Children’s Hospital Of Wisconsin

Co-Management Guidelines

To support collaborative care, we have developed guidelines for our community providers to utilize when referring to, and managing patients with, the pediatric specialists at Children’s Hospital of Wisconsin. These guidelines provide protocols for jointly managing patient cases between community providers and our pediatric specialists.

Pharmacologic Management of ADHD

Diagnosis/symptom	Referring provider’s initial evaluation and management:	When to initiate referral/ consider refer to Psychiatry Clinic:	What can referring provider send to Psychiatry Clinic?	Specialist’s workup will likely include:
Signs and symptoms Inattention, hyperactive and impulsive behavior	**Overview** • Adjunctive Behavioral and Physiological interventions may be indicated in ADHD to address organizational skills deficits or oppositional behavior. Nonetheless, medication is a first-line treatment for ADHD. The treatment of choice is a stimulant. The decision regarding which medication to start and when to start will need to be made as part of an informed consent decision with the patient and the parent/guardian. • A routine physical exam, including blood pressure, pulse, height, and weight, should be performed prior to initiating stimulants. Vital signs should be checked at each visit for potential tachycardia or hypertension. Obtaining a lead level should be considered for exposed children, but is not part of routine assessment. Baseline EKGs are not recommended unless there is a history of cardiac disease, symptoms suggestive of significant cardiac disease, or a family history of cardiac disease, including but not limited to sudden cardiac death before the age of 50 years, cardiomyopathy, arrhythmias, or tachycardia. Cardiac evaluation is recommended in the presence of	Consider referring to a child psychiatrist if two adequate trials of stimulants or Strattera have failed. Prior to referral consider the Child Psychiatry Consultation Program (CPCP) http://www.chw.org/medical-care/psychiatry-and-behavioral-medicine/for-medical-professionals/psych-consult-site/	**1. Using Epic** • Please complete the external referral order **In order to help triage our patients and maximize the visit, the following information would be helpful include with your referral order:** • Urgency of the referral • What is the key question you would like answered? Note: The patient must call to schedule the appointment **2. Not using Epic external referral order:** • In order to help triage our patients maximize the visit	After referral to Psychiatry Clinic: Medication management, or recommendations and referral back to the referring provider to continue care

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	excessive increase in blood pressure or pulse, exertional chest pain, or unexplained syncope.
	
	<u>Diagnosis and Treatment</u>
	<u>Treatment</u>
	• “Rebound” in ADHD symptoms is common in the late-afternoon as the stimulant wears off, even with the sustained-release formulations. An immediate release dose may be given late in the afternoon to help avoid this phenomenon. Watch for sleep disturbances when the stimulants are given later in the day.
	• The American Academy of Child and Adolescent Psychiatry (AACAP) identifies the following contraindications to the use of stimulants: glaucoma, symptomatic cardiovascular disease, hyperthyroidism, hypertension, active psychosis, and concomitant use of an MAO-I. If there is a history of substance use in the home, consider Vyvanse or other non-stimulant medications.
	• The FDA identifies the following *relative* contraindications: motor tics, severe anxiety, and a family history or diagnosis of Tourette’s Disorder. In the presence of seizure disorder, it is best to initiate stimulant treatment following adequate seizure control with antiepileptic drugs.
	• Vanderbilt rating scale:
	  ○ http://www.nichq.org/toolkits_publications/complete_adhd/03VanAssesScaleParent%20Infor.pdf
	  ○ http://www.nichq.org/toolkits_publications/complete_adhd/04VanAssesScaleTeachInfor.pdf
	  ○ http://www.nichq.org/toolkits_publications/complete_adhd/07Scoring%20Instructions.pdf
	• Common side effects of stimulants and strategies to address them:
	  ○ <u>decreased appetite</u>: dose after meals, frequent snacks, drug holidays, nutritional supplement
	    use medication as a last resort:
	      • cyproheptadine: 4mg or 8mg
	  ○ <u>sleep disturbance</u>: reduce afternoon dose, move dosing regimen to earlier time, eliminate caffeine,
	    use medication as a last resort:
			time, please **fax** the above information to **(414-607-5288**)
			• It would also be helpful to include:
			  • Chief complaint, onset, frequency
			  • Recent progress notes
			  • Labs and imaging results
			  • Other Diagnoses
			  • Office notes with medications tried/failed in the past and any lab work that may have been obtained regarding this patient’s problems.
			
			Note: The patient must call to schedule the appointment.	

	• melatonin: 1-9mg • clonidine : ≤ 0.2mg • imipramine: for insomnia, anxiety, and enuresis • trazodone • mirtazapine: for insomnia + appetite suppression; Tmax=3.5h, so give at ~6 PM • antihistamine: acutely ○ symptom rebound: try sustained-release stimulant, add small dose of short-acting in late-afternoon ○ irritability or tearfulness (less common): decrease dose, try another medication, consider co-morbid conditions ○ exacerbation of tics (rare): observe, reduce dose, try another medication ○ psychosis/mania/severe depression (rare): stop stimulant, refer to mental health specialist			
Causes Genetics, environment, development				

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ADHD Medication Chart

Medication	Dose/MDD	Available Doses	Off-Label Max/Day	Duration of Action	Split?	FDA Approval	Notes
Methylphenidates							
Short-acting							
Ritalin	5-30mg BID; ↑ by 5mg/wk	5, 10,20	<50kg: 2mg/kg >50kg: 100mg	3-5 h	Yes	age 6 -12, adults	
Focalin	2.5-10mg BID; ↑ by 5mg/wk	2.5, 5, 10	<50kg: 1mg/kg; >50kg: 50mg	3-5 h	Yes	age 6 - 17	D-enantiomer of Ritalin; Focalin dose=1/2 of total Ritalin dose
Methylin	5-30mg BID; ↑ by 5mg/wk	5, 10, 20	<50kg: 2mg/kg >50kg: 100mg	3-5 h	Yes	age 6 - 12	
Methylin CT	5-30mg BID; ↑ by 5mg/wk	2.5, 5, 10	<50kg: 2mg/kg >50kg: 100mg	3-5 h	Yes	age 6 - 12	Chewable, grape-flavored
Methylin Oral Solution	5-30mg BID; ↑ by 5mg/wk	5mg/5ml, 10mg/5ml	<50kg: 2mg/kg >50kg: 100mg	3-5 h	NA	age 6 - 12	Clear, grape-flavored liquid
Intermediate-acting							
Metadate ER	10-60mg qAM; ↑ by 10mg/wk	10, 20	<50kg: 2mg/kg >50kg: 100mg	4-8 h	No	age 6 and up	Continuous release (less predictable because of wax matrix)
Methylin ER	20-60mg qAM ; ↑by 10mg/wk	10, 20	<50kg: 2mg/kg >50kg: 100mg	4-8 h	No	age 6 - 12	Hydrophilic polymer, so possibly more continuous than others in category
Metadate CD	20-60mg qAM; ↑ by 10mg/wk	10, 20, 30, 40, 50, 60	<50kg: 2mg/kg >50kg: 100mg	8 h	can sprinkle	age 6 – 17	Mimics BID dosing; has early peak; Capsule can be opened and medication sprinkled
Ritalin LA	20-60mg qAM; ↑ by 20mg/wk	10, 20, 30, 40	<50kg: 2mg/kg >50kg: 100mg	8 h	can sprinkle	age 6 - 12	Mimics BID dosing; has early peak; Capsule can be opened and medication sprinkled
Long-acting							
Concerta	18-72mg qAM; ↑ by 9mg/wk	18, 27, 36, 54		12 h	No	age 6 and up	Initial bolus, then continuous; peaks at about 8 hours; Swallow whole with liquids. Non-absorbable tablet shell may be seen in stool.
Quillivant XR QuilliChew ER	25-60mg ↑ by 10-20mg	25mg/5ml soln; 20mg		Up to 12 h	NA	age 6 - 12	Only long-acting oral suspension form of a psychostimulant; banana-flavored – XR

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		scored, 30mg scored, 40mg unscored		(~8 h)			
Focalin XR	5-30mg qAM; ↑ by 5mg/wk	5, 10, 15, 20, 30, 35, 40	<50kg: 1mg/kg; >50kg: 50mg	10-12 h	can sprinkle	age 6 and up	Focalin dose=1/2 of total Ritalin dose; Capsule can be opened and medication sprinkled
Aptensio XR	↑ by 5-10mg/wk	10, 15, 20, 30, 40, 50, 60	60 mg	12 h	sprinkle	age 6 and up	Biphasic release; don't chew the beads (i.e., give with something like applesauce)
Daytrana	10mg qAM; ↑by patch doses	10, 15, 20, 30 patch	30 mg	12 h (worn 9h)	Can be cut	age 6 and up	Takes about 1 hour to take effects; treat skin irritation with tea tree oil; may need lower dose via patch; because bypasses first-pass metabolism, may be more likely to cause anorexia and insomnia

Medication	Dose/MDD	Available Doses	Off-Label Max/Day	Duration of Action	Split?	FDA Approval	Notes
Amphetamines							
Short-acting							
Dexedrine	3-5y: 2.5mg daily; >6y: 5mg daily-BID; ↑ by 5mg/wk; MDD=40mg	5, 10	<50kg: 1mg/kg >50kg: 60mg	3-5 h	Yes	age 3 - 16	Dextroamphetamine
Dextrostat	3-5y: 2.5mg daily; >6y: 5mg daily-BID; ↑ by 5mg/wk; MDD=40mg	5, 10	<50kg: 1mg/kg >50kg: 60mg	3-5 h	Yes	age 3 - 16	Dextroamphetamine
Desoxyn	5-10mg BID; ↑ by 5mg/wk	5	<50kg: 1mg/kg >50kg: 60mg	3-5 h	Yes	age 3 - 16	Methamphetamine
ProCentra		5mg/5ml		3-5 h		age 3 - 16	Bubblegum-flavored
Intermediate-acting							

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Adderall	3-5y: 2.5mg daily; ≥6y: 5mg daily-BID; ↑ by 5mg/wk; MDD=40mg	5, 7.5, 10, 12.5, 15, 20, 30	<50kg: 1mg/kg >50kg: 60mg	4-6 h	Yes	age 3 - 12	Mixed salt of l- and d- amphetamine
Evekeo	3-5y: 2.5-40 mg daily-TID ↑2.5 mg/ wk ≥6 y: 5-40 mg daily-TID ↑5mg/wk	5, 10	40 mg/day	4-6 h	Yes	Age 3 and up	
Long-acting							
Dexedrine Spansules	≥6y: 5-10mg daily-BID; ↑ by 5mg/wk; MDD=40-45mg	5, 10, 15	<50kg: 1mg/kg >50kg: 60mg	8-12 h	can sprinkle	age 6 - 16	Initial bolus, then continuous; beads
Adderall XR	≥6y: 10mg daily; ↑ by 10mg/wk; MDD=30mg	5, 10, 15, 20, 25, 30	<50kg: 1mg/kg >50kg: 60mg	8-12 h	can sprinkle	age 6 and up	Mixed salt of l- and d-amphetamine; Capsule can be opened and medication sprinkled; mimics BID dosing; duration seems to be somewhat dose-related (in contrast to in the methylphenidates)
Lisdexamfet-amine (Vyvanse)	30-70mg daily	20, 30, 40, 50, 60, 70	70 mg	12 h	No	age 6 and up	Cannot be diverted; Can be dissolved in liquid
Dyanavel XR	≥ 6y: 2.5- 20 mg daily ↑ by 2.5- 10 mg/q4-7days	2.5 mg/ML	20mg	13 h	NA	age 6 and up	
Adzenys XR-ODT	6-12y: 6.3-18.8 mg daily ↑3.1-6.3 mg/qwk 13-17y:6.3-12.5 mg daily	3.1 mg, 6.3 mg, 9.4 mg, 12.5 mg 15.7 mg 18.8mg	6-12 y: 18.8 mg 13-17y: 12.5 mg	10 h	NA	age 6-17 yo	

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