PSYCHOSTIMULANT & ADHD-Related AGENTS

A. FDA approved indications - See Table 1
   1. Attention Deficit/Hyperactivity Disorder (ADHD)
   2. Narcolepsy

B. Non-FDA approved, commonly used indications
   1. Fatigue, disease related (methylphenidate)
   2. Obesity (mixed salt amphetamines)
   3. Refractory depression (methylphenidate)

C. Minimal documentation
   1. All standard outpatient & inpatient requirements
   2. In children/adolescents: Family history, developmental history, school behavior, collateral information obtained from sources such as teachers, parents, care takers and other providers, and/or Psychometric assessment scores.
   3. In Adults:
      A. History of ADHD diagnosis or symptoms
      B. Any past treatment in childhood/adolescence including treatment response.
      C. In patients who report symptoms of ADHD (including during childhood), verification is required by obtaining collateral information or psychometric testing prior to initiating treatment.
      D. Detailed Substance Use history
      E. In patients who report symptoms of ADHD, always consider addressing the co-morbid condition which may mimic the symptoms of ADHD.
      F. All adults with ADHD should receive an adequate trial with a non-controlled FDA approved medication as first line treatment or document failure to previous “adequate trial” with a non-controlled medication.
      G. In patients with substance use, stimulant medications may be provided in accordance to Section P of medication practice guideline, Guidelines for Prescribing Controlled Psychotropic Medications to Patients with Substance Use.
D. Maximum dosage - See Medication Summary for MDD, or Table 1

E. Duration

1. For Outpatient: Document rationale when making any medication change.
2. For Inpatient: Document rationale when making more than 3 changes in any 7-day period.

F. Polypharmacy*

1. Adequate medication doses should be used over a sufficient period of time to obtain desired results before introducing polypharmacy.
2. If using >1 same class psychostimulant agent is necessary, provide clear supportive rationale for adding the second agent. Refer to section E2 for duration of use.

G. Drug Interactions

1. Drugs with levels (or clinical effects) that can be significantly increased by amphetamines: especially MAO inhibitors, tricyclics, sympathomimetic drugs (including OTC products), phenobarbital, phenytoin, other anticonvulsants, warfarin, meperidine
2. Drugs with effects that can be reduced or blocked by amphetamines: antipsychotics, antihistamines, antihypertensives, adrenergic blockers

G. Black Box Warnings – See Table 2

I. Adverse Events

1. Irritability, restlessness and agitation
2. Marked sedation or lethargy
3. Dysphoria and sadness, crying and withdrawal - depression
4. Marked anorexia and weight loss
5. Marked insomnia
6. Stomachache and headache
7. Significant tachycardia (esp. w/ mixed amphetamine salt)
8. Psychotic-like thinking and behavior
9. Precipitation of involuntary motor tics or even full-blown Tourette’s syndrome
10. Drug dependence
11. Stunting of growth in long-term administration
**Documentation Required**

**J. Standard laboratory and examination requirements**

1. For inpatient: Basic laboratory studies on admission
2. For outpatient:
   a. Children and Adolescents
      i. Height, weight, blood pressure and pulse at baseline, every 6 months, and after dose adjustment
   b. Adult
      i. Weight, blood pressure, and pulse at baseline and every 6 months, and after dose adjustment
   c. For all age groups
      i. Obtain cardiovascular history of patient and family prior to initiating a stimulant trial.
      ii. Patients with preexisting heart disease or symptoms suggesting significant cardiovascular disease should be referred for consultation with a pediatrician, internist and/or cardiologist for clearance prior to a stimulant trial. If stimulants are initiated, then the patient should also be followed by the pediatrician, internist and/or cardiologist during the course of treatment.

**Documentation Required**

**K. Contraindications (requires documentation of justification)**

1. Alcohol and/or drug abuse (mixed salt amphetamines)
2. History of allergy to this class of drug
3. MAO-Inhibitors - during or within 14 days following the administration of MOAIs (atomoxetine, psychostimulants)
4. Hyperactivity associated with psychotic symptoms
5. Hyperactivity due to depression and anxiety
6. Age less than 6 years (less than 3 years with dextroamphetamine)
7. Hypertension
8. Hyperthyroidism (mixed salt amphetamines)
9. Presence of motor tics or Tourette’s syndrome (Stimulants)
10. Family history of motor tics or Tourette’s syndrome (methylphenidate)
11. Heart disease (psychostimulants)
12. Glaucoma (atomoxetine, psychostimulants)
13. Seizure disorder
14. Criteria specific to adults:
Psychostimulants are to be initiated as treatment for an adult by outpatient psychiatrists only.

Documentation of ADHD diagnosis as set by DSM

Initiation of treatment with amphetamines or methylphenidate in an adult with Attention Deficit Disorder requires prior trials of at least one antidepressants and/or Atomoxetine.

L. Warnings

1. Sudden death has been reported in association with CNS stimulant treatment at usual doses in children and adolescents with structural cardiac abnormalities or other serious heart problems. Stimulant products generally should not be used in children or adolescents with known serious structural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, or other serious cardiac problems that may place them at increased vulnerability to the sympathomimetic effects of a stimulant drug.

2. Stimulants can cause modest increase in the average blood pressure (about 2-4 mmHg) and average heart rate (about 3-6 bpm) and some individuals may have larger increases. All patients should be monitored for larger changes in heart rate and blood pressure.

3. Methylphenidate may cause leukopenia and/or anemia. Periodic CBC, differential, and platelet counts are advised during prolonged therapy.

M. Other agents used Off Label for the Treatment of ADHD

1. Antidepressants
   - Bupropion (Wellbutrin)
   - Imipramine (Tofranil)
   - Nortriptyline (Pamelor)

2. $\alpha_2$ Adrenergic agonist
   - Clonidine (Catapres)
   - Guanfacine (Tenex)
   - Guanfacine ER (Intuniv)

Attachments
Table 1 FDA approved Indications and Maximum Dose
Table 2 Black Box Warnings
References:

2. Psychiatry Online, April 19, 2013, DOI: 10.1176/appi.pn.2013.4a6: ADHD related\Expert Discusses Problems of Comorbid ADHD Substance Use Disorder in Adolescents
3. City and County of San Francisco, Department of Public Health, Community behavioral health services: Pharmacotherapy for Adult Attention Deficit/Hyperactivity Disorder
5. APA Psychiatric News, Expert Discusses Problems of Comorbid ADHD Substance Use Disorder in Adolescents
6. Epocrates.com
7. Micromedix.com
### Table 1: FDA-Approved Indications and Maximum Daily Dose

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Maximum Daily Dosage</th>
<th>ADHD</th>
<th>Narcolepsy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amphetamine Preparations</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Short-Acting</strong></td>
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</tr>
<tr>
<td>Amphetamine/ Dextroamphetamine</td>
<td>Adderall</td>
<td>40 mg (ADHD) 60mg (Narcolepsy)</td>
<td>40 mg (&gt;3yo, ADHD) 60 mg (&gt;6 yo, Narcolepsy)</td>
<td>X</td>
</tr>
<tr>
<td>Dextroamphetamine</td>
<td>Dextedrine, Dextrostat</td>
<td>60 mg</td>
<td>40mg &gt;6yo, ADHD 60mg&gt;6yo, Narcolepsy</td>
<td>X</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>Desoxyn</td>
<td>25 mg</td>
<td>25 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Long-Acting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphetamine/ Dextroamphetamine</td>
<td>Adderall XR</td>
<td>60 mg</td>
<td>30 mg (6-12 yo); 40 mg (13-17 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Dextroamphetamine</td>
<td>Dextedrine spansule</td>
<td>60 mg</td>
<td>40 mg (≥ 6, ADHD) 60 mg (≥ 6 yo, dose to optimal response, Narcolepsy)</td>
<td>X</td>
</tr>
<tr>
<td>Lisdexamfetamine</td>
<td>Vyvanse</td>
<td>70 mg</td>
<td>70 mg (&gt; 6 yo)</td>
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<tr>
<td><strong>Amphetamine Related</strong></td>
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<tr>
<td>Modafinil</td>
<td>Provigil</td>
<td>400 mg</td>
<td>non FDA approved</td>
<td>X</td>
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<tr>
<td><strong>α2-Adrenergic Agonist</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Guanfacine ER</td>
<td>Intuniv</td>
<td>Dosing NA</td>
<td>.12mg/kg up to 4mg</td>
<td>X</td>
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<tr>
<td><strong>Methylphenidate Preparations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Short-Acting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dexmethylphenidate</td>
<td>Focalin</td>
<td>20 mg</td>
<td>20 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Methylin</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Ritalin</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Intermediate-Acting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Metadate ER</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Methylin ER</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Ritalin SR</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Metadate CD</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Ritalin LA</td>
<td>60 mg</td>
<td>60 mg (&gt; 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Long-Acting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dexmethylphenidate</td>
<td>Focalin XR</td>
<td>40 mg</td>
<td>30 mg (≥ 6 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Concerta</td>
<td>72 mg</td>
<td>54 mg (6-12 yo); 72 (&gt;13 yo)</td>
<td>X</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Daytrana</td>
<td>30mg/9h patch</td>
<td>30 mg/9h patch (&gt;6 yo)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Selective Norepinephrine Reuptake Inhibitor</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Atomoxetine</td>
<td>Strattera</td>
<td>100 mg</td>
<td>1.4 mg/kg (&gt;6yo, &lt; 70kg); 100 mg (&gt;6yo, &gt; 70kg)</td>
<td>X</td>
</tr>
</tbody>
</table>

References: Prescribing Information, Epocrates, AACP Practice Parameters for the Assessment and Treatment of ADHD 7-07
### Table 2: Black Box Warnings

<table>
<thead>
<tr>
<th>Black Box Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amphetamines</strong></td>
</tr>
<tr>
<td>Amphetamine has a high potential for abuse. Administration of amphetamines for prolonged periods of time may lead to drug dependence and must be avoided. Particular attention should be paid to the possibility of subjects obtaining amphetamines for non-therapeutic use or distribution to other, and the drugs should be prescribed or dispensed sparingly.</td>
</tr>
<tr>
<td>Misuse of Amphetamines may cause sudden death and serious cardiovascular adverse events.</td>
</tr>
<tr>
<td><strong>Strattera</strong></td>
</tr>
<tr>
<td>Strattera increases suicidal ideation in short term studies in children and adolescent with ADHD. Anyone considering the use of Strattera in a child or adolescent must balance the risk with the clinical need. Co-morbidities occurring with ADHD may be associated with an increase in the risk with suicidal ideation and/or behavior. Patients who are started on therapy should be monitored closely for suicidality (suicidal thinking and behavior), clinical worsening, or unusual changes in behavior. Families and caregivers should be advised of the need for close observation and communication with the prescriber.</td>
</tr>
<tr>
<td><strong>Methylphenidate</strong></td>
</tr>
<tr>
<td>Methylphenidate should be given cautiously to patients with a history of drug dependence or alcoholism. Chronic abusive use can lead to marked tolerance and psychological dependence with varying degrees of abnormal behavior. Frank psychotic episodes can occur, especially with parenteral abuse. Careful supervision is required during withdrawal from abusive use, since severe depression may occur. Withdrawal following chronic therapeutic use may unmask symptoms of the underlying disorder that my require follow-up.</td>
</tr>
</tbody>
</table>