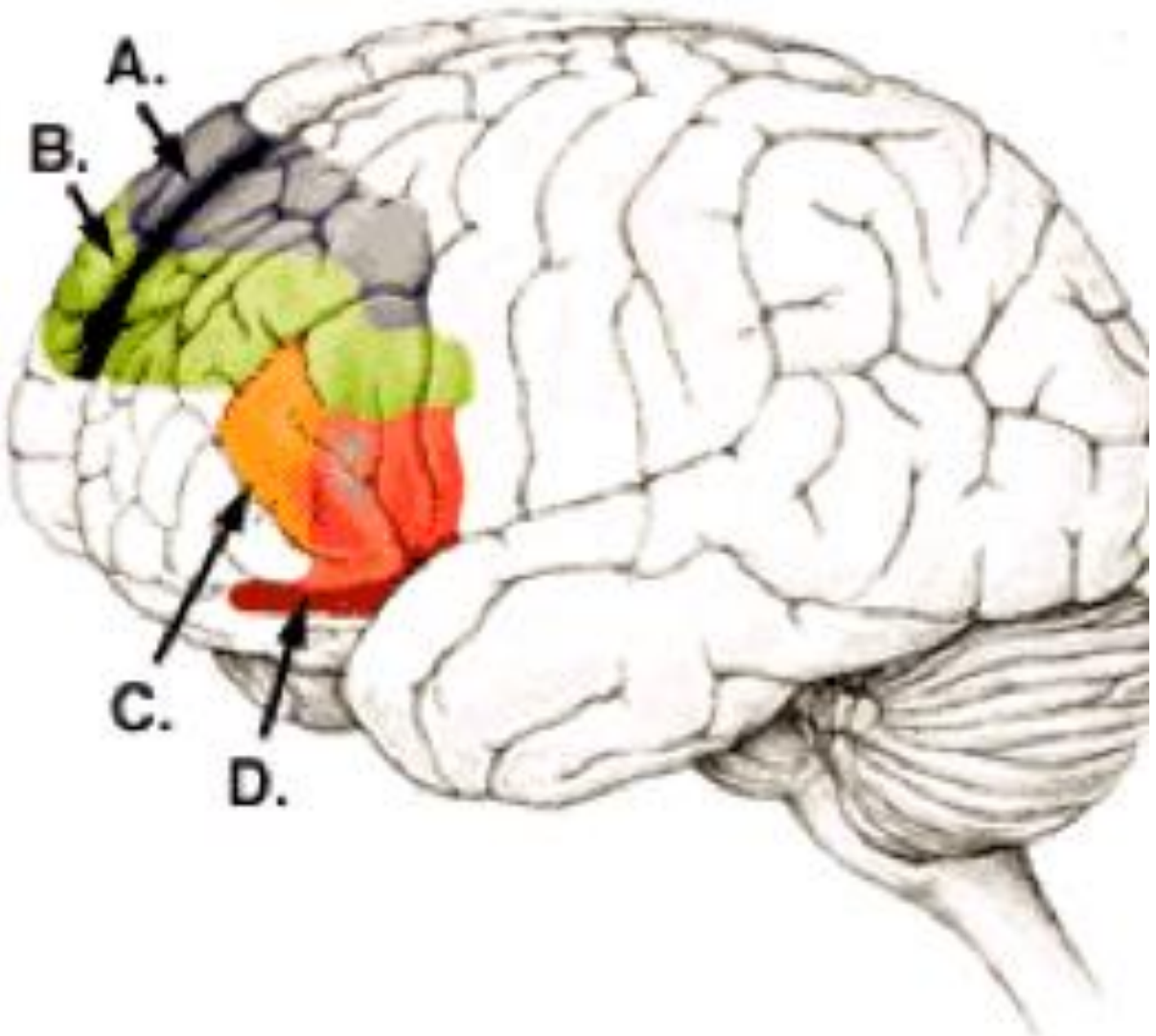
Treatment with Medications

- **How clinicians decide where to start**
  - Assessment –diagnosis
  - Identify functional impairments
- **Think about target symptoms**
  - Inattention that interferes with function
  - Rule out other medical issues
  - First line medications
    - ➢ Start with stimulant medication
      - ✓ Safest medications for treatment of ADHD
      - ✓ Most effective
- **Cautions:**
  - Cardiac abnormities – do not start with stimulants until cleared by cardiologist
  - History of family substance abuse disorders
  - Tourette's syndrome: Stimulants can increase frequency of tics.
  - Monitor growth



How Do Stimulants Work?

- How do stimulants work?
- The importance of the neurotransmitter: Dopamine in the Prefrontal Cortex
- **MEASURE effects of medication behaviorally**.



Medication and the Brain (Khan Academy)

https://www.khanacademy.org/science/health-and-medicine/mental-health/drug-abuse-and-drug-addictions/v/reward-pathway-in-the-brain

5- Minute Break

Using Stimulant Medications

Types of stimulants

- Short Acting
- Long Acting
- Methylphenidate vs. Amphetamines

Short acting:

- Duration 4 hours
- Used primarily for titration phase

Longer-acting (less frequent dosing)

- Lasts 6 to 16 hours
- Used for long term treatment

Different formulations:

- Liquid
- Patches
- Capsules
- Tablets

Starting Medication

Assess

Titrate

Transition

1st Step: Assess how the child is responding to short acting stimulant

- Onset in the first hour; duration 4 hours
- Compare functioning in the morning vs. afternoon at home and school

2nd Step: Titrate the dose

- Start with lowest possible dose and titrate to the most effective dose with the fewest side effects.
  - ➢Measure by use of rating scale (Conner's or Vanderbilt) for parents and teachers, and children 8 years and older.
  - ➢Observe for effects vs. side effects.
  - ➢Look at side effects until you have the desired response.

3rd Step: Transition to longer-acting (extended release) stimulants

- Continue to monitor with rating scales, growth, neurological examination, cardiac exam, and observation of behavior.

Case Study

- Sam is a 13 year old male. He was diagnosed ADHD-combined at the age of 7 years.
- He started with behavioral therapy and a 504 Plan at school.
- He was expelled from public school.
- He was titrated on Methylphenidate, with transition to Extended Release, with dose adjustments across time.
- He is currently on Methylphenidate ER 36 mg per day, with a short acting Methylphenidate 5 mg in the afternoon.
- He continues to receive behavioral therapy and his parents receive parent counseling (to teach behavioral strategies).
  - Increased use reinforcements
  - Antecedent and consequence strategies (e.g. time outs; response cost; token economy systems)
  - Organizational skills (teach planning skills; color coding for easy access to information; checklists, etc.)
  - Transition
- Next slide will show his most recent Conner's Questionnaire
- Effect of medication, when it works well, can be dramatic
  - Complete positive behavior – On task, focus, and improved function

Male Profile: Ages 12–18

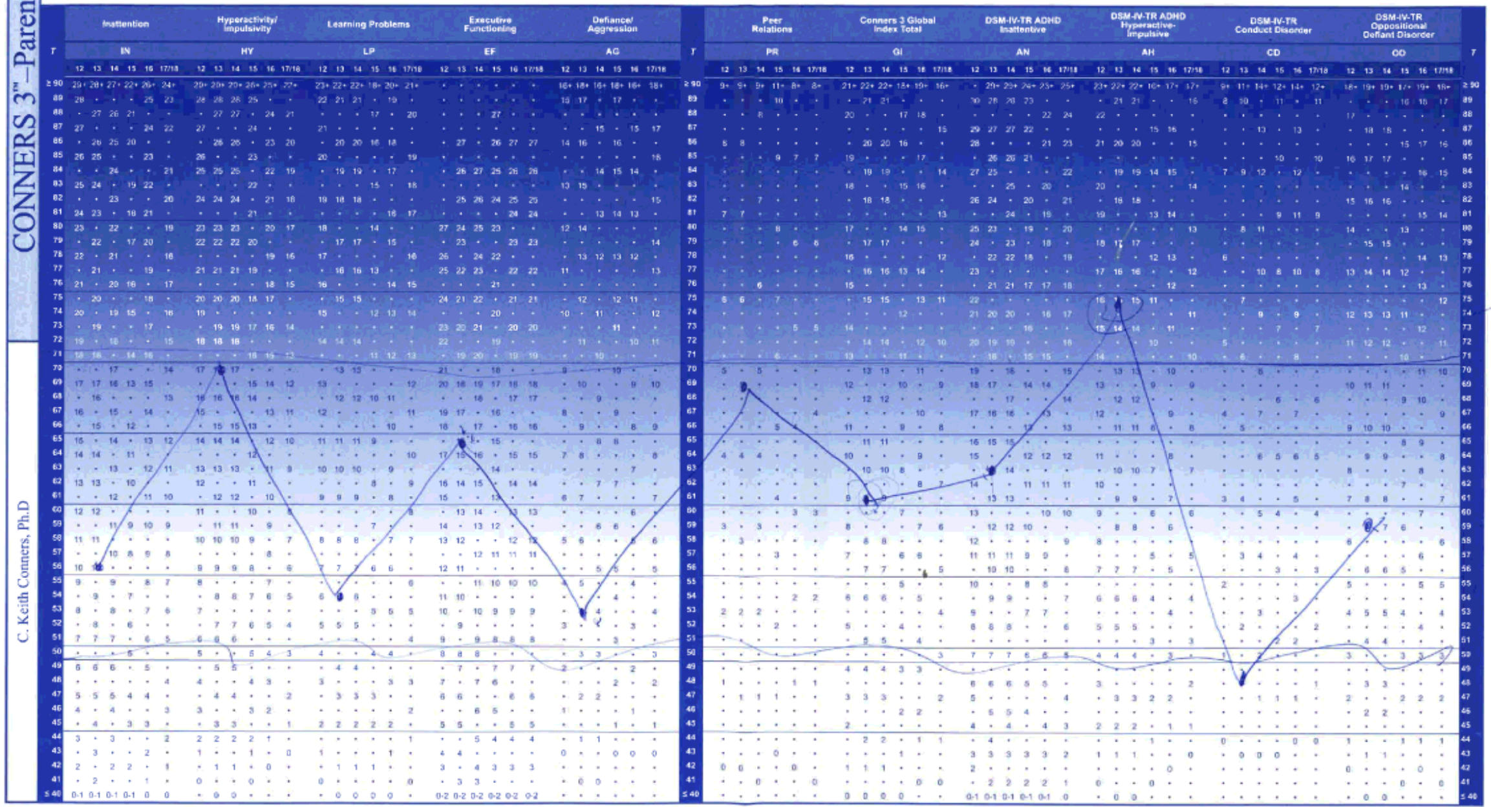
CONNERS 3rd—Parent

C. Keith Conners, Ph.D

Child's Name/ID: _____ Age: 13 Years 5 Months Birth Date: 3 Month / 10 Day / 03 Year

Gender: (M) F Grade: 8 Parent's Name/ID: _____ Admin Date: 8 Month / 10 Day / 18 Year

Instructions:
1. Using the Total Raw Scores from the Scoring Grid, circle the raw score for each scale under the appropriate scale and age column.
2. Follow the row across to the left, right, or center to find the T-score for each scale.
3. Connect the circled scores with straight lines to obtain the profile.



Referral to Specialists

Most pediatricians will refer to a psychiatrist if first line stimulants are not effective

- Most pediatricians will prescribe stimulants (because it's safe)
- Referral after first failed trial of stimulants or with co-morbidity
  - Autism
  - Mood disorders
    - ✓ Mood disorders (bi-polar) – 65% to 80% are diagnosed with ADHD
  - Oppositional defiant disorders
  - Depression and/or anxiety
- Other classes of medication to consider:
  - Guanfacine (Intuniv)
  - Atomoxetine (Strattera)
  - Bupropion (Wellbutrin)
  - Consider treatment for co-morbidity if other classes of stimulants are not working

How to Use a Team Approach to Managing Meds

MEASURE effects of medication behaviorally.

- How do you get BCBAs to be active participants?
- Affinity of how the effects of medication can/should be measured to the role of the BCBA.
- Behavior analysts generally have negative perception of medication because they are not aware of the benefits of medication and how it works
  - Why? How to dispel?

- Recommendation for those hesitant to start medication
  - Try behavior management to start. More conservative method.
  - Use a trial of medication to see if has any effect on behavior
    - Note. Medication can be stopped at any time due to short half-life or duration of effects
  - Once you get buy-in (effectiveness), transition to longer acting formulations of the stimulants

Common Terminology (Pscyhology and ABA)

Psychology	Behavior Analysis
Functioning (Diagnosis)	**Functions of Behavior** Medical, Escape, Attention, Tangible, Self-stimulation (MEATS)
I.Q. (Cognitive Ability)	Skills
Observable vs. non observable issues	Internal events / Private Events
Reinforcement vs. Reinforcer	Positive Reinforcement (to add something) Negative Reinforcement (to remove something)
Rapport	Pairing
Anxiety	Escape
Retention or Regression	Maintenance
Coping Skills	Delay to Reinforcement
Proactive Plan	Antecedent Strategies
Replacement (on-task) Behavior	Functional Equivalent Replacement Behavior

Marroquin, M., & Rumfola, J. (2019, April). Multidisciplinary collaboration series. In M. Marroquin (Chair), *Module 4- Psychologist & ABA.* Symposium conducted at the Special Learning, Inc. CEU LIVE event, Virtual.

Common Myths

If your child is on a stimulant, your child will not grow.

Every child needs a "medication holiday"

Ritalin kills

Too many children are being prescribed stimulants

Children grow out of ADHD

Children on stimulants are at a higher risk for drug addiction

Children with ADHD are cognitively impaired

ADHD is a behavioral problem due to poor parenting

A strong child with ADHD will not need medication; just will-power and discipline

Video games are good for children with ADHD; they help calm the child

If a child can watch a television show, they cannot have ADHD

Summary

- ADHD is best treated with a combination of stimulant medications, behavioral therapy, parent counseling, and school involvement.
- Stimulant medications are safe medications with good efficacy.
  - 65-85% of children diagnosed with ADHD are given medications as part of their treatment plan.
- Other medications are available if stimulants are not effective or cause intolerable side effects.
- ADHD commonly co-occurs with other diagnoses.
- When treated, children with ADHD perform as well as typically developing children. When not treated, children with ADHD are at higher risk for academic failure, drug addiction, criminal behavior, and failed relationships.
- Medication should not be the only treatment that children with ADHD receive.

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Next in the ADHD in Series:

ADHD Management: Behavioral Strategies Across Settings (LIVE 6/11/2019)

Thank you to the wonderful Special Learning team members without whom our experience would be greatly diminished (or just plain disorganized!)

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