Aggression (Severe) in Children under Age 6

Level 0

Comprehensive diagnostic assessments. Refer to *Principles of Practice* on page 6. Evaluate and treat comorbid conditions (i.e. medical, other psychiatric conditions).

Level 1

Psychosocial intervention.

- Evidence-based psychotherapeutic interventions such as Parent Management Training (PMT) or Parent-Child Interaction therapy (PCIT) is the first line treatment for 3 to 6 months.
- Multimodal intervention such as Multisystemic therapy (MST), used in school age children may be tried (Rosato et al., 2012).
- Behavioral therapy such as token economies and contingency management, and Applied Behavioral Analysis (ABA therapy) may be tried (as useful in aggression in Autism Spectrum population).

Level 2

Initial medication treatment should target the underlying disorder(s) (when available, follow evidence-based guidelines for primary disorder).

- Always treat primary disorder fully first before addressing aggression with other pharmacologic agents.
- Treat comorbid ADHD per guideline. Refer to page 14.
- Treat comorbid Anxiety Disorders per guidelines. Refer to page 30.
- Treat comorbid Mood Disorders per guidelines. Refer to page 46 for Major Depressive Disorder.

Level 3

Only in cases of severe impairment, severe aggression, or failure of psychosocial treatment:

- Monotherapy with methylphenidate formulation, then amphetamine formulation or low dose alpha-2 agonists, then atomoxetine.
- Consider combination therapy of stimulant with alpha-2 agonists.

Level 4

If failure to respond to Level 2 and/or 3, or insufficient response consider:

- Low dose risperidone, aripiprazole
  - Discontinuation trial after 6 months of any effective medication treatment.

Not Recommended:

- Use of medication without a trial of concurrent psychosocial treatment.

Aggression (Chronic, Impulsive) in Children and Adolescents Ages 6 to 17 Years Old

Level 0

Comprehensive diagnostic assessment. Refer to *Principles of Practice* on page 9. Evaluate and treat comorbid conditions (i.e. medical, other psychiatric conditions).

- Consider screening tools:
  - Ages 3 to 21 years old: Child /Adolescent Psychiatry Screen (CAPS)
  - Ages 4 to 17 years old: Strengths and Difficulties Questionnaire (SDQ) for parents and teachers

Links to screening tools available at ***http://medicaidmentalhealth.org/.***

- Assess treatment effects and outcomes with standardized measures, such as the Modified Overt Aggression Scale (MOAS) is highly encouraged.
- When acute aggression is present, conduct a risk assessment and, if necessary, consider referral to a psychiatrist or an emergency department for evaluation.
- Continuously track and re-assess aggression problems and triggers.
- Obtain additional collateral information as needed and obtain a relevant medical workup, physical examination, and nutritional status evaluation.
- Provide psychoeducation for patients and families.
- Develop an appropriate treatment plan with the patient/family and obtain buy-in.
- Help the family establish community supports.

Level 1

Engage the child and family in taking an active role in implementing psychosocial strategies and help them to maintain consistency with psychosocial, psychoeducational, and other evidence-based treatments interventions:

- Parent Management Training (PMT), Parent-Child Interaction therapy (PCIT), behavioral therapies such as ABA therapy and behavioral modification and contingency management
- Multimodal interventions: Multisystemic therapy
- Cognitive behavioral therapy (anger management)
- Family therapy

Level 2

If Level 1 interventions are not successful, re-assess:

Initial medication treatment should target the underlying disorder(s) (when available, follow evidence-based guidelines for primary disorder).

- Always treat primary disorder fully first before addressing aggression with other pharmacologic agents.
- Treat comorbid ADHD per guidelines. Refer to page 16.
- Treat comorbid Anxiety Disorders per guidelines. Refer to page 31.
- Treat comorbid Mood Disorders per guidelines. Refer to page 36 for Bipolar Disorder and page 47 for Major Depressive Disorder.
- Consider monotherapy with methylphenidate formulation, then amphetamine formulation or alpha-2 agonist, then atomoxetine.
- May want to consider combination therapy of stimulant with an alpha-2 agonist.
- For affective aggression, if benefits outweigh risks, consider starting with low-dose risperidone or aripiprazole (most robust evidence for use at the time of publication).

Level 3

If Level 2 interventions are not successful, re-assess:

- Consider switching to or adding an antipsychotic medication to ongoing psychosocial and/or pharmacological treatments (after an adequate trial), taking into account the latest evidence on efficacy and safety of individual agents.
  - Risperidone or aripiprazole are recommended at low doses. Titrate to appropriate dose to target symptoms given level of impairment.
- Use recommended titration schedules and deliver medication trial at adequate dose and duration before changing or adding medication. Refer to Table 9 on page 28. Before changing, make sure that medications have been administered for an appropriate dose and duration and that adequate psychosocial interventions addressing adherence have been implemented. Monitor and manage adverse effects and non-response.

Level 4

If failure to respond to Level 3 or insufficient response, switch to a different antipsychotic (either risperidone or aripiprazole).

Level 5

If failure to respond to risperidone or aripiprazole, consider other antipsychotics for which less evidence exists. Refer to Table 9 on page 28.

OR

Combination of a mood stabilizer with atypical antipsychotic, but not of two antipsychotics (unless during cross-titration or plateau switch).

- When patient responds only partially to a first-line antipsychotic medication, first reassess the diagnosis, adequacy of behavioral interventions, pharmacotherapy for any identified primary or comorbid disorder, and dose/duration of the medication trial. Then, it may be appropriate to consider adding a mood stabilizer: Most evidence exists for lithium.

Not Recommended:

- Use of Long Acting Intramuscular (IM) formulations of antipsychotics to treat aggression (lack of evidence in the pediatric population).

Table 9.

Treatment of Aggression in Children and Adolescents Ages 6 to 17: Level of Evidence and Dosing Recommendations[◊]			
Level of Evidence[†]	**Medication**	**Child (>6 years)**	**Adolescents (13-17 years)**
B+	†Methylphenidate/ Amphetamines	See ADHD guidelines, pg 14.	See ADHD guidelines, pg 16.
B	†Clonidine, Guanfacine, Guanfacine ER	See ADHD guidelines, pg 14.	See ADHD guidelines, pg 16.
B-	†Atomoxetine	Starting dose: See ADHD guidelines, pg 14. Max dose: 1.8 mg/kg for children over 8 years old	Starting dose: See ADHD guidelines, pg 16. Max dose: 1.8 mg/kg for children over 8 years old
A	Risperidone **Not recommended first line due to side effect profile*	Starting dose: 0.1 to 0.25 mg/ day Max dose: 2 mg/day	Starting dose: 0.50 mg/day Max dose: 4 mg/day
	Aripiprazole **Not recommended first line due to side effect profile*	Starting dose: 1 to 2.5 mg/day Max dose: 10 mg/day	Starting dose: 1 to 2.5 mg/day Max dose: 15 mg/day
	Lithium **Not recommended first line due to side effect profile*	Blood level: 0.6 mEq/L Max blood level should be 1.2 mEq/L	Blood level: 0.6 mEq/L Max blood level should be 1.2 mEq/L
A-	Haloperidol **Not recommended first line due to side effect profile*	Starting dose: 0.25 to 0.5 mg/ day Max dose: 4 to 6 mg/day	Starting dose: 0.5 mg/day Max dose: 6 to 10 mg/day
	Chlorpromazine **Not recommended first line due to side effect profile*	Starting dose: 25 mg/day Max dose: 200 mg/day	Starting dose: 25 to 50 mg/ day Max dose: 400 mg/day
B+	Valproate **Use caution in female population due to side effect profile*	10-15 mg/kg/day in divided doses Blood level: 80-125 mcg/mL Dose determined by blood level. Max blood level should be 125 mcg/mL	10-15 mg/kg/day in divided doses Blood level: 80-125 mcg/mL Dose determined by blood level. Max blood level should be 125 mcg/mL
B	Olanzapine **Not recommended first or second line due to metabolic SE and/or in pts with BMI ≥ 85%*	Starting dose: 1.25 to 2.5 mg/ day Max dose: 15 mg/day	Starting dose: 2.5 to 5.0 mg/ day Max dose: 20 mg/day
	Quetiapine **Not recommended first line in patients with BMI ≥ 85%*	Starting dose: 12.5 mg po twice per day Max dose: 400 mg/day	Starting dose: 25 mg po twice per day Max dose: 600 mg/day
B-	Ziprasidone **Requires cardiac monitoring*	Starting dose: 20 mg/day Max dose: 40-60 mg/day	Starting dose: 20 mg/day Max dose: 40-60 mg/day

Table 9 *(continued)*.

Treatment of Aggression in Children and Adolescents Ages 6 to 17: Level of Evidence and Dosing Recommendations[◊]			
Level of Evidence[1]	**Medication**	**Child (>6 years)**	**Adolescents (13-17 years)**
C+	Paliperidone **Limited data below age 12*	Starting dose: 1.5 mg/day Max dose: 6 mg/day	Starting dose: 1.5 to 3 mg/day Max dose: 12 mg/day
C	Carbamazepine	Not recommended due to adverse effects.	Not recommended due to adverse effects.
D	Asenapine	Not recommended under 10 years old. Can be given to children and adolescents 10-17 years old. Starting dose: 2.5 mg SL twice per day Max dose: 20 mg/day	Can be given to children and adolescents 10-17 years old. Starting dose: 2.5 mg SL twice per day Max dose: 20 mg/day
D-	Lurasidone	Not FDA approved in children and adolescents Starting dose: 20 mg/day Suggested dosing: 20 to 80 mg/day Max dose (6-9 years old): 100 mg/day	Not FDA approved in children and adolescents Suggested dosing: 20 mg to 80 mg/day Starting dose: 20 mg/day Max dose: 120 mg/day

[◊]mg = milligrams; mEq/L = milliequivalents per liter; mcg/L = micrograms per milliliter

[1]Ratings based on extrapolation from ADHD, ASD or irritability studies, aggression, and disruptive behavior studies.

[†]Note: Methylphenidate, amphetamines, alpha agonists (clonidine, guanfacine), and atomoxetine are recommended prior to other treatment regimens due to better side-effect profile in combination with evidence for use.

Level of Evidence:
A = 2RCTs or more
B = Small RCT or more than one open label study
C = Open label or case series
D= Pediatric trials assessing tolerability

For a full list of references, visit ***http://medicaidmentalhealth.org/*.**