

# Pulled by the Now: Understanding ADHD in Children

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## Objectives

Discuss how to recognize ADHD symptoms and the varying presentations impacting executive functioning skills.

Describe how to navigate the evaluation process in the clinic/medical setting

Summarize processes for how to advocate for a child with ADHD in the schools and what resources are available for support.

Apply strategies to engage children with ADHD to set their environment up for success



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## Introductions



**Jasmine Gray, PhD, BCBA**  
Child Clinical Psychologist  
Autism Clinic  
Children's Mercy Hospital



**Christina Pynn, PhD**  
Child Clinical Psychologist  
ADHD Specialty Clinic  
Children's Mercy Hospital



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# Some materials derived from *Kansas City Children's Mercy Hospital, ADHD Specialty Clinic* parent group curriculum

Created by:



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# Who is in the room?

Children's Mercy KANSAS CITY

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## What is ADHD?

Traditional Descriptive Model of ADHD

**Daily Functioning**

- \*developmental impact
- \*two or more settings

Children's Mercy KANSAS CITY

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## What can this look like?

National data: 13.7% of males and 7.1% of females currently have an ADHD diagnosis

ADHD: A neurodevelopmental disorder defined by:

Inattention	Impulsivity	Hyperactivity
Trouble keeping attention on tasks that are not interesting	Difficulty with patience and waiting	Excessive movement
Making careless mistakes	Interrupting others	Fidgeting: squirming when seated
Distractibility	Excessive talking, making noise	Unable to play or take part in leisure activity
Forgetfulness	Repeated failure to follow rules	"Always on the go"
Lose or misplace things a lot	Urgency	
	Lack of perseverance	

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"Pulled around by the now"

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## So what actually causes someone to have ADHD?



### Possible Environmental Factors

Prematurity  
Exposure to high levels of lead  
Febrile seizures  
Brain injuries



### Genetics

Smaller, less active regions in the frontal lobe  
Differences in dopamine/norepinephrine

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## Causes of ADHD

### What we know does NOT cause ADHD:

1. Poor diet
2. Overdemanding teacher
3. Red food dye
4. Too much screen time
5. Overdemanding teachers



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Research has shown that the vast majority of ADHD cases result from differences in neurobiology that have a genetic basis

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## Cortical Maturation in Children with ADHD and TD Children

AGE: 6



ADHD HEALTHY CONTROLS

Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J. P., Greenstein, D. E. E. A., ... & Rapoport, J. L. (2007). Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation. *Proceedings of the National Academy of Sciences*, 104(49), 19649-19654.



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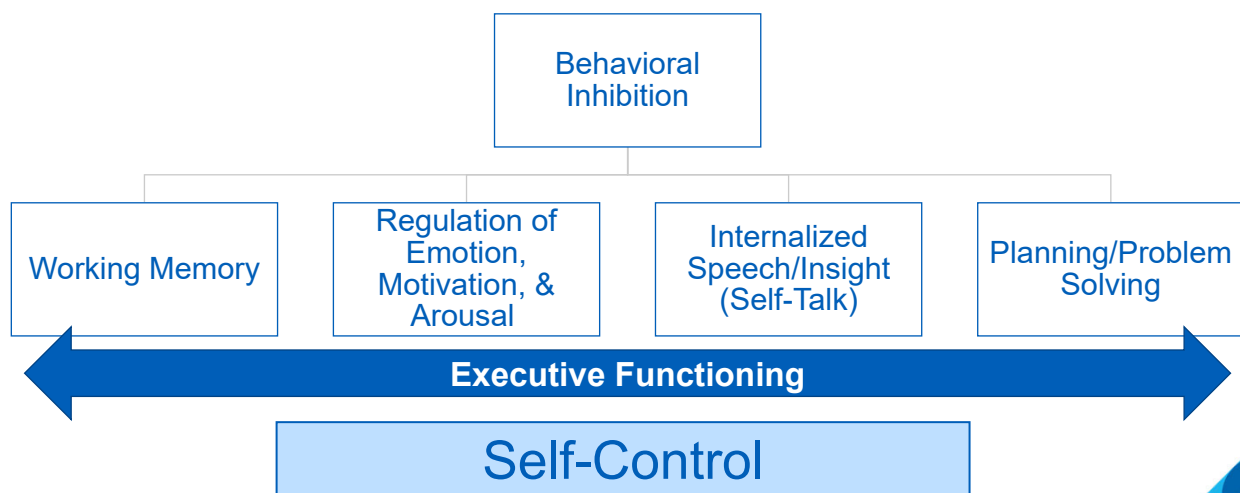
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## Some perspective...

- ADHD is best viewed as a **lifelong disorder** that results from differences in the brain largely cause by one's genetics
  - But I thought some kids can outgrow their symptoms?"
  - The brain chemistry does not change, BUT individuals can learn to manage their symptoms to function and THRIVE in their life
- Research over the past 40+ years has shown that intervention can:
  - Decrease negative effects of ADHD
  - Improve a child's day-to-day functioning

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## Russell Barkley's Model of ADHD



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Imagine the different skills/steps that were required for you to attend this conference today...



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## Elements of Executive Functioning

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PLANNING



ORGANIZATION



TIME MANAGEMENT



WORKING MEMORY



METACOGNITION

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## Elements of Executive Functioning pt 2



RESPONSE  
INHIBITION



EMOTIONAL  
CONTROL



SUSTAINED  
ATTENTION



TASK INITIATION



FLEXIBILITY



GOAL-DIRECTED  
PERSISTENCE

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## Behavioral Inhibition

- The ability to automatically delay one's initial reaction or response to something going on in your environment, whether *external* or *internal*.

External



Internal



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## Why is Inhibition Important?

1. It allows a child the time needed to “**stop** and **think**” about what they do before they do it.
2. It allows a child to **stop** doing a behavior that **isn't working** and try something else
3. It allows them to use **other ways of thinking** that are necessary for **self-control**



When children can't inhibit themselves, they will often react to the most stimulating thing going on in their environment. They often respond with whatever comes to mind. This is generally not a good thing!

## Negative Feedback Loop

- Kids with ADHD are prone to experiencing negative social or natural consequences so frequently
- **Begin feeling nervous in situations where they might make a mistake or evoke a negative social reaction.**
- By age 12, children who have ADHD receive 20,000 more negative messages from parents, teachers, and other adults than their friends and siblings who do not have ADHD.

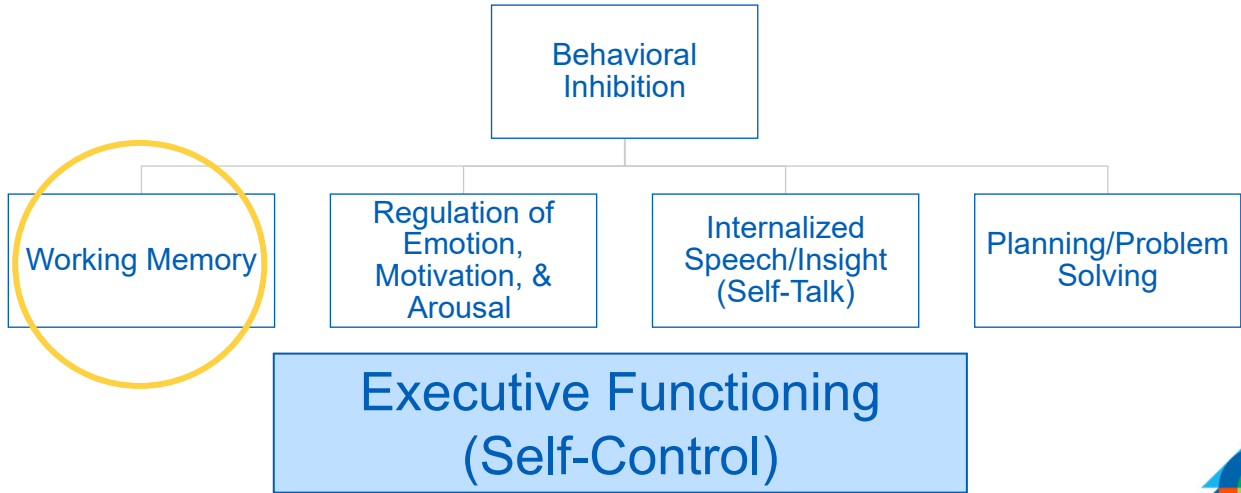


**Positive  
Feedback**



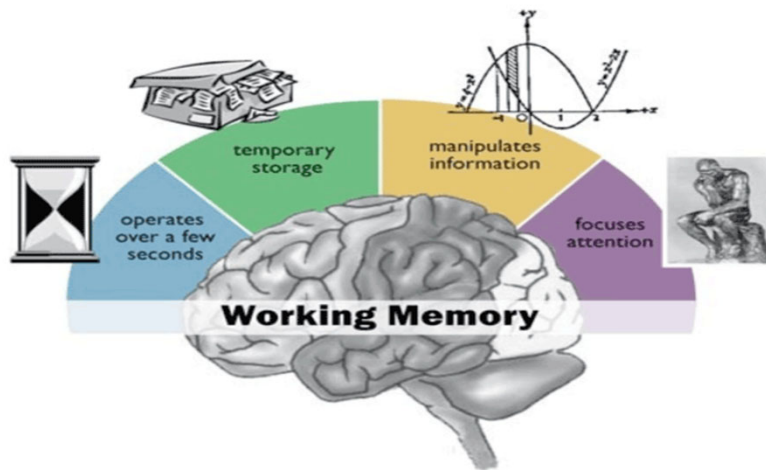
**Negative  
Feedback**

# Russell Barkley's Model of ADHD



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# What is Working Memory?



- Active problem solving
- Mental math
- Hold instructions in mind long enough to execute
- Hold information in mind long enough to write it down
- Comprehension
- Gateway to long-term memory
- Retrieval from long-term memory

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## What you may see...

- Struggles recalling what was previously learned
  - *Example:* forgetting spelling words during the test (although knew them when practiced at home)
- Difficulty following multi-step directions
  - *Example:* “go upstairs and wash your face and brush your teeth”
- Limited *Prospective memory* or “remembering to remember” something when it needs to be remembered at some point in the future
  - *Example:* remembering to turn in your completed homework the next day at school

## Impaired working memory → Impaired sense of time



- Understanding time is harder for children with ADHD than it is for others
  - boring/difficult tasks take forever
  - interesting tasks take no time at all
- “Time-blindness” – seem to have little awareness of time or the passage of time
  - *Example:* “5 more minutes” watching TV turns into watching several more episodes

**GCO** Copy and place by strategies

Gray, Jasmine, C, 2023-09-22T19:18:48.790

## What you may see...

- The “now” exerting more control over behavior than does prior experience or future consequences
  - Being inconsistent in using past experience to guide current behavior → seem to not learn from experience (**limited hindsight**)
  - Immediate consequences have more appeal than delayed ones → less motivated by future consequences (**limited foresight**)

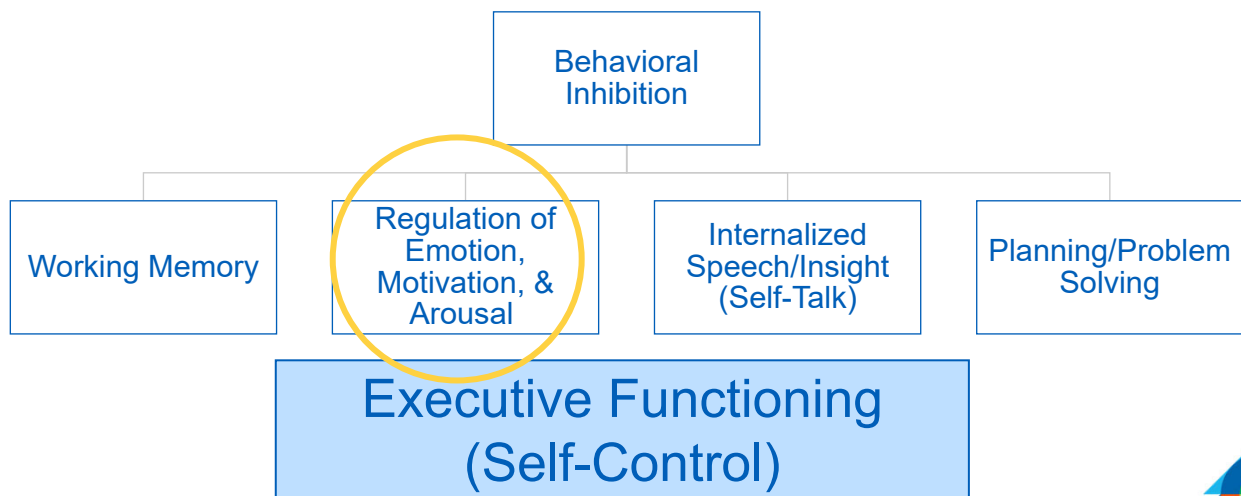
## What you may see...

- Not doing the right thing at the right time
- Poor planning ability (*e.g.*, poor ability to estimate how long a task will take)
- Difficulties doing a task now in order to meet a future goal (*i.e.*, procrastination)
- Often “caught off-guard” when it’s time to transition from one task to another
- Delays in the development of social skills maintained more by future rather than immediate consequences (*e.g.*, sharing and trading)

What has resonated  
with you so far?

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## Russell Barkley's Model of ADHD



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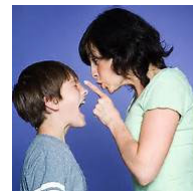
## Emotional dysregulation: what you may see...

- Stronger emotional reactions than expected for a child their age, often accompanied by:
  - Harder/takes longer to calm down
  - Continue to make the same poor choices leading to emotional dysregulation



## Emotional dysregulation: what you may see...

- More frequent and/or intense:
  - Tantrums due to frustration
  - Impulsive oppositional behaviors – especially during transitions
  - Reactive aggressive behaviors





PCPO

## Motivation dysregulation: what you may see...

- Greater need for **external sources** of motivation in the immediate environment
  - *Ex: shouting out during class discussions to make other kids laugh*
- A clear preference for tasks and activities that are very stimulating / high interest
  - *Ex: television, video games, screens*
- Increased difficulty in starting or sticking to “boring” tasks
  - *Ex: Starting and completing a homework assignment*

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## Motivation dysregulation in a nutshell:

Starting & finishing enjoyable tasks:



Starting & finishing difficult/uninteresting tasks:



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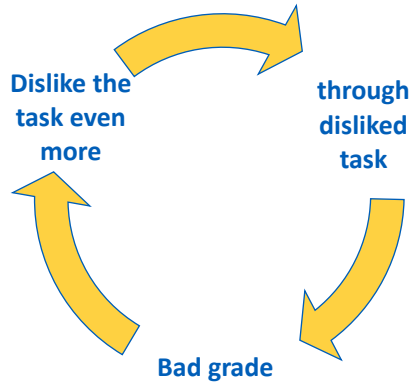
## Slide 31

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**PCPO** Could move this prior to strategy section (relabel title)

Pynn, Christina, PhD, 2023-09-22T18:55:42.406

## Real life application



- a tendency to have lots of partially completed projects/tasks
- being seen by others as “irresponsible” and in need of nagging

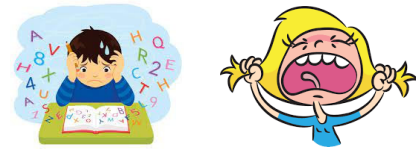
## PROCRASTINATION STATION

- Happens when faced with tasks that are perceived as “boring” and/or “too hard”
  - the pressure of the last minute can be *either*:

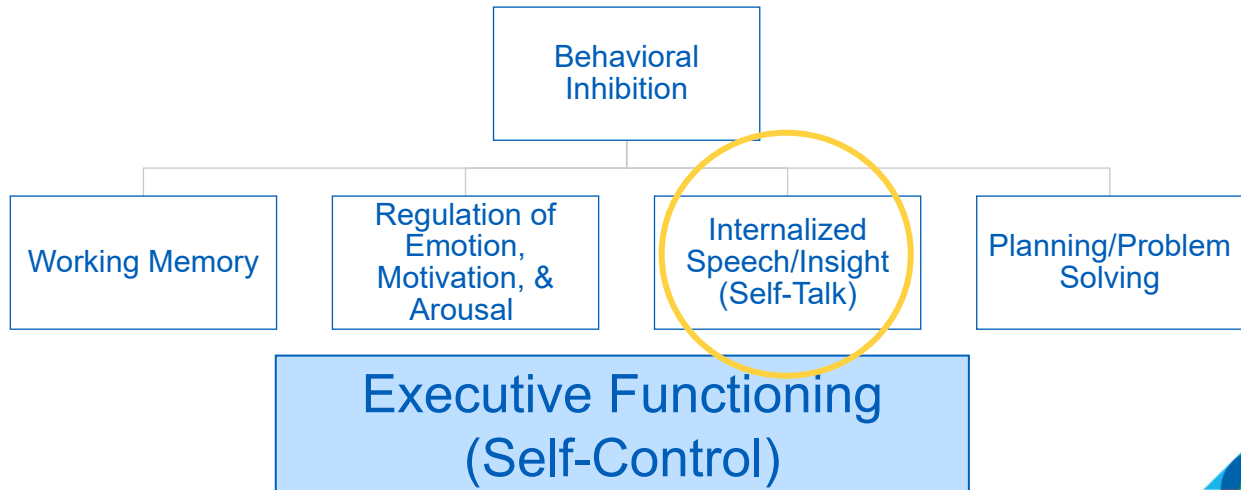
**Activating** →  
resulting in intense  
motivation and focus



**Overwhelming** →  
resulting in a “shut  
down” or a “melt down”



## Russell Barkley's Model of ADHD



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## What is Internalized Speech?

### Thinking to ourselves!

- Conscious thoughts we use to “talk” or guide ourselves through tasks or activities
- Necessary to:
  - match our behavior to rules we have learned for what is appropriate/expected in a situation, *and*
  - reflect on one’s own behavior after-the-fact.



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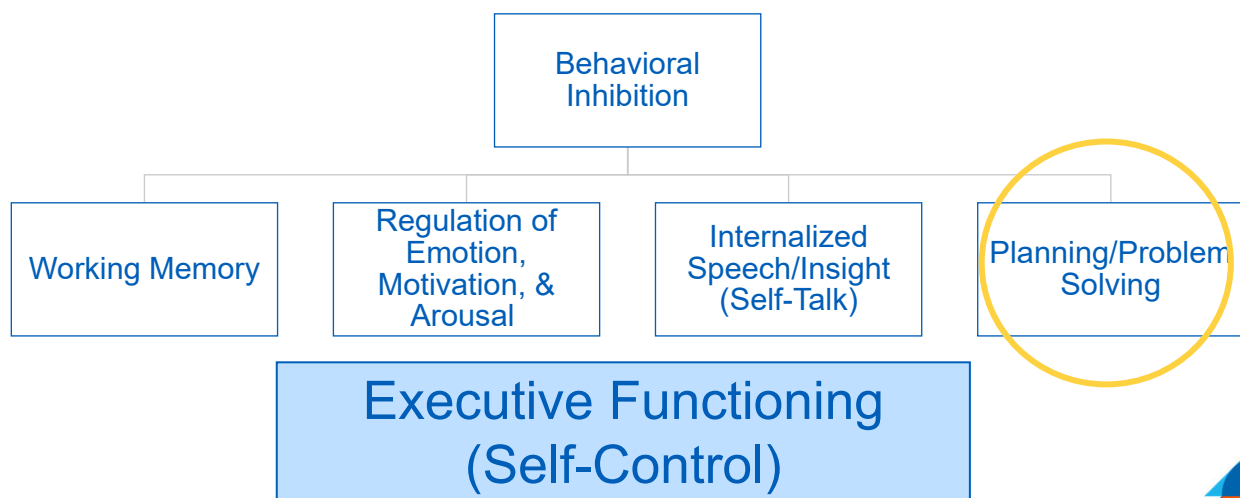
## What you may see...

- More blurting out what they're thinking at the moment
- Less thinking through what they are doing
- Less understanding of what they see, hear, and/or read
- Less follow through with rules and routines
  - Need more prompting and guidance to do routine, everyday tasks
- Less awareness of social/group rules to help regulate behavior

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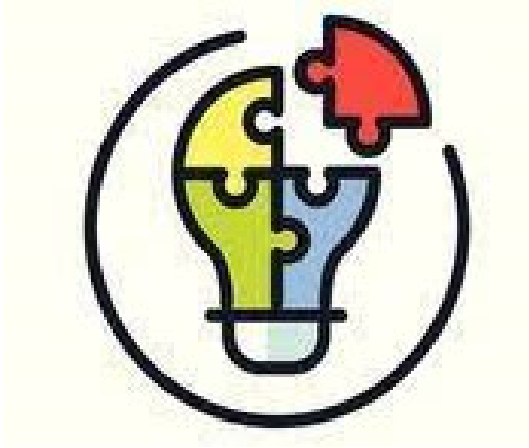
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## Russell Barkley's Model of ADHD



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## What is planning/problem solving?

- The ability to:
  - Use what we have learned in the past to deal with new experiences in the present
  - Break previously learned behaviors into smaller parts and put them back together in a new way to meet the demands of the moment in front of them

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## What you may see...

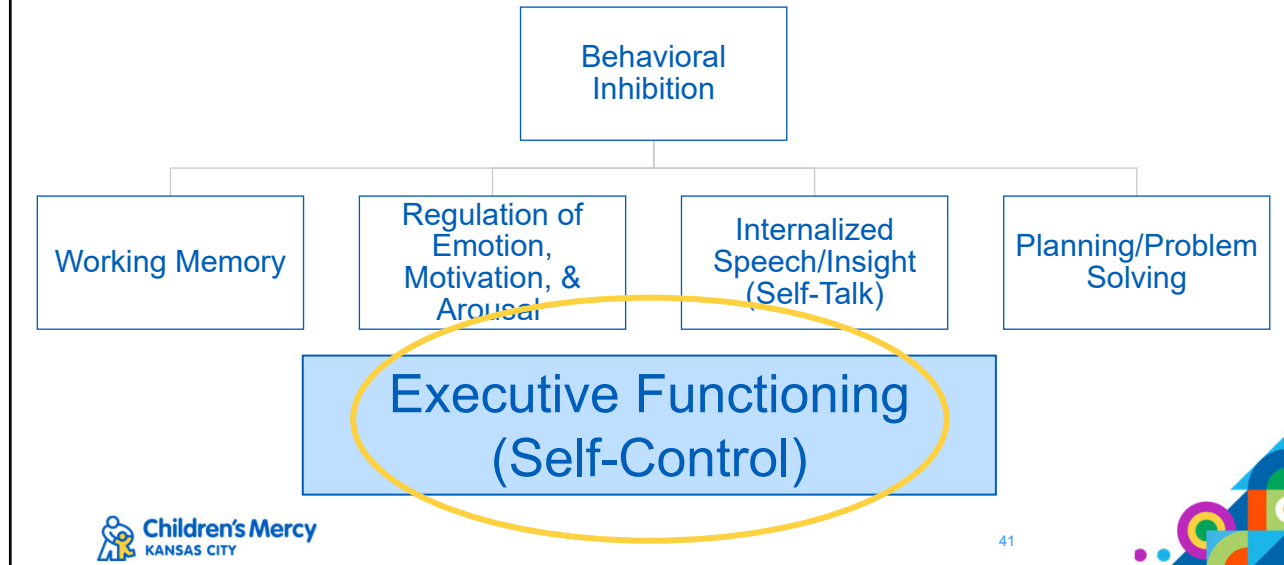
- Difficulties using previously learned skills to address new challenges
  - One size fits all perspective
  - If it doesn't fit → cue frustration
- Difficulties coming up with more than one way to achieve a particular goal
  - Rigid thinking
  - If rigidity is broken → cue frustration



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## Russell Barkley's Model of ADHD



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## What is self-control?

- The ability to exert **age-appropriate** control over one's own behavior based on:
  - ✓ What is going on **in the moment**
  - ✗ One's **past experiences**
  - ✗ One's **expectations for the future**

*"Self-control refers to changing one's behavior in the moment in order to achieve some future goal."*

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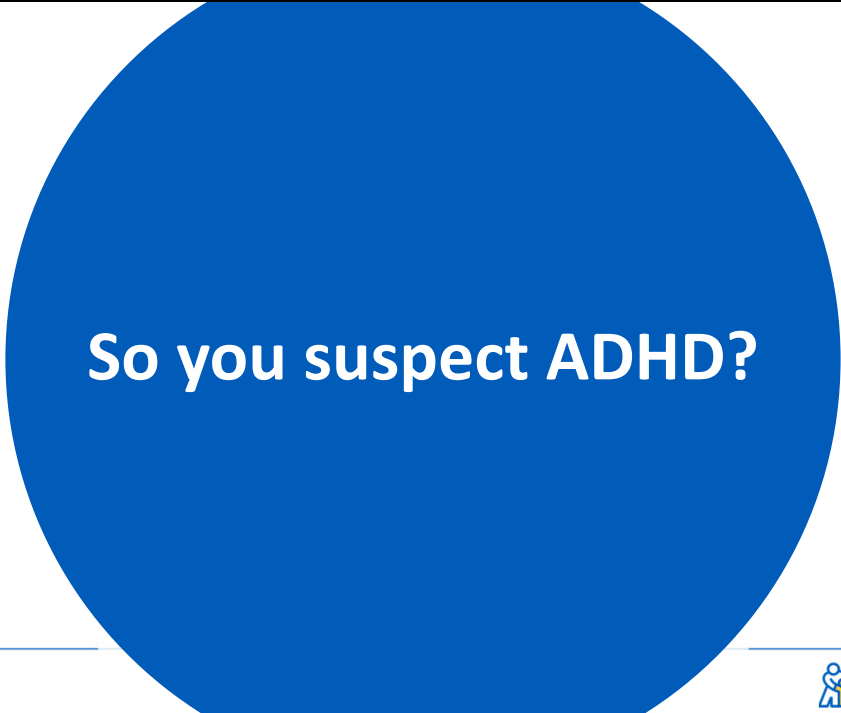
## What you may see...

- Continuing to do the same thing *despite repeated negative consequences*
- *Less likely* to go back to a previous behavior following a disruption
- Failing to use past experiences/*what they know* to guide their behavior in the moment

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## So you suspect ADHD?

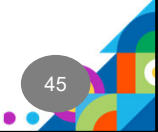

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**Do you have any experience(s) navigating the evaluation process for ADHD?**



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## Evaluation Process

**Clinical**      **School**



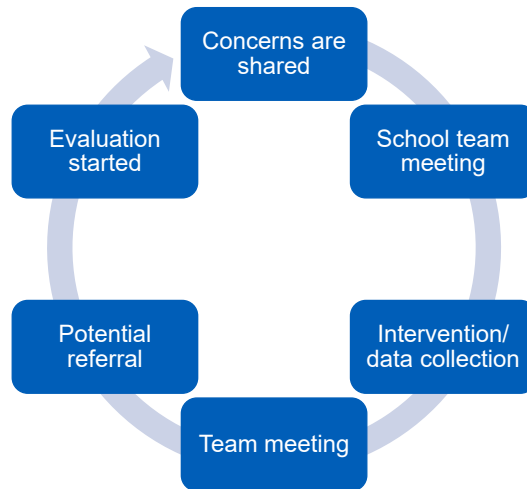
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## Clinical Process



\*This process may vary between institutions

## School Evaluation



## School Evaluation

- These can vary between districts and schools
- Initiated by a referral to school psychologist
- Generally, evaluations can include:
  - Ratings from teacher(s) and parents
  - Observations in school/class-social/emotional/behavioral
  - Cognitive/academic testing



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## Now what?

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# Next Steps

**Results of assessment(s) could lead to:**

Diagnosis- in clinic setting  
Verification- in school setting

**In the school setting:**

Verification can lead to an Individualized Education Program/Plan (IEP)

**Other potential outcomes:**

Behavior Plan  
504 Plan

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## But what is an IEP and 504 Plan?

IEP vs 504	Individualized Education Plan (IEP)	Section 504 Plan
Type of law	Special Education - Individuals with Disabilities Act (IDEA)	Civil Rights - Rehabilitation Act of 1973
Department	Department of Education	Office of Civil Rights
Requirements for eligibility	Has a disability that: a) meets criteria under IDEA, b) significantly impacts educational performance, and c) requires specialized services	Has a disability that significantly impacts a major life function
What is typically included?	Specialized education services, accommodations, related services	Accommodations, modifications, and related services
Age limits	IEP offered through 12th grade or until age 21 when required	No age limits with a 504 plan
Where is the plan used?	Educationally, through the 12th grade  Does not transfer to college	School, work, and college  Eligibility and plan creation occurs at each institution
Discipline	A Manifestation Determination meeting must be held to determine if the offense is a manifestation of the disability by the 10th day of suspension  Services are required during long-term suspension	A Manifestation Determination meeting must be held to determine if the offense is a manifestation of the disability by the 10th day of suspension  May require reevaluation

[www.schoolpsychologistfiles.com](http://www.schoolpsychologistfiles.com)

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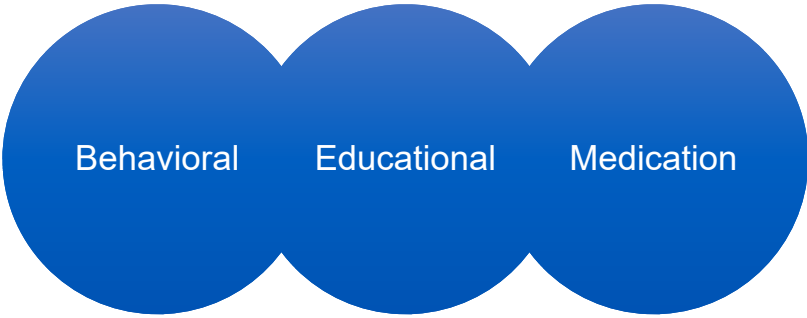
**Advocacy**





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**Treatment**



Behavioral      Educational      Medication



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## Behavioral

### Behavioral treatment:

- Allows for MANAGEMENT of symptoms of ADHD
- Treatment does NOT cure ADHD
- Finding effective strategies is a process and can vary person to person

### In a clinical setting behavioral treatment:

- Can include individual sessions with the child
- Individual sessions with parents/caregivers
- Group sessions

## Educational



Clinical evaluations typically have recommendations for the school setting



Evaluations in the school typically allow multiple school staff to provide input on strategies

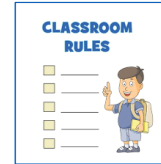


Typically, the school psychologists, behavior interventionist, or similar professional will provide recommendations

# Strategies

- Rules and Expectations

- Fill the environment with prompts and reminders
  - Post classroom/household rules, verbal reminder of expectations, visual cues



- Mental problem solving

- Make solving problems manual work, not just mental
  - Manipulatives for mental math, calculator, index cards to outline essays



- Time

- Make it visible
  - Cues to passage of time – alarms, timers, auditory cues via parent/Google home/Alexa



- Motivation

- Use external, artificial sources of motivation in the immediate environment
  - Rewards, tangible items, activities, money



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# Medication



Can be helpful in improving:

Attention/focus  
Hyperactivity  
Impulsivity



It's important to work with your child's Pediatrician, Primary Care Physician (PCP), or Psychiatrist if medication is of interest.

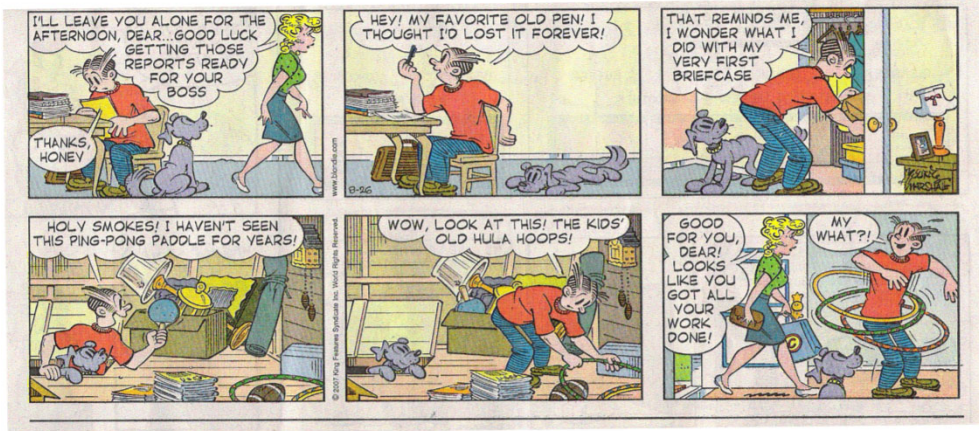
Discuss the pros and cons of medication  
Discuss the process of starting medication and associated journey



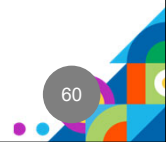
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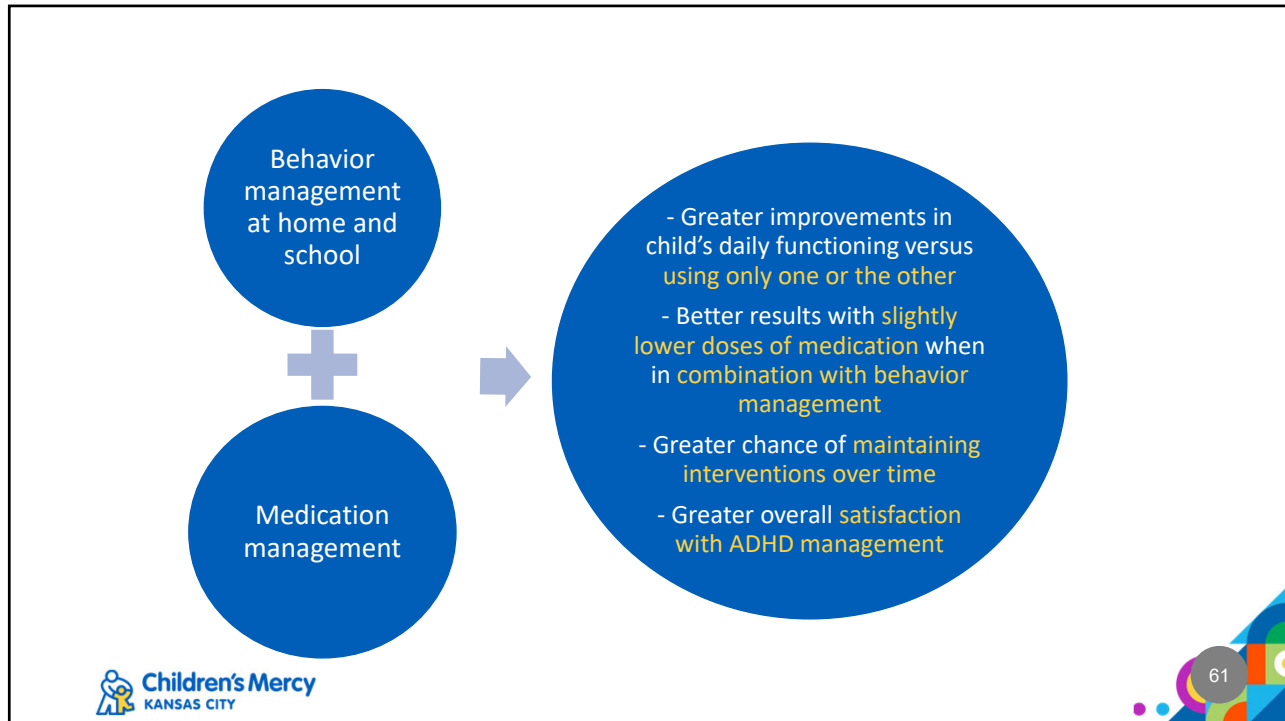
# And it can be a long haul...



# Bringing it all Together

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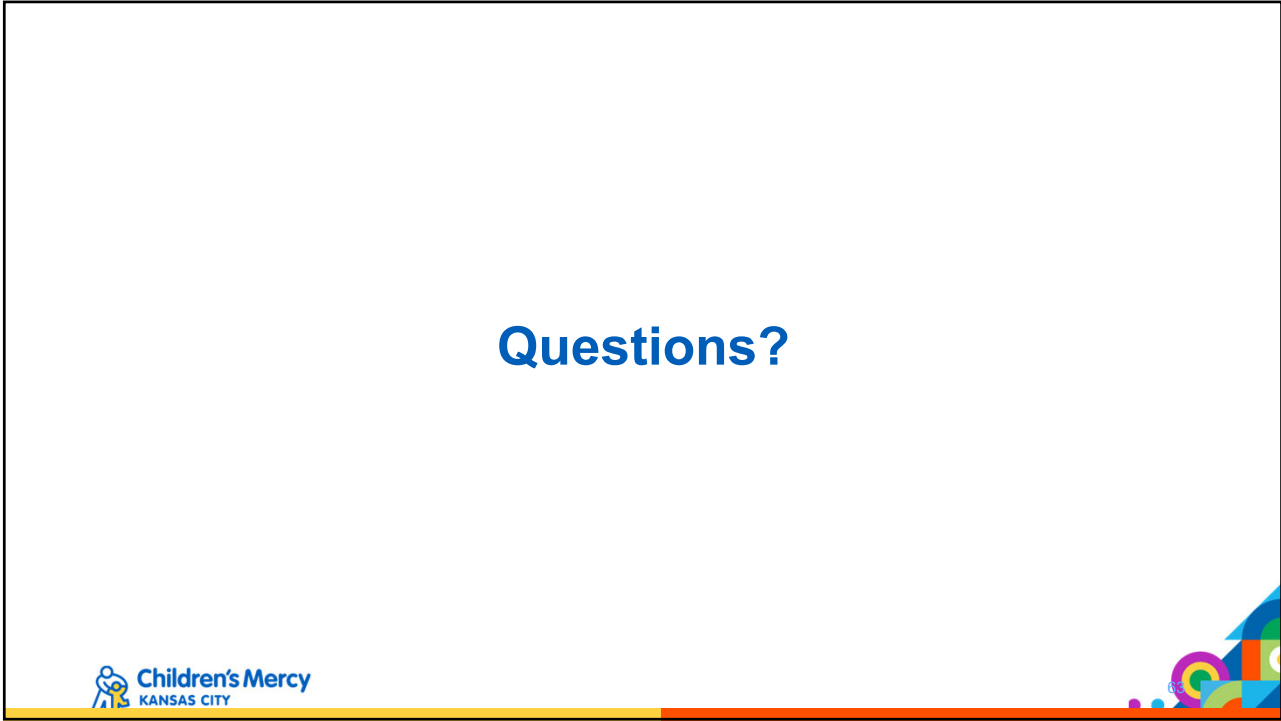
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## Resources

- **Parent Training Information Center**
- Provides training, information, and supports to families with children birth-26 who have disabilities/special healthcare needs;
  - <https://www.parentcenterhub.org/find-your-center/>
- Information on supports, accommodations, and modifications (parent)
  - <https://www.parentcenterhub.org/accommodations/#staff>
- 10 Basics of Special Education Process
- Parent friendly handout outlining steps
  - [https://www.parentcenterhub.org/wp-content/uploads/repo\\_items/10steps.pdf](https://www.parentcenterhub.org/wp-content/uploads/repo_items/10steps.pdf)

At the bottom left of the slide is the Children's Mercy KANSAS CITY logo. At the bottom right, there is a decorative graphic with a circle containing the number 62.

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