

## Drug Use Evaluation: Dose Limits for ADHD Drugs

### Plain Language Summary: Do Oregon Health Plan providers recommend doses of attention deficit hyperactivity disorder (ADHD) medicines that are based on the evidence?

- Most providers prescribe doses of ADHD medicine that are approved by the Food and Drug Administration (FDA). Providers prescribe doses higher than the FDA approved dose in 1.9% of people. Adderall and Adderall XR (dextroamphetamine/amphetamine salts) were the most common medicines recommended at doses higher than the FDA labeled dose.
- About half of people who take ADHD drugs see a provider who has training in mental or behavioral health.
- If providers prescribe doses higher than recommended by current guidelines, providers must send information to the Oregon Health Plan (OHP) before OHP will pay for the drug. This process is called prior authorization.
- We recommend updating the current prior authorization criteria to clarify maximum doses for ADHD medicines.

### Research Questions:

- What proportion of patients are prescribed ADHD drugs above the maximum FDA-labeled dose?
- What proportion of patients with high doses have prescriptions written from a behavioral health specialist?

### Conclusions:

- Of patients with paid FFS prescriptions for ADHD drugs (n=10,834) during the study period, only 1.9% (n=207) had a prescription above the FDA approved maximum dose for their age. The most common ADHD drug prescribed above the FDA-approved maximum dose was dextroamphetamine/amphetamine salts (n=158, 76%).
- About half of prescriptions were written by behavioral health specialists. The proportion of patients with prescriptions written by a behavioral health specialist was similar for subgroups based on age, drug, or dose. The most common prescribing provider types were psychiatric/mental health nurse practitioners, family medicine physicians, and pediatric physicians.

### Recommendations:

- Revise prior authorization (PA) criteria to reflect maximum age and dose limits as specified in product labeling or supported compendia (see **Appendix 2**).
- To avoid disruption in care, patients initiated on an ADHD medication as a child should be excluded from PA if they age into a maximum age limit.

### Background

There are many drugs which are used for treatment of ADHD. These include broadly, stimulants (such as amphetamine and methylphenidate derivatives) and non-stimulants (including atomoxetine, clonidine, guanfacine and viloxazine). Stimulants are available in both immediate-release and extended-release formulations, and not all agents share the same FDA-approved ages or doses. Current guidelines and available literature support off-label dosing in certain circumstances. An example of variation in dosing recommendations for mixed amphetamine salts is shown in **Table 1**. Most guidelines note that effective dose

of ADHD treatment varies among patients and should be individualized based on symptoms and adverse effects.<sup>1-3</sup> Adverse events of ADHD drugs can include decreased appetite, tics, sexual dysfunction, new or worsening seizures, cardiovascular events, and changes in sleep.<sup>3</sup> Recommended monitoring includes changes in weight and/or height, blood pressure and heart rate, potential for stimulant diversion, and assessment of adverse events.<sup>3</sup> Efficacy for reduced symptoms, positive behavior change, and improvements in education, employment and relationships should also be reassessed frequently during dose titration and periodically during maintenance treatment.<sup>3</sup>

**Table 1.** Example of variations in dosing recommendations for mixed amphetamine salts.

	FDA-approved max doses	Guideline-recommended max doses
Amphetamine/dextroamphetamine IR	Adderall: 40 mg for ≥ 3 years <sup>4</sup>	AACAP: 60 mg for > 50 kg <sup>5</sup>
Amphetamine/dextroamphetamine XR	Adderall XR: 30 mg for 6-12 years <sup>6</sup> 20 mg for ≥ 13 years <sup>6</sup> Mydayis: 25 mg for 13-17 years <sup>7</sup> 50 mg for ≥18 years <sup>7</sup>	AACAP: 60 mg for > 50 kg <sup>5</sup> CADDRA: 30 mg for <18 years <sup>2</sup> 50 mg for ≥18 years <sup>2</sup>

*Abbreviations: AACAP = American Academy of Child and Adolescent Psychiatry; CADDRA = Canadian ADHD Resource Alliance; IR = immediate-release; XR = extended-release*

Preferred medications are available for FFS patients without prior authorization if they are within usual doses and age limits typically used in clinical practice. Medications prescribed outside usual dose, age limits, or guideline-directed combinations for ADHD require prior authorization and documentation of consultation or review by a mental health provider. Stimulant medications are paid for by both FFS and coordinated care organizations (CCOs) and are subject to the PDL in addition to age and dose limits. Non-stimulant ADHD medications are also subject to appropriate age and dose limits, but these drugs are carved-out of CCOs and are designated as preferred or voluntary non-preferred.

This review evaluates the incidence of prescribing above the maximum FDA-approved dose in the OHP FFS population.

**Methods:**

Patients were included in the analysis if they had paid FFS claims for drugs in the ADHD Drugs PDL class during the study period from 4/1/2021 to 3/31/2022. Patients were excluded if they had other insurance, Medicare, or OHP with limited drug benefit during the study period because data from these patients are likely to be incomplete. Patients with Medicare or limited drug benefits were identified based on the following benefit packages:

Category	Benefit Package	Description
Medicare Part D coverage	BMM	Qualified Medicare Beneficiary + Oregon Health Plan with Limited Drug
	BMD	Oregon Health Plan with Limited Drug
	MED	Qualified Medicare Beneficiary
Limited or no Medicaid drug benefit	MND	Transplant package
	CWM	Citizenship Waived Emergency Medical
	SMF	Special Low-Income Medicare Beneficiary Only
	SMB	Special Low-Income Medicare Beneficiary Only

The index event (IE) for each patient was defined as the claim with the largest daily dose during the study period. If multiple claims were identified with the same daily dose, then the first claim in the study period with the largest dose was used as the IE. Baseline demographics were evaluated at the time of the IE. The following definitions were used for the analysis:

- Daily dose was calculated for each claim using the following formula: drug strength per unit\*units dispensed/days' supply.
- The dose for IEs was categorized as above or below the FDA max labeled dose according to the drug, daily dose, and age identified on the claim. **Table A1** lists maximum FDA labeled doses for various products and ages.
- Behavioral health specialists were defined according to taxonomies in **Table A2**.

**Results:**

Of patients with paid FFS prescriptions for ADHD drugs (n=10,834) during the study period, only 1.9% (n=207) had a prescription higher than the FDA labeled dose for their age (**Table 2**). Patients with high doses were more commonly adults over 17 years of age. Most patients included in this study were documented as White or Unknown race on their OHP profile. **Table 3** further describes subgroups based on age, prescriber type, and doses above or below the FDA labeled dose. Regardless of age or dose, about half of patients had prescriptions written from a behavioral health specialist. The most common drugs prescribed higher than the FDA-labeled dose are listed in **Table 4**. Of patients with high-dose prescriptions (n=207), the most common entity prescribed was dextroamphetamine/amphetamine salts (n=158, 76%). Use of other agents higher than the FDA-labeled dose was infrequent.

There were no major trends in prescribing provider type when evaluating patients with claims above or below the FDA-labeled dose. The most common prescribing provider types for ADHD drugs were psychiatric/mental health nurse practitioners, family medicine physicians, and pediatric physicians (**Table 5**). These prescribers were the most common regardless of the dose prescribed. Psychiatrists, family nurse practitioners, and physician assistants were also common prescribers of ADHD drugs.

**Table 2.** Demographics

	N=	IE above max FDA dose		IE at or below max FDA dose	
		207	1.9%	10,627	98.1%
<b>Age</b>					
≤12		23	11.1%	3,859	36.3%
13-17		30	14.5%	2,230	21.0%
≥18		154	74.4%	4,538	42.7%
<b>Female</b>		104	50.2%	4,570	43.0%
<b>Behavioral health specialist</b>					
Y		100	48.3%	4,882	45.9%
N		107	51.7%	5,745	54.1%
<b>Race</b>					
White		76	36.7%	4,953	46.6%
Unknown		62	30.0%	3,940	37.1%
HNA		53	25.6%	1,002	9.4%
Other		16	7.7%	732	6.9%

<b>Current PDL status</b>				
Y	181	87.4%	5,877	55.3%
N	6	2.9%	62	0.6%
V	20	9.7%	4,688	44.1%

**Table 3.** Dosing by age and prescriber type

	<b>Specialist</b>		<b>Non-Specialist</b>	
<b>N=</b>	<b>4,982</b>	<b>%</b>	<b>5,852</b>	<b>%</b>
<b>IE above max FDA dose</b>				
≤12	16	0.3%	7	0.1%
13-17	13	0.3%	17	0.3%
≥ 18	71	1.4%	83	1.4%
<b>IE at or below max FDA dose</b>				
≤12	1,668	33.5%	2,191	37.4%
13-17	1,153	23.1%	1,077	18.4%
≥ 18	2,061	41.4%	2,477	42.3%

**Table 4.** Most common drugs prescribed above max FDA dose (by molecular entity)

	<b>Specialist</b>		<b>Non-Specialist</b>	
<b>N=</b>	<b>4,982</b>	<b>%</b>	<b>5,852</b>	<b>%</b>
<b>IE above max FDA dose</b>				
<u>Carve-out drugs</u>				
clonidine HCl	12	0.2%	2	0.0%
guanfacine HCl	6	0.1%	0	0.0%
<u>Physical health drugs</u>				
dextroamphetamine/amphetamine	61	1.2%	97	1.7%
amphetamine	13	0.3%	2	0.0%
methylphenidate HCl	4	0.1%	3	0.1%
dexmethylphenidate HCl	2	0.0%	1	0.0%
dextroamphetamine sulfate	2	0.0%	2	0.0%

**IE at or below max FDA dose**

Carve-out drugs

atomoxetine HCl	2,058	41.3%	2,732	46.7%
guanfacine HCl	1,901	38.2%	2,007	34.3%
clonidine HCl	476	9.6%	268	4.6%
viloxazine HCl	30	0.6%	6	0.1%

Physical health drugs

dextroamphetamine/amphetamine	186	3.7%	365	6.2%
methylphenidate HCl	135	2.7%	273	4.7%
lisdexamfetamine dimesylate	80	1.6%	68	1.2%
dexmethylphenidate HCl	14	0.3%	22	0.4%
dextroamphetamine sulfate	1	0.0%	3	0.1%
methylphenidate	1	0.0%	1	0.0%

**Table 5.** Top 10 common prescriber taxonomies

		<b>IE above max FDA dose</b>	
		<b>207</b>	<b>%</b>
<b>1</b>	NURSE PRACTITIONER - PSYCHIATRIC/MENTAL HEALTH	62	30.0%
<b>2</b>	PHYSICIAN-FAMILY MEDICINE	41	19.8%
<b>3</b>	PHYSICIAN-PEDIATRICS	17	8.2%
<b>4</b>	PHYSICIAN-PSYCHIATRY&NEUROLOGY-PSYCHIATRY	16	7.7%
<b>5</b>	PHYSICIAN-PSYCHIATRY&NEUROLGY-CHILD&ADOLESCENT PSYCHIATRY	15	7.2%
<b>6</b>	NURSE PRACTITIONER - FAMILY	9	4.3%
<b>7</b>	PHYSICIAN-INTERNAL MEDICINE	9	4.3%
<b>8</b>	PHYSICIAN ASSISTANT	9	4.3%
<b>9</b>	STUDENT IN AN ORGANIZED HEALTH CARE EDUCATION/TRAINING PROGRAM	7	3.4%
<b>10</b>	CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH	4	1.9%

**IE at or below max FDA dose**

		<b>10,627</b>	<b>%</b>
<b>1</b>	NURSE PRACTITIONER - PSYCHIATRIC/MENTAL HEALTH	2,616	24.6%
<b>2</b>	PHYSICIAN-PEDIATRICS	1,786	16.8%
<b>3</b>	PHYSICIAN-FAMILY MEDICINE	1,221	11.5%
<b>4</b>	PHYSICIAN-PSYCHIATRY&NEUROLOGY-PSYCHIATRY	1,102	10.4%
<b>5</b>	NURSE PRACTITIONER - FAMILY	814	7.7%
<b>6</b>	PHYSICIAN-PSYCHIATRY&NEUROLOGY-CHILD&ADOLESCENT PSYCHIATRY	806	7.6%
<b>7</b>	PHYSICIAN ASSISTANT	441	4.1%
<b>8</b>	NURSE PRACTITIONER - PEDIATRICS: PEDIATRICS	264	2.5%
<b>9</b>	PHYSICIAN-INTERNAL MEDICINE	230	2.2%
<b>10</b>	NATUROPATH	215	2.0%

#### Limitations:

- Diagnostic data were not included in this evaluation. In some cases, drugs for ADHD are also approved by the FDA for other indications, including narcolepsy at higher doses than doses recommended for treatment of ADHD. It is unclear based on this current study if drugs were prescribed for ADHD or sleep-wake disorders.
- Use of highest dose claim as the IE may overestimate number of patients with high-dose utilization. Daily dose was calculated based on information submitted by the pharmacy and cannot account for adherence, drug holidays, or the average dose actually taken by the patient. Patients were included even if utilization appeared to be off-label for a given age. If max dose was unavailable for a given age, maximum doses were estimated based available information for other ages for the same product. Some doses are weight based which cannot be easily captured in claims data. In these circumstances, a single threshold was chosen as the max dose and used to categorize claims.
- Patients were categorized based on a single IE, and patients who had claims for multiple different doses or drugs would be identified according to the highest strength dose. A recent drug use evaluation conducted in the OHP population estimated that about 7.2% of patients had claims for multiple agents.<sup>8</sup>
- Prescriber specialty was identified using the primary prescriber taxonomy which may be incomplete or not accurately reflect the prescriber specialty. This study also only evaluated prescriber type associated with IE. It would not capture patients who may have previously transitioned care from a specialist to a general practitioner. Additionally, this study would not identify scenarios where general practitioners consult with a behavioral health specialist prior to prescribing off-label dosing.

## References:

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2. Canadian ADHD Resource Alliance (CADDRA): Canadian ADHD Practice Guidelines, Fourth Edition, Toronto ON; CADDRA, 2018.
3. National Institute for Health and Care Excellence. Attention deficit hyperactivity disorder: diagnosis and management. NICE guideline [NG87]. <https://www.nice.org.uk/guidance/ng87>. March 2018. Last updated: September 13, 2019.
4. Adderall (Dextroamphetamine Saccharate, Amphetamine Aspartate, Dextroamphetamine Sulfate and Amphetamine Sulfate) tablets [package labeling]. Horsham, PA: Teva Pharmaceuticals; January 2017.
5. Pliszka S. Practice Parameter for the Assessment and Treatment of Children and Adolescents With Attention-Deficit/Hyperactivity Disorder. *J Am Acad Child Adolesc Psychiatry*. 2007;46(7):894-921.
6. Adderall XR (mixed salts of a single-entity amphetamine product) extended release capsules [package labeling]. Lexington, MA: Takeda Pharmaceuticals; February 2022.
7. Mydayis (mixed salts of a single-entity amphetamine product) extended-release capsules [package labeling]. Lexington, MA: Takeda Pharmaceuticals; January 2022.
8. Karagodsky, G and Herink, M. Drug Use Research and Management Program. Drug Use Evaluation: Attention Deficit Hyperactivity Disorder (ADHD) Drugs. June 2022. [https://www.orpdl.org/durm/meetings/meetingdocs/2022\\_06\\_02/archives/2022\\_06\\_02\\_DrugUseEvalADHD.pdf](https://www.orpdl.org/durm/meetings/meetingdocs/2022_06_02/archives/2022_06_02_DrugUseEvalADHD.pdf). Accessed August 26, 2022.

**Appendix 1: Drug Coding**

**Table A1. Unit doses and max daily FDA approved doses for various age for ADHD drugs**

GSN	Brand Name	Generic Name	Form	Drug Strength	Strength Calculated	Max Pediatric Dose	Max Pediatric Age	Max Adult Dose	Min Adult Age
77736	ADZENYS ER	amphetamine	SUS BP 24H	1.25 mg/mL	1.25	18.8	12	12.5	13
75549	ADZENYS XR-ODT	amphetamine	TAB RAP BP	18.8 mg	18.8	18.8	12	12.5	13
75548	ADZENYS XR-ODT	amphetamine	TAB RAP BP	15.7 mg	15.7	18.8	12	12.5	13
75547	ADZENYS XR-ODT	amphetamine	TAB RAP BP	12.5 mg	12.5	18.8	12	12.5	13
75546	ADZENYS XR-ODT	amphetamine	TAB RAP BP	9.4 mg	9.4	18.8	12	12.5	13
75545	ADZENYS XR-ODT	amphetamine	TAB RAP BP	6.3 mg	6.3	18.8	12	12.5	13
75544	ADZENYS XR-ODT	amphetamine	TAB RAP BP	3.1 mg	3.1	18.8	12	12.5	13
75025	DYANAVEL XR	amphetamine	SUS BP 24H	2.5 mg/mL	2.5	20			
79482	EVEKEO ODT	amphetamine sulfate	TAB RAPDIS	20 mg	20	40			
79481	EVEKEO ODT	amphetamine sulfate	TAB RAPDIS	15 mg	15	40			
79480	EVEKEO ODT	amphetamine sulfate	TAB RAPDIS	10 mg	10	40			
79479	EVEKEO ODT	amphetamine sulfate	TAB RAPDIS	5 mg	5	40			
5003	EVEKEO	amphetamine sulfate	TABLET	5 mg	5	40			
5002	EVEKEO	amphetamine sulfate	TABLET	10 mg	10	40			
60391	STRATTERA	atomoxetine HCl	CAPSULE	100 mg	100	100			
60390	STRATTERA	atomoxetine HCl	CAPSULE	80 mg	80	100			
51493	STRATTERA	atomoxetine HCl	CAPSULE	60 mg	60	100			
51492	STRATTERA	atomoxetine HCl	CAPSULE	40 mg	40	100			
51491	STRATTERA	atomoxetine HCl	CAPSULE	25 mg	25	100			
51490	STRATTERA	atomoxetine HCl	CAPSULE	18 mg	18	100			
51489	STRATTERA	atomoxetine HCl	CAPSULE	10 mg	10	100			
66895	KAPVAY	clonidine HCl	TAB ER 12H	0.1 mg	0.1	0.4			
67693	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	35 mg	35	30	17	40	18
67692	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	25 mg	25	30	17	40	18
66611	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	40 mg	40	30	17	40	18
65909	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	30 mg	30	30	17	40	18
61317	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	15 mg	15	30	17	40	18
59192	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	20 mg	20	30	17	40	18
59191	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	10 mg	10	30	17	40	18
59190	FOCALIN XR	dexmethylphenidate HCl	CPBP 50-50	5 mg	5	30	17	40	18
48984	FOCALIN	dexmethylphenidate HCl	TABLET	10 mg	10	20			
48983	FOCALIN	dexmethylphenidate HCl	TABLET	5 mg	5	20			
48982	FOCALIN	dexmethylphenidate HCl	TABLET	2.5 mg	2.5	20			
72314	ZENZEDI	dextroamphetamine sulfate	TABLET	30 mg	30	40			
72313	ZENZEDI	dextroamphetamine sulfate	TABLET	20 mg	20	40			
71049	ZENZEDI	dextroamphetamine sulfate	TABLET	7.5 mg	7.5	40			



71048	ZENZEDI	dextroamphetamine sulfate	TABLET	2.5 mg	2.5	40			
64090	PROCENTRA	dextroamphetamine sulfate	SOLUTION	5 mg/5 mL	1	40			
5011	DEXEDRINE	dextroamphetamine sulfate	TABLET	5 mg	5	40			
5010	ZENZEDI	dextroamphetamine sulfate	TABLET	15 mg	15	40			
5009	ZENZEDI	dextroamphetamine sulfate	TABLET	10 mg	10	40			
5007	DEXEDRINE	dextroamphetamine sulfate	CAPSULE ER	5 mg	5	40			
5006	DEXEDRINE	dextroamphetamine sulfate	CAPSULE ER	15 mg	15	40			
5005	DEXEDRINE	dextroamphetamine sulfate	CAPSULE ER	10 mg	10	40			
77501	MYDAYIS	dextroamphetamine/amphetamine	CPTP 24HR	50 mg	50	25	17	50	18
77500	MYDAYIS	dextroamphetamine/amphetamine	CPTP 24HR	37.5 mg	37.5	25	17	50	18
77499	MYDAYIS	dextroamphetamine/amphetamine	CPTP 24HR	25 mg	25	25	17	50	18
77498	MYDAYIS	dextroamphetamine/amphetamine	CPTP 24HR	12.5 mg	12.5	25	17	50	18
50430	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	25 mg	25	30	12	20	13
50429	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	15 mg	15	30	12	20	13
50428	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	5 mg	5	30	12	20	13
48703	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	30 mg	30	30	12	20	13
48702	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	20 mg	20	30	12	20	13
48701	ADDERALL XR	dextroamphetamine/amphetamine	CAP ER 24H	10 mg	10	30	12	20	13
47133	ADDERALL	dextroamphetamine/amphetamine	TABLET	15 mg	15	40			
47132	ADDERALL	dextroamphetamine/amphetamine	TABLET	12.5 mg	12.5	40			
47131	ADDERALL	dextroamphetamine/amphetamine	TABLET	7.5 mg	7.5	40			
34359	ADDERALL	dextroamphetamine/amphetamine	TABLET	30 mg	30	40			
5001	ADDERALL	dextroamphetamine/amphetamine	TABLET	20 mg	20	40			
5000	ADDERALL	dextroamphetamine/amphetamine	TABLET	10 mg	10	40			
4999	ADDERALL	dextroamphetamine/amphetamine	TABLET	5 mg	5	40			
65574	INTUNIV	guanfacine HCl	TAB ER 24H	4 mg	4	4	12	7	13
65573	INTUNIV	guanfacine HCl	TAB ER 24H	3 mg	3	4	12	7	13
65572	INTUNIV	guanfacine HCl	TAB ER 24H	2 mg	2	4	12	7	13
65570	INTUNIV	guanfacine HCl	TAB ER 24H	1 mg	1	4	12	7	13
77146	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	60 mg	60	70			
77145	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	50 mg	50	70			
77144	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	40 mg	40	70			
77143	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	30 mg	30	70			
77142	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	20 mg	20	70			
77083	VYVANSE	lisdexamfetamine dimesylate	TAB CHEW	10 mg	10	70			
73292	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	10 mg	10	70			
63647	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	60 mg	60	70			
63646	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	40 mg	40	70			
63645	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	20 mg	20	70			
62285	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	70 mg	70	70			
62284	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	50 mg	50	70			

62283	VYVANSE	lisdexamfetamine dimesylate	CAPSULE	30 mg	30	70			
5014	DESOXYN	methamphetamine HCl	TABLET	5 mg	5	25			
77496	COTEMPLA XR-ODT	methylphenidate	TAB RAP BP	25.9 mg	25.9	51.8			
77495	COTEMPLA XR-ODT	methylphenidate	TAB RAP BP	17.3 mg	17.3	51.8			
77494	COTEMPLA XR-ODT	methylphenidate	TAB RAP BP	8.6 mg	8.6	51.8			
60618	DAYTRANA	methylphenidate	PATCH TD24	30 mg/9 hour	30	30			
60617	DAYTRANA	methylphenidate	PATCH TD24	20 mg/9 hour	20	30			
60616	DAYTRANA	methylphenidate	PATCH TD24	15 mg/9 hour	15	30			
60615	DAYTRANA	methylphenidate	PATCH TD24	10 mg/9 hour	10	30			
78728	JORNAY PM	methylphenidate HCl	CPDR ER SP	100 mg	100	100			
78727	JORNAY PM	methylphenidate HCl	CPDR ER SP	80 mg	80	100			
78726	JORNAY PM	methylphenidate HCl	CPDR ER SP	60 mg	60	100			
78725	JORNAY PM	methylphenidate HCl	CPDR ER SP	40 mg	40	100			
78724	JORNAY PM	methylphenidate HCl	CPDR ER SP	20 mg	20	100			
78099	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	85 mg	85	85	17	100	18
78098	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	70 mg	70	85	17	100	18
78097	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	55 mg	55	85	17	100	18
78096	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	45 mg	45	85	17	100	18
78095	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	35 mg	35	85	17	100	18
78094	ADHANSIA XR	methylphenidate HCl	CPBP 20-80	25 mg	25	85	17	100	18
78038	RELEXXII	methylphenidate HCl	TAB ER 24	72 mg	72	54	12	72	13
75265	QUILLICHEW ER	methylphenidate HCl	TAB CBP24H	40 mg	40	60			
75264	QUILLICHEW ER	methylphenidate HCl	TAB CBP24H	30 mg	30	60			
75263	QUILLICHEW ER	methylphenidate HCl	TAB CBP24H	20 mg	20	60			
72092	METHYLPHENIDATE LA	methylphenidate HCl	CPBP 50-50	60 mg	60	60			
				5 mg/mL (25 mg/5 mL)					
70374	QUILLIVANT XR	methylphenidate HCl	SU ER RC24		5	60			
61449	APTENSIO XR	methylphenidate HCl	CSBP 40-60	60 mg	60	60			
61448	APTENSIO XR	methylphenidate HCl	CSBP 40-60	50 mg	50	60			
61447	APTENSIO XR	methylphenidate HCl	CSBP 40-60	40 mg	40	60			
61446	APTENSIO XR	methylphenidate HCl	CSBP 40-60	30 mg	30	60			
61445	APTENSIO XR	methylphenidate HCl	CSBP 40-60	20 mg	20	60			
61444	APTENSIO XR	methylphenidate HCl	CSBP 40-60	15 mg	15	60			
61443	APTENSIO XR	methylphenidate HCl	CSBP 40-60	10 mg	10	60			
60547	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	60 mg	60	60			
60546	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	50 mg	50	60			
60545	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	40 mg	40	60			
54680	METHYLIN	methylphenidate HCl	SOLUTION	10 mg/5 mL	2	60			
54679	METHYLIN	methylphenidate HCl	SOLUTION	5 mg/5 mL	1	60			
54678	METHYLPHENIDATE HCL	methylphenidate HCl	TAB CHEW	10 mg	10	60			
54677	METHYLPHENIDATE HCL	methylphenidate HCl	TAB CHEW	5 mg	5	60			

54676	METHYLPHENIDATE HCL	methylphenidate HCl	TAB CHEW	2.5 mg	2.5	60				
53974	RITALIN LA	methylphenidate HCl	CPBP 50-50	10 mg	10	60				
53061	RITALIN LA	methylphenidate HCl	CPBP 50-50	40 mg	40	60				
53060	RITALIN LA	methylphenidate HCl	CPBP 50-50	30 mg	30	60				
53059	RITALIN LA	methylphenidate HCl	CPBP 50-50	20 mg	20	60				
53058	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	30 mg	30	60				
53057	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	20 mg	20	60				
53056	METHYLPHENIDATE HCL CD	methylphenidate HCl	CPBP 30-70	10 mg	10	60				
50172	CONCERTA	methylphenidate HCl	TAB ER 24	27 mg	27	54	12	72	13	
47318	CONCERTA	methylphenidate HCl	TAB ER 24	54 mg	54	54	12	72	13	
45982	CONCERTA	methylphenidate HCl	TAB ER 24	36 mg	36	54	12	72	13	
45981	CONCERTA	methylphenidate HCl	TAB ER 24	18 mg	18	54	12	72	13	
44072	METHYLPHENIDATE ER	methylphenidate HCl	TABLET ER	10 mg	10	60				
4029	METHYLPHENIDATE ER	methylphenidate HCl	TABLET ER	20 mg	20	60				
4028	RITALIN	methylphenidate HCl	TABLET	5 mg	5	60				
4027	RITALIN	methylphenidate HCl	TABLET	20 mg	20	60				
4026	RITALIN	methylphenidate HCl	TABLET	10 mg	10	60				
82024	AZSTARYS	serdexmethylphen/dexmethylphen	CAPSULE	52.3 mg-10.4 mg	52.3	52.3				
82023	AZSTARYS	serdexmethylphen/dexmethylphen	CAPSULE	39.2 mg-7.8 mg	39.2	52.3				
82022	AZSTARYS	serdexmethylphen/dexmethylphen	CAPSULE	26.1 mg-5.2 mg	26.1	52.3				
82135	QELBREE	viloxazine HCl	CAP ER 24H	200 mg	200	400	17	600	18	
82134	QELBREE	viloxazine HCl	CAP ER 24H	150 mg	150	400	17	600	18	
82132	QELBREE	viloxazine HCl	CAP ER 24H	100 mg	100	400	17	600	18	

**Table A2. Taxonomy codes associated with behavioral health or psychiatric specialists**

<b>Taxonomy</b>	<b>Taxonomy Description</b>
163WP0807X	REGISTERED NURSE - PSYCHIATRIC/MENTAL HEALTH
163WP0808X	REGISTERED NURSE - PSYCHIATRIC/MENTAL HEALTH
163WP0809X	REGISTERED NURSE - PSYCHIATRIC/MENTAL HEALTH
167G00000X	NURSING SERVICE - LICENSED PSYCHIATRIC TECHNICIAN
1835P1300X	PHARMACIST - PSYCHIATRIC
2080P0006X	PHYSICIAN-PEDIATRICS-DEVELOPMENTAL BEHAVIORAL PEDIATRICS
2080P0008X	PHYSICIAN-PEDIATRICS-NEURODEVELOPMENTAL DISABILITIES
2084A0401X	PSYCHIATRY & NEUROLOGY, ADDICTION MEDICINE
2084B0002X	PHYSICIAN-PSYCHIATRY&NEUROLOGY-BARIATRIC MEDICINE
2084B0040X	BEHAVIORAL NEUROLOGY & NEUROPSYCHIATRY
2084D0003X	PHYSICIAN-PSYCHIATRY&NEUROLOGY-DIAGNOSTIC NEUROIMAGING
2084F0202X	PHYSICIAN-PSYCHIATRY&NEUROLOGY-FORENSIC PSYCHIATRY
2084H0002X	PHYSICIAN-PSYCHIATRY&NEUROLOGY-HOSPICE AND PALLIATIVE MEDICINE
2084N0008X	PHYSICIAN-PSYCHIATRY&NEUROLOGY-NEUROMUSCULAR MEDICINE

2084N0400X PHYSICIAN-PSYCHIATRY&NEUROLOGY-NEUROLOGY  
2084N0402X PHYSICIAN-PSYCHIATRY&NEUROLOGY-NEUROLOGY WITH SPECIAL QUAL IN CHILD NEUROLO  
2084N0600X PHYSICIAN-PSYCHIATRY&NEUROLOGY-CLINICAL NEUROPHYSIOLOGY  
2084P0005X PHYSICIAN-PSYCHIATRY&NERUOLOGY-NEURODEVELOPMENTAL DISABILITIES  
2084P0015X PHYSICIAN-PSYCHIATRY&NEUROLOGY-PSYCHOSOMATIC MEDICINE  
2084P0800X PHYSICIAN-PSYCHIATRY&NEUROLOGY-PSYCHIATRY  
2084P0802X PHYSICIAN-PSYCHIATRY&NEUROLOGY-ADDICTION PSYCHIATRY  
2084P0804X PHYSICIAN-PSYCHIATRY&NEUROLGY-CHILD&ADOLESCENT PSYCHIATRY  
2084P0805X PHYSICIAN-PSYCHIATRY&NEUROLGY-GERIATRIC PSYCHIATRY  
2084P2900X PHYSICIAN-PSYCHIATRY&NEUROLOGY-PAIN MEDICINE  
2084S0010X PHYSICIAN-PSYCHIATRY&NEUROLOGY-SPORTS MEDICINE  
2084S0012X PHYSICIAN-PSYCHIATRY&NEUROLOGY-SLEEP MEDICINE  
2084V0102X PHYSICIAN-PSYCHIATRY&NEUROLOGY-VASCULAR NEUROLOGY  
273R00000X PSYCHIATRIC UNIT  
283Q00000X HOSPITALS: PSYCHIATRIC HOSPITAL  
323P00000X PSYCHIATRIC RESIDENTIAL TREATMENT FACILITY  
363LP0808X NURSE PRACTITIONER - PSYCHIATRIC/MENTAL HEALTH  
364SP0807X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0808X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0809X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0810X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0811X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0812X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH  
364SP0813X CLINICAL NURSE SPECIALIST - PSYCHIATRIC/MENTAL HEALTH

## Appendix 2. Proposed Prior Authorization Criteria

# Attention Deficit Hyperactivity Disorder (ADHD) Safety Edit

### Goals:

- Cover medications used for ADHD and narcolepsy if diagnosis is funded by the OHP, and medication use is consistent with best practices.
- Promote care by a psychiatrist for patients requiring therapy outside of best practices.
- Promote preferred drugs in class.

### Length of Authorization:

- Up to 12 months

### Requires PA:

- Non-preferred drugs on the enforceable preferred drug list.
- Regimens prescribed outside of standard doses and age range (Tables 1 and 2)
- Non-standard polypharmacy (Table 3)

### Covered Alternatives:

- Current PMPDP preferred drug list per OAR 410-121-0030 at [www.orpdl.org](http://www.orpdl.org)
- Searchable site for Oregon FFS Drug Class listed at [www.orpdl.org/drugs/](http://www.orpdl.org/drugs/)

**Table 1. Age Range and Maximum Daily Doses for Drugs Approved for ADHD.**

Drug	Brand Name (or generic equivalents)	Min Age	Max Age	Max Daily Dose
<b>STIMULANTS</b>				
Amphetamine IR	Evekeo (tab)	3	NA	40 mg
	Evekeo ODT (dist tab)	3	NA	40 mg
Amphetamine ER	Adsensys ER (susp) and XR-ODT (tab)	6	12	18.8
		13	NA	12.5 mg
	Dyanavel XR (susp, tab)	6	NA	20 mg
Dextroamphetamine IR	ProCentra (sol)	3	16	40 mg
	Zenzedi (tab)	3	16	40 mg
Dextroamphetamine ER	Dexedrine Spansule (cap)	6	16	40 mg
	Xelstrym (transdermal patch)	6	NA	18 mg/9 hr

Dextroamphetamine/ amphetamine salts IR	Adderall (tab)	3	NA	40 mg
Dextroamphetamine/ amphetamine salts ER	Adderall XR (cap)	6	12	30 mg
		13	NA	60 mg
	Mydayis (cap)	13	17	25 mg
		18	55	50 mg
Dexmethylphenidate IR	Focalin (tab)	6	17	20 mg
Dexmethylphenidate ER	Focalin XR (cap)	6	17	30 mg
		18	NA	40 mg
Lisdexamfetamine	Vyvanse (cap; chew tab)	6	NA	70 mg
Methamphetamine IR	Desoxyn (tab)	6	17	25 mg
Methylphenidate IR	Methylin (sol)	6	NA	60 mg
	Ritalin (tab)	6	NA	60 mg
Methylphenidate ER	Adhansia XR (cap)	6	17	85 mg
		18	NA	100 mg
	Aptensio XR (cap)	6	NA	60 mg
	Concerta (tab)	6	12	54 mg
		13	65	72 mg
	Cotempla XR-ODT (tab)	6	17	51.8 mg
	Daytrana (transdermal patch)	6	17	30 mg/9 hr
	Jornay PM (cap)	6	NA	100 mg
	Metadate CD (tab)	6	NA	60 mg
	QuilliChew ER (chew tab)	6	NA	60 mg
	Quillivant XR (susp)	6	NA	60 mg
	Relexxi (tab)	6	12	54 mg
		13	65	72 mg
Ritalin LA (cap)	6	NA	60 mg	
Serdexmethylphenidate/ dexmethylphenidate	Azstarys (cap)	6	NA	52.3 mg/ 10.4 mg
<b>NON-STIMULANTS</b>				
Atomoxetine	Strattera (cap)	6	17	≤70 kg: lesser of 1.4 mg/kg or 100 mg
		18	NA	>70 kg: 100 mg
Clonidine ER	Kapvay (tab)	6	17	0.4 mg
Guanfacine ER	Intuniv (tab)	6	12	4 mg

		13	17	7 mg
Viloxazine ER	Qelbree (cap)	6	17	400 mg
		18	NA	600 mg
<b>Abbreviations:</b> cap = capsule; chew = chewable; dist = disintegrating; ER = extended-release formulation; IR = immediate-release formulation; NA = not applicable; sol = solution; susp = suspension; tab = tablet.				

**Table 2. Age Range and Maximum Daily Doses for Drugs Approved for Narcolepsy.**

Drug	Brand Name (or generic equivalents)	Min Age	Max Age	Max Daily Dose
<b>STIMULANTS</b>				
Amphetamine IR	Evekeo (tab)	6	12	40 mg
		13	NA	60 mg
Dextroamphetamine IR	ProCentra (sol)	3	17	40 mg
		18	NA	60 mg
	Zenzedi (tab)	3	17	40 mg
		18	NA	60 mg
Dextroamphetamine ER	Dexedrine (cap)	6	17	40 mg
		18	NA	60 mg
Dextroamphetamine/amphetamine salts IR	Adderall (tab)	6	17	40 mg
		18	NA	60 mg
Methylphenidate IR	Methylin (sol)	6	NA	60 mg
	Ritalin (tab)	6	NA	60 mg
Methylphenidate ER	Ritalin LA (cap)	6	12	60 mg
<b>Abbreviations:</b> cap = capsule; ER = extended-release formulation; IR = immediate-release formulation; NA = not applicable; sol = solution; tab = tablet.				

**Table 3. Standard Combination Therapy for ADHD**

Age Group	Standard Combination Therapy
Age <6 years	Combination therapy not recommended*
Age 6-17 years	1 Stimulant Formulation (ER or IR) + Guanfacine ER* 1 Stimulant Formulation (ER or IR) + Clonidine ER*
Age ≥18 years	Combination therapy not recommended**

Abbreviations: ER = extended-release; IR = immediate-release formulation.

\* Recommended by the American Academy of Pediatrics. Wolraich ML, Hagan JF, Jr., Allan C, et al. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. Pediatrics. 2019;144(4).

\*\*Identified by: Pharmacologic Treatments for Attention Deficit Hyperactivity Disorder: Drug Effectiveness Review Project, 2015.

## Approval Criteria

1. What diagnosis is being treated?	Record ICD10 code.	
2. Is the drug being used to treat an OHP-funded condition?	<b>Yes:</b> Go to #3	<b>No:</b> Pass to RPh. Deny; not funded by OHP.
3. Is the requested drug on the PDL?	<b>Yes:</b> Go to #5	<b>No:</b> Go to #4
4. Will the prescriber consider a change to a preferred agent?  Preferred drugs reviewed for comparative effectiveness and safety by the Oregon Pharmacy & Therapeutics Committee.	<b>Yes:</b> Inform prescriber of preferred alternatives	<b>No:</b> Go to #5
5. Is the request for an ADHD diagnosis?	<b>Yes:</b> Go to #6	<b>No:</b> Go to #9
6. Are the patient's age and the prescribed dose within the limits defined in Table 1?	<b>Yes:</b> Go to #7	<b>No:</b> Go to #11
7. Is the prescribed drug the only stimulant or non-stimulant filled in the last 30 days?	<b>Yes:</b> Approve for up to 12 months	<b>No:</b> Go to #8
8. Is the multi-drug regimen a standard combination therapy, as defined in Table 3?	<b>Yes:</b> Approve for up to 12 months	<b>No:</b> Go to #11
9. Is the request for a narcolepsy diagnosis?	<b>Yes:</b> Go to #10	<b>No:</b> Pass to RPh. Deny; medical appropriateness.
10. Are the patient's age and the prescribed dose within the limits defined in Table 2?	<b>Yes:</b> Approve for up to 12 months	<b>No:</b> Go to #11
11. Was the drug regimen developed by or in consultation with a mental health specialist (e.g., psychiatrist, developmental pediatrician, psychiatric nurse practitioner, sleep specialist or neurologist)?	<b>Yes:</b> Document name and contact information of consulting provider and approve for up to 12 months	<b>No:</b> Go to #12



## Approval Criteria

12. Was the current drug regimen *initiated* at doses and ages recommended in Tables 1-3 and has the provider assessed ongoing need for treatment in the past year?

**Yes:** Approve for up to 12 months

**No:** Pass to RPh. Deny; medical appropriateness.

Ages or doses exceeding defined limits, or non-recommended multi-drug regimens, are only approved when prescribed by or in consultation with a mental health specialist. Specialist consultation is not required if patients age into a maximum age limit.

May approve continuation of existing therapy once up to 90 days to allow time to consult with a mental health specialist.

P&T Review: 10/22 (DE);6/22; 8/20; 5/19; 9/18; 5/16; 3/16; 5/14; 9/09; 12/08; 2/06; 11/05; 9/05; 5/05; 2/01; 9/00; 5/00  
Implementation: 11/1/2018; 10/13/16; 7/1/16; 10/9/14; 1/1/15; 9/27/14; 1/1/10; 7/1/06; 2/23/06; 11/15/05