| **Body System:** Psychogenic | | |
|---|---|---|
| **Session Topic:** Attention Deficit/Hyperactivity Disorder (ADHD) in Female Patients | | |
| **Educational Format** | | **Faculty Expertise Required** |
| **REQUIRED** | Interactive Lecture | Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required. |
| **OPTIONAL** | Problem-Based Learning (PBL) | Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. Please describe your interest and plan for teaching a PBL on your proposal form. |

| **Professional Practice Gap** | **Learning Objective(s) that will close the gap and meet the need** | **Outcome Being Measured** |
|---|---|---|
| • Knowledge gaps with regard to assessing female child and adolescent patients with symptoms of ADHD, particularly if they have never been diagnosed and are experiencing significant functional impairments at school, home, and work or in other social settings. Physicians should especially consider that females with ADHD present differently than males.<br>• Knowledge gaps with regard to helping patients and family members to understand that ADHD can be successfully managed with an approach to treatment that combines pharmacologic and psychological therapy. Family physicians should prepare appropriate medication recommendations for | 1. Utilize current evidence-based guidelines and DSM-V criteria to diagnose and evaluate ADHD in symptomatic female children and adolescent patients.<br>2. Screen patients with ADHD for sleep problems, and adjust treatment accordingly.<br>3. Develop a collaborative care plan that included multimodal interventions of other concomitant conditions and comorbidities, as well as pharmacologic and non-pharmacologic interventions to manage ADHD in female children and adolescent patients.<br>4. Counsel children and family members on successful management of ADHD, including transition management from adolescence to adulthood. | Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations. |

 

| | | |
|---|---|---|
| patients and be prepared to make adjustments if a particular drug proves to be ineffective or causes unpleasant side effects in patients.<br>• Knowledge gaps with regard to self-confidence with transitioning care of adolescent female patients with ADHD as they age into adulthood. Transition should be planned in advance by both referring and receiving services. If needs are severe and/or complex, use of the care program approach should be considered.<br>• The relationships between sleep and attention-deficit/hyperactivity disorder (ADHD) are complex and are routinely overlooked by practitioners. | | |

**ACGME Core Competencies Addressed** (select all that apply)

| | | | |
|---|---|---|---|
| X | Medical Knowledge | | Patient Care |
| X | Interpersonal and Communication Skills | | Practice-Based Learning and Improvement |
| | Professionalism | | Systems-Based Practice |

## Faculty Instructional Goals

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
    - Visit http://www.aafp.org/journals for additional resources

 

  - Visit http://familydoctor.org for patient education and resources
- Provide recommendations regarding current evidence-based guidelines and DSM-V criteria to diagnose and evaluate ADHD in symptomatic female children and adolescent patients.
- Provide recommendations regarding screening patients with ADHD for sleep problems, and adjust treatment accordingly.
- Provide strategies and resources for developing a collaborative care plan that included multimodal interventions of other concomitant conditions and comorbidities, as well as pharmacologic and non-pharmacologic interventions to manage ADHD in female children and adolescent patients.
- Provide strategies and resources for counseling children and family members on successful management of ADHD, including transition management from adolescence to adulthood.

**Needs Assessment**

Attention deficit/hyperactivity disorder (ADHD) is a neurobiological disorder characterized by inattentiveness, hyperactivity and/or impulsiveness. It is one of the most common behavioral disorders in children (affecting as many as 4.5 million youth between the ages of 5-17), but research in recent years has focused on its prevalence among adults (which, according to some estimates, may be as high as 4% in those aged 18-44 years). Precise causes have yet to be identified, but research suggests that heredity serves as the biggest contributing factor to the development of ADHD.[1]

Data from the 2012 American Academy of Family Physicians (AAFP) CME Needs Assessment Survey indicates that CME is needed by family physicians.[2] Family physician members indicated that the topic of ADHD is very relevant (5.37 on a 7-point scale), but that their medical skills to manage patients with ADHD was much less (4.85 on a 7 point scale) than where it should be to provide optimal care.

CME outcomes data from the 2013 AAFP Scientific Assembly: *Pediatric Attention Deficit Hyperactivity Disorder (ADHD)* CME sessions indicate that family physicians have a need for further education to help them provide better management of pediatric ADHD in their practice.[3] Over 32% of respondents indicated a need to pursue additional education; suggesting these CME sessions helped those learners identify knowledge gaps in their current practice management of the disorder. Specifically, learners identified the need to learner more about screening tools and evaluation, how to implement evidence-based recommendations and guidelines into their practice, and evidence-based recommendations for treatment therapies. CME outcomes data from the 2014 AAFP Assembly sessions on adult and child ADHD topics, as well from 2014-2015 AAFP Chapter Lecture Series: *ADHD in Female Patients* suggest that physicians have knowledge and practice gaps with regard to effective history taking; screening guidelines; recognizing that females present ADHD symptoms differently than males, as well as differences regarding treatment and prognosis; evidence-based recommendations for behavioral therapies and pharmacologic treatment; knowing when to refer, & coordinating referral and follow up.[4,5]

Family physicians should initiate an evaluation for attention-deficit/hyperactivity disorder (ADHD) for any child 4 through 18 years of age who presents with academic or behavioral

 

problems and symptoms of inattention, hyperactivity, or impulsivity.[6] Because symptoms vary significantly from person to person, ADHD can be difficult to diagnose. ADHD is frequently comorbid with the disorders listed in the *Disruptive, Impulse-Control, and Conduct Disorders* chapter of the DSM-V.[7] Family physicians need to have an understanding of how the changes in diagnostic criteria for ADHD and comorbid disorders from the DSM-IV to the DSM-V impact decisions about diagnosis and treatment. Physicians must also be aware of gender-related diagnostic issues. ADHD is more frequent in males than in females in the general population, with a ration of approximately 2:1 in children and 1.6:1 in adults. Females are more likely than males to present primarily with inattention versus disruptive behaviors more commonly displayed by males, resulting in girls and women consistently being under identified and underdiagnosed.[8-11] Physicians need continuing training and education with regard to gender-sensitive aspects of the diagnosis and treatment of ADHD in females; including raising awareness among parents, school counselors, teachers, and other care givers.

The AAFP endorses the current American Academy of Pediatrics (AAP) clinical practice guidelines for the diagnosis, evaluation, and treatment of ADHD in children and adolescents; therefore, family physicians should understand how to apply the guidelines to individual patient scenarios.[6,12] A summary of key recommendations from the AAP guideline is as follows:[6,12,13]

- Any child 4 through 18 years of age who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity should be evaluated for ADHD.
- The diagnosis of ADHD should be based on the criteria from the Diagnostic and Statistical Manual of Mental Disorders, 5$^{th}$ edition (DSM-V), with information obtained from parents/guardians, teachers, and other school and mental health clinicians involved in the child's care.
- Alternative causes of the behavior should be ruled out.
- A child being evaluated for ADHD should also be assessed for other conditions that might coexist with ADHD, including emotional, behavioral, developmental, and physical conditions.
- Children with ADHD should be managed following the principles of the chronic care model and the Medical Home.
- Preschool-aged children (4-5 years of age) should be treated with behavior therapy as the first line of treatment. Methylphenidate may be prescribed if the behavior interventions do not provide significant improvement and there is moderate-to-severe continuing disturbance in the child's function.
- Elementary school-aged children (6-11 years of age) should be treated with FDA-approved medications for ADHD and /or behavioral therapy.
- Adolescents (12-18 years of age) should be treated with FDA-approved medications for ADHD and may be treated with behavioral therapy.
- Medication doses should be titrated to achieve maximum benefit with minimum adverse effects.

Physicians may improve their care of female patients with ADHD by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:[14,15]

 

- Children four years and older and adolescents with poor attention, distractibility, hyperactivity, impulsiveness, poor academic performance, or behavioral problems at home or at school should be evaluated for ADHD.
- Behavioral therapy should be the primary treatment for ADHD in children younger than six years, and it may be helpful at older ages.
- Treatment of ADHD in children six years and older should start with medication.
- Psychostimulants (e.g., methylphenidate [Ritalin], dextroamphetamine) are the most effective therapy for core ADHD symptoms and have generally acceptable adverse effect profiles.
- A proper diagnosis of ADHD requires obtaining information from teachers, family members, and non-family members who are familiar with the child's behavior
- Pharmacotherapy with stimulant medication is the first-line treatment for most patients with ADHD
- On average, carefully monitored pharmacotherapy is more effective for ADHD than intensive behavioral treatment alone
- Support groups for parents who have children with ADHD help parents connect with others who have children with similar problems

As the diagnosis is considered in patients, the physician also has to determine whether other co-existing conditions – including mood and anxiety disorders, tics and Tourette syndrome, learning disabilities or speech/language/hearing disorders (the latter primarily in children) – may be responsible for the presenting symptoms. ADHD is a particular concern for children because its comorbidities include learning disabilities, conduct disorders (including oppositional defiant disorder), anxiety, depression or bipolar disorder.[14] Many studies indicate that ADHD is associated with sleep problems, especially initiating and maintaining sleep; thereby contributing to excessive daytime sleepiness (EDS).[16-18] However, the relationship between sleep and ADHD is frequently overlooked.[19] There is some evidence that treatment of comorbid sleep problems can improve ADHD symptoms.[17]

Dosing and medication release should be carefully considered in prescribing an effective pharmacologic agent for patients with ADHD, and a family physician can help monitor safety, efficacy and any potential misuse of the medication. Family physicians may need to be especially alert in treating patients who specifically request stimulants, as the medication may be sought for purposes that are not consistent with treatment for ADHD. Physicians should also check the U.S. Food and Drug Administration (FDA) Approved Risk Evaluation and Mitigation Strategies (REMS) for current REMS components for medications they are prescribing for the treatment of ADHD.[20] In fact, on December 17, 2013 the FDA warned that methylphenidate products, one type of stimulant drug used to treat attention deficit hyperactivity disorder (ADHD), may in rare instances, cause prolonged and sometimes painful erections known as priapism. A recent Cochrane review concluded that, compared with a placebo, immediate-release methylphenidate is an effective treatment for adults with ADHD, but with some limitations.[21,22]

Family physicians should receive continuing education that helps practicing physicians apply evidence-based recommendations and guidelines for the diagnosis, evaluation, treatment and management of ADHD in children to their current practices; emphasizing tools, resources, and strategies.[23-28]

 

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- AAP ADHD: clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents[6]
- Diagnosis and management of ADHD in children[15]
- ADHD interventions in children younger than six years[13]
- Current strategies in the diagnosis and treatment of childhood attention-deficit/hyperactivity disorder[14]
- FDA Approved Risk Evaluation and Mitigation Strategies (REMS)[20]
- Medication adherence: we didn't ask and they didn't tell[24]
- Health coaching for patients with chronic illness[23]
- Patient-physician partnering to improve chronic disease care[25]
- Thinking on paper: documenting decision making[26]
- Engaging Patients in Collaborative Care Plans[27]
- Integrating a behavioral health specialist into your practice[28]
- Familydoctor.org. Attention-Deficit Hyperactivity Disorder (ADHD) | Overview (patient resource)[29]

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