



# Using Psychological Assessment to Inform Treatment

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# Disclosures

I have the following relevant financial relationship with commercial interests to disclose:

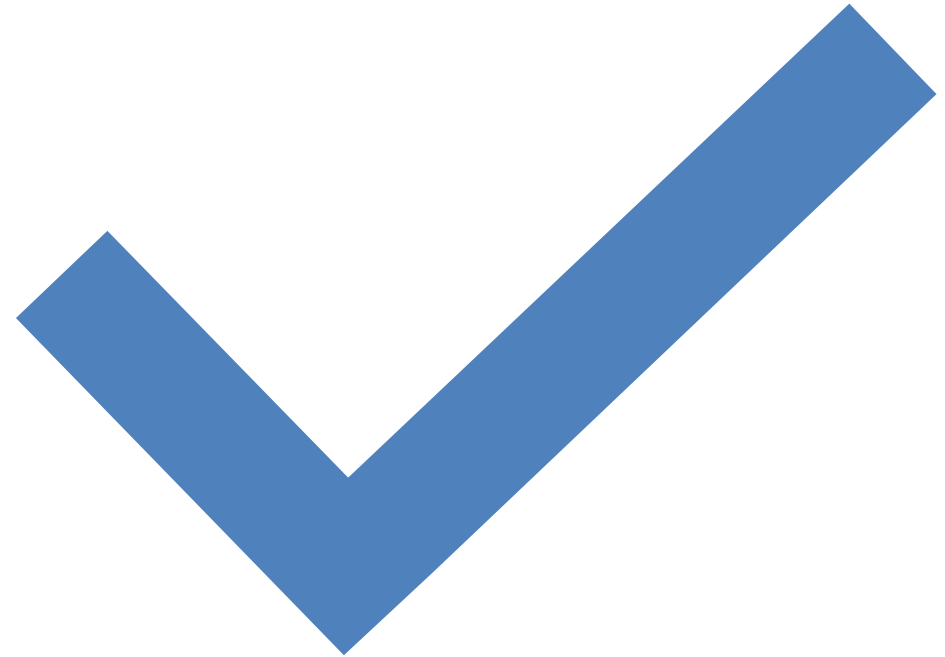
- American Psychological Association, Magination Press: Advisory Board
- Guilford Press: Author

# Why all the testing?



# When Testing Can Help

- Question of a learning disability
- Eligibility for school services
- Need more specific information that can enhance the potential for effective treatment
- Shed light on constellation of problems and relative severity and connections between them
- Highlight cognitive and emotional strengths



# What Types of Questions Can Be Answered by a Formal Assessment?

- Learning Disabilities
- Attention Deficit Hyperactivity Disorder
- Asperger's
- Autism & Pervasive Developmental Disorder
- Emotional Difficulties
- Traumatic Brain Injuries
- Baseline data for children with family history of learning disabilities, attentional difficulties, etc.

# Typical areas of concern....

Social reciprocity/language/behavior

- *“Is this child autistic?”*

Rate of learning

- *“Is there a learning disability?”*

Rigid, shuts down, has outbursts

- *“Is there an emotional disorder?”*

Seems to be generally slow

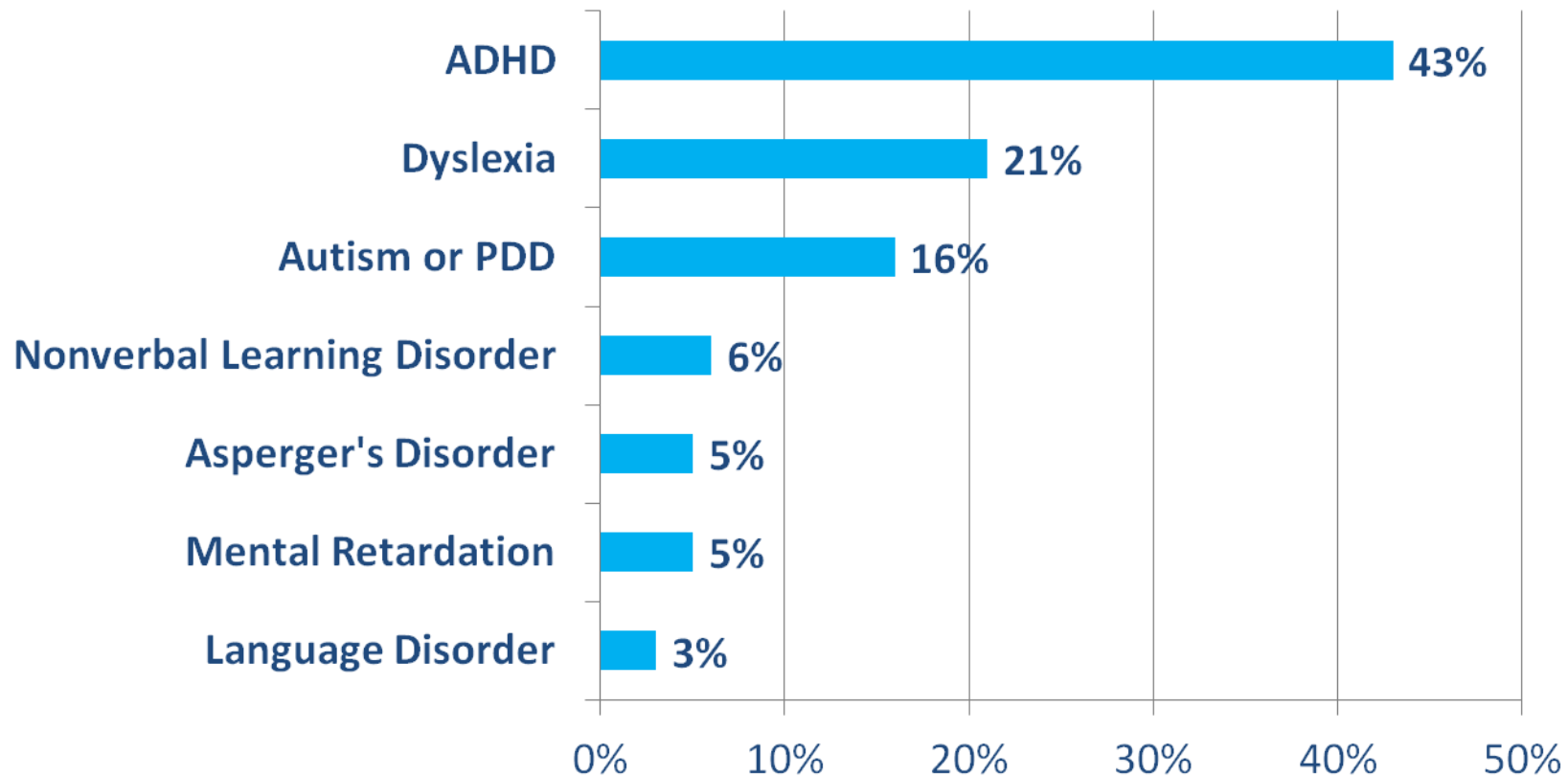
- *“Does this child have an intellectual or developmental disability (formerly mental retardation)?”*

Has trouble focusing, seems impulsive, bothers other children

- *“Does this child have ADHD?”*

# Neuropsychological Functioning

## Neuropsychological and Neurodevelopment Disorders Among LEAP Patients

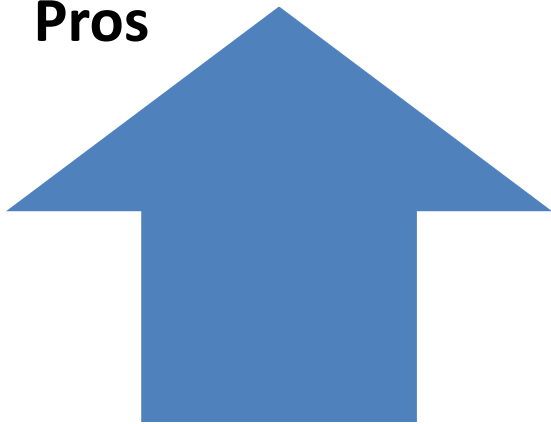


# Psychiatric Functioning

PRIMARY NEUROPSYCH DIAGNOSIS	COMORBID PSYCHIATRIC CONCERNS		
	Anxiety	Mood	Externalizing
Learning Disorder	48%	41%	23%
ADHD	45%	41%	33%
Autism Spectrum Disorder	63%	49%	27%
Intellectual Disability (MR)	50%	38%	25%

# Assessing these conditions: Public Evaluation

## Pros



- Evaluation is free
- The individual completing the testing will often also implement any necessary intervention
- Parents have the right to seek independent evaluation at the school's expense if the evaluation is unsatisfactory

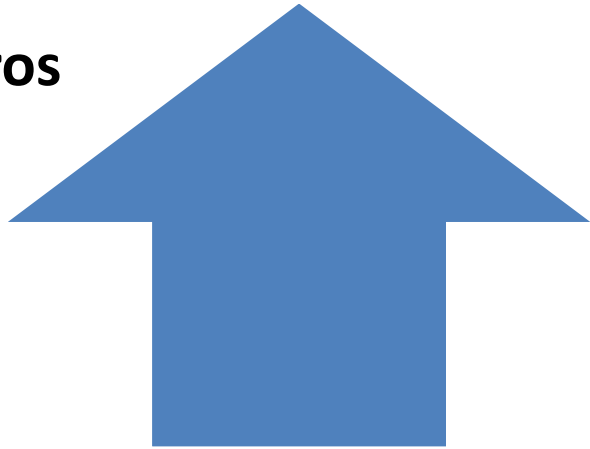
## Cons



- Cannot request a specific evaluator
- The process can take longer than private evaluation
- The report automatically becomes part of the child's record
- Seeking independent evaluation after school evaluation limits the independent evaluators options in testing

# Assessing these conditions: Private Evaluation

## Pros



- Insurance will often cover some or all of the evaluation
- More confidence that recommendations are being made without regard to cost
- Can request editing of personal information on report
- Individuals being tested control who sees the report
- Individuals can pick the evaluator

## Cons



- Some schools will not accept private testing and will insist on testing of their own
- Usually a long wait to be seen, between 6 months and 1 year
- If insurance will not cover the cost, evaluation can be quite expensive

# When to Refer



*The purpose of referral is to have a person with training or experience different from your own provide additional information about the child*



*Referral is typically done to answer specific questions about a child's developmental, cognitive or emotional status*

# What are the Primary Goals for Assessment

- Primary Goals could include:
  - Obtaining a detailed description of a child's cognitive strengths and weaknesses
  - Clarifying a child's diagnosis
  - Helping direct his or her treatment
  - Making recommendations for additional evaluations, treatment, or rehabilitation
  - Monitoring a child's functioning over time



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# Neuropsychological evaluations typically include:



Intelligence



Attention/organization



Fine motor



Academic achievement



Memory



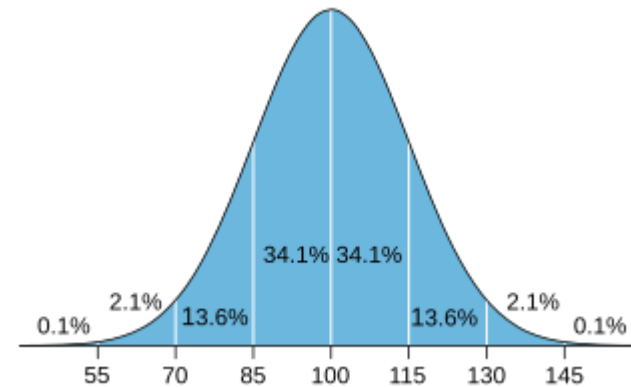
Mood



Parent/teacher questionnaires (assessing mood, behavior, strengths)

# Norm-referenced tests

- A norm-referenced test provides data that allows you to compare someone's performance to a specific group
- Tests have been standardized (so administration is the same for everyone)
- Norm Groups
  - Nationally representative sample
    - Typical norm group: compares the patient to the average person that patient's age
  - Clinical norm group:
    - compares the patient to a group within a specific clinical population (e.g., comparing results achieved to typical results achieved by other people with ADHD)
  - Grade based norms
    - Compares the patient's performance to that of children in the same grade as that patient
    - Used for academic tests; typically used for students who are not in the expected grade for their age (e.g., a child who has been retained)



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# Benefits of Norm Referenced Tests



- Provides a degree of quantification of a child's functioning in reference to a peer group
- Helps to identify specific cognitive, motor, and behavioral deficits and strengths
- Allows evaluator to measure progress and changes
- Economical and efficient

# Intelligence

- What is intelligence or IQ?
  - Not a universally defined construct
  - Generally a person's mental abilities consisting of:
    - Crystallized intelligence (Knowledge – vocabulary and what we know about the world)
    - Fluid Intelligence (Reasoning – ability to problem solve, particularly in novel situations)
    - Crystallized intelligence is presumed to be influenced by cultural and environmental factors more than fluid intelligence
    - Some IQ tests also include processing power in calculating intelligence

# What to look for in IQ Tests (WISC/WAIS)



**Overall IQ is best measure of overall functioning**



**Take note of:**

Language index  
Nonverbal problem solving  
Processing speed  
Working memory

# Neuropsychological Assessment and ADHD



- Not necessary to diagnose ADHD, but can:
  - Confirm or clarify a diagnosis (ASD vs ADHD)
  - Provide profile of strengths and weaknesses for educational, vocational, or other services
  - Document changes in functioning since prior examinations, including effects of treatment
  - Clarify what compensatory strategies would help
  - Result in referrals to other specialists

# What is Specific Learning Disorder (SLD)?

- Difficulties in learning and using academic skills despite interventions that target those difficulties
- Learning difficulties began during the school years (up to age 17)
- Learning difficulties are not better explained by other impairments (e.g. intellectual, visual, auditory, or other mental or neurological disorders)
- An SLD diagnosis is often specified as having impairment in reading, writing, mathematics, or a combination of two or more areas of difficulty
- Prevalence:
  - 9.7% throughout the U.S. school age population
  - 5.4% of all otherwise typically developing children have an SLD
  - 27.8% of children receiving special mental health care needs have an SLD

# Types of SLD's

## SLD with Impairment in Reading

### Prevalence

- 5-20% in a sample of US school students (Shaywitz et al., 1998)
- Boys are 2-4 times more likely to be diagnosed than girls

### Areas of difficulty

- Word reading accuracy
- Reading rate or fluency
- Reading comprehension

## SLD with Impairment in Writing

### Prevalence

- 7-14% in a sample of US school students (Katusic et al., 2009)
- Boys are 2-3 times more likely to be diagnosed than girls

### Areas of difficulty

- Spelling accuracy
- Grammar and punctuation accuracy
- Clarity or organization of written expression

## SLD with Impairment in Mathematics

### Prevalence

- 6-14% in a sample of US school students (Barbarese et al. 2005)
- Boys are almost 1.5 times more likely to be diagnosed than girls

### Areas of difficulty

- Number sense
- Memorization of arithmetic facts
- Accurate or fluent calculations
- Accurate math reading

# Attention Deficit/Hyperactivity Disorder (ADHD) and SLD

ADHD has been shown to be frequently comorbid with SLD

- Any SLD: 31-45% (DuPaul et al., 2013).
- Reading Disorder: 25-40% (Boada et al., 2012)
- Mathematics Disorder: 11-30% (Capano et al., 2008)
- Writing Disorder: 55-64% (Yoshimasu et al., 2011)

# Executive Functioning and SLD

- SLD is a heterogeneous disorder with respect to executive functioning, however:
  - Working memory (and metacognition as a more general domain) has been shown to be impaired in SLD (Giofre et al., 2016; Griblat et al., 2016)
  - Processing speed has similarly been shown to be impaired in SLD (Wilcutt et al., 2005)

# How is processing speed related to ADHD?

- Processing speed is often impaired in children with ADHD
- If executive functions are the car, processing speed is the engine
- ADHD is often comorbid with reading disabilities, and research supports the idea that processing speed is the shared cognitive deficit between these two disorders



# Detrimental Impact of Slow Processing Speed & ADHD

Cook, Braaten, Surman (2017) *Child Neuropsychology*

- Systematic review and meta-analysis of PS in ADHD

Clinical and functional correlates			
Weaker academic skills	More difficulties in adaptive functioning	Increased self-reported anxiety	Overestimates of social competence

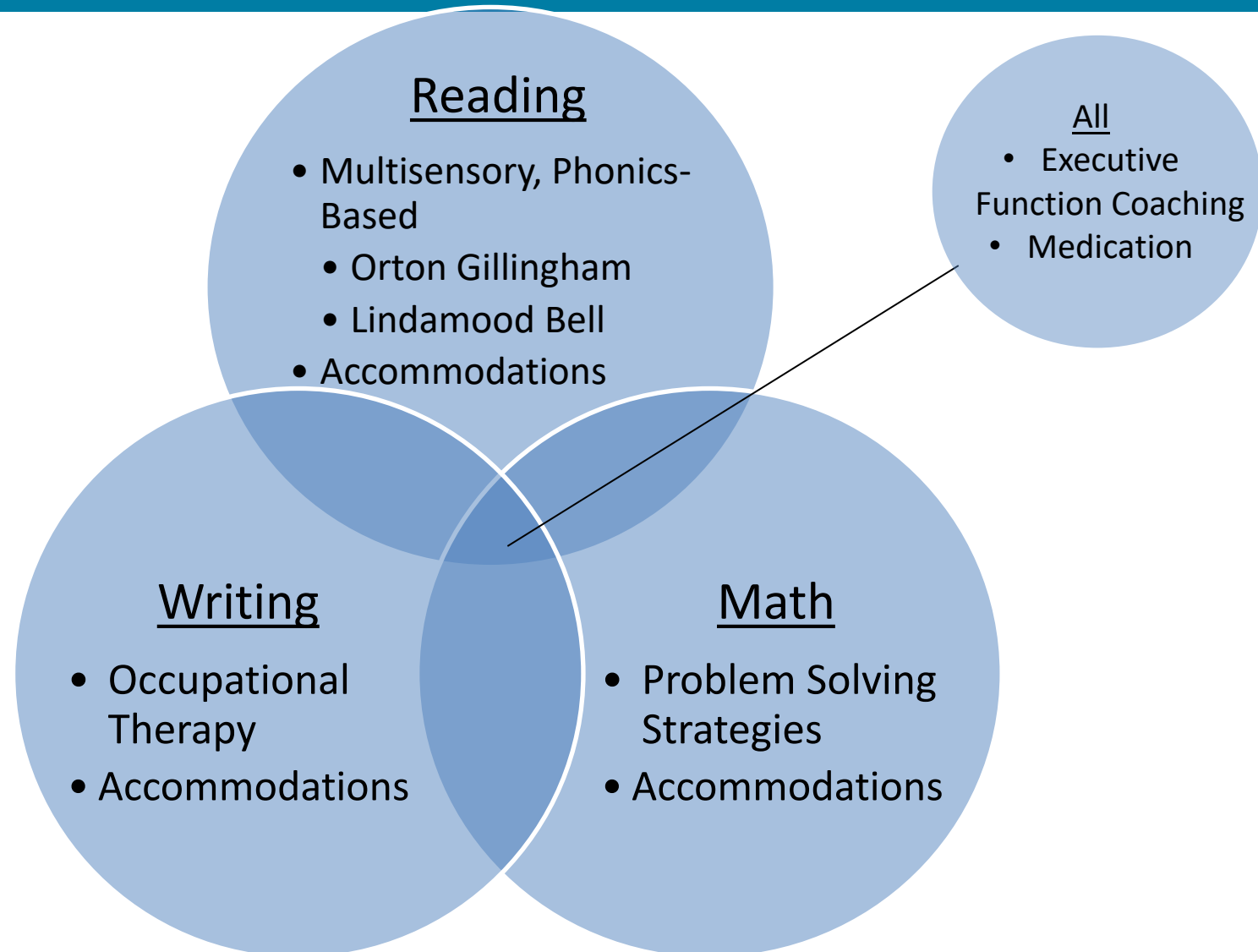
Yet, the mechanisms by which PS influences these outcomes are not well understood.

# Organizing the Report Data

- Summarize data in shorthand that works for you.
  - Spread sheet
  - Single sheet of handwritten notes
  - Notes written directly on report
  - Use method that works best for you
- Highlight report details
- Develop consistent approach



# Remediation for SLD in the Context of ADHD



# If You Have Limited Time

Look at:

Referral Question

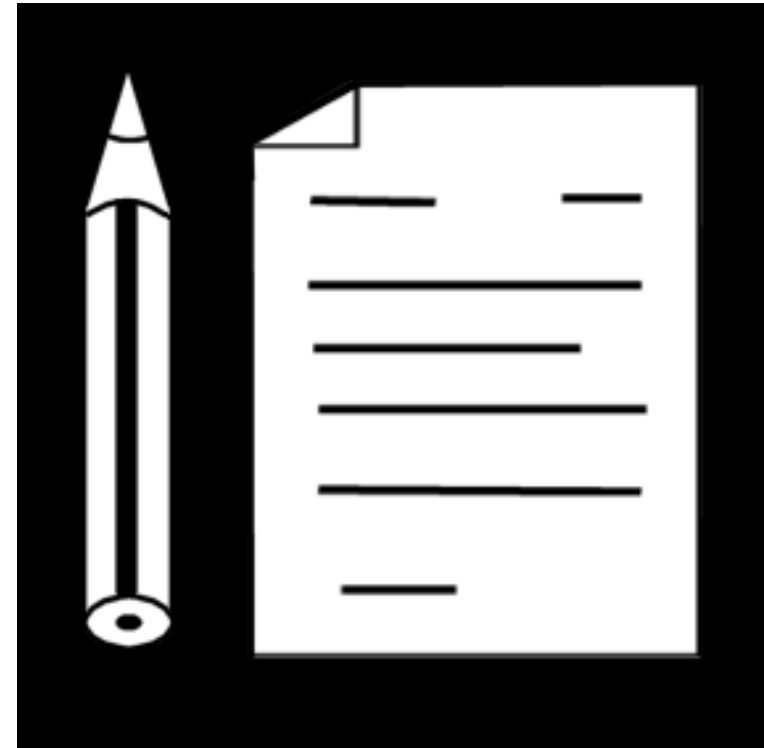
High and low scores

Diagnosis

Conceptualization

Recommendations

*Ask parents: Does this match you  
child?*



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# Linking Evaluation to Treatment

Is child eligible for special ed services?

Does the child have an IEP? Are supports adequate based on results?

What interventions are lacking?

What family supports are needed?

What services are available?

# What to Think About



Does the testing support your clinical hypothesis?

- Do you need more information than testing has provided?
- Has your clinical question been answered?
- Do the recommendations make sense?
- Does the report match prior evaluations?

# Thank You!

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