Ask The Shrink: ADHD

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Funder & Partners
Learning Objectives

• Understand how to implement PSC primary screening tool and determine if further secondary screening is necessary for further identification of ADHD in pediatric patients
• Identify & recognize symptoms of ADHD in pediatric patients
• Describe the pharmacological and non-pharmacological interventions/treatments in working with patients with ADHD
• Discuss when referral to psychiatry may be warranted, examining factors of severity or comorbidities
• Consider how best to implement psychiatric recommendations for patients with ADHD diagnoses
• Describe the process of hub referral and care coordination regarding your patients with ADHD
Pediatric Symptom Checklist (PSC-35, Y-PSC-37)

- A psychosocial screen and functional screening tool designed to facilitate the recognition of cognitive, emotional, and behavioral problems so that appropriate interventions can be initiated as early as possible.
- Assessment can be used for ages 6 to 18
- Available in multiple languages and a pictorial version
- Parent version (PSC) with 35 questions is available for young children ages 6 and up and, in addition, Youth version for self-assessment (Y - PSC) can be used from age 11 and up.

http://www.massgeneral.org/psychiatry/services/psc_scoring.aspx

Pediatric Symptom Checklist (PSC-35)

<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complain of aches and pains</td>
<td>1</td>
<td></td>
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<tr>
<td>2. Spends more time alone</td>
<td>2</td>
<td></td>
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<tr>
<td>3. Tires easily, has little energy</td>
<td>3</td>
<td></td>
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<tr>
<td>4. Frigid, unable to sit still</td>
<td>4</td>
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<tr>
<td>5. Has trouble with teacher</td>
<td>5</td>
<td></td>
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<tr>
<td>6. Less interested in school</td>
<td>6</td>
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<tr>
<td>7. Acts as if driven by a motor</td>
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<tr>
<td>8. Daydreams too much</td>
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<tr>
<td>9. Distracted easily</td>
<td>9</td>
<td></td>
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<tr>
<td>10. It afraid of new situations</td>
<td>10</td>
<td></td>
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<tr>
<td>11. Feels sad, unhappy</td>
<td>11</td>
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</tbody>
</table>
Pediatric Symptom Checklist (Y-PSC)

<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complain of aches or pains</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Spend more time alone</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>3. Tired easily, little energy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4. Fidgety, unable to sit still</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>5. Have trouble with teacher</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>6. Less interested in school</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Act as if driven by motor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>8. Daydream too much</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>9. Distract easily</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. Are afraid of new situations</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. Feel sad, unhappy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>36. During the past three months, have you thought of killing yourself?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>37. Have you ever tried to kill yourself?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tbody>
</table>

Source: Pediatric Symptom Checklist – Youth Report (Y-PSC)
Scoring the Pediatric Symptom Checklist (PSC-35, Y-PSC-35, Y-PSC-37)

- 35/37 items, rated “Never”, “Sometimes”, or “Often”
- Scored 0, 1, 2 respectively
- For the total score, the cut-offs are as follows:
  - Ages 6-18: score >/= 28 is significant
  - Y-PSC: score >/= 30 is significant
  - Y-PSC-37: score >/= 30 is significant OR positive response to Q 36 or 37
- Items left blank are ignored (score = 0), 4 or more blank = invalid questionnaire
- Aside from total score, PSC also has three subscales

PSC Subscales

- **Internalizing Problems**
  - Depression, Anxiety
- **Attention Problems**
  - ADHD
- **Externalizing Problems**
  - Conduct disorder, oppositional defiant disorder
- **Suicidality**

![Image of subscales and individual problem areas](image)
PSC Subscale Scoring

- **Attention Subscale:**
  - Sum responses to items 4, 7, 8, 9, 14
  - 7 or higher is considered significant

- **Internalization Subscale (Mood/Anxiety Symptoms):**
  - Sum responses to items 11, 13, 19, 22, and 27
  - 5 or higher is considered significant

- **Externalization (ODD / Conduct Disorder):**
  - Sum responses to items 16, 29, 31, 32, 33, 34, and 35
  - 7 or higher is considered significant

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Why Use the PSC?

- The AAP has called for pediatricians to consider mental health during all well child visits using validated, reliable measures like the PSC
- Endorsed by the National Quality Forum as a national standard of care
- One of the most frequently recommended instruments for children with both Medicaid and commercial health insurance
- Clear majority of studies have shown the PSC’s usefulness as a marker for psychosocial dysfunction
- Congruent with the philosophy behind screening and the concept of a medical home
- Designed to fit into the work flow of a primary care practice and to alert families that the pediatrician is interested in psychosocial and emotional issues
CASE STUDY:
Angela, age 13 years, 8th grade, Hispanic, lives with both parents

- Comes for annual check up; parents voice concerns
- She has been angry over the past 15 months almost all of the time
- Verbal, explosive rages occur frequently
  - Often over little things
  - No physical aggression
- She sometimes appears very happy and describes such feelings
- Mom has history of severe anxiety; dad has had depressive episodes

Angela’s PSC and Y-PSC-37 Scores

<table>
<thead>
<tr>
<th></th>
<th>Total = 38</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSC (mom)</strong></td>
<td></td>
</tr>
<tr>
<td>Attention</td>
<td>8</td>
</tr>
<tr>
<td>Internalizing</td>
<td>5</td>
</tr>
<tr>
<td>Externalizing</td>
<td>9</td>
</tr>
<tr>
<td><strong>Y-PSC-37 (Angela)</strong></td>
<td>Total = 32</td>
</tr>
<tr>
<td>Attention</td>
<td>9</td>
</tr>
<tr>
<td>Internalizing</td>
<td>5</td>
</tr>
<tr>
<td>Externalizing</td>
<td>8</td>
</tr>
<tr>
<td>Suicidal</td>
<td>0</td>
</tr>
</tbody>
</table>
ADHD as a Diagnosis

- ADHD symptoms are found in multiple disorders
  - *Multiple Medical Diseases and Psychiatric Disorders present with ADHD symptoms*
- Spectrum of ADHD symptoms
  - Normal variant to severe psychopathology
- Complex genetic disorder resulting from combined effects of several genes through interactions with the environment
- Diagnosis made by applying validated criteria
  - Well established with multiple biological correlates

Attention-Deficit/Hyperactivity Disorder (ADHD)

- Persistent pattern of **Inattention** (6 or more symptoms for 6 or more months) &/or **Hyperactivity - impulsiveness** (6 or more symptoms for 6 or more months)
  - Symptoms more severe than normally seen for comparable development level
  - 5 symptoms in either or both for those 17 or older years of age
- Symptoms negatively impact social and academic/occupational activities
- **Several** symptoms of inattentive and/or hyperactive-impulsive behavior have been present
  - **Before age 12 years** AND
  - In at least 2 settings.
ADHD - **Inattention**

**Often:**
- Makes careless mistakes
- Difficulty sustaining attention (“I have problems focusing”)
- Doesn’t seem to listen when directly spoken to
- Fails to finish things
- Difficulty organizing activities and tasks
- Avoids tasks requiring sustained mental effort
- Loses things necessary for tasks
- Easily distracted
- Forgetful

*Symptoms not due to oppositional defiance or not understanding*

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ADHD **Hyperactivity-Impulsivity**

**OFTEN:**
- Fidgets or squirms
- Leaves seat when should be seated
- Inappropriately runs around or climbs excessively (restlessness in older teens and adults)
- Difficulty playing quietly
- On the go, acts as if driven by a motor
- Talks excessively
- Blurs out answers
- Difficulty waiting for turn
- Intrudes or interrupts others (e.g., games or conversations)
ADHD Management Strategies

• Biopsychosocial approach
• Medical factors and medication
• Psychological factors, learning ability, cognitive distortions, social skills and self-control strategies.
• Social factors in home and school

Medical Disorders presenting with ADHD symptoms

• Sleep Apnea
• Endocrine especially Thyroid
  • Hyperthyroid
  • Resistance to thyroid hormone (RTH) with ADHD symptoms
• Elevated lead levels
• Neurological diseases
  • Seizure disorder
  • Tumors and Unusual syndromes
ADHD: Treatment Issues

- Untreated teens more likely to have:
  - Increased use of substances of abuse,
  - 4x more Sexually transmitted diseases (STDs),
  - 3x more likely to be unemployed
  - 2x more likely to be divorced or arrested
- Short term medication treatment highly effective compared to placebo
- Best prognosis for multimodal treatment:
  - Psychopharmacologic and Psychosocial
- Comorbid conditions affect outcome

What Types of Treatments Are Effective?
Multi-modal Treatment Study of Children with ADHD (the MTA study).

14-month study: stimulant medication the most effective in treating the symptoms of ADHD,
- administered in doses adjusted for each child to give the best response – either alone or in combination with behavioral therapy.
- medication dosage is regularly monitored and adjusted for each child.

MTA study and other large-scale treatment studies assessing safety and effectiveness of ADHD medication
- stimulant medication reduces hyperactivity and impulsivity, improves attention, and increases the ability to get along with others

MTA study found combining behavioral treatment with medicine was useful in helping families, teachers, and children learn ways to manage and modify the behaviors causing problems at home and at school.
- some children receiving the combination of medication and behavioral therapy were able to take lower doses of medicine.
## FDA-Approved ADHD Medication *

<table>
<thead>
<tr>
<th>Class</th>
<th>Trade Name</th>
<th>Generic Name</th>
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</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td></td>
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</tr>
<tr>
<td>Adderall</td>
<td>mixed amphetamine salts</td>
<td></td>
</tr>
<tr>
<td>Adderall XR</td>
<td>extended release mixed amphetamine salts</td>
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</tr>
<tr>
<td>Dextedrine</td>
<td>dextroamphetamine</td>
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<tr>
<td>Dextedrine Spansule</td>
<td>dextroamphetamine</td>
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<tr>
<td>Vyvanse</td>
<td>Lisdexamfetamine (extended release)</td>
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<tr>
<td>Concerta</td>
<td>methylphenidate</td>
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<tr>
<td>Daytrana</td>
<td>methylphenidate (patch)</td>
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<tr>
<td>Focalin</td>
<td>dexmethylphenidate</td>
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<td>Focalin XR</td>
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<td>Metadate ER</td>
<td>extended release methylphenidate</td>
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<tr>
<td>Metadate CD</td>
<td>extended release methylphenidate</td>
<td></td>
</tr>
<tr>
<td>Methylin</td>
<td>methylphenidate hydrochloride (liquid &amp; chewable tablets)</td>
<td></td>
</tr>
<tr>
<td>Quillivant XR</td>
<td>extended release methylphenidate (liquid)</td>
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<tr>
<td>Ritalin</td>
<td>methylphenidate</td>
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<tr>
<td>Ritalin LA</td>
<td>extended release methylphenidate</td>
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<tr>
<td>Ritalin SR</td>
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<tr>
<td>Methylphenidate</td>
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<td></td>
</tr>
<tr>
<td>Non-stimulants</td>
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<tr>
<td>Norepinephrine Uptake Inhibitor</td>
<td>Strattera</td>
<td>Atomoxetine</td>
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<tr>
<td>Alpha Adrenergic Agents</td>
<td>Intuniv</td>
<td>extended release guanfacine</td>
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<td></td>
<td>Kapvay</td>
<td>extended release clonidine</td>
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### Behavioral treatments in the MTA

- **Parent Training**: Helped parents learn about ADHD and ways to manage ADHD behaviors.
  - includes techniques by which the parents can have positive interactions with their child while becoming more effective at getting their children to meet expectations for behavior.
- **Child-Focused Treatment**:
  - Helping children and teens with ADHD learn to develop social, academic, and problem-solving skills in a summer treatment program, home or school settings.
- **School-Based Interventions**:
  - Helping teachers meet children’s educational needs to learn skills to manage ADHD behaviors in the classroom (such as rewards, consequences, classroom seating, and daily report cards sent to parents).
Impaired executive functions in ADHD

Co-Occurring Disorders are the Rule with ADHD
Implications for Presence of ADHD and Comorbid Disorder(s)

Impact on expected psychological growth and development:

- Earlier the age of ADHD onset, the greater the presence of a comorbid disorder
- School-aged children with ADHD typically
  - score lower on achievement tests than non-ADHD peers
  - are at greater risk of special education placement and grade retention
- Preschoolers with ADHD & ODD more likely to have psychiatric disorder in 2 years than ADHD alone

Impact on expected psychological growth and development:

- ADHD in adolescents causes impairment in multiple areas of functioning and presents in many different ways.
- Examples - Teens inadequately treated for ADHD are
  - highly likely to develop SUD, particularly associated with degree of inattention severity—double the risk than those without ADHD;
  - have increased vulnerability to school failure and drifting to associate with non-conformist peer groups that tolerate heavier substance use.
Implications for presence of ADHD and comorbid disorder(s)

Problems facing clinicians:
▪ Determining whether it is the severity of ADHD or one or more comorbid conditions that result in the clinical picture that needs to be addressed

Examples:
▪ ADHD symptoms and symptoms of depression or anxiety often occur together
  ◦ Pose diagnostic and treatment questions if full criteria for either are not met
  ◦ Symptoms overlap and can be misdiagnosed or misinterpreted

Implications for presence of ADHD and comorbid disorder(s)

When criteria met for both a depressive disorder (e.g., MDD or Dysthymic disorder) and ADHD
▪ Which to treat first—
  ◦ ADHD as untreated or inadequately treated or
  ◦ Depression that must be treated before the ADHD

Similar decision points occur with anxiety disorders, bipolar and mood dysphoric disorders when consideration about medication is the focus
Implications for presence of ADHD and comorbid disorder(s)

Children with comorbid anxiety disorder and ADHD are worriers
- About their behavior, performance and academic, social, and physical competency, as well as the future
- They will respond openly to questions about their worries but rarely will volunteer such information without an inquiry
- Not risk takers, they’ll often inquire about how they are doing in the interview, with testing, etc.
- May also be reluctant to leave their parents

Implications for presence of ADHD and comorbid disorder(s)

• Coexistence of ADHD and an Anxiety disorder can cause impairment in problem solving and reading due to compromised working memory and effortful processing in presence of low self-esteem in many of these children
• Parents may be unaware of this or of themselves suffering from anxiety
• Role of Primary Care Physicians to inquire of child and parents
Implications for presence of ADHD and comorbid disorder(s)

- Coexisting learning and language disorders affect multiple levels of functioning. For reading disorders and reading difficulties if left untreated often persist into adolescence and adulthood.
- Comorbid ADHD and mathematics disorder highly predicts persistent difficulty in calculating, writing problems, and lower IQ.
- Communication disorders may exacerbate behavioral problems secondary to misunderstandings in interpersonal relations.

Implications for presence of ADHD and comorbid disorder(s)

- Risk of youth with ADHD for SUD seems predominantly associated with comorbid CD and non-adherence to treatment.
- Children with ADHD and aggression appearing early in life are at highest risk for poor outcome and require intensive intervention.
- Coexisting CD, ODD, and aggression may be present in about half of all youth with ADHD combined type and “accounts for the majority of poor behavioral outcome among children with ADHD, as well as among children with CD”
CASE STUDY:
Angela, age 13 years, 8th grade, Hispanic, lives with both parents

• Comes for annual check up; parents voice concerns
• She has been angry over the past 15 months almost all of the time
• Verbal, explosive rages occur frequently
  • Often over little things
  • No physical aggression
• She sometimes appears very happy and describes such feelings
• Mom has history of severe anxiety; dad has had depressive episodes

What are your differential diagnoses and options?

History:
  • Onset/duration
  • Stressors
Data needed for differential diagnoses and case formulation:
  • Vanderbilt
  • PHQ- A
  • SCARED
Collaborative Hub Procedure

Referring to the Hub: After required routine screening and/or based on clinical judgement following the exam, providers can fax the PPC Hub. Providers should send a complete consult form, screening tools, and any other clinically relevant information.

What Does the Hub Staff Need? All of the information the PPC Hub staff needs is on the referral form, including relevant background information, current clinical picture, demographic information, and reason for referral. Some providers may choose to send notes from previous visits as well, which can be very helpful, but is not required.

Communicating with the Family: Please be sure you have discussed the PPC Hub with the patient and family prior to faxing a referral to the PPC Hub, so that the family is aware that a Hub staff psychologist/LCSW/other mental health specialist will be contacting them to discuss current concerns and suggestions for support/treatment.
Collaborative Hub Procedure Cont’d

- **What will the PPC Hub Staff Do?** Hub staff will call the patient’s family and complete a clinical intake. The family will discuss their main concerns. Case managers will evaluate for severity and level of care. Depending on the patient’s needs, Hub staff will:
  - Recommend an appropriate level of care (inpatient, PHP, IOP, or outpatient) - the family is sent a list of referrals for therapy services to address current mental health concerns.
  - Match the patient with a therapist based on their insurance and geographical location – the referrals are researched by staff psychologists/LCSWs, and most often accept patient insurance.

  **“Closing” the Loop:** Hub staff will communicate with you, sending you notes on what occurred with the family. They will also encourage the family to call them back if they need another resource. Hub staff will also follow-up with referred families 3 and 9 months after initial referral.

Questions?

Please contact:

NJAAP
Mental Health Collaborative
609-842-0014
mhc@njaap.org