

# Texas Medicaid

## High Dose Attention-Deficit/Hyperactivity Disorder (ADHD) Medication Management in Children & Adolescents

<b>Educational RetroDUR Mailing</b>	<input checked="" type="checkbox"/> Initial Study <input type="checkbox"/> Follow – up /Restudy
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### Executive Summary

<b>Purpose:</b>	To ensure the safe and cost-effective prescribing of medications for treatment of Attention-Deficit/Hyperactivity Disorder (ADHD)				
<b>Why Issue was Selected:</b>	<p>Attention deficit hyperactivity disorder (ADHD) is the most commonly diagnosed mental health condition in children of all ages and is increasingly diagnosed in adolescents and adults.<sup>1,2</sup></p> <p>Studies have not shown improved response at doses above the manufacturers' recommended maximums (Table 1). Minimizing use of ADHD medications at doses above recommended maximums may decrease adverse outcomes and associated costs.</p>				
<b>Program Specific Information:</b>	<b>Performance Indicators</b>	<b>Exceptions</b>			
		<b>&lt;3 years</b>	<b>3-5 Years</b>	<b>6-12 Years</b>	<b>13-17 Years</b>
	• High dose mixed amphetamine salts immediate-release (IR) & extended-release (ER)	0	138	160	265
	• High dose dextroamphetamine IR & ER	0	45	87	9
	• High dose lisdexamfetamine	0	20	12	57
	• High dose methamphetamine	0	489	312	405
	• High dose methylphenidate IR & ER	0	720	447	523

	<ul style="list-style-type: none"> <li>High dose dexamethylphenidate IR &amp; ER</li> </ul>	0	211	257	230
	<ul style="list-style-type: none"> <li>High dose atomoxetine</li> </ul>	0	7	5	7
	<ul style="list-style-type: none"> <li>High dose clonidine ER</li> </ul>	0	5	6	2
	<ul style="list-style-type: none"> <li>High dose guanfacine ER</li> </ul>	0	23	33	12
	<ul style="list-style-type: none"> <li>Multiple Prescribers: Stimulants</li> </ul>	0	0	1	1
	<ul style="list-style-type: none"> <li>Duplicate Therapy: Stimulants</li> </ul>	0	20	1,266	553
<b>Setting &amp; Population:</b>	All patients <18 years of age receiving a prescription claim for an ADHD medication in the past 60 days will be included.				
<b>Types of Intervention:</b>	Cover letter and individual patient profiles.				
<b>Main Outcome Measures:</b>	The results of this intervention will be measured six months post-intervention. Targeted patient cases will be re-examined to determine whether changes have been made.				
<b>Anticipated Results:</b>	<ul style="list-style-type: none"> <li>Determine a patient drug treatment plan so that maximum stimulant dose per day does not exceed FDA approved limits</li> <li>Identify multiple prescribers of stimulants to prevent abuse and improve coordination of care.</li> </ul>				

### Performance Indicator #1: High-Dose Use of ADHD Medications

<b>Why has this indicator been selected?</b>	The risk for adverse events with ADHD medications, including serious cardiac complications that may be fatal, increases as the dose of the agent increases. Studies have not shown improved response at doses above the manufacturers' recommended maximums. <sup>1,2</sup> Minimizing use of ADHD medications at doses above recommended maximums may decrease adverse outcomes and associated costs.
<b>How will the patients be selected ?</b>	
<b>Candidates (denominator):</b>	All patients <18 years of age receiving a medication for ADHD in the past 45 days
<b>Exception criteria (numerator):</b>	Candidates who are receiving any ADHD medication at a daily dose higher than that supported by treatment guidelines or recommended by the manufacturer (Table 1) <sup>3,4</sup>

### Performance Indicator #2: Multiple Prescribers: Stimulants

<b>Why has this indicator been selected?</b>	The ADHD stimulants ADHD have potential for abuse. While most individuals who need these medications for their medical conditions use them appropriately, over-utilization has become a growing concern. Minimizing over-utilization of stimulants will help prevent abusive circumstances.
<b>How will the patients be selected ?</b>	
<b>Candidates (denominator):</b>	All patients <18 years of age receiving a stimulant in the past 60 days

<b>Exception criteria (numerator):</b>	Candidates with stimulants from >2 providers
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### Performance Indicator #3: Duplicate Therapy: Stimulants

<b>Why has this indicator been selected?</b>	The ADHD stimulants have potential for abuse. While most individuals who need these medications for their medical conditions use them appropriately, over-utilization has become a growing concern. Minimizing over-utilization of stimulants will help prevent abusive circumstances.
<b>How will the patients be selected ?</b>	
<b>Candidates (denominator):</b>	All patients <18 years of age receiving a stimulant in the past 60 days
<b>Exception criteria (numerator):</b>	Candidates with at least two different stimulant prescriptions from the same or different prescribers. Individuals receiving an immediate-release and extended-release medication with the same active ingredient are excluded.

#### References:

1. Subcommittee on Attention-Deficit/Hyperactivity Disorder, Steering Committee on Quality Improvement and Management. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents. Pediatrics. 2011; 128:1-16.
2. Montano B. Diagnosis and treatment of ADHD in adults in primary care. J Clin Psychiatry 2004;65 Suppl 3:18-21.
3. Psychotropic Medication Utilization Parameters for Children and Youth in Foster Care (5<sup>th</sup> Version), Texas Department of Family and Protective Services, March 2016. Available at: [http://www.dfps.state.tx.us/Child\\_Protection/Medical\\_Services/documents/reports/2016-03\\_Psychotropic\\_Medication\\_Utilization\\_Parameters\\_for\\_Foster\\_Children.pdf](http://www.dfps.state.tx.us/Child_Protection/Medical_Services/documents/reports/2016-03_Psychotropic_Medication_Utilization_Parameters_for_Foster_Children.pdf). Accessed September 6, 2016.
4. Desoxyn® (methamphetamine) prescribing information; April 2005. Deerfield, IL; Ovation Pharmaceuticals, Inc. Available at: <http://www.amphetamines.org/methamphetamine/methamphetamine-desoxyn.pdf> Accessed November 18, 2015.

**Table 1: Maximum Recommended Doses of ADHD Medications<sup>4,5</sup>**

<b>STIMULANTS</b>		
<b>Drug (generic)</b>	<b>Drug (brand)</b>	<b>Texas DFPS Literature Based Maximum Dosage*</b>
<b>Amphetamine Products</b>		
Mixed Amphetamine Salts		
• Immediate-release	Adderall®, Evekeo®	Age 3-5 years: 30 mg/day Age ≥6 years: 60 mg/day
• Extended-release	Adderall® ER	
• Oral suspension	Dyanavel® XR	
• Oral disintegrating tablet (ODT)	Adzenys® XR-ODT	Age 3-5 years: 6.3 mg/day Age 6-12 years: 18.8 mg/day Age 13-17 years: 12.5 mg/day
Dextroamphetamine		
• Immediate-release	Dexedrine®, Zenzedi®	Age 3-5 years: 30 mg/day Age ≥6 years: 60 mg/day
• Oral suspension	Procentra®	
• Extended-release	Dexedrine Spansule®	
Methamphetamine	Desoxyn®	Age >6 years: 25 mg/day
Lisdexamfetamine	Vyvanse®	Age 3-5 years: 30 mg/day Age ≥6 years: 70 mg/day
<b>Methylphenidate Products</b>		
Methylphenidate		
• Immediate-release	Ritalin®	Age 3-5 years: 20 mg/day Age ≥6 years: 100 mg/day
• Extended-release	Ritalin® SR, Methylin® ER, Metadate® ER, Ritalin® LA, Metadate® CD, Aptensio® XR	
• Chewable immediate-release	Methylin® chewable	
• Chewable extended-release	Quillichew® ER	
• Oral suspension immediate-release	Methylin® oral solution	
• Oral suspension extended-release	Quillivant® XR oral suspension	
• Oral Osmotic Release System (OROS) extended-release	Concerta®	
• Transdermal patch	Daytrana® TD	Age: 3-5 years: 20 mg/day Age >6 years: 30 mg/day
Dexmethylphenidate		
• Immediate-release	Focalin®	Age: 3-5 years: 10 mg/day Age ≥6 years: 50 mg/day
• Extended-release	Focalin® XR	
<b>NON-STIMULANT PRODUCTS</b>		
Atomoxetine	Strattera®	Age >6 years: 100 mg/day
Clonidine extended-release	Kapvay® ER	Age >6 years: 0.4 mg/day
Guanfacine extended-release	Intuniv® ER	Age 6-12 years: 4 mg/day Age 13-17 years: 7 mg/day

\*Some literature based maximum dosages published by DFPS are weight-based. For more information, refer to the full publication at: [http://www.dfps.state.tx.us/Child\\_Protection/Medical\\_Services/documents/reports/2016-03\\_Psychotropic\\_Medication\\_Utilization\\_Parameters\\_for\\_Foster\\_Children.pdf](http://www.dfps.state.tx.us/Child_Protection/Medical_Services/documents/reports/2016-03_Psychotropic_Medication_Utilization_Parameters_for_Foster_Children.pdf).

## External Messages

Flag	Internal Messages	External Messages
129	# Candidates	
8412	# Candidate ADD/ADHD	
8798	High Dose Atomoxetine	<p>Atomoxetine High Daily Dose: According to submitted pharmacy claims data, it appears your patient has received atomoxetine at a daily dose of more than 100 mg. While atomoxetine is dosed on a mg/kg basis at lower doses and body masses, treatment guidelines and the manufacturer's information recommend the total dose not exceed 100 mg/day regardless of age or body weight. Doses above this amount have not been shown to be more effective and may result in increased adverse effects/toxicity. Please review your patient's regimen and consider reducing the dose of atomoxetine. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects including tachycardia, increased blood pressure, dizziness, and mood swings.</p>
8800	High Dose Amphetamines	<p>Amphetamine Product High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received an amphetamine product at a daily dose that is higher than that recommended in treatment guidelines or in the official labeling of the manufacturer (40 mg/day for mixed amphetamine salts or dextroamphetamine, 25 mg/day for methamphetamine, regardless of age). At daily doses higher than these recommended adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of their amphetamine product. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>
8801	High Dose Stimulants	<p>CNS Stimulant Products at High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received CNS stimulant products at a total daily dose that is higher than that recommended in treatment guidelines or in the official labeling of the manufacturer. This concern has been identified based on your patient receiving one product at its recommended daily maximum dose and simultaneously receiving a second CNS stimulant. All CNS stimulants for ADHD have additive adverse effects. At combined daily doses above recommended individual maximums, adverse effects may become problematic. Please review your patient's regimen and consider discontinuing one of their CNS stimulant products. If continued high daily dosage is deemed necessary, please monitor your patient closely.</p>
8802	High Dose Methylphenidate	<p>Methylphenidate High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received a methylphenidate product at a daily dose of more than 60 mg. The maximum dose recommended in treatment guidelines or by the manufacturer, regardless of age, is 60 mg/day. At daily doses higher than this adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of methylphenidate. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>

**External Messages**

<b>Flag</b>	<b>Internal Messages</b>	<b>External Messages</b>
8803	High Dose Concerta	Concerta® Brand Methylphenidate High Daily Dose: According to submitted pharmacy and medical claims data, it appears your young patient with ADHD has received Concerta® brand methylphenidate at a daily dose of more than 54 mg. The maximum dose recommended in treatment guidelines or by the manufacturer for children 12 years of age or younger is 54 mg/day. At daily doses higher than this adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of methylphenidate. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.
8804	High Dose Concerta > 12 years old	Concerta® Brand Methylphenidate High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received Concerta® brand methylphenidate at a daily dose of more than 72 mg. The maximum dose recommended in treatment guidelines or by the manufacturer for all patients greater than 12 years of age is 72 mg/day. At daily doses higher than this adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of methylphenidate. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.
8805	High Dose Stimulants: Methylphenidate	CNS Stimulant Products at High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received CNS stimulant products at a total daily dose that is higher than that recommended in treatment guidelines or in the official labeling of the manufacturer. This concern has been identified based on your patient receiving a methylphenidate product at the maximum dose recommended of 60 mg/day and simultaneously receiving a second CNS stimulant. All CNS stimulants for ADHD have additive adverse effects. At combined daily doses above recommended individual maximums adverse effects may become problematic. Please review your patient's regimen and consider discontinuing one of their CNS stimulant products. If continued use is deemed necessary, please monitor your patient closely for adverse effects such as tachycardia, increased blood pressure, cardiac arrhythmias or psychosis.
8806	High Dose Stimulants: Concerta	CNS Stimulant Products at High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received CNS stimulant products at a total daily dose that is higher than that recommended in treatment guidelines or in the official labeling of the manufacturer. This concern has been identified based on your patient receiving Concerta® brand methylphenidate at the maximum dose recommended of 54 mg/day in patients age 12 and younger or 72mg/day in all others and simultaneously receiving a second CNS stimulant. All CNS stimulants for ADHD have additive adverse effects. At combined daily doses above recommended individual maximums adverse effects may become problematic. Please review your patient's regimen and consider discontinuing one of their CNS stimulant products. If continued use is deemed necessary, please monitor your patient closely for adverse effects.
10082	High Dose Clonidine	Clonidine High Daily Dose: According to submitted pharmacy and medical claims data, it

**External Messages**

<b>Flag</b>	<b>Internal Messages</b>	<b>External Messages</b>
		<p>appears your patient with ADHD has received clonidine at a high daily dose. The maximum recommended dose is 0.4 mg/day regardless of age. At higher daily doses adverse effects become more prominent, including sedation, dizziness, and hypotension. More significant problems are also possible, including bradycardia and syncope. Please review your patient's regimen and consider reducing the dose of clonidine. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>
10220	High Dose Lisdexamfetamine	<p>High Dose Lisdexamfetamine: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received lisdexamfetamine at a daily dose of more than 70 mg. The maximum dose recommended by the manufacturer, regardless of age, is 70 mg/day. At daily doses higher than this, adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of lisdexamfetamine. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>
12398	High Dose Guanfacine	<p>Guanfacine Extended-Release High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received guanfacine extended-release at a high daily dose. The maximum dose recommended by the manufacturer is 4 mg/day if less than 12 years of age, 7 mg/day if older. At higher daily doses adverse effects become more prominent, including sedation, dizziness, abdominal pain, dry mouth, and constipation. More significant problems such as hypotension, bradycardia, and syncope are possible. Please review your patient's regimen and consider reducing the dose of guanfacine. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>
12400	High Dose Dexmethylphenidate SR	<p>Dexmethylphenidate Extended-Release High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received dexmethylphenidate extended-release at a daily dose of more than 40 mg. The maximum dose recommended by the manufacturer, regardless of age, is 40 mg/day. At higher daily doses adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's regimen and consider reducing the dose of dexmethylphenidate. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.</p>
12401	High Dose Dexmethylphenidate IR	<p>Dexmethylphenidate Immediate-Release High Daily Dose: According to submitted pharmacy and medical claims data, it appears your patient with ADHD has received dexmethylphenidate immediate-release at a daily dose of more than 20 mg. The maximum dose recommended by the manufacturer, regardless of age, is 20 mg/day. At higher daily doses adverse effects become more prominent, including nervousness, anorexia, insomnia, tics, tachycardia, and increased blood pressure. More significant problems such as cardiac arrhythmias or psychosis are also possible. Please review your patient's</p>

**External Messages**

**Flag Internal Messages**

**External Messages**

regimen and consider reducing the dose of dexamethylphenidate. If continued high daily dosage is deemed necessary, please monitor your patient closely for adverse effects.

## External Messages

Flag	Internal Messages	External Messages
129	# Candidates	
566	# Candidates-B	
3420	Duplicate Therapy: Stimulants, 1MD	Concurrent use of > 1 Stimulant: It appears that your patient has received more than one stimulant concurrently. Use of more than one stimulant is not generally recognized as synergistic and is usually not indicated. Using this combination may increase the risk of adverse drug events and may decrease overall compliance. Please review the need for this combination of medications and discontinue one of the agents if appropriate.
3421	Duplicate Therapy: Stimulants, >1MD	Concurrent use of > 1 Stimulant from > 1 MD: It appears that your patient has received more than one stimulant concurrently from more than one prescriber. Use of more than one stimulant is not generally recognized as synergistic and is usually not indicated. The risk of adverse events from unintentional duplicate stimulant therapy is significant. There is concern as to whether your patient has informed you that other physicians are prescribing similar medications. Please review the need for this combination of medications and discontinue one or more of the agents if appropriate.
4337	Multiple Prescribers: Stimulants	Stimulant prescriptions from multiple prescribers: According to submitted pharmacy claims data, it appears your patient has received prescriptions for stimulants from multiple prescribers. Although your patient may have a clinical indication for this medication, there is concern about coordination of care and whether the medications are being utilized according to the prescribers' directions. Please review the use of these medications, and if appropriate, discuss with your patient.

10/16/2013

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TEXAS HEALTH AND HUMAN SERVICES COMMISSION

<<Date>>

CHARLES SMITH  
EXECUTIVE COMMISSIONER

<<Name>>  
<<Address>>  
<<Address>>

**RE: High Dose Attention-Deficit/Hyperactivity Disorder (ADHD) Medication Management in Children and Adolescents**

Dear Dr. <lname>:

The goal of this quality management program is to assist you in caring for your patients with ADHD by promoting safe and cost-effective drug therapy. Doses above the literature based recommended maximums developed by the Texas Department of Family and Protective Services (DFPS) are not recommended (Table 1).

**The Texas Psychotropic Medication Utilization Parameters for Children and Youth in Foster Care (Version 5)** are available at:

[http://www.dfps.state.tx.us/Child\\_Protection/Medical\\_Services/documents/reports/2016-03\\_Psychotropic\\_Medication\\_Utilization\\_Parameters\\_for\\_Foster\\_Children.pdf](http://www.dfps.state.tx.us/Child_Protection/Medical_Services/documents/reports/2016-03_Psychotropic_Medication_Utilization_Parameters_for_Foster_Children.pdf)

Minimizing use of ADHD medications at doses above recommended maximums may decrease adverse outcomes and associated costs.<sup>1,2</sup> Moreover, studies show that the combination of medication management and behavior therapy allows for lower doses of stimulants.<sup>1</sup> Taking advantage of available resources will help improve care.

**The American Academy of Pediatrics Clinical Practice Guidelines for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents** are available at:

<http://pediatrics.aappublications.org/content/early/2011/10/14/peds.2011-2654.full.pdf+html>

**Centers for Disease Control and Prevention (CDC) resources** are available at:

<http://www.cdc.gov/ncbddd/adhd/treatment.html>

**Total Texas Medicaid Specific Data**

ADHD Medication Management Indicator Summary	Number of Patients with Opportunities*			
	<3 Years	4 to 5 Years	6 to 12 Years	13 to 17 Years
o High dose mixed amphetamine salts immediate-release (IR) & extended-release (ER)	0	138	160	265
o High dose dextroamphetamine IR & ER	0	45	87	9
o High dose lisdexamfetamine	0	20	12	57
o High dose methamphetamine	0	489	312	405

○ High dose methylphenidate IR & ER	0	720	447	523
○ High dose dexamethylphenidate IR & ER	0	211	257	230
○ High dose atomoxetine	0	7	5	7
○ High dose clonidine ER	0	5	6	2
○ High dose guanfacine ER	0	23	33	12
○ Multiple prescribers: stimulants	0	0	1	1
○ Duplicate therapy: stimulants	0	20	1,266	553

\*Based on data through 6/16/16

**The enclosed patient profiles reflect one or more of the above issues and are provided as a medical record reminder for when your patients return for their next appointments.**

We acknowledge that there may be clinical variables influencing an individual patient's management that are not apparent in claims data. However, we believe the issues identified may assist you in caring for your patient(s). It is possible that your license number may have been inadvertently assigned to the claim as an error at the pharmacy during the billing process. **Also, some prescribed medications may not appear on the patient's profile because they may have been privately purchased.** We thank you for reviewing this information and caring for Texas Medicaid patients, and we welcome the opportunity to discuss any comments or concerns you may have about our quality management program. Please feel free to call our office at 1-866-923-7208 with questions or concerns. **If your mailing address is incorrect, it must be updated through the Texas Medical Board online at <http://www.tmb.state.tx.us/page/change-address>.**

Sincerely,

Medicaid Drug Use Review Board  
Vendor Drug Program H-630  
P.O. Box 85200  
Austin, TX 78708-5200

**Table 1: Maximum Recommended Doses of ADHD Medications<sup>3,4</sup>**

STIMULANTS		
Drug (generic)	Drug (brand)	*Texas DFPS Literature Based Maximum Dosage*
<b>Amphetamine Products</b>		
Mixed Amphetamine Salts		
• Immediate-release	Adderall®, Evekeo®	Age 3-5 years: 30 mg/day Age ≥6 years: 60 mg/day
• Extended-release	Adderall® ER	
• Oral suspension	Dyanavel® XR	
• Oral disintegrating tablet (ODT)	Adzenys® XR-ODT	Age 3-5 years: 6.3 mg/day Age 6-12 years: 18.8 mg/day Age 13-17 years: 12.5 mg/day
Dextroamphetamine		
• Immediate-release	Dexedrine®, Zenzedi®	Age 3-5 years: 30 mg/day Age ≥6 years: 60 mg/day
• Oral suspension	Procentra®	
• Extended-release	Dexedrine Spansule®	
Methamphetamine	Desoxyn®	Age ≥6 years: 25 mg/day

Lisdexamfetamine	Vyvanse®	Age 3-5 years: 30 mg/day Age ≥6 years: 70 mg/day
<b>Methylphenidate Products</b>		
Methylphenidate		
• Immediate-release	Ritalin®	Age 3-5 years: 20 mg/day Age ≥6 years: 100 mg/day
• Extended-release	Ritalin® SR, Methylin® ER, Metadate® ER, Ritalin® LA, Metadate® CD, Aptensio® XR	
• Chewable immediate-release	Methylin® chewable	
• Chewable extended-release	Quillichew® ER	
• Oral suspension immediate-release	Methylin® oral solution	
• Oral suspension extended-release	Quillivant® XR oral suspension	
• Oral Osmotic Release System (OROS) extended-release	Concerta®	Age: 3-5 years: 36 mg/day Age ≥6 years: 108 mg/day
• Transdermal patch	Daytrana® TD	Age: 3-5 years: 20 mg/day Age ≥6 years: 30 mg/day
Dexmethylphenidate		
• Immediate-release	Focalin®	Age: 3-5 years: 10 mg/day Age ≥6 years: 50 mg/day
• Extended-release	Focalin® XR	
<b>NON-STIMULANT PRODUCTS</b>		
Atomoxetine	Strattera®	Age ≥6 years: 100 mg/day
Clonidine extended-release	Kapvay® ER	Age >6 years: 0.4 mg/day
Guanfacine extended-release	Intuniv® ER	Age 6-12 years: 4 mg/day Age 13-17 years: 7 mg/day

\*Some literature based maximum dosages published by DFPS are weight-based. For more information, refer to the full publication available at the link shown on page 1.

#### References:

1. Subcommittee on Attention-Deficit/Hyperactivity Disorder, Steering Committee on Quality Improvement and Management. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents. Pediatrics. 2011; 128:1-16.
2. Montano B. Diagnosis and treatment of ADHD in adults in primary care. J Clin Psychiatry 2004;65 Suppl 3:18-21.
3. Psychotropic Medication Utilization Parameters for Children and Youth in Foster Care (5<sup>th</sup> Version), Texas Department of Family and Protective services, March 2016. Available at: \*Some maximum dosages published by DFPS are based on weight. For more information, refer to the full publication at: [http://www.dfps.state.tx.us/Child\\_Protection/Medical\\_Services/documents/reports/2016-03\\_Psychotropic\\_Medication\\_Utilization\\_Parameters\\_for\\_Foster\\_Children.pdf](http://www.dfps.state.tx.us/Child_Protection/Medical_Services/documents/reports/2016-03_Psychotropic_Medication_Utilization_Parameters_for_Foster_Children.pdf). Accessed September 6, 2016.
4. Desoxyn® (methamphetamine) prescribing information; April 2005. Deerfield, IL; Ovation Pharmaceuticals, Inc. Available at: <http://www.amphetamines.org/methamphetamine/methamphetamine-desoxyn.pdf> Accessed November 18, 2015.