ADHD TREATMENT OVERVIEW

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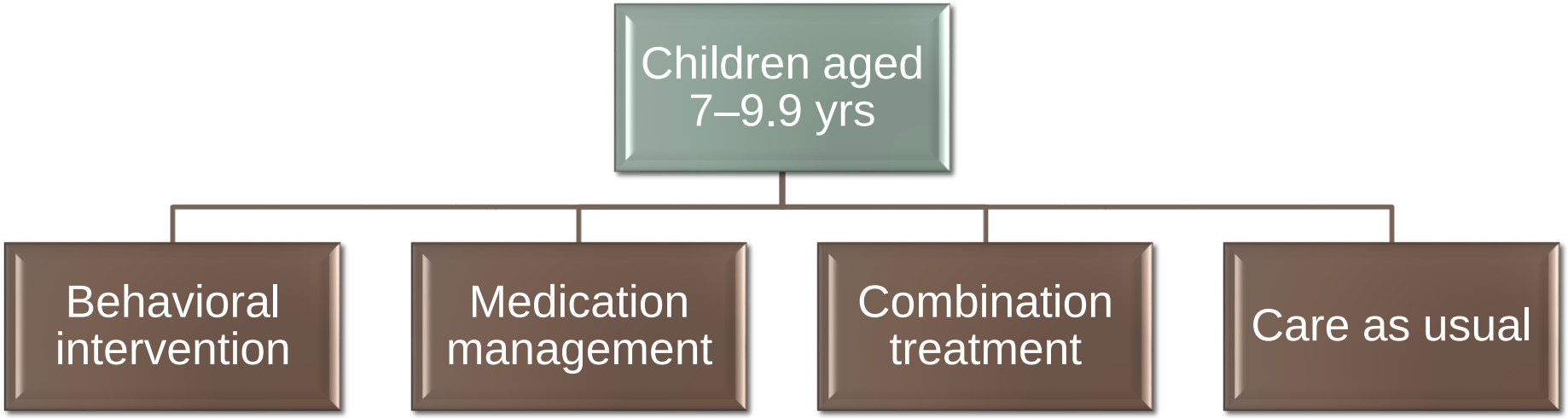
Learning Objectives

1. Understand the role medications play in treating ADHD and describe their goals of therapy.
2. Describe consequences of not treating or under treating ADHD.
3. List guideline-recommended options for treating ADHD in preschool-aged children, elementary school-aged children, and adolescents.
4. Compare and contrast the expected efficacy of medications used in treating ADHD.

Multimodal Treatment Study of Children with ADHD (MTA)

- NIMH funded,14-month RCT contrasted impact of 4 treatment modalities on ADHD symptoms, co-morbidities and functional impairment in children aged 7 – 9.9 years



Arch Gen Psychiatry. 1999;56(12):1073

MTA Study Outcomes

- Treatment outcomes were superior in medication management and combination treatment groups compared to behavioral intervention and usual care groups
- ADHD symptom reduction was virtually identical between medication management and combination treatment groups
- Final medication doses in the combination treatment group were significantly lower than in the medication management group
- 25% of the behavioral intervention group required medication before study end (14 months)

MTA Implications

- Supports use of stimulant medication as first-line treatment option for ADHD with or without behavioral intervention
- However, quality of delivery of medication treatment is crucial for optimal treatment effects
- Identifies key factors in optimizing ADHD treatment outcomes with medication use:
  - Accurate dosing
  - Frequent monitoring
  - Dosages spanning after-school hours
  - Contact with teachers
  - Dedicated time during clinic visits for medication counseling (i.e. adherence, adverse effects)

Consequences of Untreated or Undertreated ADHD

ADHD is a chronic condition and should be treated following the principles of the chronic care model

Physical Health	Mental Health	Psychosocial Functioning
• chronic medical conditions • motor vehicle accidents • injuries	• anxiety • substance abuse • depression • suicide	• academic underachievement • interpersonal issues • underemployment • legal troubles

JAMA. 2016;315(18):1997-2008.

Treatment Options

- Pharmacotherapy
  - CNS stimulants
  - NE reuptake inhibitor
  - Alpha-2-adrenergic agonists
  - Antidepressants
- Behavioral/cognitive interventions
- Combination treatment

↑ executive function
↑ attentiveness
↓ distractibility
↓ hyperactivity and restlessness
↓ behavioral disruption
↓ impulsive decisions and risk taking

Guideline Recommendations

Age Range	First-Line Treatment
Preschool-aged (4-5 years old)	Evidence-based PTBM and/or behavioral classroom intervention[a]
Elementary school aged (6-11 years old)	FDA approved medication[b] + evidence-based PTBM and/or behavioral classroom intervention (preferably both)
Adolescents (12-18 years old)	FDA approved medication[b] + evidence-based training interventions and/or behavioral interventions if available; prepare for transition to adulthood

PTBM: parent training in behavior management

[a] consider methylphenidate if moderate to severe dysfunction remains despite behavior interventions

[b] order of evidence: stimulant > atomoxetine > ER guanfacine > ER clonidine

American Academy of Pediatrics. Clinical Practice Guideline 2019. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents.
Pediatrics October 2019, 144 (4) e20192528; DOI: https://doi.org/10.1542/peds.2019-2528

Questions??

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