## Aggression (Severe) in Children under Age 6

### Level 0
Comprehensive diagnostic assessment (see Principles of Practice).

### 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 as per ADHD guidelines pg. 11.
- Treat comorbid Anxiety and Depressive Disorders per guidelines.
- Treat comorbid Mood Disorders.

### 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.
- May want to consider combination therapy of stimulant with alpha-2 agonists or stimulant with atomoxetine.

### 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.
References
Level 0
Conduct a thorough initial evaluation and diagnostic work-up for aggression and any potentially underlying disorder before initiating treatment.

- 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]

Screening tools available at [http://medicaidmentalhealth.org/](http://medicaidmentalhealth.org/)

- Assess treatment effects and outcomes with standardized measures, such as the [Modified Overt Aggression Scale (MOAS)](http://medicaidmentalhealth.org/)
- 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 work-up, 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
Re-evaluate if Level 1 interventions are not successful.

- Monotherapy with methylphenidate formulation, then amphetamine formulation or low dose alpha-2 agonist, then atomoxetine.
- May want to consider combination therapy of stimulant with alpha-2 agonist or stimulant with atomoxetine.
Aggression (Chronic, Impulsive) in Children and Adolescents Ages 6 to 17 Years Old (continued)

Level 3
Re-evaluate if Level 2 interventions are not successful.

- Consider 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.
- Use recommended titration schedules and deliver medication trial at adequate dose and duration before changing or adding medication. 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, try a different antipsychotic (either risperidone or aripiprazole).

- If failure to respond to risperidone or aripiprazole, consider other antipsychotics for which less evidence exists.

Level 5
Combination of a mood stabilizer with atypical antipsychotic, but not of two antipsychotics (unless during cross-titration or plateau switch).

- Avoid using more than 2 antipsychotic medications for aggression simultaneously, unless all possible alternatives have been exhausted, especially the combination or intensification of psychosocial interventions in conjunction with a single medication for aggression (manage comorbidities appropriately).
- For a partial response to an initial first-line antipsychotic, consider augmentation with a mood stabilizer: Most evidence exists for lithium.
- May consider other mood stabilizers for which less evidence exists.
- 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.
### Level of Evidence and Dosing Recommendations

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Level of Evidence</th>
<th>Starting Dose (mg)</th>
<th>Max Dose (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clonidine, Guanfacine, Guanfacine ER</td>
<td>B</td>
<td>See ADHD guidelines</td>
<td>See ADHD guidelines</td>
</tr>
<tr>
<td>Methylphenidate/Amphetamines</td>
<td>B</td>
<td>See ADHD guidelines</td>
<td>See ADHD guidelines</td>
</tr>
<tr>
<td>Atomoxetine</td>
<td>B-</td>
<td>See ADHD guidelines</td>
<td>See ADHD guidelines</td>
</tr>
<tr>
<td>Risperidone</td>
<td>A</td>
<td>Child: 0.1-0.25 mg/day</td>
<td>Child: 2 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 0.50 mg/day</td>
<td>Adolescent: 4 mg/day</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>A</td>
<td>Child: 0.25-0.5 mg/day</td>
<td>Child: 4-6 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 0.5 mg/day</td>
<td>Adolescent: 6-10 mg/day</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>A-</td>
<td>Child: 0.25-0.5 mg/day</td>
<td>Child: 10 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 0.5 mg/day</td>
<td>Adolescent: 15 mg/day</td>
</tr>
<tr>
<td>Ziprasidone</td>
<td>B-</td>
<td>20 mg/day</td>
<td>40-60 mg/day</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>B</td>
<td>Child: 1.25-2.5 mg/day</td>
<td>Child: 15 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 2.5-5.0 mg/day</td>
<td>Adolescent: 20 mg/day</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>B</td>
<td>Child: 12.5 mg po bid</td>
<td>Child: 400 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 25 mg po bid</td>
<td>Adolescent: 600 mg/day</td>
</tr>
<tr>
<td>Chlorpromazine</td>
<td>A-</td>
<td>Child: 25 mg/day</td>
<td>Child: 200 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 25-50 mg/day</td>
<td>Adolescent: 400 mg/day</td>
</tr>
<tr>
<td>Valproate</td>
<td>B+</td>
<td>10-15 mg/kg/day in divided doses</td>
<td>Dose determined by blood level. Max blood level should be 125 mcg/mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blood level: 80-125 mcg/mL</td>
<td></td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>C</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Lithium</td>
<td>A</td>
<td>Blood level: 0.6 mEq/L</td>
<td>Max blood level should be 1.2 mEq/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Paliperidone</td>
<td>C</td>
<td>Child: 1.5 mg/day</td>
<td>Child: 6 mg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent: 1.5-3 mg/day</td>
<td>Adolescent: 12 mg/day</td>
</tr>
</tbody>
</table>

**Not recommended due to adverse effects; Ratings based on extrapolation from ADHD, ASD or irritability studies, aggression, disruptive behavior studies

A = 2RCTs or more
B = Small RCT or more than one open label study
C = Open label or case series

medicaidmentalhealth.org