



Illinois DocAssist Program

Screening, Diagnosing, and Treating
ADHD in the Primary Care Setting

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[Disclosure Information]

- No financial relationships with:
 - pharmaceutical firms
 - provider of commercial services or CME credits

[Learning Objectives]

- 1) Understand screening recommendations for ADHD and common co-morbidities
- 2) Identify and employ rating tools for ADHD
- 3) Recognize diagnostic criteria for ADHD and common co-morbidities
- 4) Determine if treatment in the primary care setting is feasible
- 5) Identify psychosocial interventions that can be integrated into PC setting
- 6) Formulate a plan for initiation, titration, and monitoring of ADHD medication

Role of the Primary Care Provider

- Primary Care Providers (PCPs) as the major source of mental health care
- ADHD is one of the most prevalent chronic health conditions affecting school-aged children
- PCPs are frequently asked by parents and teachers to evaluate a child for ADHD
- Not uncommon for the PCP to be first person who has opportunity to diagnose ADHD
- Early recognition, assessment, and management, can realign the educational and psychosocial development of most children with ADHD
- Many patients will go undiagnosed and untreated if their clinicians are not prepared to consider the diagnosis of ADHD

[ADHD facts]

- Most common behavioral health problem among children
- 4-12% of school-aged children are diagnosed with ADHD (community samples)
- 65% of children diagnosed will have symptoms persisting into adolescence and more than a third will have symptoms persisting into adulthood
- 3 types: inattentive, hyperactive-impulsive, combined; 65% have the combined type

[More ADHD facts]

- Most are diagnosed in childhood but some diagnosed in adolescence, particularly with the inattentive type
- Hyperactivity symptoms decline but impulsivity and inattention often persist into adulthood
- Girls are more than twice as likely as boys to be diagnosed with the inattentive subtype
- There is a strong genetic component
- But, extent of impairment is influenced by co-morbidities and psychosocial factors

ADHD characteristics in adolescents

- Low self esteem
- Accident prone
- New academic problems
- Problems with time management, organization, problem solving, completing tasks
- Problems in peer relationships
- Higher risk of substance abuse if untreated
- Higher risk of traffic violations/ accidents if untreated
- Frequency and type of co-morbidities in adolescents

Presentations in the primary care setting

- Presentations of ADHD vary in clinical practice
- In many (but not all) cases, concerns are spontaneously mentioned by parents and
- Common teacher concerns:
 - Academic underachievement/ failure
 - Disruptive classroom behavior
 - Inattention
 - Problems with peer relationships
- Common parental concerns:
 - Similar to teachers
 - Poor self-esteem

Screening recommendations in the primary care setting

- Symptoms may not be present or concerns may not be reported in the primary care setting
- Thus, screening during routine health supervision visits can assist in early recognition
- Strategies for screening during routine health supervision

[Diagnosing ADHD]

■ DSM-IV criteria: Inattention Symptoms

- 1) fails to give close attention to details; makes careless mistakes
- 2) difficulty sustaining attention in tasks or play activities
- 3) does not seem to listen when spoken
- 4) does not follow instructions or finish school work, chores, or duties
- 5) has difficulty organizing tasks and activities
- 6) avoids, dislikes tasks requiring sustained mental effort
- 7) loses things necessary for tasks or activities
- 8) easily distracted by extraneous stimuli
- 9) forgetful in daily activities

[Diagnosing ADHD]

- DSM-IV criteria: Hyperactive-Impulsive Symptoms
 - 1) Fidgets/ squirms
 - 2) Trouble sitting still/ leaves seat
 - 3) Runs about inappropriately (in adolescents may be feelings of restlessness/ jittery)
 - 4) Difficulty playing quietly
 - 5) "On the go"; "driven by a motor"
 - 6) Talks excessively
 - 7) Blurts out (I)
 - 8) Difficulty awaiting turn (I)
 - 9) Interrupts or intrudes on others

[Diagnosing ADHD]

- DSM-IV criteria: Other criteria
 - 1) More than 6 symptoms total for more than 6 months and to a maladaptive degree and inconsistent with developmental level
 - 2) Some symptoms present before age 7
 - 3) Some impairment from symptoms in at least 2 settings (usually school and home)
 - 4) Clear evidence of significant impairment in social or academic functioning
 - 5) Symptoms due not exist solely secondary to PDD, a psychotic disorder, and are not better accounted for by another physical or mental disorder
- Combined type: if criteria are met from a combination of Inattention and Hyperactive-Impulsive
- ADHD Not Otherwise Specified: prominent symptoms that do not meet full diagnostic criteria (ex-age of onset after 7 or symptoms of inattention such as daydreaming and hypoactivity)

Special considerations to diagnosing ADHD in primary care setting

- DSM IV diagnosis requires significant impairment/ dysfunction but no reliable/ valid measure of dysfunction applicable to primary care setting exists
- Diagnosis must come from a synthesis of sources (parents, child, school etc) and DSM IV criteria must be applied in the context of clinical judgment
- PCPs typically encounter children with behaviors related to activity level--inattention and impulsivity that may be less problematic or a developmental variation not meeting DSM IV criteria
- The Diagnostic and Statistical Manual for Primary Care (DSM-PC), Child and Adolescent Version provides behavioral descriptions with a developmental perspective; can guide clinicians in evaluating and managing these concerns

ADHD Specific Rating Scales

- Conners' Rating Scales
- Vanderbilt Assessment Scales

[ADHD diagnosed: Next steps]

- Assessing for Co-morbid conditions and distinguishing a co-morbid condition from a “masquerading” condition
 - The role of a careful family psychiatric history
 - Co-morbid or “masquerading” disorders
 - ODD
 - CD
 - Depressive disorders
 - Anxiety Disorders
 - Learning Disorders
 - Others

[ADHD diagnosed: Next steps]

- Medical or neurological work-up?
- Neuropsychological and Academic testing?
- Documentation and Monitoring

[Explaining the diagnosis]

- Parent/Child
 - Background
 - Importance of recognizing symptoms
 - Expected course of disorder
 - Resources
 - National Alliance on Mental, www.nami.org
 - Facts for Families, www.aacap.org
 - Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) <http://www.chad.org>

- Teacher/ School
 - Resources
 - School Psychiatry Program at Massachusetts General Hospital, www.schoolpsychiatry.org

Treatment Choices for PCPs

- When to refer:
 - Upon assessment
 - severe aggression
 - co-morbid psychiatric disorders
 - After initiation of treatment
 - failure to respond to stimulants, atomoxetine
 - treatment emergent psychosis, agitation
 - family problems persist with resolution of ADHD symptoms

[Treatment Choices for PCPs]

- Psychosocial interventions
 - Psychoeducation for patient and family members
 - symptoms
 - course of disorder
 - treatment options

[Treatment Choices for PCPs]

- Psychosocial interventions
 - Support groups (www.chadd.org)
 - Advocacy groups (www.add.org)

[Treatment Choices for PCPs]

- Psychosocial interventions
 - Educational
 - coordinated behavioral plan
 - 504 Plan
 - Individualized Educational Plan

[Treatment Choices for PCPs]

- Psychosocial interventions
 - Behavior therapy
 - positive reinforcement
 - time-out
 - response cost
 - token economy

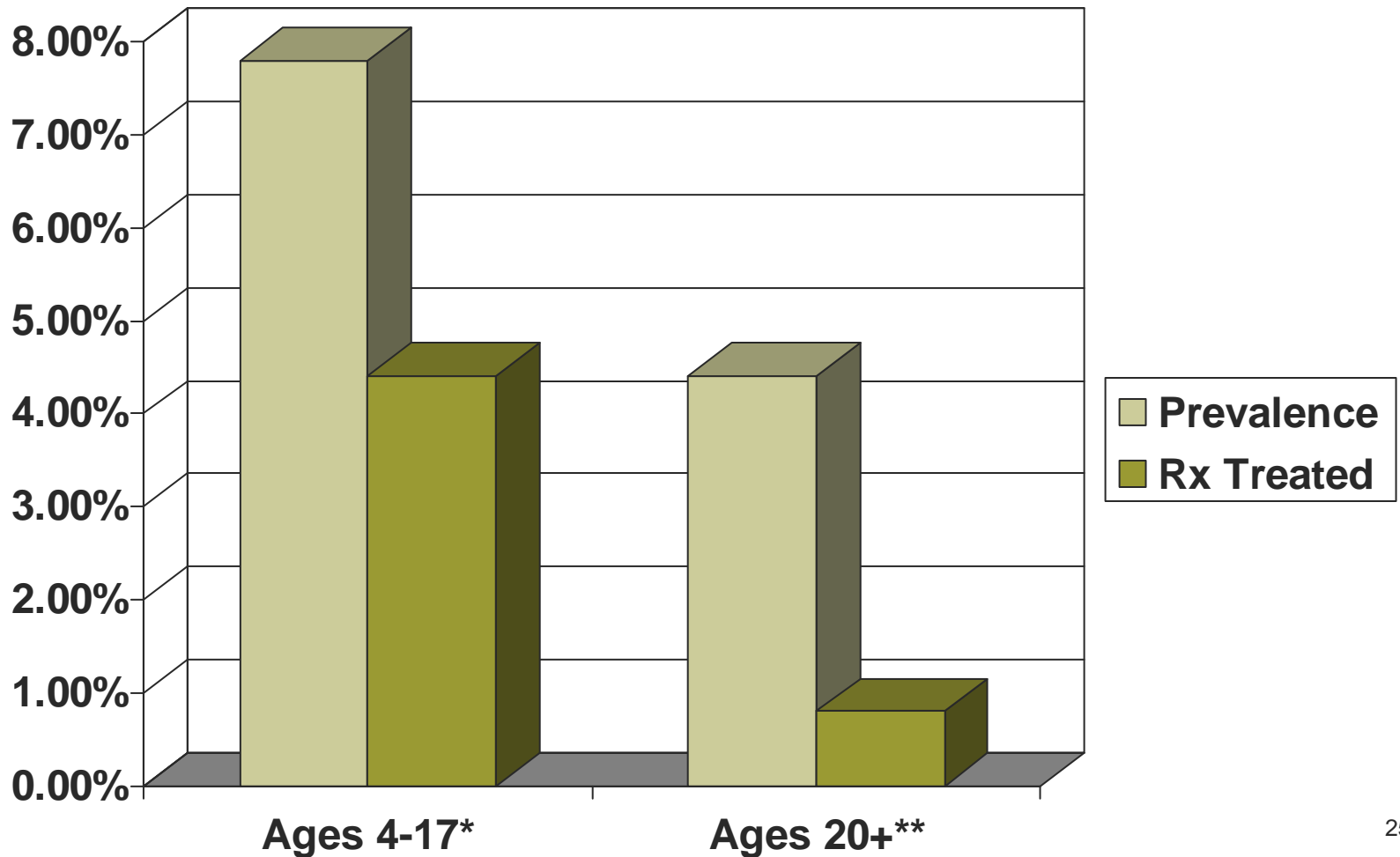
[Treatment Choices for PCPs]

- Psychosocial interventions
 - Parent training
 - 1-2-3 Magic: Effective Discipline for Children 2-12 (Thomas W. Phelan)

[Treatment Choices for PCPs]

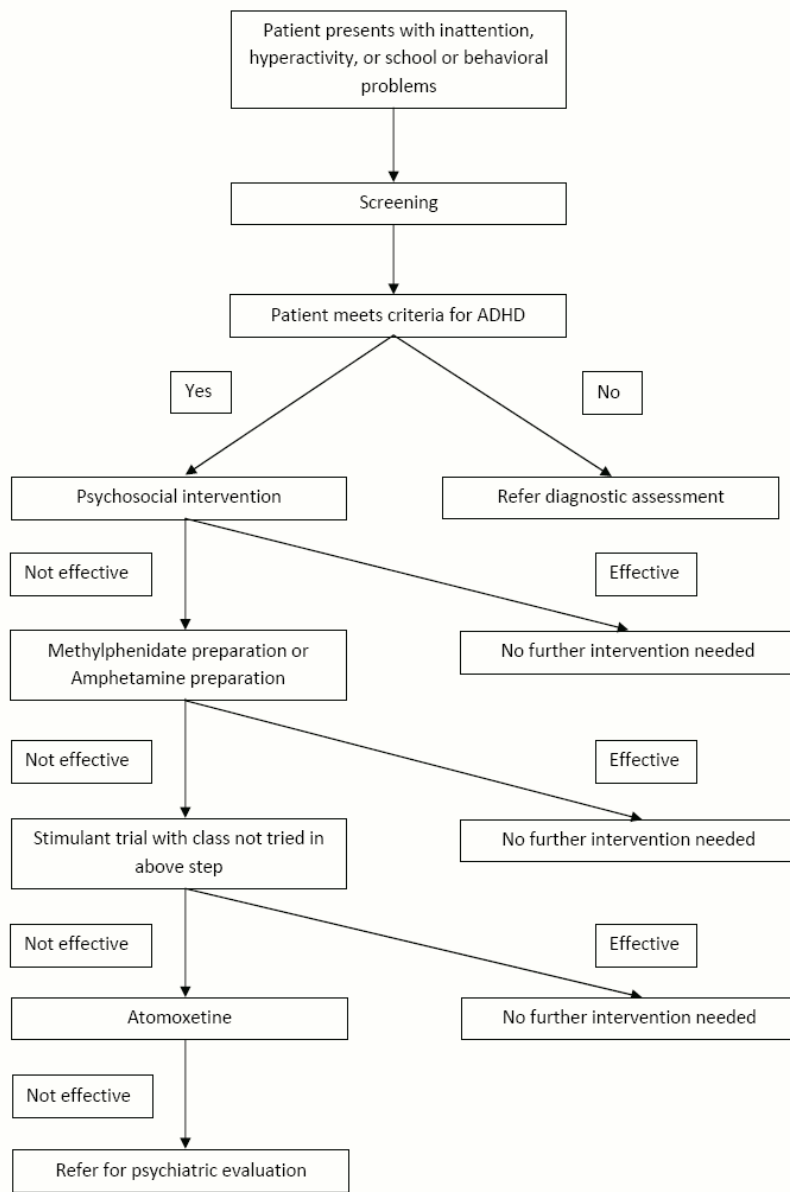
- Pharmacotherapy
 - stimulants
 - atomoxetine
 - other
 - α_2 adrenergic agonists
 - bupropion
 - tricyclic antidepressants
 - modafanil

ADHD Prevalence vs. Medication Treatment



Treatment Algorithm for Uncomplicated ADHD

Treatment Algorithm for ADHD



[Stimulant Medications]

- Treatment of choice
 - 65 – 75% respond to first trial
 - 85% respond if both classes tried
- Classes
 - methylphenidate
 - amphetamines

[Stimulant Medications]

- Methylphenidate preparations
 - Immediate release
 - methylphenidate (generic)¹
 - Ritalin²
 - Methylin²
 - Focalin (dexmethylphenidate)²
 - dexmethylphenidate (generic)¹

¹ – HFS Preferred Drug

² – HFS Non-Preferred Drug

[Stimulant Medications]

- Methylphenidate preparations
 - Sustained release
 - Ritalin SR
 - Ritalin LA²
 - Concerta¹
 - Methylin ER
 - Metadate CD¹
 - Metadate ER
 - Focalin XR¹

¹ – HFS Preferred Drug

² – HFS Non-Preferred Drug

[Stimulant Medications]

- Methylphenidate preparation
 - Other
 - Daytrana²

¹ – HFS Preferred Drug

² – HFS Non-Preferred Drug

[Stimulant Medications]

- Amphetamine preparations
 - immediate release
 - d-amphetamine²
 - Dexedrine
 - Liquadd (5 mg/5ml)
 - mixed amphetamine salts¹
 - Adderall
 - Desoxyn (methamphetamine)²

¹ – HFS Preferred Drug

² – HFS Non-Preferred Drug

[Stimulant Medications]

- Amphetamine preparations
 - Sustained release
 - Adderall XR¹
 - Other
 - Vyvanse (lisdexamfetamine)²

¹ – HFS Preferred Drug

² – HFS Non-Preferred Drug

[Contraindications]

- CNS stimulants can cause cardiac stimulation- may cause problems for patients with angina, dysrhythmias, hypertension
- Also contraindicated in anxiety disorders, glaucoma, or hyperthyroidism
- Usually contraindicated in history of drug abuse

[Stimulant Medications]

- Methylphenidate
 - Dose: 0.3-2 mg/kg/day PO div bid-tid
 - Start: 2.5-5 mg PO bid
 - Increase: 5-10 mg/day q7 days
 - Maximum: 2 mg/kg/day up to 60 mg/day

Stimulant Medications

- Dexamethylphenidate
 - ~ 2x as potent as d,l-methylphenidate
 - >6y.o.
 - Dose: 2.5-10 mg PO BID
 - Start: 2.5 mg PO BID
 - Increase: 5-10 mg/day q7 days
 - Max: 20mg/day
- Focalin XR
 - >6 y.o.
 - Start: 5 mg PO QAM
 - Increase: 5mg/day q7 days
 - Max: 20mg/day

[Stimulant Medications]

■ Concerta

○ 6-12 y.o.

- Start: 18 mg PO qd
- Increase: 18 mg/day q7 days
- Maximum: 54 mg/day

○ > 13 y.o.

- Start: 18 mg PO qd
- Increase: 18 mg/day q7 days
- Maximum: 2 mg/kg/day or 72 mg/day

[Stimulant Medications]

- Metadate CD
 - >6 y.o.
 - Dose: 20-60 mg PO qam
 - Start: 20 mg PO qam
 - Increase: 10-20 mg/day q7 days
 - Maximum: 60 mg/day

Stimulant Medications

- Amphetamine/d-amphetamine
 - 3-5 y.o.
 - Start: 2.5 mg/day qwk
 - Increase: 2.5 mg/d q7 days
 - > 6 y.o.
 - Start: 5 mg PO qam or bid
 - Increase: 5 mg/day qwk
 - Maximum: 40 mg/day

Stimulant Medications

- Adderall XR
 - 6-12 y.o.
 - Start: 5-10 mg PO qam
 - Increase: 5-10 mg/day qwk
 - Maximum: 30 mg/day
 - 13-17 y.o.
 - Start: 10 mg PO qam
 - Increase: 10 mg/day qwk
 - Maximum: 40 mg/day
- Daytrana

[Vyvanse]

- Lisdexamfetamine dimesylate
- Prodrug
- Dosage equivalent
 - 70 mg Vyvanse
 - 23.7 mg Adderall XR
 - 14.8 mg d-amphetamine
- Decreased abuse potential
- Decreased interpatient variability

Stimulant Medications

- Side effects
 - headache/jittery feeling
 - anorexia/weight loss
 - increased HR, BP
 - irritability
 - insomnia
 - tics
 - Psychosis
- Effects on growth
- Black box warning

[Atomoxetine]

- General information
 - Low abuse potential
 - May be first line treatment
 - tic disorder
 - anxiety disorder
 - substance use disorder
 - Onset of action delayed
 - Black box warning for suicidal thinking

[Atomoxetine]

- Side effects
 - Anorexia/weight loss
 - Nausea / vomiting
 - Sleep disturbance
 - Suicidal ideation
 - Liver damage
- Black box warning

[Non-Stimulant Medications]

■ Atomoxetine

- >6 y.o., <70 kg
 - Start: 0.5 mg/kg PO qam x 3 days
 - Increase to 1.2 mg/kg PO qam
 - Maximum: 1.4 mg/kg/day
- >6 y.o., >70 kg
 - Start: 40 mg PO qam x3 days
 - Increase to 80 mg PO qam
 - Maximum: 100 mg/day

[Monitoring Treatment]

- Symptom severity
 - Each visit
 - Parent and teacher rating scales
 - Worsening of behaviors
 - School failure

[Monitoring Treatment]

- Height and weight
 - Once or twice a year
 - Growth charts
 - changes in growth velocity
 - crosses 2 percentile lines

[Monitoring Treatment]

- BP and pulse
 - Several times annually
 - With dosage adjustment

[Monitoring Treatment]

- Medication side effects
 - Each visit
 - Strategies to alleviate side effects
 - dose adjustment
 - switching medication
 - Adjunctive
- Assess for development of co-morbid conditions

[Monitoring Treatment]

- Assessment to determine if ongoing medication management is necessary
 - Annually
 - At least one year symptom free
 - Drug holiday

Combined Pharmacotherapy & Behavior Therapy

- Decreased ratings of:
 - Inattention (P & T)
 - Hyperactivity-impulsivity (P)
 - Oppositional/aggressive behaviors (P)
 - Anxiety and depression (P)
- Lower dose of medication

[ADHD – Treatment]

- Adjunctive medications for comorbid features
 - Tics/Tourette's
 - Insomnia
 - Aggression

[Illinois DocAssist Program]

The mission of the Illinois DocAssist Program is to improve the ability of primary care providers to screen, diagnose and treat the mental health and substance use problems of children and youth (ages 21 and under).

For more information about DocAssist call 866-986-ASST (2778) or visit our website at:

www.psych.uic.edu/DOCASSIST



Illinois DocAssist Program

Thank You