

Supplementary Material

Title: Reasons for Treatment Changes in Children and Adolescents with Attention-Deficit/Hyperactivity Disorder: A Chart Review Study

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Table S1. Patient characteristics in the child and adolescent subgroups

Characteristics at index treatment initiation	Children N=235		Adolescents N=199	
Age (years), mean $\pm$ SD [median]	8.8 $\pm$ 1.9 [9.0]		14.3 $\pm$ 1.2 [14.0]	
Gender, n (%)				
Male	166	(70.6%)	132	(66.3%)
Female	65	(27.7%)	65	(32.7%)
Non-binary	4	(1.7%)	2	(1.0%)
Race¹, n (%)				
White or Caucasian	161	(68.5%)	149	(74.9%)
Black or African American	38	(16.2%)	31	(15.6%)
Asian	22	(9.4%)	12	(6.0%)
American Indian or Alaska Native	3	(1.3%)	1	(0.5%)
Native Hawaiian or Other Pacific Islander	1	(0.4%)	1	(0.5%)
Unknown	10	(4.3%)	5	(2.5%)
Region of residence, n (%)				
Northeast	67	(28.5%)	55	(27.6%)
South	60	(25.5%)	48	(24.1%)
West	54	(23.0%)	49	(24.6%)
Midwest	54	(23.0%)	47	(23.6%)
Type of healthcare coverage¹, n (%)				
Commercial/private insurance	156	(66.4%)	149	(74.9%)
Medicare	8	(3.4%)	4	(2.0%)
Medicaid	59	(25.1%)	36	(18.1%)
Military insurance (VA or active military)	3	(1.3%)	4	(2.0%)
No insurance	1	(0.4%)	2	(1.0%)
Other	0	(0.0%)	2	(1.0%)
Unknown	11	(4.7%)	7	(3.5%)
Clinical and ADHD characteristics				
Type of ADHD, n (%)				
Combined presentation	146	(62.1%)	98	(49.2%)
Inattentive	59	(25.1%)	82	(41.2%)
Hyperactive	27	(11.5%)	19	(9.5%)
Unknown	3	(1.3%)	0	(0.0%)
Overall ADHD severity, n (%)				
Mild	30	(12.8%)	21	(10.6%)
Moderate	158	(67.2%)	156	(78.4%)
Severe	40	(17.0%)	21	(10.6%)
Unknown	7	(3.0%)	1	(0.5%)
Comorbidities associated with ADHD¹, n (%)				
Anxiety	36	(15.3%)	47	(23.6%)
Depression	20	(8.5%)	33	(16.6%)
Learning disability	33	(14.0%)	20	(10.1%)
Emotional impulsivity/mood lability	34	(14.5%)	18	(9.0%)
Behavioral disorder	27	(11.5%)	19	(9.5%)
Other comorbidities¹, n (%)				
Obesity	4	(1.7%)	16	(8.0%)
Chronic pulmonary disease (e.g., asthma, emphysema, bronchitis)	7	(3.0%)	2	(1.0%)

ADHD: attention-deficit/hyperactivity disorder; SD: standard deviation; VA: Veteran Affairs

Note:

1. More than one option could be selected (i.e., not mutually exclusive).

Table S2. Index treatment characteristics in the child and adolescent subgroups

Treatment characteristics at index treatment initiation	Children N=235		Adolescents N=199	
Type of treatment¹, n (%)				
Stimulants	200	(85.1%)	161	(80.9%)
Short-acting methylphenidates	51	(21.7%)	40	(20.1%)
Short-acting amphetamines	24	(10.2%)	21	(10.6%)
Long-acting methylphenidates	81	(34.5%)	49	(24.6%)
Long-acting amphetamines	44	(18.7%)	51	(25.6%)
Non-stimulants	23	(9.8%)	26	(13.1%)
Atomoxetine	11	(4.7%)	20	(10.1%)
Clonidine	5	(2.1%)	1	(0.5%)
Guanfacine	7	(3.0%)	5	(2.5%)
Combination therapy	11	(4.7%)	11	(5.5%)
Multiple stimulants	4	(1.7%)	8	(4.0%)
Multiple non-stimulants	0	(0.0%)	2	(1.0%)
Combination of stimulants and non-stimulants	7	(3.0%)	1	(0.5%)
Other (i.e., bupropion)	1	(0.4%)	1	(0.5%)
Duration of treatment (months), mean ± SD [median]	23.9 ± 15.2 [20.2]		22.5 ± 14.2 [19.4]	
Patients with treatment expected to be taken based on a pre-defined schedule, n (%)	226	(96.2%)	186	(93.5%)
Adherence to planned schedule², n (%)				
<20%	3	(1.3%)	1	(0.5%)
20%–39%	4	(1.8%)	3	(1.6%)
40%–59%	24	(10.6%)	25	(13.4%)
60%–79%	72	(31.9%)	67	(36.0%)
≥80%	123	(54.4%)	90	(48.4%)
Other prescribed medications received as of treatment initiation¹, n (%)				
Antidepressant	19	(8.1%)	35	(17.6%)
Antianxiety medication	13	(5.5%)	25	(12.6%)
Sleep aid (excluding over-the-counter)	17	(7.2%)	12	(6.0%)
Antipsychotic	5	(2.1%)	6	(3.0%)
Anti-asthmatic medication and bronchodilator	7	(3.0%)	3	(1.5%)
Analgesics – opioid	0	(0.0%)	0	(0.0%)
Other	2	(0.9%)	2	(1.0%)
No other prescribed medication(s)	183	(77.9%)	126	(63.3%)

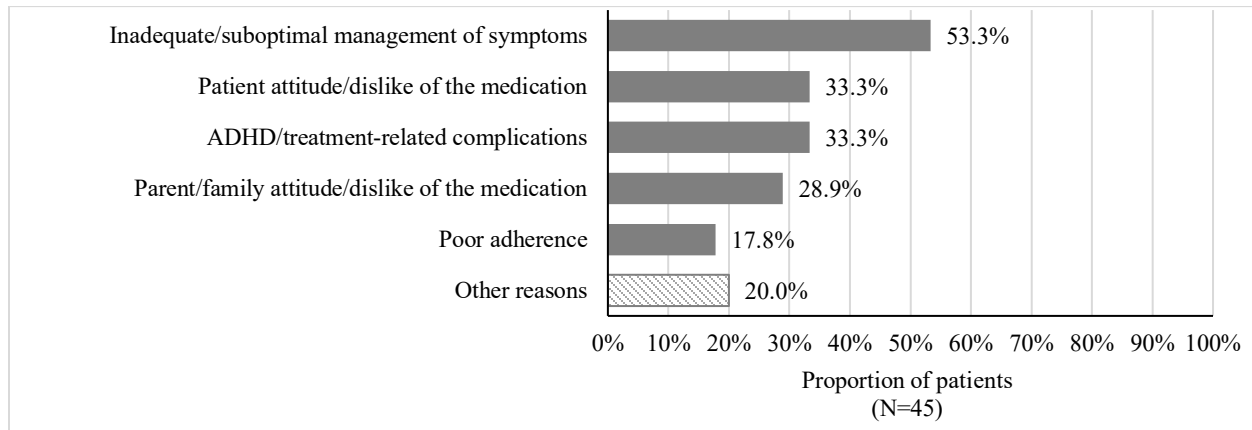
ADHD: attention-deficit/hyperactivity disorder; SD: standard deviation

Notes:

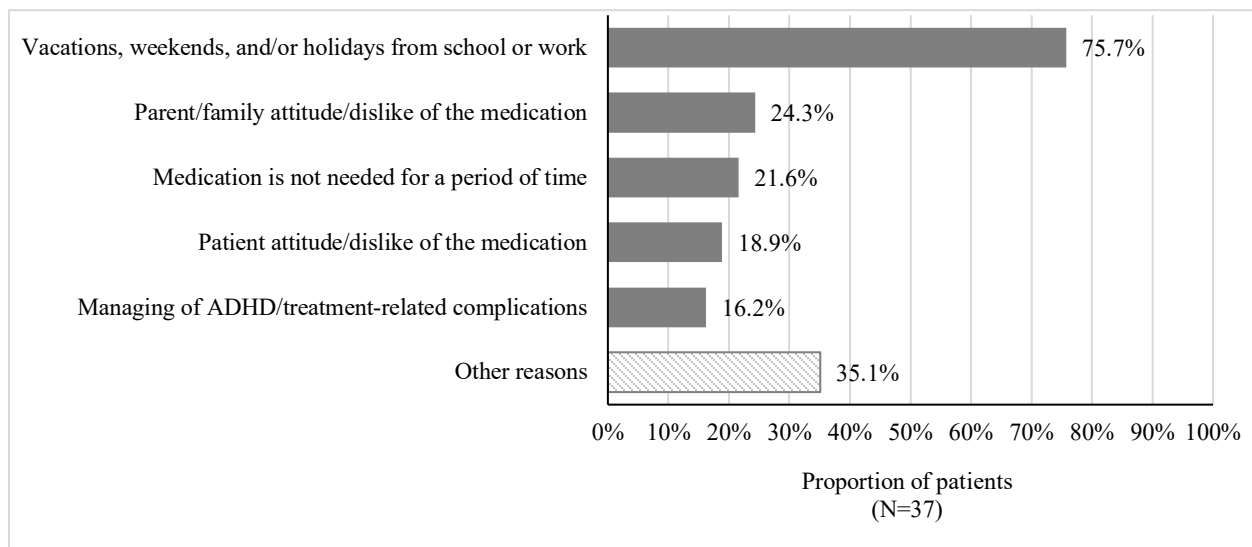
1. More than one option could be selected (i.e., not mutually exclusive).
2. Adherence level was assessed among patients whose treatment was expected to be taken regularly, according to a pre-defined schedule

Figure S1. Reasons for treatment changes and modifications in the child subgroup

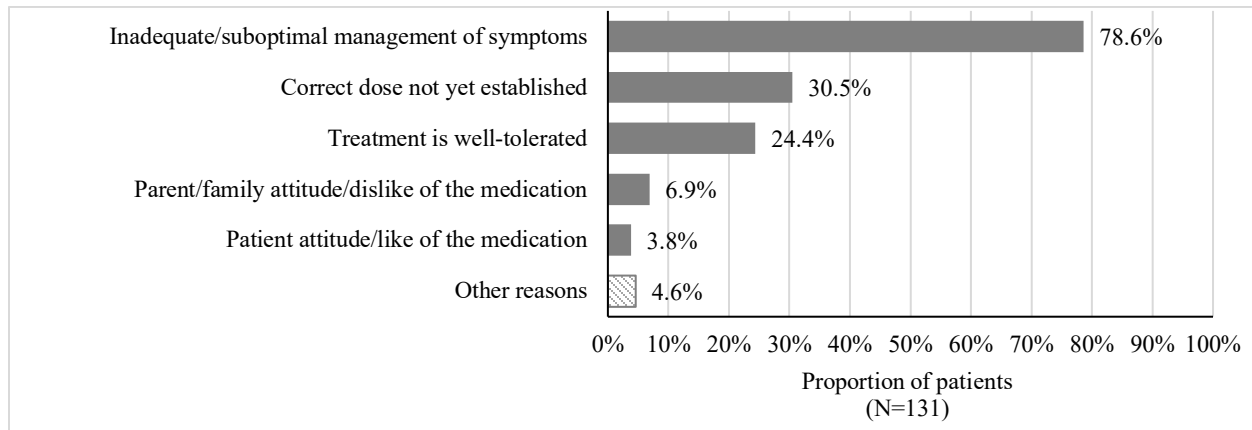
a) Most common reasons for treatment discontinuation^{1,2}



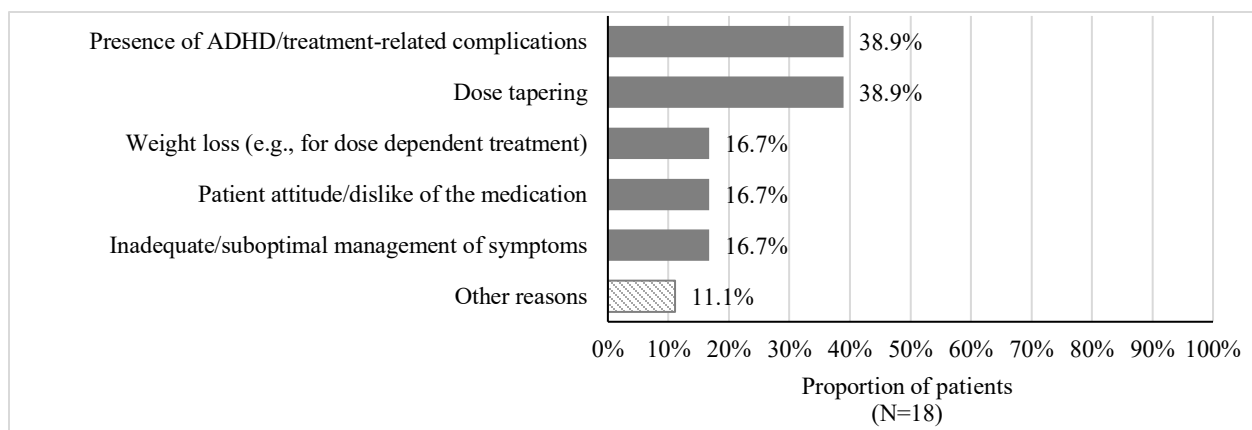
b) Most common reasons for treatment interruption/drug holidays^{1,3}



c) Most common reasons for dose increase^{1,4}



d) Most common reasons for dose decrease^{1,5}

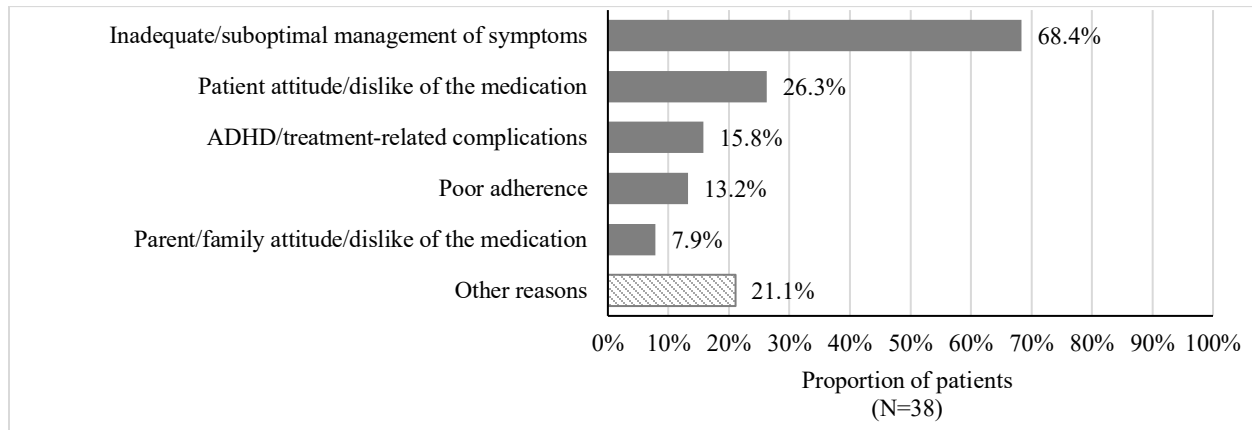


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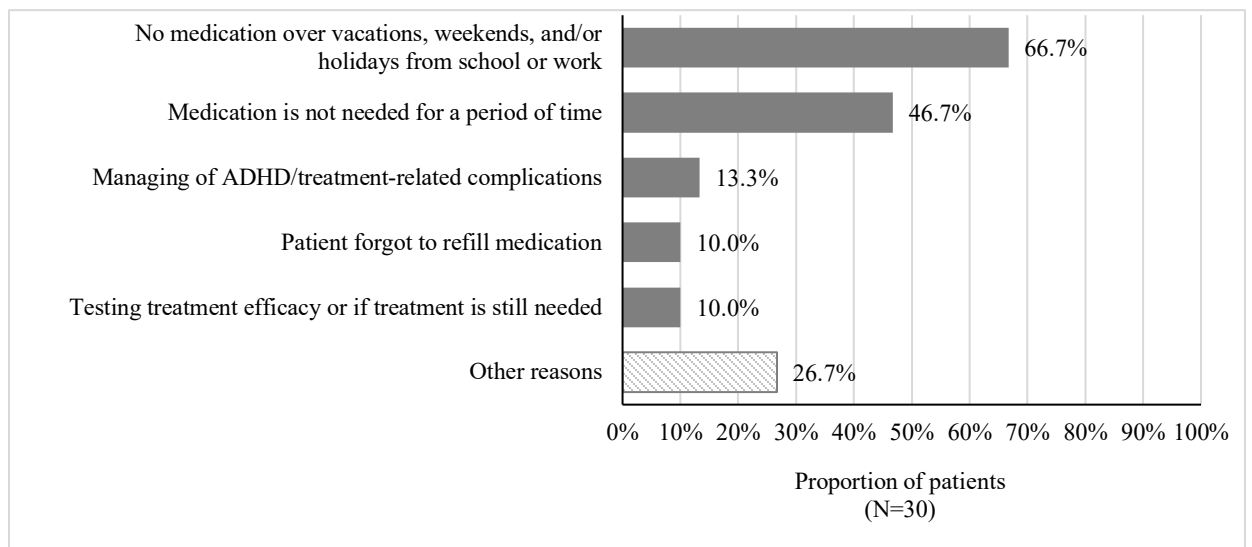
1. More than one option could be selected (i.e., not mutually exclusive).
2. Other reasons for treatment discontinuation included cost considerations, inconvenience of dosing, social stigma associated with ADHD medication, and other patient/parent/family/physician-driven reasons.
3. Other reasons for treatment interruption/drug holidays included patient forgot to refill medication, testing treatment efficacy or if treatment is still needed, social stigma associated with ADHD medication, and other patient/parent/family-driven reasons.
4. Other reasons for dose increase included leveraging the treatment's side effects, weight gain, and other patient-driven reasons.
5. Other reasons for dose decrease included change in insurance coverage and parent/family attitude/dislike of the medication.

Figure S2. Reasons for treatment changes and modifications in the adolescent subgroup

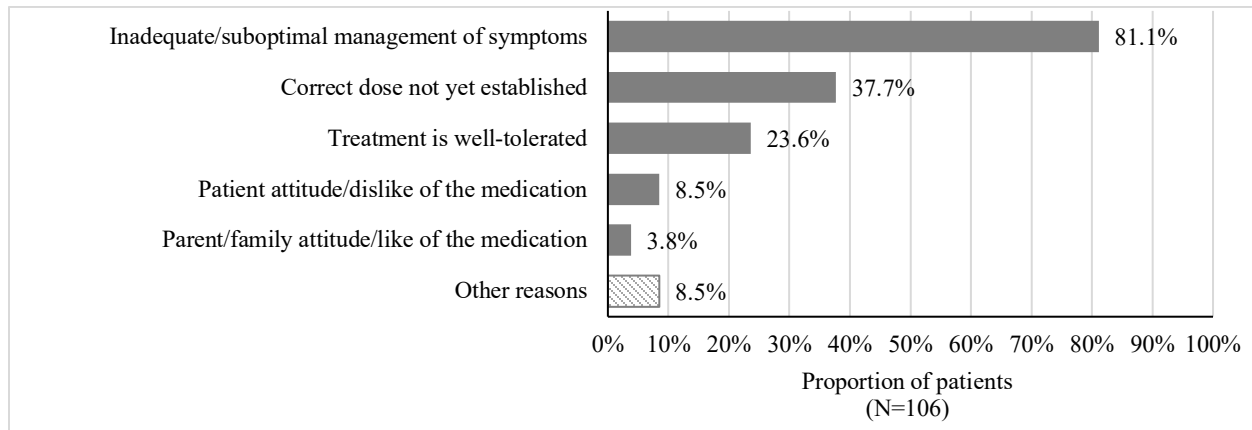
a) Most common reasons for treatment discontinuation^{1,2}



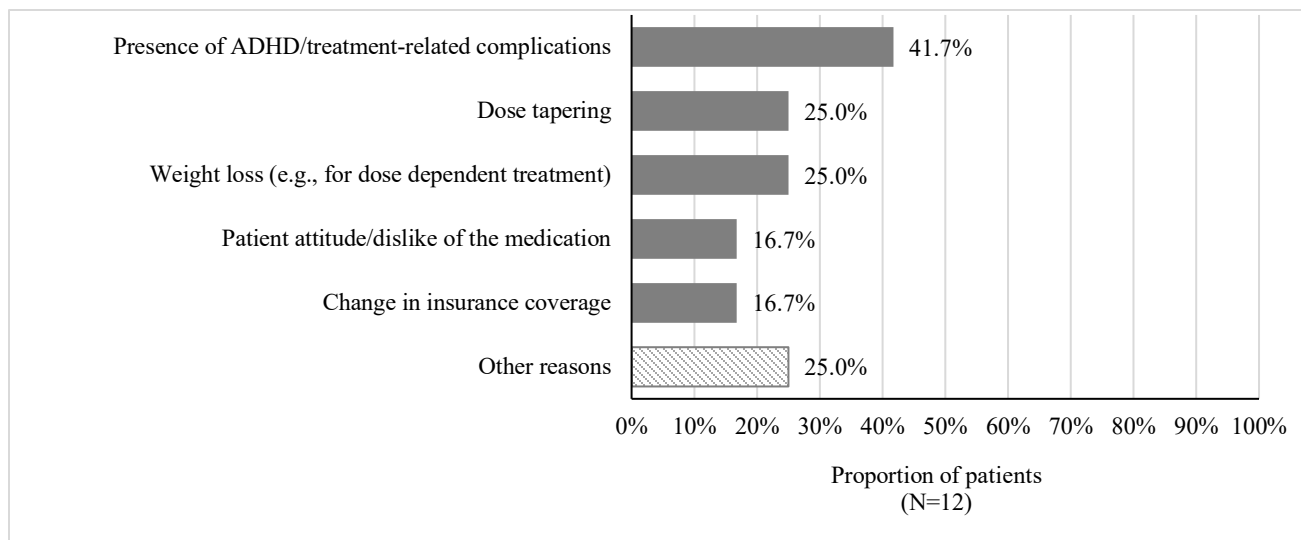
b) Most common reasons for treatment interruption/drug holidays^{1,3}



c) Most common reasons for dose increase^{1,4}



d) Most common reasons for dose decrease^{1,5}

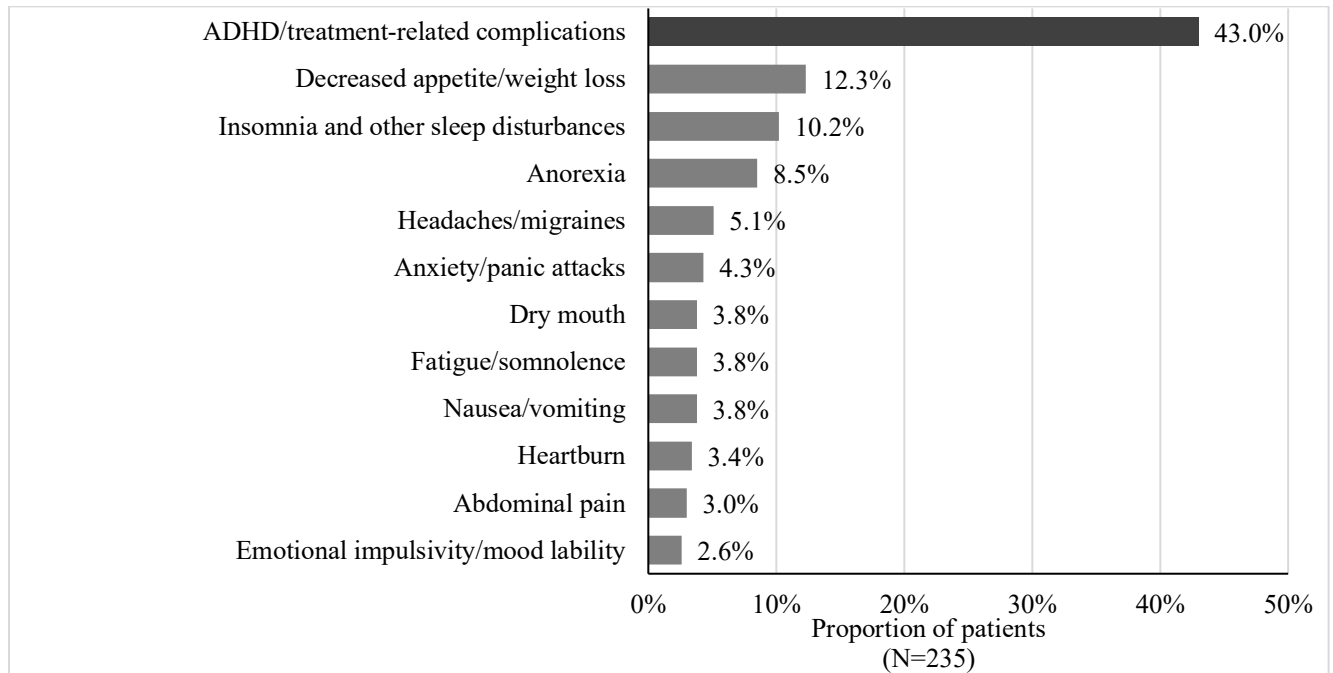


Notes:

1. More than one option could be selected (i.e., not mutually exclusive).
2. Other reasons for treatment discontinuation included cost considerations, inconvenience of dosing, treatment monitoring becoming burdensome, and other patient/parent/family-driven reasons.
3. Other reasons for treatment interruption/drug holidays included patient/parent/family attitude/dislike of the medication, social stigma associated with ADHD medication, and other patient/physician-driven reasons.
4. Other reasons for dose increase included leveraging the treatment's side effects, weight gain, change in insurance coverage, and other physician-driven reasons.
5. Other reasons for dose decrease included member of patient's household misuse of medication or addiction and parent/family attitude/dislike of the medication.

Figure S3. ADHD/treatment-related complications during index treatment and impact on adherence in the child subgroup

a) Most common ADHD/treatment-related complications



b) Negative impact of ADHD/treatment-related complications on treatment adherence among patients with ≥ 1 ADHD/treatment-related complication

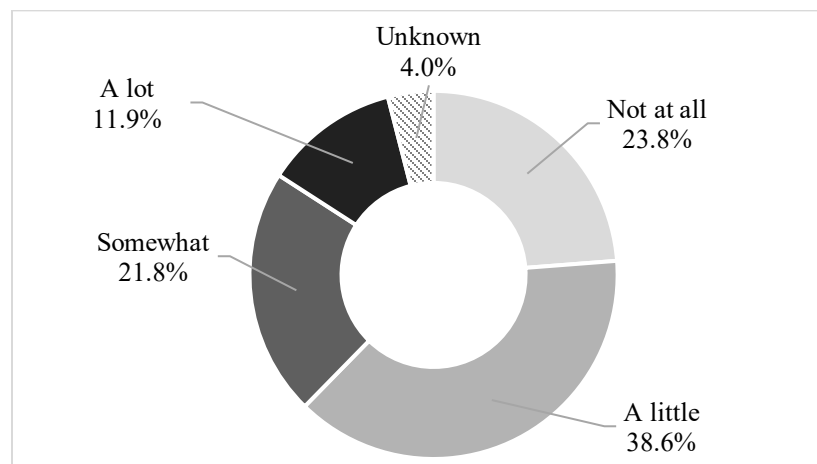
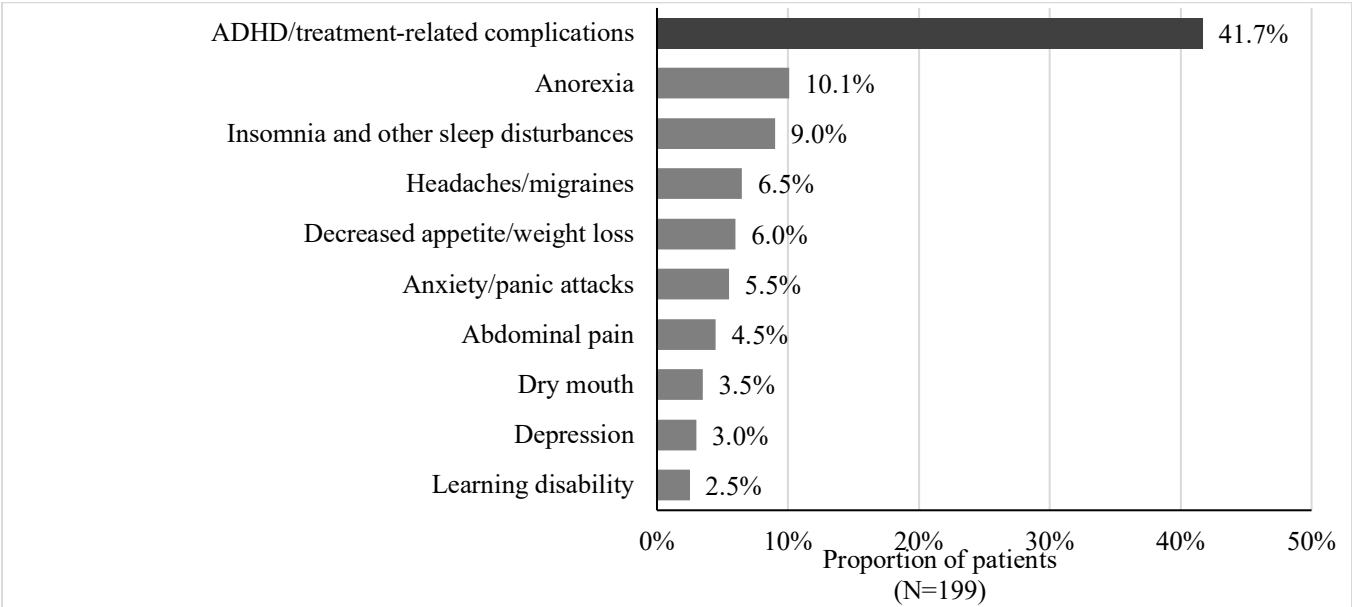


Figure S4. ADHD/treatment-related complications during index treatment and impact on adherence in the adolescent subgroup

a) Most common ADHD/treatment-related complications



b) Negative impact of ADHD/treatment-related complications on treatment adherence among patients with ≥1 ADHD/treatment-related complication

