



MCPAP Clinical Conversations: Attention Deficit/Hyperactivity Disorder (ADHD) Update: MCPAP ADHD Algorithm

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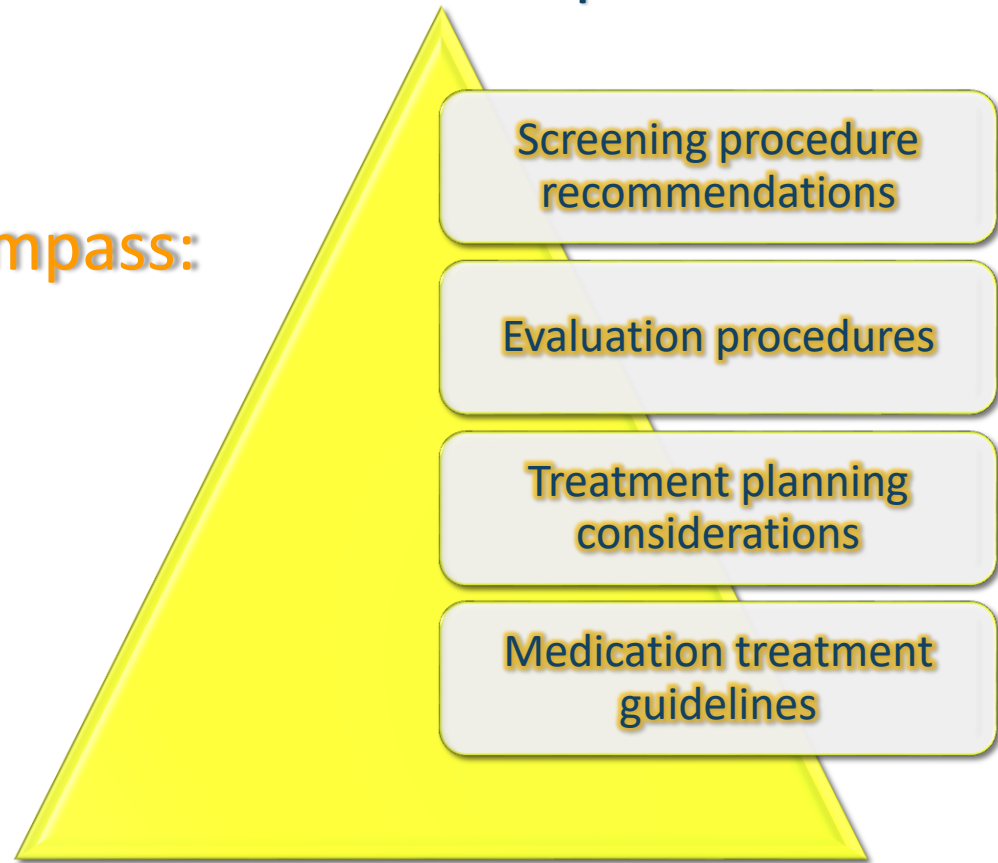
Overview

- Introduction to MCPAP Clinical Algorithms
- Presentation of MCPAP ADHD Clinical Algorithm
- Questions and Discussion

MCPAP Clinical Algorithms: Purpose

- Creation of practical clinical guidelines for PCP's when dealing with common mental health problems

➤ Guidelines encompass:



MCPAP Clinical Algorithms: Content

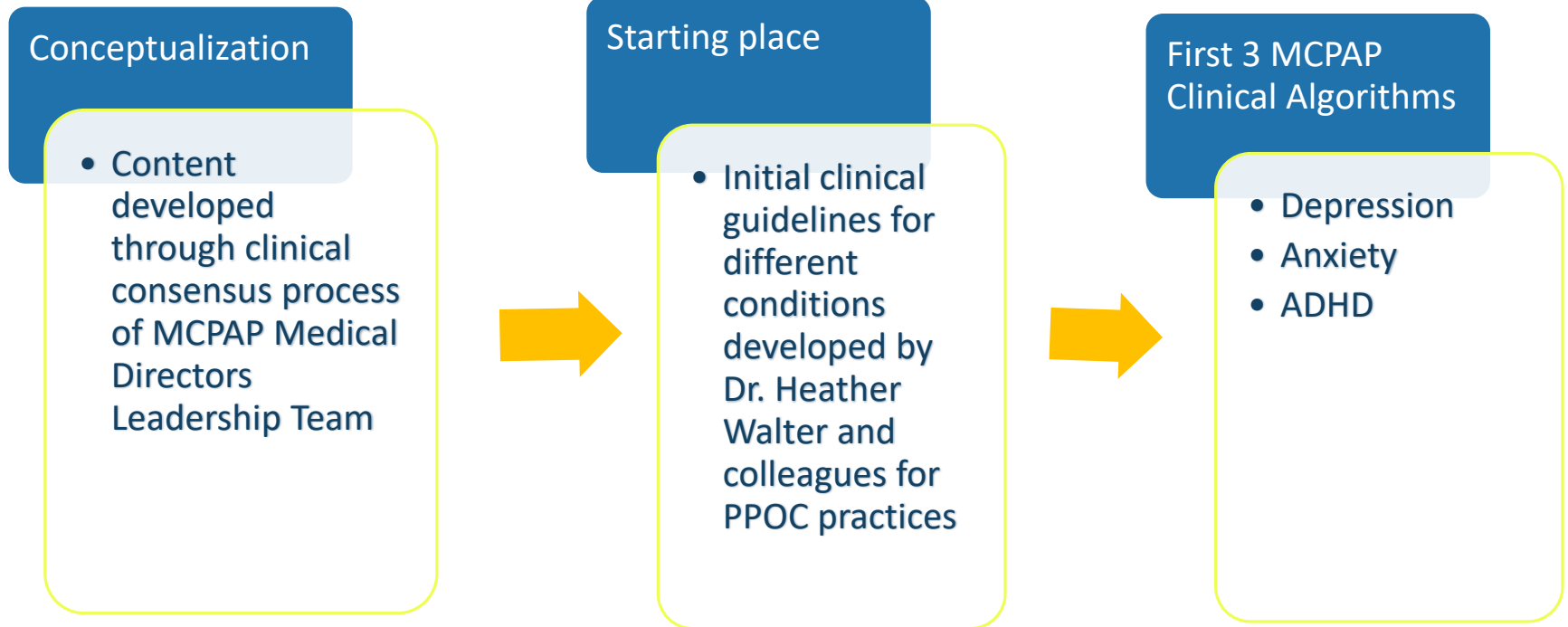
1. Content is developed to be most helpful for PCP in regular primary care practice

2. Content includes procedures that can be performed in all algorithms in the context of regular primary care practice

3. Content recommends the use of standard well-validated clinical rating scales that can be used in primary care practice

4. Content recommends the use of medication guidelines suggesting evidence supported first-line medication treatment for mental health conditions commonly treated in primary care

MCPAP Clinical Algorithms: Process



MCPAP Clinical Algorithms: Applications

To help train primary care providers in basic evidence-supported tools and procedures for mild-to-moderate, relatively uncomplicated forms of mental health problems that can reasonably be handled in primary care practice

To help MCPAP consulting teams provide consistent training and guidance to primary care providers during phone and face-to-face consultations across the state

Algorithms will likely not be the best starting point for severely ill, treatment-resistant or highly complicated presentations of mental illness in primary care

Primary care providers are encouraged to make liberal use of MCPAP phone consultation and face-to-face consultations for complicated, treatment-resistant or severely ill presentations rather than relying on MCPAP Clinical Algorithms

MCPAP ADHD Clinical Algorithm

- Third clinical algorithm “rolled out” by MCPAP teams
- Provides clinical guidance for the PCP in terms of:
 - Screening for ADHD in children and teens
 - Diagnostic evaluation procedures
 - Treatment planning considerations
 - Initial medication selection and management procedures

Measurement Based Care

Suitable for use in Primary Care Settings

Improves patient/parent engagement

Structures Assessment

Helpful to navigate treatment algorithm

Provides shared language for consideration of symptom severity with patient, family and other providers

Well, You Look Like You Are Growing...



Measurements should be

- Relevant to Outcome
- Validated
- Sensitive to Change
- Brief, easy to score
- Administered at appropriate intervals
- Reviewed with patient/family with reference to previous score

MCPAP ADHD Guidelines for PCPs

PCP visit:

- Screen for behavioral health problems
 - Pediatric Symptom Checklist-17 (cut-points: 15 total, 7 attention, 7 behavior, individual attention, and behavior items)
- If screen is positive, conduct brief interview focusing on distress, impairment, danger
 - If concern for sub-clinical ADHD or behavior problem, provide guided self-management with follow-up
 - If concern for clinical ADHD or behavior problem, conduct focused assessment
 - If concern for imminent danger, refer to hospital or crisis team for emergency psychiatric assessment

Focused assessment including clinical interview and rating scale assessment [Need to use both parent and teacher assessments]:
Vanderbilt Parent – Initial (age < 13): ADHD cut-points: 6+ "often" or "very often" on items 1-9 (inattentive) and/or 10-18 (hyperactive/impulsive); ODD cut-points: 4+ "often" or "very often" on items 19-26
Vanderbilt Teacher – Initial (age < 13): ADHD cut-points: 6+ "often" or "very often" on items 1-9 (inattentive) and/or 10-18 (hyperactive/impulsive); behavior cut-points: 3+ "often" or "very often" on items 19-28
SNAP-IV (age 6-18): ADHD cut-points: score 13+ for items 1-9 and/or score 13+ for items 10-18

Sub-clinical to mild ADHD or behavior problem: Guided self-management with follow-up

Moderate ADHD: Consider medication;
 Moderate ADHD with moderate behavior problem: Consider medication and refer to therapy

Severe ADHD (associated with high-risk behavior and/or comorbid presentation): Refer to specialty care for therapy and medication management until stable

Medication treatment* for ADHD (age 6+) [Call MCPAP for consultation on medication treatment for children < 6 years old]:

Methylphenidate

e.g., **Oros methylphenidate extended release** – starting dose: 18mg; therapeutic dosage range: 18-54mg; duration of action: 12 hrs

e.g., **Dexamethylphenidate extended release** – starting dose: 5mg; therapeutic dosage range: 5-30mg; duration of action: 10-12 hrs

Amphetamine

e.g., **Amphetamine/dextroamphetamine mixed salts extended release** – starting dose: 5mg; therapeutic dosage range: 5-30mg; duration of action: 12 hrs

e.g., **Dextroamphetamine extended release** – starting dose: 5mg; therapeutic dosage range: 5-40mg; duration of action: 6-8 hrs

Baseline assessment: personal/family cardiovascular history; height, weight, pulse, blood pressure; substance abuse history

After 2-3 weeks on starting dose, obtain Vanderbilt Parent and Teacher Follow-Up or SNAP-IV to assess response

If inattention and/or hyperactive/impulsive scores > cut-points and impairment persists, increase dose to next step (in 18mg increment for Oros methylphenidate and 5mg increments for other medications)

**Medication treatment is just one component of a comprehensive treatment plan for ADHD. Psychotherapy referral should be considered for all patients at the time of initial diagnosis for behavior modification, parent guidance, improving individual and family coping skills, and/or school consultation.*

After each dosage increase, obtain Vanderbilt Parent and Teacher Follow-Up or SNAP-IV to assess response before further dosage increase

If inattention and/or hyperactive/impulsive scores > cut-points and impairment persists, continue to up-titrate dose stepwise every 2-3 weeks to maximum therapeutic dose as tolerated

If inattention and/or hyperactive scores > cut-points at maximum therapeutic dose, consult MCPAP CAP for next steps

When inattention and/or hyperactive/impulsive scores < cut-point with mild to no impairment, remain at current dose for remainder of school year

Monitor every 3-4 months for maintenance of remission, side effects, and anthropometrics/vitals; consult with MCPAP CAP as needed

Consider off medication on weekends, holidays, vacation days

Consider discontinuation each school year, using Vanderbilt Parent and Teacher Initial to assess for symptom recurrence

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Acknowledgement,
 Origins and Process
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HJ Walter, Department of Psychiatry, Boston Children's Hospital (adapted by MCPAP with permission)
 Revised 5/17/18

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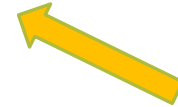
Clinical Decision-Making Procedure



Medication Selection Support



Screening and Evaluation Procedures



Follow-up and Monitoring Support



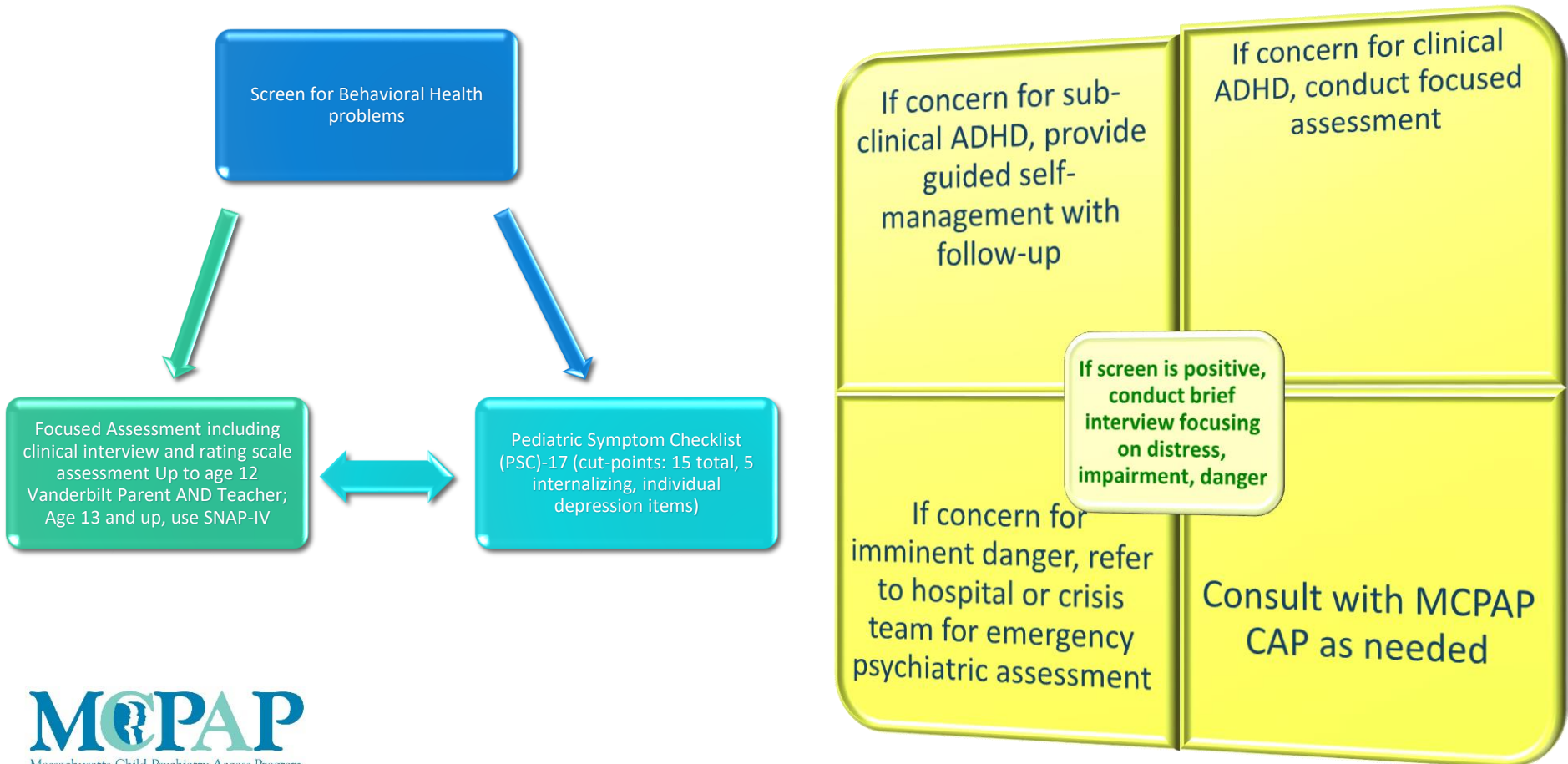
Acknowledgement, Origins and Process of Development

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Screening and Evaluation Procedures

PCP visit:



Pediatric Symptom Checklist-17 (PSC-17)

Caregiver Completing this Form: _____ Date: _____

Name of Child: _____

At screening:

PSC-17-I (cut points 15 total, 7 attention, 7 behavior, individual attention & behavior items)

PSC-17-A subscale ≥ 7 is considered positive for ADHD symptoms

PSC-17-E subscale ≥ 7 is considered positive for externalizing symptoms

PSC-17 total ≥ 15 is considered positive for total problems

		Please mark under the heading that best fits your child			For Office Use		
		NEVER	SOME-TIMES	OFTEN	I	A	E
1.	Fidgety, unable to sit still						
2.	Feels sad, unhappy						
3.	Daydreams too much						
4.	Refuses to share						
5.	Does not understand other people's feelings						
6.	Feels hopeless						
7.	Has trouble concentrating						
8.	Fights with other children						
9.	Is down on him or herself						
10.	Blames others for his or her troubles						
11.	Seems to be having less fun						
12.	Does not listen to rules						
13.	Acts as if driven by a motor						
14.	Teases others						
15.	Worries a lot						
16.	Takes things that do not belong to him or her						
17.	Distracted easily						
(scoring totals)							

Scoring:

- Fill in unshaded box on right with: "Never" = 0, "Sometimes" = 1, "Often" = 2
- Sum the columns.
 PSC17 Internalizing score is sum of column I
 PSC17 Attention score is sum of column A
 PSC17 Externalizing score is sum of column E
 PSC-17 Total Score is sum of I, A, and E columns

Suggested Screen Cutoff:

- PSC-17 - I ≥ 5
- PSC-17 - A ≥ 7
- PSC-17 - E ≥ 7
- Total Score ≥ 15

Higher Scores can indicate an increased likelihood of a behavioral health disorder being present.

PSC-17 may be freely reproduced.

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- Total Score ≥ 15

Higher Scores can indicate an increased likelihood of a behavioral health disorder being present.

PSC-17 may be freely reproduced.

Vanderbilt ADHD Diagnostic Parent Rating Scale

Patient Name: _____ Today's Date: _____

Date of Birth: _____ Age: _____

Grade: _____

Each rating should be considered in the context of what is appropriate for the age of your child.

Frequency Code: 0 = Never; 1 = Occasionally; 2 = Often; 3 = Very Often

1. Does not pay attention to details or makes careless mistakes, such as in homework	0	1	2	3
2. Has difficulty sustaining attention to tasks or activities	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Does not follow through on instruction and fails to finish schoolwork (not due to oppositional behavior or failure to understand)	0	1	2	3
5. Has difficulty organizing tasks and activities	0	1	2	3
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort	0	1	2	3
7. Loses things necessary for tasks or activities (school assignments, pencils, or books)	0	1	2	3
8. Is easily distracted by extraneous stimuli	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Leaves seat when remaining seated is expected	0	1	2	3
12. Runs about or climbs excessively in situations when remaining seated is expected	0	1	2	3
13. Has difficulty playing or engaging in leisure activities quietly	0	1	2	3
14. Is "on the go" or often acts as if "driven by a motor"	0	1	2	3
15. Talks too much	0	1	2	3
16. Blurts out answers before questions have been completed	0	1	2	3
17. Has difficulty waiting his or her turn	0	1	2	3
18. Interrupts or intrudes on others (butts into conversations or games)	0	1	2	3
19. Argues with adults	0	1	2	3
20. Loses temper	0	1	2	3
21. Actively defies or refuses to comply with adults' requests or rules	0	1	2	3
22. Deliberately annoys people	0	1	2	3
23. Blames others for his or her mistakes or misbehaviors	0	1	2	3
24. Is touchy or easily annoyed by others	0	1	2	3
25. Is angry or resentful	0	1	2	3
26. Is spiteful and vindictive	0	1	2	3
27. Bullies, threatens, or intimidates others	0	1	2	3
28. Initiates physical fights	0	1	2	3
29. Lies to obtain goods for favors or to avoid obligations ("cons" others)	0	1	2	3
30. Is truant from school (skips school) without permission	0	1	2	3

Provided courtesy of CME Outfitters, LLC

Available for download at www.neuroscienceCME.com

Each rating should be considered in the context of what is appropriate for the age of your child.

Frequency Code: 0 = Never; 1 = Occasionally; 2 = Often; 3 = Very Often

31. Is physically cruel to people	0	1	2	3
32. Has stolen items of nontrivial value	0	1	2	3
33. Deliberately destroys others' property	0	1	2	3
34. Has used a weapon that can cause serious harm (bat, knife, brick, gun)	0	1	2	3
35. Is physically cruel to animals	0	1	2	3
36. Has deliberately set fires to cause damage	0	1	2	3
37. Has broken into someone else's home, business, or car	0	1	2	3
38. Has stayed out at night without permission	0	1	2	3
39. Has run away from home overnight	0	1	2	3
40. Has forced someone into sexual activity	0	1	2	3
41. Is fearful, anxious, or worried	0	1	2	3
42. Is afraid to try new things for fear of making mistakes	0	1	2	3
43. Feels worthless or inferior	0	1	2	3
44. Blames self for problems, feels guilty	0	1	2	3
45. Feels lonely, unwanted, or unloved; complains that "no one loves" him or her	0	1	2	3
46. Is sad, unhappy, or depressed	0	1	2	3
47. Is self-conscious or easily embarrassed	0	1	2	3

PERFORMANCE

	Problematic	Average	Above Average		
Academic Performance					
1. Reading	1	2	3	4	5
2. Mathematics	1	2	3	4	5
3. Written expression	1	2	3	4	5
Classroom Behavioral Performance					
1. Relationships with peers	1	2	3	4	5
2. Following directions/rules	1	2	3	4	5
3. Disrupting class	1	2	3	4	5
4. Assignment completion	1	2	3	4	5
5. Organizational skills	1	2	3	4	5

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Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS)

Scoring Instructions for the VADPRS:

Behaviors are counted if they are scored 2 (often) or 3 (very often).

Predominantly inattentive subtype	Requires 6 or more counted behaviors on items 1 through 9 and a performance problem (score of 1 or 2) in any of the items on the performance section.
Predominantly hyperactive/impulsive subtype	Requires 6 or more counted behaviors on items 10 through 18 and a performance problem (score of 1 or 2) in any of the items on the performance section.
Combined subtype	Requires 6 or more counted behaviors each on both the inattention and hyperactivity/impulsivity dimensions.
Oppositional-defiant disorders	Requires 4 or more counted behaviors on items 19 through 26.
Conduct disorder	Requires 3 or more counted behaviors on items 27 through 40.
Anxiety or depression	Requires 3 or more counted behaviors on items 41 through 47.

The **performance section** is scored as indicating some impairment if a child scores 1 or 2 on at least 1 item.

All responses should be verified by a clinician and a definitive diagnosis is made on clinical grounds

Diagnoses of ADHD requires impairment in functioning (see performance section)

Important “rule outs” :

- ✓ Normal Bereavement
- ✓ Bipolar Disorder
- ✓ Medical Disorders
- ✓ Reactions to medications
- ✓ Illicit substance use

SNAP-IV-18 Rating Scale For Use in Youth >12 years old

	Not At All	Just a Little	Quite a bit	Very Much
1. Often fails to give close attention to details or makes careless mistakes in schoolwork or tasks				
2. Often has difficulty sustaining attention in tasks or play activities				
3. Often does not seem to listen when spoken to directly				
4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties				
5. Often has difficulty organizing tasks and activities				
6. Often avoids, dislikes, or reluctantly engages in tasks requiring sustained mental effort				
7. Often loses things necessary for activities (e.g., toys, school assignments, pencils or books)				
8. Often is distracted by extraneous stimuli				
9. Often is forgetful in daily activities				
10. Often fidgets with hands or feet or squirms in seat				
11. Often leaves seat in classroom or in other situations in which remaining seated is expected				
12. Often runs about or climbs excessively in situations in which it is inappropriate				
13. Often has difficulty playing or engaging in leisure activities quietly				
14. Often is “on the go” or often acts as if “driven by a motor”				
15. Often talks excessively				
16. Often blurts out answers before questions have been completed				
17. Often has difficulty awaiting turn				
18. Often interrupts or intrudes on others (e.g., butts into conversations/ games)				

SNAP-IV-18: Scoring Guide

The SNAP-IV 18-item scale is an abbreviated version of the Swanson, Nolan, and Pelham (SNAP) Questionnaire (Swanson, 1992; Swanson et al., 1983). Items from the DSM-IV criteria for attention-deficit/hyperactivity disorder (ADHD) are included for the two subsets of symptoms: Inattention (items 1–9) and Hyperactivity/Impulsivity (items 10– 18). Symptom severity is rated on a 4-point scale. Responses are scored as follows: Not at all = 0 Just a little = 1 Quite a bit = 2 Very much = 3 The scores in each of the two subsets (inattention, and hyperactivity/impulsivity) are totaled.

SNAP-IV-18: Scoring Guide

Questions 1 – 9: Inattention Subset

- < 13/27 = Symptoms not clinically significant
- 13 – 17 = Mild symptoms
- 18 – 22 = Moderate symptoms
- 23 – 27 = Severe symptoms

Questions 10 – 18: Hyperactivity/Impulsivity Subset

- < 13/27 = Symptoms not clinically significant
- 13 – 17 = Mild symptoms
- 18 – 22 = Moderate symptoms
- 23 – 27 = Severe symptoms

Suggested Targets:

- <13/27 for inattention
- <13/27 for hyperactivity/impulsivity

Clinical Decision-Making Procedures I

Diagnostic Evaluation

- Symptom rating scales for assessment of **ADHD severity**:
 - ❑ <12 years old: **Vanderbilt Parent and Teacher Forms (Initial and Follow-up)**
 - ❑ >12 years old: **SNAP-IV-18 Parent and Teacher Forms**
- Assessment for “red flags” and diagnostic “rule-outs” that would be expected to affect treatment planning

Red Flags

- Suicidality
- Cultural Issues
- Trauma
- Substance Abuse

Differential Diagnosis

- Oppositional Defiant Disorder
- Intermittent Explosive Disorder
- Neurodevelopmental Disorders
- Learning Disorders
- Autism Spectrum Disorders
- Substance Use Disorders
- Mood Disorders (MDD, DMDD, Bipolar)
- Anxiety Disorders
- Medication Induced Symptoms of ADHD

Clinical Decision-Making Procedures II

Treatment planning

**Sub-clinical to mild
ADHD:**

Guided self-
management
with follow-
up

**Moderate ADHD (or
self-management
unsuccessful):**

Consider
medication
and refer to
therapy

**Severe ADHD:
Associated with high
risk behaviors and/or
comorbid disorder(s)**

Refer to
specialty
care for
therapy &
medication
management
until stable

FDA Approved Medications for ADHD in Youth 6 years and older

Stimulants:

Amphetamine, Methylphenidate

Non-Stimulants:

Atomoxetine, Guanfacine ER, Clonidine XR

CALL MCPAP for Consultation on Medication Treatment for children < 6 years old

Baseline assessments:

- Cardiovascular History (personal & family)
- Height
- Weight
- Pulse
- Blood Pressure
- Substance Use history

After 2-3 weeks on Starting Dose obtain Rating Scales (Vanderbilt or SNAP-IV (Parents and Teacher Follow-Ups) to Assess Response

If inattention and/or hyperactive/impulsive scores > cut points & impairment persists then increase dose to next step (18 mg for OROS; 5 mg for other stimulants)

Methylphenidate:

OROS-MPH

- Starting Dose 18 mg QAM;
- Range 18-72 mg QAM
- Up to 12 hours of coverage

Dex-MPH XR

- Starting Dose 5 mg QAM;
- Range 5-30 mg QAM
- 10-12 hours of coverage

Amphetamine:

MAS XR

- Starting Dose 5 mg QAM
- Range 5-30 mg QAM
- Up to 12 hours of coverage

Dextroamphetamine ER

- Starting Dose 5 mg QAM
- Range 5-40 mg Daily
- 6-8 hours of coverage

Additions since Guidelines Developed

- **external Trigeminal Nerve Stimulation (eTNS) System** on April 19, 2019
The U.S. Food and Drug Administration permitted marketing of the first medical device to treat attention deficit hyperactivity disorder (ADHD). The prescription-only device is indicated for patients ages 7 to 12 years old who are not currently taking prescription ADHD medication and is the first non-drug treatment for ADHD granted marketing authorization by the FDA.

<https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-first-medical-device-treatment-adhd>

- **Viloxazine Hydrochloride** (Qelbree) , a new nonstimulant medication for ADHD, has received FDA approval for treatment of attention deficit hyperactivity disorder in patients 6 to 17 years of age. Qelbree is the first nonstimulant ADHD medication to receive FDA approval for use in children in more than a decade.

Black Box Warning: increase in suicidality

<https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=overview.process&varApplNo=211964>

Managing Medications for ADHD

After each dosage increase, obtain Vanderbilt or SNAP-IV (Parent & Teacher Follow-Up) to assess response before further dosage increase

If inattention and/or hyperactive/impulsive scores > cut-points & impairment persists, continue to up-titrate dose stepwise every 2-3 weeks to maximum therapeutic dose as tolerated

If inattention and/or hyperactive scores > cut-points at maximum therapeutic dose, consult MCPAP CAP for next steps

When inattention and/or hyperactive/impulsive scores < cut-point with mild to no impairment, remain at current dose for remainder of school year

Monitor every 3-4 months for maintenance of remission, side effects, & anthropometrics/vitals; consult with MCPAP CAP as needed

Consider off medication on weekends, holidays, vacation days

Consider discontinuation each school year, using Vanderbilt Parent and Teacher Initial to assess for symptom recurrence

Medication treatment is just one component of a comprehensive treatment plan for youth with ADHD

Psychotherapy referral should be considered at the time of initial diagnosis for all patients for:

- Behavioral Modification
- Parent Guidance
- Improving Individual and Family Coping Skills
- School Consultation
- Psychoeducation

MCPAP Clinical Algorithms: Applications

Algorithms will likely not be the best starting point for severely ill, treatment-resistant or highly complicated presentations of mental illness in primary care



Primary care providers are encouraged to make liberal use of MCPAP phone consultation and face-to-face consultations for complicated, treatment-resistant or severely ill presentations rather than relying on MCPAP Clinical Algorithms

Thank you for your attendance
and attention!

Questions and Comments
invited and appreciated!