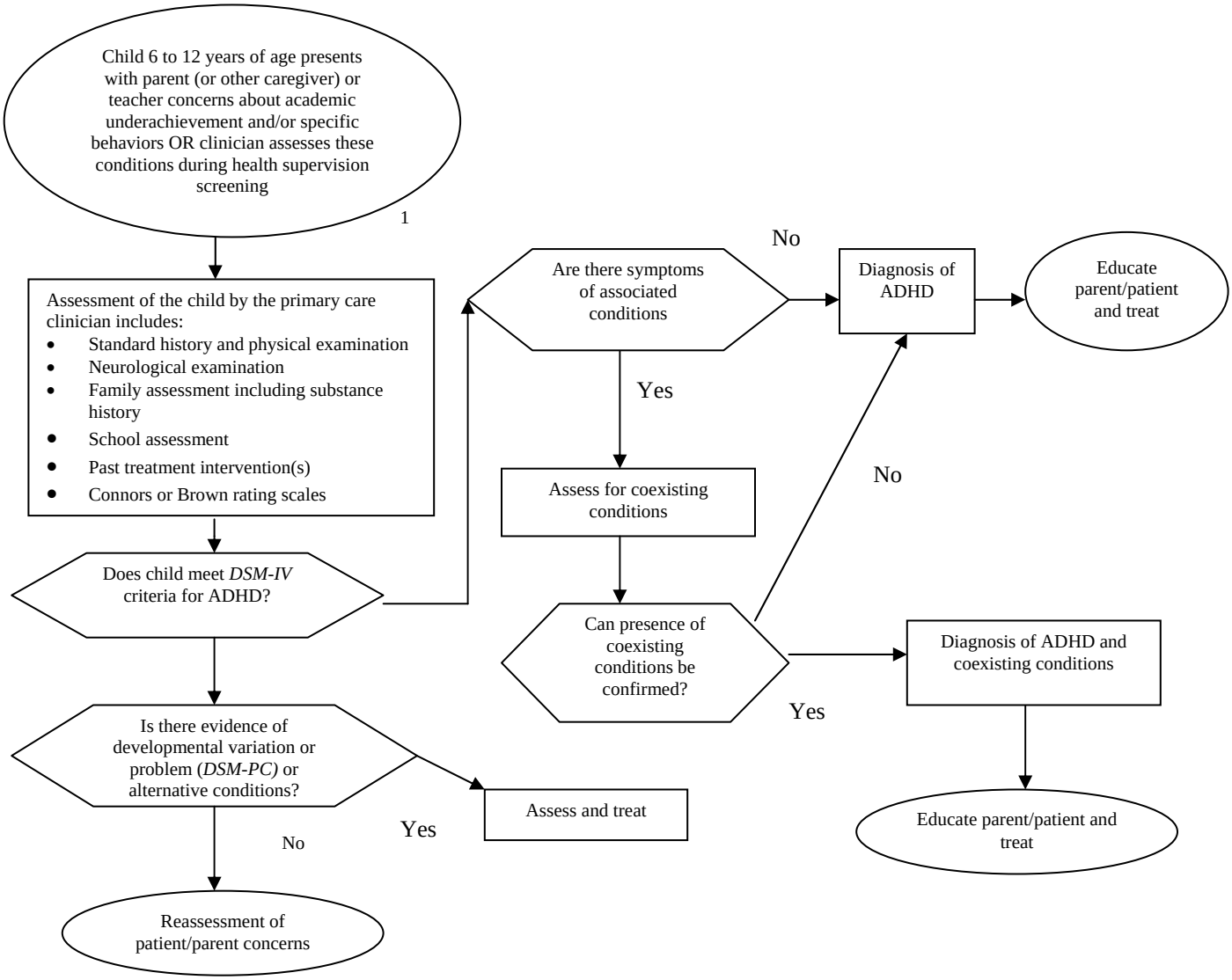
Guideline for the Management of Attention-Deficit / Hyperactivity Disorder

Essential Feature	"A persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development."
Evaluation	**Attention-Deficit/Hyperactivity Disorder is characterized by either** ❑ Six or more of the following symptoms of inattention persisting for at least six months ▪ failing to give close attention to details or making careless mistakes in schoolwork, work, other activities ▪ having difficulty sustaining attention in tasks or play ▪ not seeming to listen when directly addressed ▪ not following through on instructions and failing to finish assigned tasks, not due to oppositional behavior or failing to understand instructions ▪ having difficulty organizing tasks and activities ▪ avoiding, disliking, or being reluctant to engage in tasks requiring sustained mental effort such as schoolwork or homework ▪ losing things necessary for tasks or activities ▪ being easily distracted by extraneous stimuli ▪ being forgetful in daily activities ❑ Six or more of the following symptoms of hyperactivity-impulsivity persisting for at least six months **Hyperactivity** ▪ Fidgeting with hands or feet, or squirming in seat ▪ Leaving seat in classroom or other situations where remaining seated is expected ▪ Running about or climbing excessively in situations where this behavior is inappropriate, or, in adolescents/adults, may be limited to subjectively feeling restless ▪ Having difficulty playing or engaging in quiet leisure activities ▪ Being "on the go," or acting as if "driven by a motor" ▪ Talking excessively **Impulsivity** ▪ Blurting out answers before the questions have been completed ▪ Having difficulty awaiting one's turn ▪ Interrupting or intruding on others, such as butting into conversations or games Some hyperactive-impulsive or inattentive symptoms causing impairment were present before the age of seven. Some symptom-induced impairment is present in two or more settings, such as at school or work and at home.
Clinical Pearls and Recommendations	1. Evaluation should include information gathered from school and home. 2. ADHD should be recognized as a chronic condition. Treatment should occur in collaboration with family members and school personnel. 3. Optimal treatment involves behavioral therapy at home and at school. 4. If a child fails two stimulant medication trials, referral to a behavioral health care provider for further assessment and treatment would be appropriate. 5. Children with ADHD are at higher risk of learning disorders and should be referred for school evaluation. 6. Children with ADHD have greater needs for external, positive feedback and structure then normal children. 7. Support of the other family members is important. 8. Ratings from both school and family are strongly recommended.
Laboratory Testing	No specific laboratory tests, neurological assessments, or attentional assessments have been established as diagnostic. Cardiograms prior to prescribing stimulants are recommended only if the patient has a history of cardiac problems or family history of sudden death. Use of rating scales is highly recommended. See screening tools on page 2 of guideline.
Differential Diagnosis	ADHD must be distinguished from age appropriate behaviors in active children, age appropriate inattention noted in children with Mental Retardation, inattention in highly intelligent children placed in academically understimulating environments, oppositional behaviors, and the repetitive motor behavior seen in Stereotypic Movement Disorder. ADHD is not diagnosed if the patient's symptoms are better addressed by other mental disorders, such as Mood Disorder (particularly Bipolar), Anxiety Disorder, Dissociative Disorder, Personality Disorder, Personality Change Due to a General Medical Condition, or a Substance-Related Disorder. ADHD should not be diagnosed if the symptoms occur exclusively during the course of a Pervasive Developmental Disorder or a Psychotic Disorder.

Sources: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision. American Academy of Pediatrics, Clinical Practice Guidelines for the Diagnosis and Evaluation of ADHD in Children., Pediatrics 105:5, pp. 1158-1170 May 2000, American Academy of Pediatrics Clinical Practice Guideline for the treatment of School-Aged Child with ADHD, Pediatrics 108:4, pp. 1033-1044 October 2001http:// www.aap.org/policy/s0120.html

Diagnosis and Evaluation of the Child with Attention-Deficit/Hyperactivity Disorder



Screening Tools

Conners Rating Scales-Revised (CRS-R)

Evaluate problem behaviors as reported by teacher, parent or care givers, and self-reports. https://www.mhs.com

Connors Adult ADHD

Evaluate attention and related impulse problems in adults https://www.mhs.com

Brown Attention-Deficit Disorder Scale

Evaluate and screen from self-reports one for adolescents age 12-18, one for adults. Also effective for monitoring treatment response. http://harcourtassessment.com

Behavioral Assessment System for Children (BASC)

Coordinated systems of instruments that evaluate the behaviors, thought and emotions of children and adolescents. Provides teacher, parent and self-reports. Includes structured developmental history and observed classroom behavior. Measures numerous aspects of behavior and personality, including adaptive and problematic dimensions, as well as behaviors linked to ADHD. https://ags.pearsonassessments.com

Additional resources available for care givers:

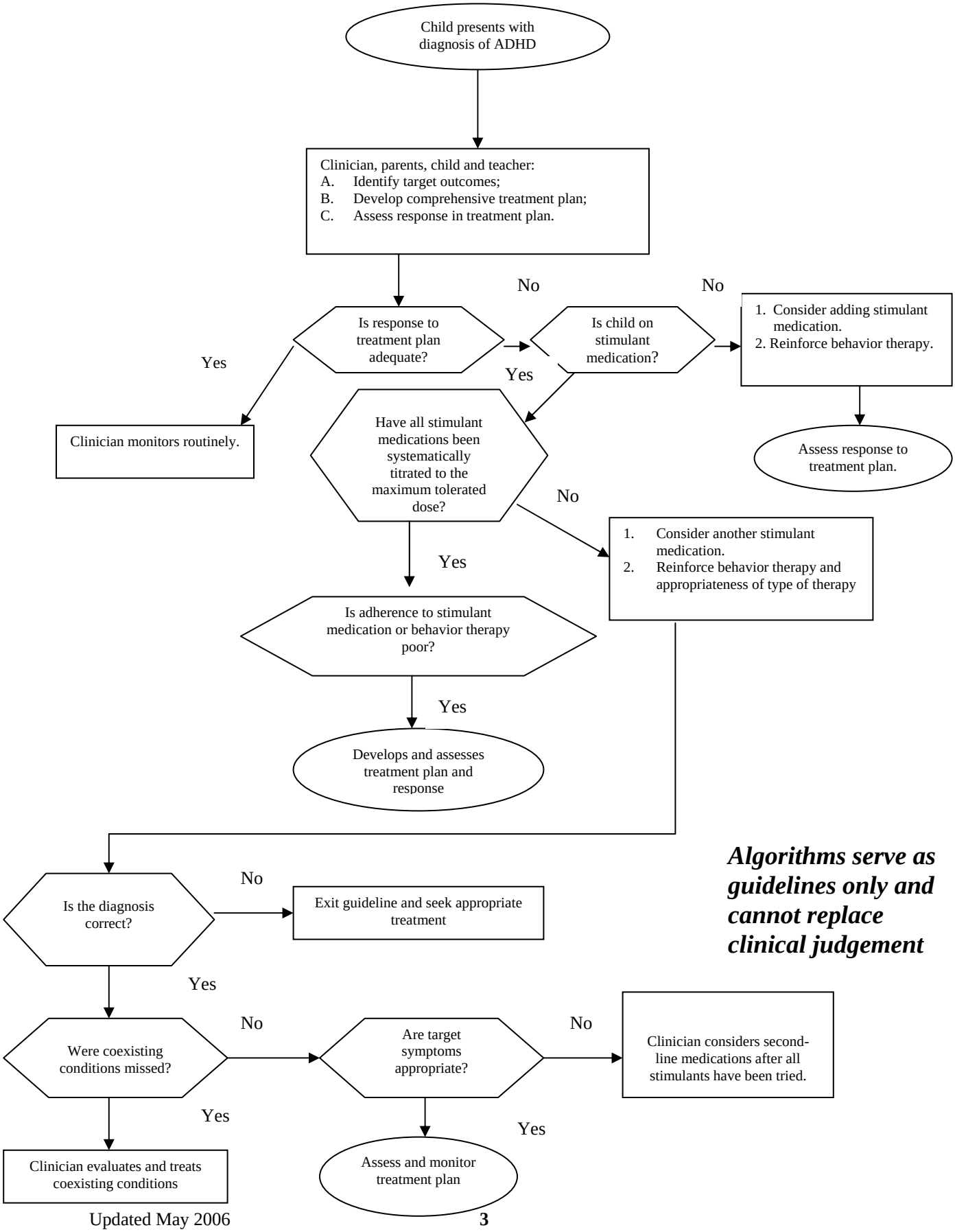
Academy of Child and Adolescent Psychiatry, The Use of Stimulant Medications in the Treatment of Children, Adolescents, and Adults, February 2002. http://www.aacap.org/Announcement/psychiatricmeds.htm

Children and Adults with Attention Deficit Disorder (CHADD) 8181 Professional Place, Suite 201 Landover, MD 20785 1-301-306-7070 fax: 1-301-306-7090 1-800-233-4050 website: *www.chadd.org*.

Learning Disabilities Association of America 4156 Library Road Pittsburgh, PA 15234-1349 1-412-341-1515 fax: 1-412-344-0224 website: *www.Idanatl.org*.

National Attention Deficit Disorder Association (ADDA) 1788 Second Street, Suite 200 Highland Park, IL 60035 1-847-432-ADDA fax: 1-847-432-5874 website: *www.add.org* email: *mail@add.org*.

Treatment of Children with ADHD



Algorithms serve as guidelines only and cannot replace clinical judgement

Supplement to Guideline

Use of Commonly Prescribed Psychostimulants

Medication	Brand Name(s)	Starting dose (mg/d)	Usual dosage (mg/d)	How Supplied	Maximum dose (mg/d)	Generic
Dextroamphetamine	Dexedrine Dextrostat	2.5 mg-increasing dosage 2.5 mg-increasing dosage	Child 15-20 md/qd Adult +/- 20-45 mg/d bid or tid	5,10 mgs tabs 10,15 mg spansules 5,10 mg tab	40 mg	Y Y
Dextroamphetamine Mix	Adderall	2.5 mg po am	Child 5-40 mg qd Adult 5-60 mg qd	5,7.5,10,12.5,15,20,30 mg 10,20,30 mg XR tabs	40 mg child 60 adult	Y
Methamphetamine	Desoxyn	5-10 mg child	Child +/- 5-40 mg/d bid or tid Adult +/- 20-40 mg/d bid or tid	5mg	25mg child	N
Dexmethylphenidate	Focalin	2.5 mg bid	2.5-10 mg po qd for child over six years to adult	2.5, 5, 10 mg	20mg/qd	N
Methylphenidate	Ritalin Ritalin SR Metadate Concerta Daytrana Patch Metadate CD Methylin Methylin ER Methylin Chewable Methylin Solution	5-10 mg child 20 mg qd child 20 mg qam 18 mg qd 5-10 mgs 20 mgs qam 5-10 mgs 10 mgs 2.5-5 mgs 5 mgs	Child 10-35 mg daily Child 20-60 mg daily 20-60 mg qam 18-54 mg-1 tab qd 1-20 mgs 20-60 mgs 10-35 mgs 20-40 mgs 10-30 mgs 1-30 mgs	5,10,20 mg tabs 20 mg SR 10, 20 mg ER tab 18,27,36,54 mg SR tabs 10, 15, 20, 30 mgs 10, 20, 30 mgs 5, 10, 20 mgs 10, 20 mgs 2.5, 5, 10 mgs 5, 10 mgs per teaspoon	35 mg qd 60 mg qd 60 mg qd 54 mg qd	Y N Y Y N N N N N N

Use of non-stimulants

Medication	Brand Name(s)	Starting dose (mg/d)	Usual dosage	How Supplied	Max dose (mg/d)	Generic
Atomoxetine HCL	Strattera	Child 40-62lbs 18 mg 63-93lbs 25 mg target dose 40 mg 94-126lbs 40 mg target dose 60 mg 127+lbs 40 mg target dose 80 mg	40-62lbs 25 mg 63-93lbs 40 mg 94-126lbs 60 mg 127+lbs 80 mg	10, 18, 25, 40, 6 0mg	Child 1.4 mg/kg or 100 mg or whichever is less Adult 100 mg	N

Additional information

Dosage is individualized for each patient.
Dextroamphetamine (Dexedrine) is not commonly used in children under the age of 5.
Longer acting agents such as Adderal, Concerta, and Ritalin SR are preferred for convenience reasons.
Upward titration should continue weekly until increments of improvement stop or side effects become significant. If there is no improvement at a dose that produces noticeable side effects the medication should be discontinued.
Common side/effects include insomnia, nervousness, and are usually dose dependant. Additional side effects include headache, palpitations, decreased appetite, and nausea.
Careful supervision is required for medication withdrawal.
Patients taking Strattera (atomoxetine) should be informed of increased risk of irritability, suicidal ideation or liver toxicity.