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- Leading a regional committee providing consultation, education and leadership on ADHD best practices
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enhancing your IMPACT
the BHPN annual conference 2021

ADHD & ASD

Kavitha Rao

MD

Disclosures

- Kavitha Rao, MD, has no relevant financial or non-financial relationships to disclose.
- It should be noted that Kaiser Permanente has a business relationship with the BHPN.

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ADHD & ASD

Learning Objectives

- Describe some of the overlapping and distinguishing features of ADHD and ASD
- Recognize and routinely monitor clients for persistent and impairing hyperactivity and inattention
- Reach out for clinical guidance if hyperactivity, impulsivity, or inattention are persistently interfering with progress in BHT
- Encourage families to seek medical attention if hyperactive-impulsive and inattentive behaviors are persistently interfering with progress in BHT

Why Are We Discussing This Topic?

- Many families assume that hyperactivity, impulsivity and inattention are due *only* to ASD.
- Many families ignore ADHD treatment, assuming BHT for ASD will manage hyperactive-impulsive and inattentive symptoms.
- Hyperactive-impulsive and inattentive symptoms can interfere with BHT.
- Untreated ADHD is associated with adverse outcomes for patient and family!

CASE #1

7-year-old boy

- Just diagnosed with ASD and starting ABA
- No other diagnosed conditions, no concern about Intellectual Disability
- Difficult to engage, constantly moving around, prefers to climb, run, and jump
- Parent complains that he must be very closely monitored in parking lots as he will quickly dash away
- 2 ED visits
  - Broken arm after jumping off the stairs
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CASE #2

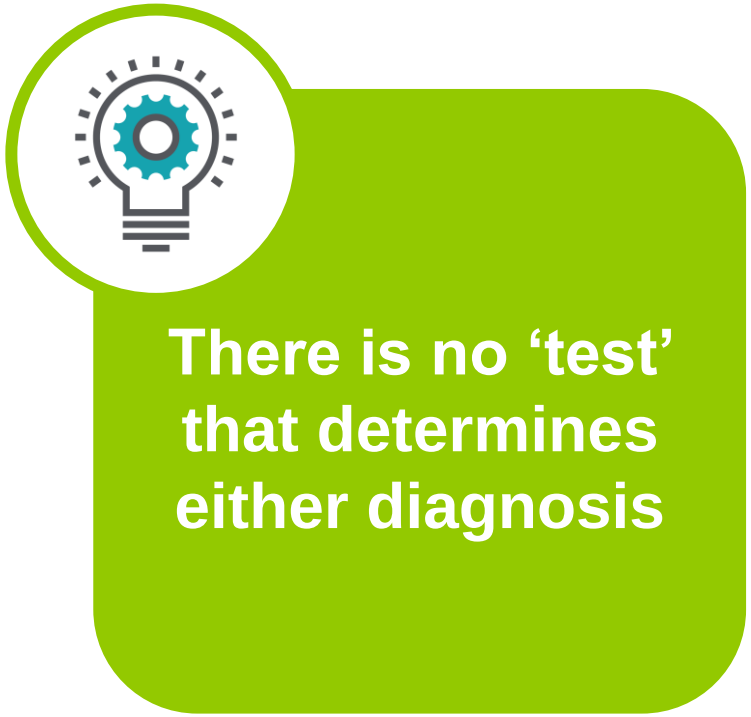
10-year-old girl

- Diagnosed with ASD at age 3
- Was in Special Day Class for Pre-K to 2nd grade, now in mainstream with Resource Specialist Program
- In remote learning for 4th grade
- Parent complains she is unable to focus on academic work and is restless (even prior to COVID)
- Pediatrician asks if BHT team can fill out ADHD screening questionnaires since there is no teacher to report on behaviors.

ASD & ADHD: Overlapping Features

- Both are “neurodevelopmental disorders” with early onset of symptoms and persistence into adulthood.
- Both are increasing in prevalence.
- Males affected much more than females.
- Both are heritable.
- Both are spectrum disorders.
  - Range from subclinical traits to fully developed disorders

How To Diagnose ASD vs. ADHD?



Attention-Deficit/Hyperactivity Disorder

- Studied for over 100 years
- Diagnostic and Statistical Manual (DSM)-5 criteria:
  - Developmentally inappropriate, impairing, and persistent pattern of symptoms *in at least one of two* symptom clusters:

INATTENTION:

At least 6 symptoms for children

At least 5 symptoms for persons age 17+

AND/OR

HYPERACTIVITY & IMPULSIVITY:

At least 6 symptoms for children

At least 5 symptoms for persons age 17+

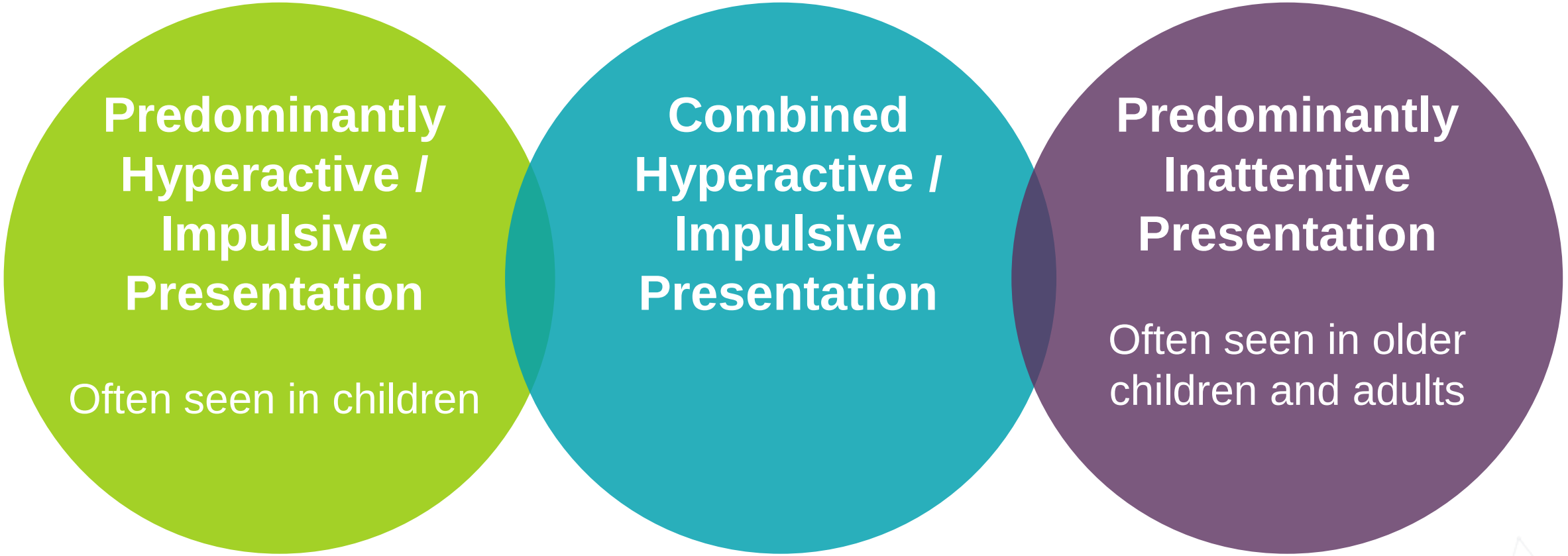
Inattention

- Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).
- Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).
- Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).
- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily sidetracked).
- Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; has poor time management; fails to meet
- Often avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms or reviewing lengthy papers).
- Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses and cell phones).
- Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
- Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills and keeping appointments).

Hyperactivity-Impulsivity

- Often fidgets with or taps hands or feet or squirms in seat.
- Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or workplace or in other situations that require remaining in place).
- Often runs about or climbs in situations where it is inappropriate. (Note: In adolescents or adults, may be limited to feeling restless.)
- Often unable to play or engage in leisure activities quietly.
- Is often "on the go," acting as if "driven by a motor" (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants and meetings; may be experienced by others as being restless or difficult to keep up with).
- Often talks excessively.
- Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for turn in conversation).
- Often has difficulty waiting his or her turn (e.g., while waiting in line).
- Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing).

Attention-Deficit/Hyperactivity Disorder: Sub-Types



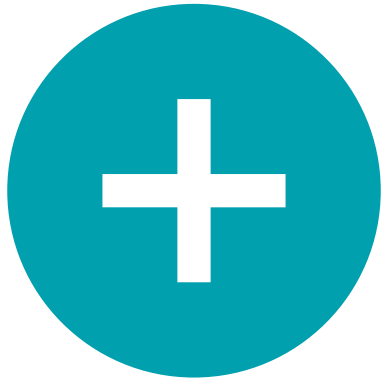
Attention-Deficit/Hyperactivity Disorder

Several inattentive or hyperactive-impulsive symptoms were present prior to age 12.
Several symptoms are present in two or more settings (e.g., home, school or work; with friends or relatives; other activities).
Clear impairment in social, academic or occupational functioning
Symptoms are not only present throughout the course of a psychotic disorder, and not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).

The ASD-ADHD Connection

- Though there are no overlaps in *criteria* for ADHD and ASD in the Diagnostic and Statistical Manual (DSM), they often occur together.
- Rates of ADHD in children with ASD range from 40-70% (depending on the study).
  - Most common comorbid (co-occurring) psychiatric condition in ASD
- Relatives of persons with ASD are much more likely (than the general population) to have ADHD.
  - And vice versa
  - A genetic connection, but the details are not known

ASD + ADHD



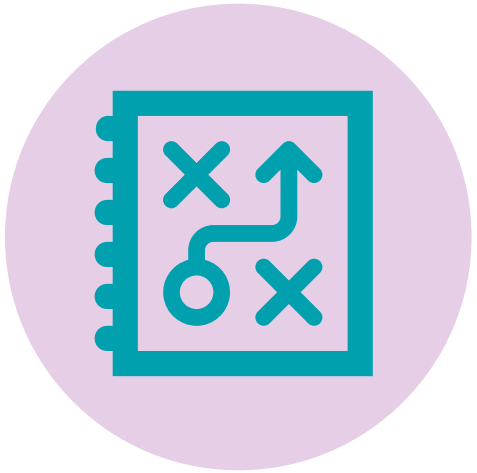
Those with both ASD and ADHD...

- Have more severe ASD
- Are more likely to have additional mood and anxiety disorders

ASD & ADHD are Both Stressful on Family Life

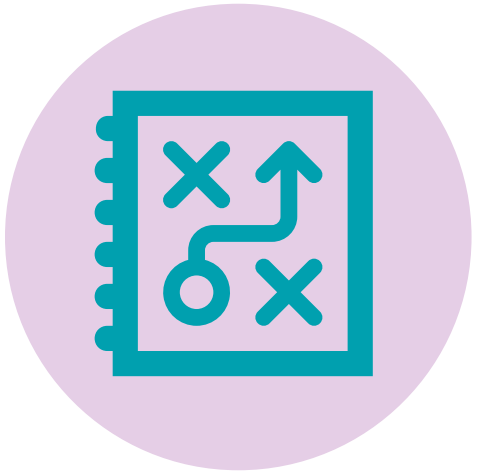
- Lower parent self-efficacy scores in children with ASD + ADHD vs. ADHD alone
- Large population-based study in Denmark on 11-year-olds:
  - 50% of the ADHD families had separated
  - 37% of ASD families had separated
  - 25% of control families had separated
  - Most marital dissolutions occurred between ages 3 and 5 years old
  - Did not study ASD + ADHD

Similarities in ADHD & ASD: Executive Functioning



- “Executive function is a broad group of mental skills that enable people to complete tasks and interact with others. An executive function disorder can impair a person's ability to organize themselves and control their behavior.”
- Very often impaired in ADHD, often impaired in ASD.
- Both considered executive functioning disorders.

Executive Functions



- One conceptualization (T.E. Brown):
  - Activating for tasks
  - Organizing, prioritizing
  - Focusing, sustaining and shifting attention to task
  - Regulating alertness, sustaining effort, and processing speed
  - Managing frustration and modulating emotions
  - Utilizing working memory and accessing recall
  - Monitoring and self-regulating action

Distinguishing Features Of Diagnosis

ASD

Age of Onset:

- **Can be diagnosed reliably as early as age 2 years**

Motor mannerisms

Impulsivity not a usual feature

ADHD

Age of Onset:

- **Can be diagnosed reliably as early as age 3-4 years**
- **Should not be diagnosed in toddlers; easier to distinguish ADHD behaviors from age-appropriate behaviors after toddlerhood**

General hyperactivity

Impulsivity a common feature

Distinguishing Features Of Diagnosis

ASD — Social Functioning	ADHD — Social Functioning
Social functioning impairment <u>required</u> for ASD diagnosis	**Social functioning impairment (to a lesser degree) seen often in ADHD but <u>not required</u>**
Lower level of reciprocal friendships	**Lower level of reciprocal friendships (to a lesser degree)**
Lack social knowledge, leading to poor social performance	**Have social knowledge, but a deficit in social performance**
Core feature of ASD	**Deficits related to disruptive behaviors (intrusiveness, impulsive blurting out) and/or inattention, but could be other factors**

Distinguishing Features Of Treatment

ASD

ABA is helpful, especially at young ages

Lack of knowledge of social skills, Social Skills Training is effective

Childhood Focus:
- Social, adaptive and academic skills development

Adulthood Focus:
- Vocational and adaptive living skills development

Medication does not help core features

ADHD

ABA is not an evidence-based treatment

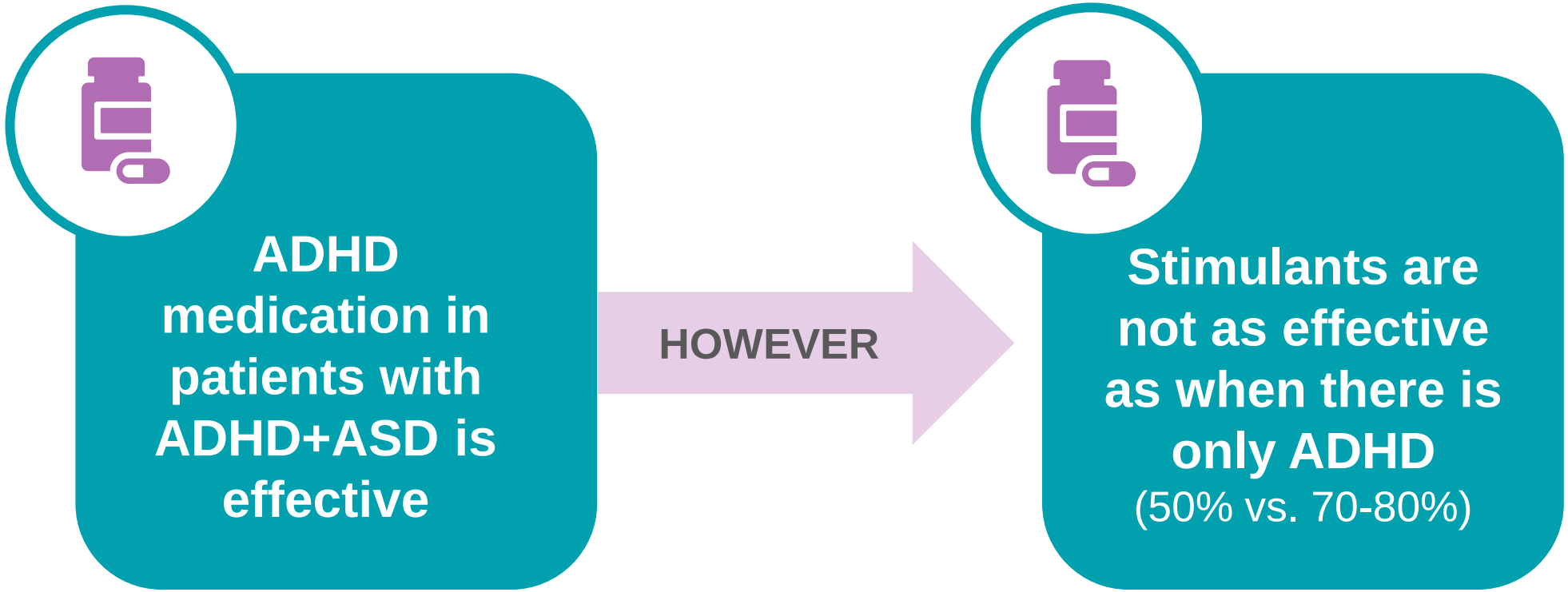
Knowledge of social skills but poor performance, Social Skills Training not effective

Childhood Focus:
- Organizational support and coaching
- Parent/teacher behavior modification (contingency) training

Adulthood Focus:
- Cognitive Behavioral Therapy
- Organizational coaching

Medication very effective for core features

Medication Management of ASD in ADHD



Medication Management of ASD in ADHD

- Patients with ASD+ADHD are somewhat more likely to have side effects to stimulants (methylphenidate, amphetamines) than those with only ADHD:
  - Decreased appetite
  - Difficulty falling asleep
  - Abdominal discomfort
  - Emotional outbursts, irritability
- Therefore, non-stimulants used if stimulant not effective:
  - Guanfacine (Tenex, Intuniv)
  - Atomoxetine (Strattera)
  - Clonidine (Kapvay)

Medication Management of ASD in ADHD

- “There was no evidence that methylphenidate [a stimulant] has a negative impact on the core symptoms of ASD, or that it improves social interaction, stereotypical behaviours, or overall ASD. ”

On the other hand…

- If ADHD exists along with ASD, medication treatment often helps improve response to ASD treatment.

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