

# OKLAHOMA PEDIATRIC PSYCHOTROPIC MEDICATION RESOURCE GUIDE



OKLAHOMA STATE UNIVERSITY  
**CENTER FOR HEALTH SCIENCES**



## Background and Purpose

The use of psychotropic medications for the treatment of youth with severe emotional and behavioral disturbances has increased dramatically over recent years. For instance, since the advent of atypical antipsychotics we have seen an increase in use up to 600%; compared to an increase in psychotherapy of 70% during that same time.<sup>3</sup> Oftentimes, youth with the most significant emotional and behavioral needs are prescribed the most medications; and yet are less likely to have seen a child and adolescent psychiatrist.<sup>1</sup> In one study of Medicaid claims, data indicates that as many as 67% of youth prescribed atypical antipsychotics reported quality of care concerns.<sup>4</sup> What is more, our most vulnerable children—in the state’s child welfare system—are prescribed polypharmacy more often with limited oversight and continuity of care. These trends have led to a national discussion on the quality of care and treatment of our nation’s vulnerable youth.<sup>5</sup> With overprescribing and, at times, imprudent use of medications, we put youth at risk for serious side effects and miss the opportunity to employ more evidence-based care.

Unfortunately, the need for quality diagnosis and treatment is increasing. Mental Health America indicates the rate of youth experiencing a mental health condition continues to rise, reporting nationally that from 2012 to 2017, the prevalence of Major Depressive Episode (MDE) increased from 8.66 percent to 13.01 percent of youth ages 12-17 and yet 70% of youth are still in need of treatment. In these reports, Oklahoma consistently ranks low compared with other states indicating that Oklahoma youth have higher prevalence of mental illness and lower rates of access to care.<sup>2</sup> The majority of youth who do receive treatment will receive it in their primary care office, with the American Academy of Pediatrics estimating that by 2020–2030 as many as 40% of patient visits to pediatricians will involve long-term chronic disease management of physical and psychological/behavioral conditions. Therefore, it is imperative that up-to-date evidence-based resources and collaboration is available to our clinicians on the front line of what at times can feel like a mental health epidemic.

It is important to note that the majority of psychotropic medications are prescribed by clinicians with limited training in child and adolescent psychiatry, and Oklahoma is no exception. With the severe shortage of child and adolescent psychiatrists and limited access to evidence-based therapy, clinicians are doing what they can, with the information they know, to treat the symptoms of often devastating and destructive mental health symptoms in our youth. Unfortunately, these interventions are often not-evidence based, masking the underlying disease state rather than treating the underlying problem. This can cause harmful and sometimes lifelong side effects including but not limited to tardive dyskinesia and metabolic syndrome. Judicious use of psychotropic medications is essential in the holistic well-being of the children of Oklahoma. With this need in mind, the Child and Adolescent Psychiatry Division of Oklahoma State University Center for Health Sciences has assembled a team of local experts to create and disseminate Pediatric Psychotropic Medication Resource Guide for Oklahoma youth.

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### **Oklahoma Pediatric Psychotropic Medication Task Force**

Clinicians from Oklahoma State University Center for Health Sciences and University of Oklahoma Center for Health Sciences lead the core team. The core-team helped to invite task force members to participate in the drafting of the resource guide. Our taskforce consisted of child and adolescent psychiatrists, pediatricians, and pharmacists who reviewed and compiled up-to-date information on best prescribing practices. Task force members were identified through their community standing and clinical expertise. Task force members were responsible for reviewing current research practices along with thoughtful clinical acumen to prepare the specific topics included in the resource guide. Through collaboration and consensus building, a first draft of the Oklahoma Pediatric Psychotropic Medication Resource Guide was developed. Subsequent revisions and input were completed to result in this final document.

The details in this report rely on the most up-to-date evidence through December 2019. Subsequent revisions in the coming years will be made available to ensure our treatment recommendations are evidence-based and current. Although this resource is meant to aid in the diagnosis and treatment of children and adolescents, it is important to note that ultimately the clinical decision making relies on the treating clinician and treatment team.

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## General Principles and Monitoring

### PRINCIPLE 1

Before initiating pharmacotherapy, a psychiatric evaluation is completed which should include a medical work up when indicated and collateral information (therapist, school, etc.). Best efforts should be made to obtain all past medical history for outpatient and inpatient treatment. **Specific questions about trauma and safety should be part of every assessment.**

Each clinician should determine their comfort diagnosing and treating based on their training and expertise. When indicated, clinicians should seek further consultation through available methods (e.g. Project ECHO and OHCA psychiatric consult line.)

Project ECHO is a collaborative model of medical education that empowers clinicians in rural and underserved communities to provide specialty care to more people right where they live.

- OHCA psychiatric consultation hotline: 1-405-522-7597
- OHCA referral for behavioral health services: 1-800-652-2010
- [Pediatric Behavioral and Emotional Health ECHO](#)
- [Infant Mental Health ECHO](#)

### PRINCIPLE 2

The prescriber develops an interdisciplinary, psychosocial and psychopharmacological treatment plan based on the best available evidence. This should include feedback about the diagnosis. **For the majority of psychiatric diagnosis, behavioral therapy (including caregiver participation) is indicated as first-line treatment.**

### PRINCIPLE 3

The prescriber develops a plan to monitor the patient and the treatment plan. This plan should include treatment response and side effects. Rating scales for disorders should be used as screeners and to ensure treatment response. Typically monitoring of mental health concerns should occur every week to two weeks at first, then monthly as symptoms stabilize to less frequent visits (e.g. every three to six months).

#### **PRINCIPLE 4**

Complete and document the assent of the child and consent of the parents before initiating medication treatment and during any changes in treatment. The assent and consent discussion should focus on the risks and benefits of the proposed and alternative treatments.

#### **PRINCIPLE 5**

Implement medication trials using an adequate dose and for an adequate duration of treatment. Document the side effects, treatment duration and treatment outcome. Document what constitutes a treatment failure (e.g. adequate trial to maximum dose without response; side effects intolerable although mild treatment response).

#### **PRINCIPLE 6**

The prescriber reassesses if the child does not respond to the initial medication trial as expected. Ensure the treatment is adhered to and the diagnosis is correct if the child is not responding to the treatment

#### **PRINCIPLE 7**

The prescriber needs a clear rationale for using medication combinations. If multiple medications are indicated only one medication change should be made at a time; unless clinically indicated. Other than cross tapering\*, there is no evidence to support the use of two medications from the same class being used simultaneously and should be avoided.

\*The use of immediate release stimulants in addition to extended release stimulants is also an exception.

#### **PRINCIPLE 8**

Discontinuing medication in children requires a specific plan, which should include ongoing monitoring of return of symptoms. Depending on the diagnosis (e.g. depression, anxiety, ADHD) a discussion of when a medication would potentially be discontinued should be discussed (e.g. after six months to one year symptom free).

### **Discontinuing Medications**

If the patient has shown a sustained period of remission or recovery and the prescriber believes that the medication may no longer be necessary, a discontinuation trial may be clinically indicated. Before initiating a discontinuation trial, the plan for discontinuation is reviewed with the patient and family focusing on the risks of discontinuation (e.g., the risks for withdrawal symptoms and the risk for relapse or recurrence of symptoms) and the treatment plan if symptoms return. This

is especially important if the patient was significantly impaired or suicidal before medication treatment. A specific plan for tapering and discontinuing medication and appropriate frequency of monitoring visits prevents withdrawal effects of medication and allows the clinician to identify early relapse/recurrence of symptoms. Monitoring children for a period of time after they are off medication allows for early identification of relapse/recurrence before symptoms become too severe.

During the discontinuation phase, patients may need to be seen more frequently than during the maintenance phase. Close monitoring as the dose of medication is being lowered, and for a period of time thereafter, ensures that withdrawal symptoms and early signs of relapse/recurrence are identified quickly.

At this time, there are little or no data to suggest which medication to remove first in children who are taking multiple medications. Some clinical guidance might include:

- If a child is taking two medications that target the same disorder, the first medication to be removed would likely be the medication that was used adjunctively or as an augmenter.
- If a child is on two medications, where one is for the underlying disorder and the second is to manage side effects of the first, it is likely that the first to be removed is the one used to manage side effects.
- If a child is on two medications for two disorders, the first medication to be removed is for the disorder that is more likely to go into remission or which is less severe or impairing.

### **Criteria Indicating Further Review**

- Absence of a thorough assessment for the DSM-5 diagnosis(es) in the child's medical record
- Four (4) or more psychotropic medications prescribed concurrently (side effect medications are not included in this count)
- Prescribing of:
  - Two (2) or more concurrent stimulants\*
  - Two (2) or more concurrent alpha agonists\*
  - Two (2) or more concurrent antidepressants
  - Two (2) or more concurrent antipsychotics
  - Two (2) or more concurrent mood stabilizers

\*The prescription of a long-acting and an immediate-release stimulant or alpha agonist of the same chemical entity does not constitute concomitant prescribing.

Note: When switching psychotropics, medication overlaps and cross taper should occur in a timely fashion, generally within four weeks.

- The prescribed psychotropic medication is not consistent with appropriate care for the patient's diagnosed mental disorder or with documented target symptoms usually associated with a therapeutic response to the medication prescribed.
- Psychotropic polypharmacy (two or more medications) for a given mental disorder is prescribed before utilizing psychotropic monotherapy.
- The psychotropic medication dose exceeds usual recommended doses (literature-based maximum dosages).
- Psychotropic medications are prescribed for children of very young age, including children receiving the following medications with an age of:
  - Stimulants: Less than three (3) years of age
  - Alpha Agonists Less than four (4) years of age
  - Antidepressants: Less than four (4) years of age
  - Mood Stabilizers: Less than four (4) years of age
  - Antipsychotics: Less than five (5) years of age
- Antipsychotic medication(s) prescribed continuously without appropriate monitoring of glucose and lipids at least every six months.
- Prescribing by a primary care provider who has not documented previous specialty training for a diagnosis other than the following (unless recommended by a psychiatrist consultant):
  - Attention Deficit Hyperactive Disorder (ADHD)
  - Uncomplicated anxiety disorders
  - Uncomplicated depression



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# PSYCHIATRIC TREATMENT OF PRESCHOOL CHILDREN: BIRTH TO FIVE (5) YEARS OF AGE

## Anxiety in Young Children Ages 0–5

### CLINICAL PEARLS

- Occurrence of anxiety disorders are found to be very similar to rates in older children and adolescents.<sup>4</sup>
- There is a scarcity of literature on pharmacological interventions for anxiety in young children, mainly case reports, which showed an increase in the amount of side effects with some anxiety symptom improvement.<sup>6</sup>
- As there are very effective psychotherapy treatments, pharmacological intervention should be rare in young children with anxiety disorders.<sup>5,7</sup>
- Children under age five thought to have anxiety disorders, should be referred to an infant mental health care provider for evaluation and to provide a first-line therapy treatment.
- Parents of young children with anxiety disorders, often have anxiety as well. Treatment of parental anxiety can decrease the child's anxiety.<sup>7</sup>

### RATING SCALES

- Spence Preschool Anxiety Scale
  - [https://www.scaswebsite.com/index.php?p=1\\_31](https://www.scaswebsite.com/index.php?p=1_31)
- Survey of Well-Being of Young Children
  - Screens three domains—developmental, emotional/behavioral, and family context. Includes anxiety and internalization questions.
    - Includes the Baby Symptom Checklist for ages two months–18 months and the Preschool Pediatric Symptoms Checklist for ages 18–60 months.
  - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
- Strengths and Difficulties Questionnaire
  - Behavioral screening (emotion, conduct, hyperactivity, peer problems, prosocial behavior) for children over age two, includes anxiety and internalization questions.
  - <https://www.sdqinfo.com/py/sdqinfo/b0.py>

- Children age four and over
  - Pediatric Symptoms Checklist
  - [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_sympton\\_chklst.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chklst.pdf)

| <b>Treatment Approach for Preschool Children (3–5 Years Old)</b>   |   |                          |
|--|---|--------------------------|
| <b>Hierarchy</b>   | <b>Treatment</b>  | <b>Comments</b>          |
| 1 <sup>st</sup> -Line Treatment  | Family-Based Cognitive Behavioral Therapy (CBT) <sup>6,1</sup><br><br>Examples: <ul style="list-style-type: none"> <li>• Being Brave: A Program for Coping with Anxiety for Young Children and Their Parents.<sup>8</sup></li> <li>• Timid to Tiger<sup>8</sup></li> <li>• PCIT with adaptations: bravery directed interaction (BDI) module and the CALM program<sup>8</sup></li> </ul> | Strong Recommendation    |
| 2 <sup>nd</sup> -Line Treatment  | Parent-Only CBT for anxiety in young children<br><br>Example: <ul style="list-style-type: none"> <li>• BRAVE ONLINE<sup>4</sup></li> </ul>  | Strong Recommendation    |
| <i>*There is limited evidence for use of medication for anxiety in young children. Therefore we highly encourage consultation with a child and adolescent psychiatrist prior to initiating medication.</i> |   |                          |
| 3 <sup>rd</sup> -Line Treatment  | Fluoxetine <sup>3,9</sup><br><br><i>Recommended starting dosage for young children is 2.5mg with slow titration.</i>  | Opinion/Clinical Opinion |

NOTE: Young children with sub-diagnostic levels of anxiety, preventative programs have been shown to be very effective, i.e. Cool Little Kids<sup>2</sup>

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- Illinois Guidelines for Prescribing Psychotropic Medication to Preschool Age Children (3–5 Years Old). (2016). [https://docassistillinois.org/wp-content/uploads/2016/09/Guidelines-for-prescribing-psychotropic-medication-to-preschool-age-children\\_120916.pdf](https://docassistillinois.org/wp-content/uploads/2016/09/Guidelines-for-prescribing-psychotropic-medication-to-preschool-age-children_120916.pdf).

# Attachment Disorders (Disinhibited Social Engagement Disorder and Reactive Attachment Disorder) and Related Relationship Problems Ages 0–5

## CLINICAL PEARLS

- Although attachment disorders are relatively uncommon, relationship problems between an infant/young child and the caregiver happen frequently.
- Primary care clinicians are important in early identification of relationship problems due to the ability to observe an infant/young child and caregiver over time.
- There are no medications to treat attachment disorders or relationship problems; however, there are effective evidenced-based therapy modalities that have been shown to be effective. Effective treatment requires the participation of a primary caregiver.
- Evaluations for attachment disorders should be done by an infant mental health trained clinician. Evaluations include specific relationship assessments.
- Treatment focuses on building the relationship of the infant/young child with the primary caregiver.
- It is important that the child has a consistent, safe attachment figure in order to improve.
- Congregate care can lead to a worsening of symptoms of attachment disorders and relationship problems.
- The Oklahoma Warmline (1-888-574-5437) is available to help find treatment providers for infants and young children.

## RATING SCALES

- There is no primary care screening tool for attachment disorders. There are relationship questions and environmental safety questions in the below that the clinician can use for decisions about referrals. These should be combined with observations made in the clinic of relationship concerns between the child and the parent.
  - Survey of Well-Being of Young Children
    - Screens three domains – developmental, emotional/behavioral, and family context, including attachment and safety questions.
    - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
  - Ages and Stages Social Emotional Developmental Screening (ASQ-SE)
    - Social emotional developmental screening tool
    - Free for Oklahomans through [www.sproutsdevelopment.com/](http://www.sproutsdevelopment.com/)

- <https://agesandstages.com/>
- Bright Futures Pediatric Intake Form
  - Screens for environmental and emotional risk factors in the home, which can lead to relationship problems.
  - [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_intake\\_form.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_intake_form.pdf)
- Safe Environment for Every Kid
  - Screens for environmental and emotional risk factors in the home, which can lead to relationship problems.
  - [https://mmcp.health.maryland.gov/epsdt/healthykids/Appendix2Risks%20Assessment%20Forms/Child%20Abuse%20Assessment%20\(Seek%20Questionnaire\).pdf](https://mmcp.health.maryland.gov/epsdt/healthykids/Appendix2Risks%20Assessment%20Forms/Child%20Abuse%20Assessment%20(Seek%20Questionnaire).pdf)

### Treatment Approach for Attachment Disorders and related Relationship Difficulties in ages 0–5<sup>1,10</sup>

| Hierarchy                       | Treatment   | Comments  |
|---------------------------------|---|---|
| 1 <sup>st</sup> -Line Treatment | Attachment and Biobehavioral Catch-Up <sup>1,2,3</sup><br><br>Or<br><br>Child Parent Psychotherapy <sup>3,4,5</sup>   | Strong Recommendation/<br>Standard  |
| 2 <sup>nd</sup> -Line Treatment | Other evidenced-based behavioral therapy with parent involvement, positive parenting interventions, or social skills groups that include the parent. <sup>3</sup> <ul style="list-style-type: none"> <li>• Circle of Security<sup>9</sup></li> <li>• Promoting First Relationships<sup>8</sup></li> <li>• Theraplay<sup>7</sup></li> <li>• Mellow Babies<sup>6</sup></li> </ul> | Guideline   |
| 3 <sup>rd</sup> -Line Treatment | <ul style="list-style-type: none"> <li>• Adjunctive interventions for children who display aggressive and/or oppositional behavior that is comorbid with DSED<sup>10</sup></li> </ul>   | Guideline<br><br>Follow the resource guide for disruptive behaviors in young children |

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## Attention Deficit Hyperactivity Disorder 3–5 years

### CLINICAL PEARLS

- Attention deficit hyperactivity disorder (ADHD) is the most common psychiatric disorder in young children ages three to five.
- ADHD symptoms must be present in more than one setting for the diagnosis to be made. If a child has behavior problems in primarily one setting, the symptoms can indicate a potential relationship problem as opposed to ADHD, and further evaluation is recommended.
- When symptoms of ADHD are present in young children ages three to five, and when these symptoms are functionally impairing, a referral should be made to a child psychiatrist and/or child psychologist. Non-child and adolescent psychiatrists can use the OSU Infant Mental Health ECHO of the OSU Pediatric Behavioral and Emotional Health ECHO for further consultation.
  - [OSU ECHO LINES](#)
- First-line treatment is behavior therapy through parent management training, pharmacotherapy is typically reserved for severe cases.
- Preschool children are more likely to have side effects to stimulants and stimulants are not as effective in young children.

### RATING SCALES

- Vanderbilt Assessment Scale
  - Validated for ages six to 18; has been used clinically for preschoolers
  - Screening should be given to the caregiver as well as the childcare provider or another adult that spends a significant amount of time with the child other than the caregiver.
  - <https://www.nichq.org/sites/default/files/resource-file/NICHQ-Vanderbilt-Assessment-Scales.pdf>
- Survey of Well-Being of Young Children
  - Screens three domains—developmental, emotional/behavioral, and family context. Includes questions related to ADHD.
    - Includes the Baby Symptom Checklist for ages two months to 18 months and the Preschool Pediatric Symptoms Checklist for ages 18–60 months.
  - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
- Strengths and Difficulties Questionnaire

- Behavioral screening (emotion, conduct, hyperactivity, peer problems, prosocial behavior) for children over the age of two. Includes questions related to ADHD.

- <https://www.sdqinfo.com/py/sdqinfo/b0.py>

- Children age four and over

- Pediatric Symptoms Checklist

- General screening that includes questions related to ADHD.

- [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_sympton\\_chklst.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chklst.pdf)

### Treatment Approach for Preschool Children (3–5 Years Old)

| Hierarchy                       | Treatment  | Comments  |
|---------------------------------|--|---|
| 1 <sup>st</sup> -Line Treatment | Parent Management Training for minimum of eight weeks. <sup>2,5</sup> <ol style="list-style-type: none"> <li>1. Positive Parenting Program (Triple P)</li> <li>2. Incredible Years Parenting Program (Incredible Years)</li> <li>3. Parent-Child Interaction Therapy (PCIT)</li> </ol> | Strong Recommendation   |
| 2 <sup>nd</sup> -Line Treatment | Parent Management Training not tried in 1 <sup>st</sup> -line treatment for minimum of eight weeks <sup>2,5</sup>  | Strong Recommendation   |
| 3 <sup>rd</sup> -Line Treatment | Methylphenidate <sup>1,2,3,6</sup> monotherapy <ul style="list-style-type: none"> <li>• Starting dose of MPH IR 5mg po QAM, increasing per practice guidelines</li> </ul>  | Strong Recommendation   |
| 4 <sup>th</sup> -Line Treatment | Amphetamine Salts <sup>2</sup> <ul style="list-style-type: none"> <li>• Starting dose of AMP IR 2.5mg po QAM, increasing per practice guidelines.</li> </ul>   | <ul style="list-style-type: none"> <li>• Option/Limited evidenced-based research</li> <li>• Significant increase in diastolic blood pressure in children compared to adults.<sup>1</sup></li> <li>• FDA approved for age three and up. Studies conducted on children ≥ five years old.<sup>4</sup></li> </ul> |

|                                 |  |  |
|---------------------------------|--|--|
| 5 <sup>th</sup> -Line Treatment | Alpha Agonist <sup>2</sup><br>*Guanfacine 0.5mg po QHS, increasing per practice guidelines | <ul style="list-style-type: none"> <li>• Option/Limited evidence-based research</li> <li>• Monitor blood pressure.</li> </ul>  |
|                                 | Atomoxetine <sup>2</sup>   | <ul style="list-style-type: none"> <li>• Option/Limited evidence-based research</li> <li>• Approved in children six and older. Has been used in younger age groups, dosing based on weight.</li> <li>• Monitor weight and blood pressure changes.<sup>1</sup></li> </ul> |

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# Bipolar Disorder in Young Children

## CLINICAL PEARLS

- There is no clear consensus about the diagnosis of bipolar disorder in children under age five, and it is thought to be rare.
- A comprehensive assessment by a child psychiatrist, or child psychologist specializing in young children is most appropriate when young children exhibit mania symptoms. In this age group there are many differential diagnoses and co-morbidities to assess (i.e. ADHD, ODD, depression, anxiety). Clinicians can utilize the OSU Infant Mental Health ECHO or the OSU Pediatric and Behavioral Health ECHO for additional consultation.
  - [OSU ECHO Lines](#)
- Mania in this age group is also thought to have rapid cycling more commonly.
- There is limited evidence in this age group for treatment of bipolar disorder. As such, therapy should be first line to avoid potential side effects of psychotropic medications.
- Treatment should always involve the family.

## RATING SCALES

- There is no bipolar disorder-specific screening for children up to age five. General symptoms screenings can be used to determine the need for a referral for further evaluation.
  - Survey of Well-Being of Young Children
    - Screens three domains – developmental, emotional/behavioral, and family context, including externalization and internalization questions.
    - Includes the Baby Symptom Checklist for ages two months to 18 months and the Preschool Pediatric Symptoms Checklist for ages 18–60 months.
    - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
  - Strengths and Difficulties Questionnaire
    - Behavioral screening (emotion, conduct, hyperactivity, peer problems, prosocial behavior) for children over age two.
    - <https://www.sdqinfo.com/py/sdqinfo/b0.py>
  - Children age four and over
    - Pediatric Symptoms Checklist
    - [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_sympton\\_chkfst.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chkfst.pdf)

## Treatment Approach for Preschool Children (3–5 Years Old)

| Hierarchy   | Treatment  | Comments   |
|---|--|--|
| 1 <sup>st</sup> -Line Treatment   | Psychosocial Interventions <sup>3</sup>  | Strong Recommendation<br>(empirical evidence or strong clinical consensus) |
| 2 <sup>nd</sup> -Line Treatment   | Evidence-Based Therapy: <ul style="list-style-type: none"> <li>• Child and Family-Focused Cognitive-Behavioral Treatment<sup>3</sup></li> <li>• Family-Focused Therapy<sup>3</sup></li> <li>• Multifamily Psychoeducation<sup>3</sup></li> </ul> | Strong Recommendation<br>(empirical evidence or strong clinical consensus) |
| <b>Re-evaluation by a child psychiatrist should be done if the above therapies are ineffective.</b> |  |  |

\*Because of the current level of evidence for bipolar disorders in young children, other guidelines may need to be considered (i.e. Disruptive Behavior Disorders.<sup>1,2,4,5,6</sup>)

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## Depression 3–5 years

### CLINICAL PEARLS

- The presence of preschool depression can be an indicator of increased risk for Major Depressive Disorder (MDD) in adolescence.<sup>1</sup>
- Prevalence of depression in preschoolers is approximately 2%.
- Psychotherapy is first- and second-line treatment options and children should be referred to an infant mental health provider for further evaluation and treatment.
- Medications should be considered a last resort for anxious or depressed preschoolers who continue to have severe and impairing psychopathology after failing an adequate course of therapy.<sup>2,3,5</sup>
- Clinicians can utilize the OSU Infant Mental Health ECHO or the OSU Pediatric and Behavioral Health ECHO for further consultation.
  - [OSU ECHO Lines](#)

### RATING SCALES

- Preschool Feelings Checklist
  - A brief and valid screening measure for depression in young children.
  - <https://medicine.tulane.edu/sites/g/files/rdw761/f/pictures/Preschool%20feelings%20checklist.pdf>
- Survey of Well-Being of Young Children
  - Screens three domains—developmental, emotional/behavioral, and family context. Includes depression and internalization questions.
    - Includes the Baby Symptom Checklist for ages two months to 18 months and the Preschool Pediatric Symptoms Checklist for ages 18–60 months.
  - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
- Strengths and Difficulties Questionnaire
  - Behavioral screening (emotion, conduct, hyperactivity, peer problems, prosocial behavior) for children over age two, including depression and internalization questions.
  - <https://www.sdqinfo.com/py/sdqinfo/b0.py>
- Children age four and over

o Pediatric Symptoms Checklist

- [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_sympton\\_chklst.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chklst.pdf)

| Treatment Approach for Preschool Children (3–5 Years Old)   |   |  |
|---|---|--|
| Hierarchy   | Treatment   | Comments   |
| 1 <sup>st</sup> -Line Treatment   | Psychotherapy – Parent-Child Psychotherapy Targeting Emotion Development (PCIT-ED) <sup>3,4,5</sup>   | Strong Recommendation  |
| 2 <sup>nd</sup> -Line Treatment   | Play Therapy or Cognitive Behavioral Therapy with the caregiver <sup>2</sup>  | Opinion/Limited evidence-based research for age group  |
| <b>Re-evaluation by a child psychiatrist should be done if the above therapies are ineffective.</b> |   |  |
| 3 <sup>rd</sup> -Line Treatment   | Fluoxetine <sup>2,6</sup> <ul style="list-style-type: none"> <li>• starting dose 2.5-5mg daily, increasing per practice guidelines</li> </ul> | Opinion/Limited evidence-based research for age group<br><br>FDA Black box warning: SSRI increases the risk for suicidal thinking. |

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## Disruptive Behavior Disorders in Young Children (i.e. Oppositional Defiant Disorder)

### CLINICAL PEARLS

- Disruptive behavior problems in young children are the number one reason for referral to mental health agencies.
- Evidence-based behavioral interventions with the family have been shown to be very effective for disruptive behavior disorders in young children.
- If the trial of evidence-based therapy for behavioral problems in young children is ineffective, then the diagnoses and formulation should be reassessed. Behavior problems are symptoms of the primary issue – mental health or environmental – and evaluation should be done by a mental health professional specializing in young children before moving to the psychopharmacological treatment step.
- Parental mental health should be assessed and addressed as well because parental symptomatology often affects their child’s symptoms.
- Disruptive behavior could be indicative of underlying trauma or abuse and this should be evaluated.
- Clinicians can utilize the OSU Infant Mental Health ECHO or the OSU Pediatric and Behavioral Health ECHO for further consultation.
  - [OSU ECHO Lines](#)

### RATING SCALES

- Survey of Well-Being of Young Children
  - Screens three domains – developmental, emotional/behavioral, and family context. Includes disruptive behavior questions
    - Includes the Baby Symptom Checklist for ages two months to 18 months and the Preschool Pediatric Symptoms Checklist for ages 18-60 months.
  - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
- Strengths and Difficulties Questionnaire
  - Behavioral screening (emotion, conduct, hyperactivity, peer problems, prosocial behavior) for children over the age two.
  - <https://www.sdqinfo.com/py/sdqinfo/b0.py>

- Children age four and over
  - Pediatric Symptoms Checklist
    - [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_sympton\\_chklst.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chklst.pdf)

### Treatment Approach for Preschool Children (3–5 Years Old)

| Hierarchy  | Treatment   | Comments   |
|--|---|--|
| 1 <sup>st</sup> -Line Treatment  | Evidence-based behavioral intervention with a family approach: <ul style="list-style-type: none"> <li>• Parent Child Interaction Therapy (PCIT)<sup>1,7</sup></li> <li>• Triple P—Positive Parenting Program<sup>7,9</sup></li> <li>• Incredible Years<sup>4,7</sup></li> </ul> | Strong Recommendation/Standard   |
| 2 <sup>nd</sup> -Line Treatment  | Other evidenced-based behavioral therapy with parent involvement, positive parenting interventions, or social skills groups that include the parent. <sup>7</sup>   | Strong Recommendation/Standard   |
| 3 <sup>rd</sup> -Line Treatment  | Methylphenidate <sup>2,6</sup>  | Guideline  |
| -With co-morbid ADHD   | *starting dose of MPH 5mg po QAM increasing per practice guidelines   | Follow the ADHD guidelines for young children.   |
| <b>Re-evaluation by a child psychiatrist should be done if the above therapies are ineffective</b> |   |  |
| 4 <sup>th</sup> -Line Treatment  | Risperidone <sup>3,5,8</sup>  | Guideline  |
| -without comorbid ADHD   | *starting does of risperidone 0.125mg po QHS increasing per practice guidelines   | Metabolic and EPS monitoring is required with atypical antipsychotics. <ul style="list-style-type: none"> <li>• Lab work: CBC, CMP, lipids.</li> <li>• Abnormal Involuntary Movement Scale every six months if normal</li> <li>• Weight/height monitoring</li> </ul> Prolactin – there are differences of opinion as to whether this should be followed before puberty |

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## Obsessive Compulsive Disorder (OCD) in Children 0–5

### CLINICAL PEARLS

- Symptoms of OCD can appear as early as two years old but cannot be diagnosed until age three. The diagnosis of OCD is more reliable between the ages four and five years.
- The estimated prevalence in children ages five to seven years is 0.01%, compared to general pediatric patients at 0.5-4.0%.
- Pre-pubertal onset is more common in boys than girls, in the ratio of 2–3:1.
- OCD is diagnostically challenging as symptoms can overlap with other diagnoses such as autism.
- A consult or evaluation by a child psychiatrist or a child psychologist should be done if it is thought that a young child may have OCD.
- Clinicians can utilize the OSU Infant Mental Health ECHO or the OSU Pediatric and Behavioral Health ECHO for further consultation.
  - [OSU ECHO Lines](#)

### RATING SCALES

- Spence Preschool Anxiety Scale
  - [https://www.scaswebsite.com/index.php?p=1\\_31](https://www.scaswebsite.com/index.php?p=1_31)
  - General anxiety screening tool that has questions related to OCD.
- Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS) symptom checklist.
  - <https://iocdf.org/wp-content/uploads/2016/04/05-CYBOCS-complete.pdf>
  - Note: this scale is typically given by mental health professionals.

## Treatment Approach for Preschool Children (3–5 Years Old)

| Hierarchy  | Treatment   | Comments  |
|--|---|---|
| 1 <sup>st</sup> -Line Treatment  | Family-based exposure/response prevention therapy (E/RP) <sup>5,7,9</sup><br><br>Family-based Cognitive Behavioral Treatment <sup>3</sup> | Strong Recommendation   |
| 2 <sup>nd</sup> -Line Treatment  | Family-Based Relaxation Therapy <sup>4,6</sup>  | Strong Recommendation   |
| <b>An evaluation by a child psychiatrist should be done prior to prescribing antidepressants in preschoolers</b> |   |   |
| 3 <sup>rd</sup> -Line Treatment  | Fluoxetine <sup>1,2,8</sup><br><br>*starting dose of fluoxetine 2.5-5mg po Q day, increasing per practice guidelines.                     | Opinion/Clinical Opinion<br><br>There is limited evidence for use of medication for OCD in young children.<br><br>FDA Black box warning: SSRIs increase the risk of suicidal thinking   |
| 4 <sup>th</sup> -Line Treatment  | Sertraline <sup>9</sup><br><br>Starting dose of sertraline 5mg po Qday increasing per practice guidelines                                 | Opinion/Clinical Opinion<br><br>There is limited evidence for use of medication for OCD in young children.<br><br>FDA Black box warning: SSRIs increase the risk of suicidal thinking<br><br>Sertraline liquid is in a concentrated form and must be diluted per instructions |

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## Post-Traumatic Stress Disorder (PTSD) and Trauma in Children 0–5

### CLINICAL PEARLS

- In Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the diagnosis of “Post-traumatic stress disorder for Children 6 and Younger” was added due to the strength of evidence that PTSD symptoms and treatment look different in children younger than age six.
- There is no evidence to support the use of medications for PTSD and trauma in young children, and this practice should be avoided based on the strength of evidence for certain therapies.
  - Co-morbid conditions should be treated as well, and these conditions may have supporting evidence for psychotropic use.
- There is strong evidence that evidence-based therapies are effective for PTSD and trauma in this age group. Effective treatment requires the participation of a primary caregiver.
- Trauma should be screened for at well-child checks and any time there is a safety concern for the child. If there is a concern for trauma and/or PTSD in infants and young children, referrals for further evaluation should be made to a trained infant mental health clinician.
- In Oklahoma, every adult is a mandated reporter; if you suspect a child is a victim of abuse, neglect or exploitation, call the child abuse reporting hotline at 1-800-522-3511.
- The Oklahoma Warmline (1-888-574-5437) is available to help find treatment providers for infants and young children.

### RATING SCALES

- Questions regarding trauma and abuse are found in many developmental screeners. It is recommended that the developmental, emotional/behavioral symptoms and family/environmental context are all screened. If there is concern for trauma symptoms in the child based on observation or initial screening, follow up screening using the Young Child PTSD Checklist is recommended. In addition, if there is concern, the young child should be referred to an infant mental health provider.
  - Survey of Well-Being of Young Children
    - Screens three domains—developmental, emotional/behavioral, and family context, including safety questions.
    - <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview>
  - Bright Futures Pediatric Intake Form
    - Screens for environmental and emotional risk factors in the home, which can lead to trauma and PTSD.



- [https://www.brightfutures.org/mentalhealth/pdf/professionals/ped\\_intake\\_form.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_intake_form.pdf)
- Safe Environment for Every Kid
  - Screens for environmental and emotional risk factors in the home, which can lead to trauma and PTSD.
  - [https://mmcp.health.maryland.gov/epsdt/healthykids/Appendix2Risks%20Assessment%20Forms/Child%20Abuse%20Assessment%20\(Seek%20Questionnaire\).pdf](https://mmcp.health.maryland.gov/epsdt/healthykids/Appendix2Risks%20Assessment%20Forms/Child%20Abuse%20Assessment%20(Seek%20Questionnaire).pdf)
- Young Child PTSD Checklist
  - 42-question screening specific to PTSD for children ages one to six years.
  - [https://medicine.tulane.edu/sites/g/files/rdw761/f/YCPC\\_v5\\_23\\_14.pdf](https://medicine.tulane.edu/sites/g/files/rdw761/f/YCPC_v5_23_14.pdf)

### Treatment Approach for PTSD and Trauma in Ages 0–5

| Hierarchy                       | Treatment   | Comments   |
|---------------------------------|---|--|
| 1 <sup>st</sup> -Line Treatment | Evidence-based dyadic treatment for PTSD and/or trauma in young children: <ul style="list-style-type: none"> <li>• Attachment and Biobehavioral Catch-Up<sup>1,2,5</sup></li> <li>• Child Parent Psychotherapy<sup>3,5,6,7</sup></li> <li>• Preschool PTSD Treatment<sup>3,5,9</sup></li> </ul> | Strong Recommendation/Standard   |
| 2 <sup>nd</sup> -Line Treatment | Treatment not used in 1 <sup>st</sup> -line.  | Strong Recommendation/Standard   |
| 3 <sup>rd</sup> -Line Treatment | Other evidence-based trauma treatment for young children: <ul style="list-style-type: none"> <li>• Stepped Care TFCBT<sup>8</sup></li> </ul>  | Guideline  |
| 4 <sup>th</sup> -Line Treatment | <ul style="list-style-type: none"> <li>• Dyadic Play Therapy<sup>3</sup></li> </ul>   | Clinical Opinion   |
| 5 <sup>th</sup> -Line Treatment | Alpha agonist <sup>4</sup> <ul style="list-style-type: none"> <li>• Guanfacine 0.5mg po QHS, titrate per practice guidelines</li> </ul>   | Clinical Opinion<br><br>Literature is scarce on using alpha agonists in young children, but this practice is widely used for severe hyperarousal symptoms and nightmares in children ages 3–5 if other treatments have failed. |

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## OTHER RESOURCES

- 2016–2017 Florida Best Practice Psychotherapeutic Medication Guidelines for Children and Adolescents (2017). The University of South Florida, Florida Medicaid Drug Therapy Management Program sponsored by the Florida Agency for Health Care Administration (AHCA).
- Illinois Guidelines for Prescribing Psychotropic Medication to Preschool Age Children (3-5 Years Old). (2016) [https://docassistillinois.org/wp-content/uploads/2016/09/Guidelines-for-prescribing-psychotropic-medication-to-preschool-age-children\\_120916.pdf](https://docassistillinois.org/wp-content/uploads/2016/09/Guidelines-for-prescribing-psychotropic-medication-to-preschool-age-children_120916.pdf)

# PSYCHIATRIC TREATMENT OF CHILDREN AND ADOLESCENCE: 5-17 YEARS OF AGE

## Aggression

### CLINICAL PEARLS

- Aggression can be a symptom of many psychiatric disorders. Appropriate assessment should be conducted prior to treating the symptom of aggression.
- A thorough assessment includes gathering a detailed history of the child including symptom onset, illness course and intervention outcomes.
- Trauma history must be included and correlated with symptomatology in collaboration with a responsible adult who knows the child well.

### DIFFERENTIAL DIAGNOSIS

- Mood Disorder (major depressive disorder, disruptive mood dysregulation, bipolar disorder)
- Autism Spectrum Disorder
- Generalized Anxiety Disorder
- Psychotic Disorders
- Conduct Disorder
- Oppositional Defiant Disorder
- Impulse Control Disorder
- ADHD
- Trauma Related and Attachment Disorders
- Substance Abuse Disorder

### RATING SCALE

- Modified Overt Aggression Scale (MOAS)  
<https://www.thereachinstitute.org/images/MOAS.pdf>

## SCREENING AND ASSESSMENT

Complete diagnostic assessment as referenced in the clinical pearls.

- Use MOAS scale to establish baseline.
- Refer to higher level of care if life threatening behavior is present.
- Provide supportive educational material to the family.

## EVALUATION AND TREATMENT APPROACH

**Stage 1:** Treat the primary diagnosis and any co-morbid conditions (see guidelines for specific disorder).

- Continue monitoring progress with standardized scale (MOAS).
- Begin therapeutic intervention correlated to patient age, cognitive ability, and nature of the etiology of aggression:
  - Applied Behavioral Analysis (ABA)
  - Cognitive Behavioral Therapy (CBT)
  - Family Therapy
  - Multi-systemic Therapy
  - Parent-Child Interaction Therapy (PCIT)
  - Parent Management Training (PMT)

**Stage 2:** Consider a low dose of **level A** evidence drugs for treating aggression symptoms not responding to earlier stages of treatment:

- Second Generation Antipsychotics (SGA): risperidone, aripiprazole
- First Generation Antipsychotics (FGA): haloperidol, chlorpromazine
- Mood stabilizers: lithium

**Stage 3:** If symptoms are not improved, consider replacing level A drug with low dose of level B evidence drug:

- SGAs: quetiapine, olanzapine, ziprasidone
- Mood stabilizers: valproic acid
- Alpha-2-agonist: clonidine, guanfacine

**Stage 4:** If symptoms are not improved, consider replacing/augmenting with level C evidence drugs:

- SGAs: paliperidone
- Mood stabilizers: carbamazepine
- Beta-blocker: propranolol

**Stage 5:** If symptoms are not improved, consider augmenting/replacing with level D evidence drugs:

- SGAs: lurasidone, asenapine

| Level of Evidence                                   |
|---|
| A = Two randomized controlled trials (RCTs) or more |
| B = Small RCTs of more than one open-label study    |
| C= Open-label or case series                        |
| D= Pediatric trials assessing tolerability          |

### AGGRESSION PSYCHOPHARMACOLOGY\*

- Avoid polypharmacy if possible
- Before adding additional medications, check for:
  - Adherence to medication
  - Proper dosing
  - Accuracy of the diagnosis
  - Previously unknown co-morbidities
  - New or chronic psychosocial stressors
  - Therapy adherence

\*If medication is prescribed strictly for managing aggression not associated with mood or psychotic symptoms and there has been six months of symptom remission, consider a slow taper and discontinue medication.

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## OTHER RESOURCES

- *Parent Management Training*, by Alan E. Kazdin, PhD  
<https://yaleparentingcenter.yale.edu/parents/kazdin-method-sm>
- *The Explosive Child*, by Ross W. Greene, PhD

## Treatment of Anxiety Disorders in Children Age 6–18 years

- Generalized Anxiety Disorder (GAD) (lasting six months or longer)
- Separation Anxiety Disorder (developmentally inappropriate; lasting at least four weeks)
- Social Anxiety (lasting six months or longer)
- Specific Phobias (lasting six months or longer)
- Panic Disorder (rare in children before adolescence)

### CLINICAL PEARLS

- Anxiety disorders are the most common psychiatric disorder in children and adolescents, affecting between 15–20% of youth.
- Anxiety in youth may present as crying, irritability, angry outbursts, oppositionality or disobedience.
- First-line treatment is psychotherapy (mild-moderate) and/or psychotropic medications (if severe or unresponsive to therapy).
- One anxiety disorder is highly comorbid with other anxiety disorders.
- Additional psychiatric disorders frequently develop by late adolescents or early adulthood such as depression and substance use disorders.
- Parental anxiety can be a contributing factor to anxiety in youth; and if youth anxiety is not improving treating of parental/caregiver anxiety may be indicated.

### RATING SCALES/SCREENING TOOLS

- Screening for Child Anxiety Related Disorders (SCARED) for children under eight years old.  
<http://www.midss.org/content/screen-child-anxiety-related-disorders-scared>
- Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A) for ages 11-17.  
<http://teenmentalhealth.org/product/kutcher-generalized-social-anxiety-scale-adolescents-kgsads/>

### EVALUATION AND TREATMENT APPROACH

**Stage 1A:** Screening: early intervention and prevention offers a proactive method for alleviating symptoms and may improve long-term functioning.

**Stage 1B:** Differential diagnosis (DSM-5 criteria)

- Other psychiatric disorders, physical condition, and medication-induced anxiety should be ruled out as some have similar symptoms.
  - Psychiatric disorders with similar symptoms can include ADHD, neurodevelopmental disorders, learning disabilities, bipolar disorder, depression and psychotic disorders.
  - Physical conditions which may mimic anxiety include hyperthyroidism, caffeinism, migraines, asthma, seizure disorders, and lead intoxication.
  - Medications that may induce anxiety symptoms include anti-asthmatics, steroids, SSRIs, sympathomimetics, antipsychotics.

**Stage 1C:** Assess severity and impairment to guide treatment options.

**Stage 2A:** Parent and child education about anxiety disorders (see resource for Child Mind Institute Below).

**Stage 2B:** Mild-to-Moderate Severity and Impairment.

- First-line treatment should be psychotherapy.
  - Cognitive Behavioral Therapy (CBT)
- Second-line treatment should be considered if adequate relief of symptoms has not occurred after adequate trial of psychotherapy.
  - Selective Serotonin Reuptake Inhibitors (SSRIs)\* (fluoxetine and sertraline)<sup>2</sup>
    - Start at low dose and if there is no significant improvement after four weeks of therapy increase dose.

**Black Box Warning: children and adolescents have an increased risk of suicidal ideations at therapy initiation and patients should be monitored closely.**

**Stage 2C:** Moderate-to-Severe Severity and Impairment.

- Combination CBT and psychotropic medication.
- Psychotropic medications\*
  - First-line is an SSRI (fluoxetine and sertraline)<sup>2</sup>
  - Second-line is a different SSRI
    - To avoid polypharmacy slowly titrate down dose of first SSRI while titrating up second SSRI
  - Third-line is a Serotonin Norepinephrine Reuptake Inhibitor (SNRI)
    - Third line due to increased risk of more severe Adverse Events (AEs) such as weight loss, nausea, dizziness, palpitations, or oropharyngeal pain



- Not Recommended.
  - Tricyclics are no longer recommended because of cardiac monitoring requirements and a greater risk for overdose. May consider if other therapies are not working.
  - Benzodiazepines have shown no benefits in clinical trials.
  - Buspirone has shown small benefits in adults, but no evidence in children.

**Stage 3:** When to stop therapy.

- No good clinical studies on when to stop therapy.
- Consider stopping therapy at nine to 12 months during a period of low stress and anxiety.
- When stopping SSRIs and SNRIs the dose should be decreased gradually over time (stair step down dosing with several weeks between decreases).
- CBT “boosters” maybe helpful to maintain remission and symptom relief.

| Medication   | Anxiety Disorders          | Age  | Dose <sup>¥</sup>   | FDA Approval |
|--------------|----------------------------|------|---|--------------|
| SSRI         |                            |      |   |              |
| Fluoxetine*  | GAD, SoP, SAD <sup>4</sup> | 7-17 | Initial Dose: 10 mg/day x 1 week, then increase to 20 mg/day; 20 mg/day should be adequate for most children, higher doses may be necessary individual cases <sup>4</sup> ; maximum dose: 60 mg/day <sup>5</sup>  | No           |
| Fluvoxamine* | GAD, SoP, SAD <sup>6</sup> | 6-17 | Starting dose of 25 mg/d at bedtime increase by 50 mg/day every 2 weeks as needed based on response (doses over 50 mg should be divided into 2 doses with larger dose at bedtime)<br><br>Maximum dose: 250 mg/d children; 300 mg/d adolescents <sup>6</sup> | No           |
| Sertraline*  | GAD, SoP, SAD <sup>7</sup> | 7-17 | Starting dose 25 mg/day for at least 1 week then increase by 25 mg/d based on response; max dose 200 mg/d <sup>7</sup>  | No           |

| SNRI            |                         |      |  |     |
|-----------------|-------------------------|------|--|-----|
| Duloxetine**    | GAD                     | 7-17 | Starting dose 30 mg/d increase by 30 mg/day every 2 weeks as tolerated and based on response. Maximum dose: 120 mg/d | Yes |
| Venlafaxine ER* | GAD, SoP <sup>8,9</sup> | 6-17 | 37.5 mg/d titrated up to 2.6-3.0 mg/day based on weight (max dose of 225 mg $\geq$ 50kg) <sup>8,9</sup>              | No  |

SSRI=Selective Serotonin Reuptake Inhibitor, SNRI=Serotonin Norepinephrine Reuptake Inhibitor, TCA=Tricyclic Antidepressant; GAD=Generalized Anxiety Disorder, SoP=Social Phobia, SAD=Separation Anxiety Disorder

¥Dosing should always start at the low dose and be titrated up slowly in absence of response and toxicity

\*Based on information from clinical studies

\*\*Based on information from the FDA approved label

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## **OTHER RESOURCES**

- National Alliance on Mental Illness (NAMI) Anxiety Disorders Support <https://www.nami.org/Learn-More/Mental-Health-Conditions/Anxiety-Disorders/Support>
- American Academy of Child and Adolescent Psychiatry (AACAP) [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Resource\\_Centers/Anxiety\\_Disorder\\_Resource\\_Center/Home.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Resource_Centers/Anxiety_Disorder_Resource_Center/Home.aspx)
- Child Mind Institute For Families <https://childmind.org/topics/concerns/anxiety/>

# Attention Deficit Hyperactivity Disorder

## CLINICAL PEARLS

- Recent meta-analysis calculated a pooled worldwide ADHD prevalence of 7.2% among children and is considered the most common neurobehavioral disorder in childhood.
- Children and adolescents presenting with behavioral symptoms concerning for ADHD should be screened for trauma. If concerns for traumatic stress exists, evidence-based therapy to address the trauma should occur.
- It is also important to rule out additional causative factors including but not limited to: seizure, elevated lead levels, vision, hearing, thyroid, hepatic, substance abuse, etc.
- Learning and language problems are common comorbid conditions with ADHD.
- To make a diagnosis of ADHD, the clinician should determine that DSM-5 criteria have been met, including documentation of symptoms and impairment in more than one major setting (i.e., social, academic, or occupational), with information obtained primarily from reports from parents or guardians, teachers, other school personnel, and mental health clinicians who are involved in the child or adolescent's care.
- If diagnosis is unclear referral for psychological testing may be indicated prior to initiating medications.
- Uncomplicated ADHD should be able to be diagnosed and treated in the patient-centered medical home.

## FIRST-LINE TREATMENTS (DETAILED APPROACH BELOW):

- Age 6–11: FDA-approved medication with behavioral therapy (e.g. parent management training)
- Age 12–17: FDA-approved medication; add behavioral therapy if insufficient response

**Insufficient response:** Rule out lack of adherence at every stage

**Comparative effectiveness:**

- All stimulants ~1.0
- Atomoxetine ~0.7
- Guanfacine ~0.65

**Insufficient evidence for:**

- Imaging or electroencephalogram to diagnose ADHD in children seven to 17 years of age
- Omega-3/6 supplementation

## RATING SCALE:

Use validated instrument: must include DSM-5 criteria:

<https://www.cdc.gov/ncbddd/adhd/diagnosis.html>

Conners' Comprehensive Behavior Rating Scales and the ADHD Rating Scale IV are the only scales validated for preschool-aged children:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3279732/pdf/nihms-345276.pdf>

[https://depts.washington.edu/dbpeds/ADHD\\_Care\\_Guide\(BobHilt2014\).pdf](https://depts.washington.edu/dbpeds/ADHD_Care_Guide(BobHilt2014).pdf)

(also includes Vanderbilt rating scale)

Prodromal Questionnaire, Brief Version (PQ-B):

<http://www.mmcri.org/ns/wp-content/uploads/2015/07/MAY-Screening-Letter-and-Tool.pdf>

Vanderbilt ADHD Assessment scale

[https://www.nichq.org/sites/default/files/resource-file/NICHQ\\_Vanderbilt\\_Assessment\\_Scales.pdf](https://www.nichq.org/sites/default/files/resource-file/NICHQ_Vanderbilt_Assessment_Scales.pdf)

| <b>Treatment Approach: Pharmacotherapy</b> |   |  |   |
|--|---|--|---|
|  | <b>No contributory comorbidities</b>                                | <b>Hypertension</b>  | <b>Anxiety, tics, active substance abuse</b>  |
| <b>Stage 1</b>                             | MPH or AMP<br>(titration weekly to effect, or max recommended dose) | $\alpha$ -2<br>(age 6-17 only, titration every 3-4 weeks to effect, or max recommended dose) | ATX<br>(age 6-17 only, titration every 2-4 weeks to effect, or max recommended dose)              |
| <b>Stage 2</b>                             | MPH or AMP<br>(not used in Stage 1)                                 | $\alpha$ -2 (not used in Stage 1)<br>or ATX  | $\alpha$ -2 (if substance abuse)<br>or MPH, or AMP<br>(monitor comorbidity, titrate off ATX)      |
| <b>Stage 3</b>                             | MPH or AMP<br>(not used in Stage 1 or 2)                            | MPH or AMP<br>+/- $\alpha$ -2<br>(monitor HTN, titrate off ATX)                              | $\alpha$ -2 (not used in Stage 2)<br>or MPH or AMP (not used in Stage 2)<br>(monitor comorbidity) |
| <b>Stage 4</b>                             | MPH or AMP + $\alpha$ -2<br>or $\alpha$ -2 alone, or ATX alone      | MPH or AMP (not used in Stage 3)<br>+/- $\alpha$ -2<br>(monitor HTN)                         | MPH or AMP (not used in Stage 3, monitor comorbidity)   |
| <b>Stage 5</b>                             | Refer to mental health specialist                                   |  |   |

\*MPH: methylphenidate AMP: amphetamine  $\alpha$ -2 agonists: ER/IR guanfacine, ER/IR clonidine ATX: atomoxetine

## Stimulant Dosing Parameters

|   | Dosage Forms   | Maximum Recommended Dose   | Notes  |
|---|--|--|--|
| <b>Methylphenidates</b>                     |  |  |  |
| <b>Long-acting</b>                          |  |  |  |
| Focalin XR<br>(Novartis, East Hanover, NJ)  | 5-, 10-, 15-, 20-, 25-, 30-, 35-, and 40-mg capsules           | 1 mg/kg or 30 mg/day   | Capsule may be opened and contents dissolved                   |
| Methylphenidate ER<br>(Concerta)            | 18-, 27-, 36-, and 54-mg tablets                               | 2 mg/kg or 72 mg/day   | Tablet must be swallowed whole                                 |
| Ritalin LA<br>(ALZA, Mountain View, CA)     | 10-, 20-, 30-, and 40-mg capsules                              | 2 mg/kg or 60 mg/day   | Capsule may be opened and contents dissolved                   |
| Metadate CD<br>(UCB, Rochester, NY)         | 10-, 20-, 30-, 40-, 50-, and 60-mg capsules                    | 2 mg/kg or 60 mg/day   | Capsule may be opened and contents dissolved                   |
| Methylin ER<br>(AlliantPhr, Alpharetta, GA) | 10- and 20-mg tablets  | 2 mg/kg or 60 mg/day   |  |
| Ritalin SR<br>(Novartis, East Hanover, NJ)  | 20-mg tablets  | 2 mg/kg or 60 mg/day   |  |
| Daytrana<br>(Shire US, Wayne, PA)           | 10-, 15-, 20-, and 30-mg patches                               | 30 mg/day  | Topical patch applied 2 hours before and removed 9 hours later |
| Quillivant<br>(Pfizer, New York, NY)        | 25-mg/5-mL suspension  | Initial dose 20 mg QAM titrated by 10- to 20-mg increments<br><br>Maximum dose 60 mg QAM | Liquid formulation   |
| <b>Short-acting</b>                         |  |  |  |
| Focalin<br>(Novartis, East Hanover, NJ)     | 2.5-, 5-, and 10-mg tablets                                    | 2 mg/kg or 60 mg/day   |  |
| Ritalin<br>(Novartis, East Hanover, NJ)     | 5-, 10-, and 20-mg tablets                                     | 2 mg/kg or 60 mg/day   |  |
| Methylin<br>(AlliantPhr, Alpharetta, GA)    | 5-, 10-, and 20-mg tablets or 5-mg/5-mL or 10-mg/5-mL solution | 2 mg/kg or 60 mg/day   | Liquid formulation available                                   |

| <b>Amphetamines</b>   |  |                      |  |
|---|--|----------------------|--|
| <b>Long-acting</b>  |  |                      |  |
| Vyvanse<br>(Shire US, Wayne, PA)  | 10-, 20-, 30-, 40-,<br>50-, 60-, and 70-mg<br>capsules | 1 mg/kg or 70 mg/day | Prodrug that may<br>decrease risk of<br>recreational abuse<br><br>Capsule may be<br>opened and contents<br>dissolved |
| Adderall XR<br>(Shire US, Wayne, PA)  | 5-, 10-, 15-, 20-, 25-,<br>and 30-mg capsules          | 1 mg/kg or 30 mg/day | Capsule may be<br>opened and contents<br>dissolved   |
| Dexedrine<br>(GlaxoSmithKline, Research<br>Triangle Park, SC)                         | 5-, 10-, and 15-mg<br>capsules                         | 1 mg/kg or 30 mg/day |  |
| <b>Short-acting</b>   |  |                      |  |
| Adderall<br>(Shire US, Wayne, PA)   | 5-, 7.5-, 10-, 12.5-, 15-,<br>20-, and 30-mg tablets   |                      |  |
| Dextroamphetamine<br>(GlaxoSmithKline, Research<br>Triangle Park, SC)                 | 5- and 10-mg tabs                                      |                      |  |
| ProCentra<br>(Independence Pharmaceuticals,<br>Newport, KY)                           | 5-mg/5-mL solution                                     |                      | Liquid formulation<br>available  |
| CD, controlled delivery; LA, long-acting; SR, sustained release; XR, extended release |  |                      |  |

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## Nonstimulant ADHD Medication Dosing Parameters

| Generic (Brand)  | Initial Dose          | Titration             | Maximum Recommended Dose  | Dosage Forms                                       |
|--|-----------------------|-----------------------|---|--|
| Guanfacine ER<br>(Intuniv) <sup>a</sup><br><small>(Shire US, Wayne, PA)</small>  | 1 mg qHS              | 1 mg                  | 27–40.5 kg, 2 mg<br>40.5–45 kg, 3 mg<br>>45 kg, 4 mg qHS                        | 1-, 2-, 3-, and<br>4-mg tablets                    |
| Clonidine ER<br>(Kapvay) <sup>a</sup><br><small>(Concordia<br/>Pharmaceuticals, Inc.<br/>Bridgetown, Barbados)</small> | 0.1 mg qHS            | 0.1 mg                | 27–40.5 kg, 0.2<br>mg TDD<br>40.5–45 kg, 0.3<br>mg TDD<br>>45 kg, 0.4 mg<br>TDD | .01-mg tablets                                     |
| Atomoxetine<br>(Strattera) <sup>a</sup><br><small>(Eli Lilly, Indianapolis, IN)</small>                                | 0.5 mg/kg or 40<br>mg | 1.2 mg/kg or 80<br>mg | 1.4 mg/kg or 100<br>mg TDD  | 10-, 18-, 25-, 40-,<br>60-, 80-, 100-mg<br>tablets |
| qHS, take at bedtime; TDD, total daily dose. <sup>a</sup> Tablets must be swallowed whole.                             |                       |                       |   |  |

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[www.pediatrics.org/cgi/content/full/135/4/e994](http://www.pediatrics.org/cgi/content/full/135/4/e994)

#### **OTHER RESOURCES:**

- Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD): <https://chadd.org/>
- American Psychiatric Association: <https://www.psychiatry.org/patients-families/adhd/what-is-adhd>
- Centers for Disease Control and Prevention – ADHD  
<https://www.cdc.gov/ncbddd/adhd/index.html>
- National Institute of Mental Health – What is ADHD  
<https://www.nimh.nih.gov/health/publications/could-i-have-adhd/index.shtml#pub1>
- Cohen Children’s Medical Center, visual aid  
<http://www.adhdmedicationguide.com/>
- *Defiant Children*, by Russel Barkley
- *Helping the Noncompliant Child*, by Rex Forehand and Robert J. McMahon
- *Parents and Adolescents Working Together*, by Gerald R. Patterson and Marion S. Forgatch

## **Autism Spectrum Disorder (Early childhood-17 years)**

- Autism Spectrum Disorder (ASD)
- Older terminology: Autistic Disorder, Asperger's syndrome, Pervasive developmental disorder

### **CLINICAL PEARLS**

- Core symptoms include social communication deficits and restricted, repetitive, or sensory behaviors. Children with ASD can present in diverse ways with varying levels of severity in language skills, intellectual abilities, and functioning.
- Assessment and treatment should be interdisciplinary. Early diagnosis and intervention can improve outcomes.
- Care coordination and advocacy in educational and community-based settings is important.
- Medical and behavioral health conditions can co-occur in children with autism, requiring individualized assessment and treatment planning.
- Behavioral, other therapeutic, and school-based interventions are the mainstay of ASD treatment.
- No medication specifically addresses the core symptoms of ASD. Children with ASD can be treated with psychotropic medications when there is a specific target symptom or co-occurring behavioral health condition.
- Clinicians should ask about the use of complementary and alternative treatments, in order to discuss the risks and potential benefits.<sup>15</sup>

### **SCREENING AND ASSESSMENT**

- Universal screening for autism should occur at the 18-and 24-month well-child visits, or anytime a parent raises concern about autism. If screening indicates concerns for ASD, refer for a comprehensive evaluation for autism.<sup>5</sup>
- Diagnostic assessments for ASD should consider or rule out the following: language disorders, intellectual disability/global developmental delays, hearing impairment, ADHD/disruptive behavior disorders, trauma, reactive attachment disorder, obsessive compulsive disorder and other anxiety disorders, childhood onset schizophrenia, and other medical conditions.
- Medical assessment of children with ASD should include a comprehensive physical examination, hearing screen, and genetics evaluation.
- Additional evaluations are warranted if there are unusual symptoms such as history of developmental regression, facial dysmorphism, staring spells/seizures, or family history of disabilities/genetic syndromes).<sup>15</sup>

- The American Academy of Pediatrics Surveillance and Screening Algorithms for ASD:  
<https://pediatrics.aappublications.org/content/120/5/1183>

## **TREATMENT**

- Children with ASD should be referred for treatment based on their individual needs.
- Treatments should be selected to address either core symptoms of autism and/or co-occurring behavioral health concerns.
- Medical issues should always be ruled out before starting any treatment for emotional or behavioral problems.
- In children with acute behavioral change, it is important to rule out sleep problems, medication side effects, pain, gastrointestinal problems, or seizure disorders.<sup>12</sup>
- Providers should advocate for school-based services, including evaluation of an appropriate Individualized Education Program (IEP).<sup>15,17</sup>

## **NON-MEDICATION TREATMENTS**

Behavioral Interventions: Applied Behavioral Analysis (ABA) is recommended to improve communication skills, academic performance, social behavior, adaptive living/vocational skills and problematic behaviors.<sup>15</sup> Early Intensive Behavioral Intervention (EIBI) in young children has been shown to improve adaptive behavior, IQ, expressive, and receptive language skills.<sup>10</sup>

Communication Interventions: Children with limited functional communication often benefit from speech/language therapy supports to identify alternative communication strategies. These can include sign language, visual supports, picture exchange communication system (PECS), or a language device (ex: Proloquo, Dynavox). Children with language who show pragmatic/social language delays should also be referred to speech/language therapy.<sup>15</sup>

Social Skills & Social Cognitive Training: Group or individual instruction by speech/occupational therapists and other providers can be used to treat children with ASD strategies to interact with others and strengthen understanding of others' perspectives.

Life Skills: Daily life skills can be taught by occupational therapists and other providers.<sup>12</sup>

Cognitive-Behavioral Therapy: CBT has shown efficacy for anxiety and anger management in high functioning youth with ASD.<sup>1</sup>

Parent-Child Interaction Therapy: PCIT has shown efficacy for children under age seven with ASD who also have inattention, hyperactivity, defiance, tantrums, and aggression.<sup>8</sup>

Other interventions: Sensory-oriented interventions, including auditory integration training, sensory integration therapy. Developmental/social-based therapies that use naturalistic techniques in a community setting such as: Developmental-Individual Difference-Relationship Based (DIR)/Floortime and Relationship Development Intervention (RDI).

## MEDICATION TREATMENTS

- Though medications can be used to treat behavioral health symptoms and disorders in children with autism, no medication treats the core symptoms of autism.
- The goal of medication should be to improve the child's functioning and keep him/her in a less restrictive environment.

Children with autism can be treated with psychotropic medications when there is a specific target symptom or co-occurring behavioral health condition. Examples of clinical approaches for different behavioral health concerns are below:

- **Irritability, Aggression, Tantrums and Self-Injurious Behaviors (SIB)**
  - Assess and address the “ABC’s” of behavior (Antecedent-Behavior-Consequence) in order to understand the function of the behavior.
    - <https://www.rvaschools.net/site/handlers/filedownload.ashx?moduleinstanceid=1713&dataid=620&FileName=ABCAnalysisSheet.DATASHEETS.pdf>
  - Some examples can include: desire to avoid certain tasks, environmental stressors, need for attention, or sensory needs. Inability to communicate needs can also contribute to SIB, so addressing communication skills is important.
  - Applied Behavior Analysis (ABA) therapy can be used to identify the source of irritability or SIB.
  - Make sure the child has a functional means of communication and refer to a speech/language therapist if warranted. An augmentative communication system may be helpful.
  - If irritability is related to an underlying behavioral health issue such as anxiety or depression, treat that accordingly.
  - Risperidone and Aripiprazole are the only FDA-approved medications to treat symptoms of irritability in children with ASD. They should be used cautiously with careful monitoring as potential side effects include sedation, weight gain, cholesterol abnormalities, and movement disorders.<sup>2,4,7</sup>
  - Single controlled studies support the use of alpha agonists, Guanfacine and Clonidine, which can be used before antipsychotics due to lower risk of serious side effects.<sup>12</sup>
  - Other antipsychotics and mood stabilizers are sometimes used, but they typically have higher side effect risks and the evidence for these is in children and adolescents without ASD; thus should be monitored by a specialist.

- **Inattention, impulsivity and hyperactivity (ADHD) symptoms**

- Address possible environmental or behavioral causes first. Verify adequate structure is present in the child's environment including visual and positive behavior supports. Consider referral for behavioral therapy or Parent Child Interaction Therapy for younger children.
- Make sure the child has a functional means of communication and refer to a speech/language therapist if warranted. An augmentative communication system may be helpful.
- Refer to an occupational therapist to assess/address sensory issues.<sup>12</sup>
- For children that don't respond to these approaches:
  - Methylphenidate (MPH) can be effective in up to half of children with ASD and ADHD symptoms. Monitor for appetite suppression, headaches, irritability, and insomnia.<sup>13</sup>
  - Amphetamine salts (Ex: Vyvanse/Adderall) have not been studied in children with ASD and ADHD, but can be considered if MPH is ineffective.
  - Atomoxetine (Strattera) has also been showed to be effective for ADHD symptoms.
  - Alpha agonists including Guanfacine and clonidine can also be helpful.<sup>6,11</sup>

- **Anxiety and depression**

- Cognitive behavioral therapy: CBT can be effective for anxiety and anger management in high-functioning youth with ASD.<sup>1</sup>
- Treatment with SSRIs (such as sertraline or fluoxetine) can be considered based on studies in children without ASD who have anxiety and/or depression.
- Research showing effectiveness of SSRIs in children with autism and anxiety disorders is very limited. Behavioral activation is a significant concern and lower doses should be considered with slow titration.<sup>14</sup>
- Screening for trauma history is also important. Although evidence in children with ASD is limited, trauma-based interventions may be considered, including trauma-focused cognitive-behavioral therapy, which has significant evidence in children with PTSD.

- **Repetitive, stereotypic behaviors**

- Controlled studies of SSRIs (fluoxetine, fluvoxamine, and citalopram) have shown little to no improvement for repetitive behaviors in ASD. There is limited evidence of using aripiprazole and risperidone.<sup>16</sup>

- **Sleep problems**

- Focus on sleep hygiene strategies. While not FDA-approved, melatonin and Clonidine can be considered.<sup>3,9</sup>

- **Psychosis**

- Occurs rarely in children with ASD. Antipsychotics are typically used, but only studied in children with psychosis without autism. Refer to a specialist if there is a concern a child with autism may have psychotic symptoms.

For a comprehensive guide of controlled medication studies in ASD, please reference:

[https://www.aacap.org/App\\_Themes/AACAP/Docs/resource\\_centers/autism/Autism\\_Spectrum\\_Disorder\\_Parents\\_Medication\\_Guide.pdf](https://www.aacap.org/App_Themes/AACAP/Docs/resource_centers/autism/Autism_Spectrum_Disorder_Parents_Medication_Guide.pdf)

NOTE: Children with autism are hospitalized in psychiatric treatment facilities at much higher rates than children without autism. When inpatient psychiatric treatment is necessary, OHCA provides a guide for inpatient behavioral health treatment options. OHCA Provider Website

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## **OTHER RESOURCES:**

- Autism Focused Intervention Resources & Modules: Free, online video training for use of evidence-based practices with individuals with autism birth to age 22. Includes parent guides. <https://afirm.fpg.unc.edu/afirm-modules>
- Autism Speaks: National advocacy organization for individuals with ASD providing helpful online resources and toolkits. [www.autismspeaks.org](http://www.autismspeaks.org)
- Autism Treatment Network Toolkits [https://www.autismspeaks.org/toolkit?resource\\_type\[606\]=606&article\\_type\[2196\]=2196&resource\\_type\[606\]=606&state\[321\]=321](https://www.autismspeaks.org/toolkit?resource_type[606]=606&article_type[2196]=2196&resource_type[606]=606&state[321]=321)

- OHCA Behavioral Health Provider Directory: ABA therapists, speech/occupational therapy <http://apps.okhca.org/providersearch/>
- Oklahoma Autism Center: Provides screenings, preschool/early intervention programs, teacher/other professional development and on-site consultations, and applied research. <https://www.autismcenterok.org/>
- Oklahoma Autism Network: Oklahoma's autism information and referral site run by the OUHSC College of Allied Health. <https://okautism.org/>
- Oklahoma Department of Human Services Developmental Disabilities Services (DDS): <http://www.okdhs.org/services/dd/Pages/default.aspx>
- Oklahoma Department of Rehabilitation Services: <http://okrehab.org/>
- Oklahoma Family Network: Informs and connects individuals with special health care needs and disabilities, their families and professionals to services and supports in their communities. <http://oklahomafamilynetwork.org/>
- Oklahoma Parents Center: Parent Training and Information Center funded through the U.S. Department of Education, Office of Special Education Programs and Oklahoma State Department of Education. <http://oklahomaparentscenter.org/>
- Oklahoma University Child Study Center: Provides interdisciplinary autism evaluations and ongoing medical treatment as well as ASD and other CME trainings for medical providers. <https://www.oumedicine.com/department-of-pediatrics/department-sections/devbehav/child-study-center/>
- Sooner SUCCESS: Provides resource specialists in 18 Oklahoma counties to promote a comprehensive, coordinated system of health, social and educational services for Oklahoma children and youth with special needs in their community. <https://soonersuccess.ouhsc.edu/>
- TARC: Advocacy organization that works to ensure a high quality of life for individuals with developmental disabilities and their families through education, empowerment, support, and advocacy. <http://www.ddadvocacy.net/>



# Bipolar Disorder

## CLINICAL PEARLS

- Bipolar disorder affects an estimated 2% of pediatric patients under age 21.<sup>1</sup>
- Pediatric bipolar disorder differs from the adult diagnosis with youth typically presenting with rapid fluctuations in mood and behavior. These symptoms are also often in combination with attention deficit hyperactivity disorder and/or disruptive behavior disorders. The difference between Bipolar Disorder Type I and II is the length of the manic episode and/or presence of marked impairment/hospitalization. Type I is when the manic episode lasts at least seven days and/or the child requires hospitalization. Type II is when the manic episode lasts four days and the child does not require hospitalization. Pediatric patients may also experience bipolar depression which may guide medications.  
\*A diagnosis of bipolar disorder should not be given without a full psychological or psychiatric evaluation of the pediatric patient.
- There are no medications approved for children younger than age seven. FDA-approved medications will be preferred first line, but off-label medications can be used if comorbid diagnoses or favorable patient characteristics are present.
- Ensure appropriate monitoring occurs if the child is prescribed medications with risk of metabolic changes, such as atypical antipsychotics, valproate, and lithium. Also, the child who is prescribed an atypical antipsychotic should also be monitored for abnormal involuntary movements with the Abnormal Involuntary Movement Scale (AIMS).
- Ensure family supports are present, including family psychoeducation and skill building.

## RATING SCALES

- [Child Mania Rating Scale-Parent Version](#)<sup>2,3</sup>—age five–17
- [Young Mania Rating Scale](#)<sup>4,5</sup>—age 10–17

## TREATMENT APPROACH

**Stage 1:** Diagnostic Assessment\*. Access to the AACAP Bipolar guidelines can be found [here](#).<sup>6</sup>

**Stage 2:** Select an FDA-approved agent as monotherapy. Atypical antipsychotic agents approved for youths aged 10–17 are risperidone, aripiprazole, quetiapine, asenapine, and lurasidone. [Olanzapine](#), also an atypical antipsychotic, is approved for youths aged 13–17. Lithium is the only mood stabilizer approved for use in pediatrics, and its indication is for youths aged seven–17.

Guidance for what agent from this group to select:

- 2A. Atypical antipsychotics improve manic symptoms significantly more than mood stabilizers in youths<sup>7,8</sup> and should be selected first assuming no allergies or contraindications.
- 2B. Lamotrigine, although not FDA-approved, has proven to help children and adolescents with bipolar depression for ages of 10–17.<sup>9</sup>
- 2C. Risperidone,<sup>10,11</sup> aripiprazole,<sup>12</sup> and lithium<sup>13</sup> help as monotherapy for bipolar mania.
- 2D. Aripiprazole and lithium are not statistically significantly different in treatment of mania symptoms at 12 weeks and both are better than placebo, although aripiprazole may confer higher rates of gastrointestinal disturbances.<sup>14</sup>

### Stage 3:

- 3A. If there is a partial response to a single agent listed in Stage 2, augment with a medication from another class. Additional options to those not listed in Stage 2 are mood stabilizers valproate and lamotrigine or atypical antipsychotic ziprasidone.
- 3B. If monotherapy with an atypical listed in Stage 2 is ineffective, either (1) switch to a different atypical antipsychotic, or (2) switch to a mood stabilizer.

Guidance for what agent from this group to select:

- If the youth is a female of child-bearing years, avoid valproate and lithium because of risk of teratogenicity.<sup>15,16</sup> Lamotrigine can be safely used for mood stabilization in a pregnant female.<sup>17</sup>
- Ziprasidone is not FDA-approved for the treatment of pediatric bipolar disorder, but may confer improvement in mania symptoms in youths ages 13–17, while conferring minimal metabolic adverse effects.<sup>18</sup>

### Stage 4:

- 4A. If augmented therapy in Stage 3 is ineffective, ensure therapy is optimized before switching to a new agent in either class.
- 4B. If monotherapy listed in Stage 3 is ineffective, consider dual therapy with a combination of atypical antipsychotic and mood stabilizer.
- 4C. If bipolar depression is of concern, combination olanzapine/fluoxetine<sup>19</sup> or lurasidone<sup>20</sup> monotherapy may be considered.
  - Olanzapine/fluoxetine combination is FDA approved for youths ages 10–17.<sup>21</sup>
  - Lurasidone is FDA approved for youths ages 10–17.<sup>20</sup>

**Stage 5:** If medication regimens tried in Stages 2–4 are unsuccessful, reassess the diagnosis.

## MEDICATION CLINICAL PEARLS:

- Any person started on an atypical antipsychotic should follow the American Diabetes Association's monitoring recommendations for metabolic syndrome, the following monitoring parameters should be met to ensure patient safety from known adverse effects:<sup>22</sup>
  - Weight (BMI): baseline, four weeks, eight weeks, 12 weeks, then quarterly
  - Waist circumference: baseline, then annually
  - Blood pressure: baseline, 12 weeks, then annually
  - Fasting plasma glucose or A1c: baseline, 12 weeks, then annually
  - Fasting lipid profile: baseline, 12 weeks, and then every five years
  - Prolactin level should be assessed if symptomatic
  - AIMS (Abnormal Involuntary Movement Scale): every six to 12 months
- Do not use two atypical antipsychotics at the same time.<sup>23</sup>
- Consider adverse effect profile when selecting an agent to treat bipolar disorder in youths.<sup>24</sup> Atypical antipsychotics olanzapine, quetiapine and risperidone have higher rates of weight gain than ziprasidone and aripiprazole.<sup>22,25-27</sup>
- If Zyprexa Relprevv (olanzapine) long-acting injectable is selected, the patient should be enrolled in the Risk Evaluation and Mitigation Strategy (REMS) program to monitor for adverse effects associated with the medication and its administration.
- When switching atypical antipsychotics, cross taper the current and new antipsychotic. Other switching strategies may be employed if the clinician determines this method is suboptimal. Please refer to general atypical antipsychotics information found on page 63 for guidance.<sup>28</sup>
- Medications with little to no data to support use in pediatric bipolar disorder include topiramate<sup>6,29</sup>, oxcarbazepine<sup>30</sup>, and carbamazepine<sup>6</sup>. More research is needed before these agents should be started as treatment for bipolar disorder.

| Medication   | Class                         | FDA-Approved & Off-Label Indications (age)  |
|--------------|-------------------------------|---|
| Risperidone  | Atypical Antipsychotic        | Bipolar mania (monotherapy or as adjunct to lithium or divalproex) (10-17), irritability associated with autistic disorder (5-17), schizophrenia (13-17), Tourette syndrome (children)                                |
| Olanzapine   | Atypical Antipsychotic        | Bipolar I (acute mixed or manic) (13-17), depression assoc. with bipolar I (in combo with fluoxetine) (10-17), schizophrenia (13-17), Chemotherapy-assoc. breakthrough N/V (infants up), Tourette syndrome (children) |
| Aripiprazole | Atypical Antipsychotic        | Bipolar I (acute manic or mixed) (10-17), irritability assoc. with autistic disorder (6+), schizophrenia (13-17), Tourette syndrome (6-17)  |
| Quetiapine   | Atypical Antipsychotic        | Bipolar disorder (10-17), Schizophrenia (13-17)   |
| Lithium      | Mood Stabilizer               | Bipolar disorder (12-17) and (6-11)   |
| Valproate    | Mood Stabilizer/Antiepileptic | Epilepsy (10-17), migraine prophylaxis (12-17), status epilepticus (infants up)   |
| Lamotrigine  | Mood Stabilizer/Antiepileptic | Misc. seizures (2-17), bipolar disorder (18)  |

Lexi-complete Online.

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## **OTHER RESOURCES**

- [Depression and Bipolar Support Alliance](#)
- [National Alliance on Mental Illness \(NAMI\)](#)
- [Abnormal Involuntary Movement Scale \(AIMS\)](#)
- [Zyprexa Relprevv REMS Program](#)

## Childhood- or Adolescent-Onset Schizophrenia and other early-onset Psychotic Disorders (Ages 6–18)\*

- Schizophrenia
- Schizoaffective Disorder
- Schizophreniform Disorder
- Brief Psychotic Disorder
- Delusional Disorder
- Substance/Medication-Induced Psychotic Disorder
- Psychotic Disorder due to another Medical Condition
- Schizotypal, paranoid, and schizoid personality disorders (Personality Disorders are not typically diagnosed in an individual less than 18 years of age).

\*Early Onset Schizophrenia (EOS) is before age 18. Childhood Onset Schizophrenia (COS) is before age 13 years. DSM-5 lists Schizophrenia Spectrum and Other Psychotic Disorders.

### CLINICAL PEARLS:

- Childhood-Onset Schizophrenia (COS) is very rare but shows a pattern similar to poor outcome adult cases. The diagnostic criteria are the same for adults, adolescents, and children. COS can usually be distinguished by its severe and pervasive nature and its non-episodic and unremitting course.
- Because COS is rare, it must be distinguished from several childhood conditions that can manifest with psychotic symptoms and/or deterioration in function: Affective Disorders, Psychosis due to a General Medical Condition (such as migraines, inborn errors of metabolism, delirium, substance abuse disorders), Autism Spectrum Disorders, childhood disintegrative disorders, Obsessive Compulsive Disorder, Conduct Disorder and trauma-related disorders.
- Brain imaging (CT/MRI) and a sleep deprived EEG should be considered. Labs including complete blood count (CBC), comprehensive metabolic panel (CMP), and thyroid-stimulating hormone (TSH) are standard. Amino acid screens for inborn errors of metabolism, ceruloplasmin for Wilson's disease, porphobilinogen for acute intermittent porphyria, if clinical presentation is suggestive of the specific syndrome in question.
- Note that 28% to 65% of children ages five to 12 report experiencing imaginary friends that could be misinterpreted as pathologic. Youth may also experience voices with trauma, PTSD, and substance use.
- **Youth with schizophrenia generally experience more hallucinations and less delusions than adult patients. It is important to note that auditory hallucinations alone do not substantiate the diagnosis of schizophrenia.**

## **TREATMENT**

**Stage 1: Diagnostic Assessment:** The diagnosis of adolescent-onset or childhood-onset schizophrenia has a very serious prognosis that brings profound changes to a child and family. The diagnosis should be made with detailed input of family, teachers, pediatricians, family physicians, etc. A psychological battery of testing is strongly suggested. The previously mentioned imaging and lab studies should be considered. Finally, the diagnosis and initial management needs to be made by an adult or child psychiatrist experienced in the evaluation and treatment of adolescents and children.

- Youth with schizophrenia and their families need intensive support and case management services, including psychoeducational therapies addressing treatment options, safety planning and relapse prevention.

**Stage 2:** Monotherapy with an antipsychotic is recommended.

- Atypical (second-generation) antipsychotics are usually recommended over first-generation.
- First-line medication choice is based on the side effect profile, patient/family preference, and cost.
- A therapeutic trial is usually four to six weeks.

2A. However, if there is no response after two weeks at a therapeutic dose, consider changing to a different agent.

**Stage 3:** After two trials of a second-generation antipsychotic then a first-generation antipsychotic could be considered.

- The medications should be cross titrated for safety.
- We advise consultation if the clinician is not experienced in cross titration of anti-psychotics.
- Clinicians should be mindful of cross titration relative to the different side effect profiles or high-potency to low-potency antipsychotics and vice versa.
- Clinicians should monitor for worsening or recurrence of psychosis or breakthrough insomnia.



## **SWITCHING ANTIPSYCHOTIC DRUGS**

Approaches to switching medication vary in the rate of change and extent of any overlap of agents. Pharmacokinetically and pharmacologically the lowest risk strategy for switching is to have a drug free interval. In practice the aim is to avoid additive effects of the agents that may result in unpredictable toxicity while at the same time ensuring adequate antipsychotic cover. The advantages and disadvantages of the various approaches to switching antipsychotics are summarized:

| <b>Drug free interval</b>   |   |
|---|---|
| <b>Advantages</b> <ul style="list-style-type: none"> <li>• Minimal potential for combined adverse drug reactions</li> <li>• Minimal potential for drug interactions</li> <li>• Clarity between side effects of second drug and discontinuation effects from first drug</li> <li>• Anticholinergic/antiakathisia medication can be titrated independently</li> <li>• Reduces potential for additive myelosuppression when switching to clozapine</li> <li>• Low risk of medication errors</li> </ul> | <b>Disadvantages</b> <ul style="list-style-type: none"> <li>• Length of time taken</li> <li>• High level of monitoring of individual required, possibly even in-patient care</li> <li>• Risks of relapse</li> <li>• Relapse can be misinterpreted as lack of efficacy of second drug</li> </ul> |
| <b>Gradual reduction of drug A followed by starting B</b>   |   |
| <b>Advantages</b> <ul style="list-style-type: none"> <li>• Low risk of medication errors</li> <li>• Straightforward</li> </ul>  | <b>Disadvantages</b> <ul style="list-style-type: none"> <li>• Risk of relapse</li> <li>• Potential for combined adverse drug reactions</li> <li>• Potential for drug interactions</li> </ul>  |
| <b>Sudden withdrawal of drug A followed by starting B</b>   |   |
| <b>Advantages</b> <ul style="list-style-type: none"> <li>• Appropriate where an acute, severe reaction necessitates abrupt withdrawal, e.g. clozapine</li> <li>• Low risk of medication errors</li> <li>• Straightforward</li> </ul>  | <b>Disadvantages</b> <ul style="list-style-type: none"> <li>• Risk of relapse especially if discontinuing clozapine</li> <li>• Potential for combined adverse drug reactions</li> <li>• Potential for drug interactions</li> </ul>  |

| Partial Overlap   |  |
|---|--|
| <p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• Good if there is high risk of relapse</li> <li>• Changes are less abrupt</li> <li>• Useful for switch from depot to oral as depot plasma levels decline slowly and withdrawal reactions have not been reported</li> <li>• Useful for high potency to atypical</li> <li>• Useful where there is potential for cholinergic rebound</li> </ul> | <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• Tapering too quickly can cause inadequate cover</li> <li>• Potential for combined ADRs</li> <li>• Potential for drug interactions</li> <li>• Potential for medication errors and compliance problems</li> <li>• Incomplete switches can result in polypharmacy</li> </ul> |
| Full Overlap  |  |
| <p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• Useful where relapse prevention is the greatest concern</li> <li>• Low risk of discontinuation effects from first drug</li> <li>• Low risk strategy when changing from depot to oral as allows opportunity to assess compliance with oral therapy</li> </ul>  | <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• Possibility of combined ADRs</li> <li>• Potential for drug interactions</li> <li>• Potential for medication errors and compliance problems</li> <li>• Incomplete switches can result in polypharmacy</li> </ul>   |

For all antipsychotic trials, systematic side effect monitoring is needed, including extrapyramidal side effects and metabolic monitoring per American Diabetic Association (ADA) guidelines. Adjunctive agents may be indicated to treat/prevent enhanced exopolysaccharide (EPS) production or metabolic side effects.

## American Diabetes Association/American Psychiatric Association Guidelines for Metabolic Monitoring in Recipients of Antipsychotic Medications

| Parameter   | Monitoring Frequency |        |        |         |           |          |               |
|---|----------------------|--------|--------|---------|-----------|----------|---------------|
|   | Baseline             | Week 4 | Week 8 | Week 12 | Quarterly | Annually | Every 5 years |
| Medical history*  | X                    |        |        |         |           | X        |               |
| Weight (BMI)  | X                    | X      | X      | X       | X         |          |               |
| Waist circumference   | X                    |        |        |         |           | X        |               |
| Blood pressure  | X                    |        |        | X       |           | X        |               |
| Fasting glucose or hemoglobin A1c                           | X                    |        |        | X       |           | X        |               |
| Fasting lipids (HDL, LDL, triglycerides, total cholesterol) | X                    |        |        | X       |           |          | X             |

\*Notes: Medical history includes personal and family history of diabetes, hypertension and cardiovascular disease. More frequent assessments may be warranted based on clinical status.

**Stage 4:** Patients with treatment failure exacerbated by chronic noncompliance may be aided by long-acting depot antipsychotic agents.

- Available agents include risperidone microspheres, paliperidone palmitate, aripiprazole extended-release injectable suspension, olanzapine pamoate, Haloperidol decanoate, fluphenazine decanoate.
- If a youth is to be started on a long-term injectable they should be registered. NONE of these agents are FDA-approved for use in youth. Note: Olanzapine pamoate has been linked with a potentially life-threatening post injection syndrome.

### Zyprexa REMS

<https://www.zyprexa.reprevvprogram.com/public/Default.aspx>

### Other Risk Evaluation and Mitigation Strategies (REMS) programs

<https://www.accessdata.fda.gov/scripts/cder/rems/index.cfm>

**Stage 5:** In combination with antipsychotic monotherapy, adjunctive treatment with a mood stabilizer or an antidepressant may be considered to target comorbid diagnosis of major depression. PLEASE NOTE: The negative symptoms often associated with schizophrenia should not be confused with the signs and symptoms of major depression. The lifetime risk of suicide in schizophrenia is 5.9%.

**Stage 6:** Clozapine can be considered for treatment refractory cases. Treatment refractory is defined as failing two or more therapeutic trials of an antipsychotic agent. Clozapine requires an intensive monitoring protocol.

| Frequency of monitoring based on stage of therapy or results from WBC count and ANC monitoring tests |   |                                     |
|--|---|-------------------------------------|
| Situation  | Hematological Values for Monitoring   | Frequency of WBC and ANC Monitoring |
| Initiation of therapy  | WBC $\geq 3500/\text{mm}^3$<br>ANC $\geq 2000/\text{mm}^3$<br><br>Note: Do not initiate in patients with<br>1. history of myeloproliferative disorder or<br>2. Clorazil (clozapine) induced agranulocytosis or granulocytopenia | Weekly for six months               |
| Six months–12 months of therapy  | All results for WBC $\geq 3500/\text{mm}^3$   | Every 2 weeks for six months        |

**Stage 7:** For patients who have failed to respond to multiple different antipsychotic agents, reevaluation and consultation is indicated. Electroconvulsive therapy (ECT) may be considered for adolescents with schizophrenia who do not adequately respond to, or cannot tolerate, antipsychotic medications; or those suffering from catatonia.

**CAUTION: Catatonia is considered a medical emergency.**

*A thorough medical evaluation should be completed to rule out delirium, NMS (Neuroleptic malignant syndrome), various neurologic conditions including epilepsy, encephalitis, various metabolic disorders, endocrine disorders, and recreational drug side effects, etc.*

- We recommend only Internal Medicine physicians and Psychiatrists knowledgeable about catatonia undertake the treatment after a thorough medical evaluation has been completed.*

## Antipsychotics: Second Generation (Atypical)

| Drug (generic) | Drug (brand) <sup>+</sup>  | Initial Dosage   | Literature Based Maximum Dosage                         | FDA Approved Maximum Dosage for Children and Adolescents  | Schedule                                       | Black Box Warning  |
|----------------|--|--|---|---|--|--|
| Aripiprazole*  | Abilify®<br>Abilify Discmelt® (oral disintegrating tab)<br>Abilify® (oral solution)    | Age ≥ 4 years: 2 mg/day  | Age 4-11 years: 15 mg/day<br>Age ≥12 years: 30 mg/day   | Approved for treatment of Bipolar Mania or Mixed Episodes (age 10-17 years) and Schizophrenia (13-17 years): 30 mg/day<br><br>Approved for treatment of irritability associated with Autistic Disorder (age 6-17 years): 15 mg/day  | Once daily                                     | Increased the risk of suicidal thoughts and behavior in short-term studies in children, adolescents, and young adults with major depressive disorder and other psychiatric disorders |
| Quetiapine*    | Seroquel®  | Age 5-9 years: 12.5-25 mg/day<br>Age 10-17 years: 50 mg/day                            | Age 5-9 years: 400mg/day<br>Age 10-17 years: 800 mg/day | Approved for treatment of Bipolar Mania (age 10-17 years): 600 mg/day Approved for treatment of Schizophrenia (13-17 years): 800 mg/day   | IR: One to three times daily<br>XR: Once daily |  |
| Olanzapine*    | Zyprexa®<br>Zyprexa Zydis®   | Age 4-5 years: 1.25 mg/day<br>Age 6-12years: 2.5 mg/day<br>Age ≥ 13years: 2.5-5 mg/day | Age 4-5 years: 12.5 mg/day<br>Age 6-17 years: 20 mg/day | Approved for treatment of Bipolar Mania or Mixed Episodes and Schizophrenia (age 13-17 years): 20 mg/day  | Once daily                                     | None related to youth  |
| Risperidone*   | Risperdal®<br>Risperdal M-Tab® (oral disintegrating tab)<br>Risperdal® (oral solution) | Age 4-5 years: <20 kg: 0.25 mg/day >20 kg: 0.5 mg/day<br>Age ≥6 years: 0.5 mg/day      | Age 4-11 years: 3 mg/day<br>Age ≥12 years: 6 mg/day     | Approved for treatment of Schizophrenia (age 13-17 years) and Bipolar Mania or Mixed Episodes (age 10-17 years): 6mg/day<br><br>Approved for treatment of irritability associated with autistic disorder (age 5-16 years): 3 mg/day | Once or twice daily                            | None related to youth  |

|               |  |  |  |   |   |   |
|---------------|--|--|--|---|---|---|
| Clozapine*    | Clozaril®<br>FazaClo® (oral disintegrating tablet)<br>Versacloz® oral suspension | Age 8-11 years:<br>6.25-12.5 mg/day<br>Age ≥12 years:<br>6.25-25 mg/day            | Age 8-11 years:<br>150-300 mg/day<br>Age ≥12 years:<br>600 mg/day<br>Target serum clozapine level of 350 ng/mL for optimal efficacy            | Not approved for children and adolescents   | Once or twice daily   | Risk of life threatening agranulocytosis<br>Seizures<br>Myocarditis<br>Other adverse cardiovascular and respiratory effects |
| Asenapine     | Saphris® (sublingual tablet)   | Age ≥ 10 years:<br>2.5 mg twice daily  | Age ≥ 10 years:<br>10 mg twice daily   | Approved for acute treatment of Bipolar Mania and Mixed Episodes (age 10-17 years): 10 mg twice daily             | Twice daily. Avoid eating or drinking for 10 minutes after sublingual inistration | None related to youth   |
| lloperidone** | Fanapt®  | Insufficient Evidence  | Insufficient Evidence  | Not approved for children and adolescents   | Insufficient Evidence   | None related to youth   |
| Paliperidone* | Invega®  | Children:<br>Insufficient Evidence<br>Adolescents:<br>(Age ≥12 years):<br>3 mg/day | Children:<br>Insufficient Evidence<br>Adolescents<br>(Age ≥12 years),<br>Schizophrenia:<br>Weight <51 kg: 6 mg/day<br>Weight ≥51 kg: 12 mg/day | Approved for treatment of Schizophrenia (age 12-17 years):<br>Weight <51 kg: 6 mg/day<br>Weight ≥51 kg: 12 mg/day | Once daily  | None related to youth   |

|               |          |   |  |   |  |  |
|---------------|----------|---|--|---|--|--|
| Ziprasidone*  | Geodon®  | Bipolar Disorder (age 10-17 years):<br>20 mg/day<br><br>Tourette's Disorder: 5 mg/day | Bipolar Disorder (age 10-17 years)<br><br>Weight ≤45 kg: 80 mg/day<br><br>Weight > 45 kg: 160 mg/day<br><br>Tourette's Disorder: 40 mg/day | Not approved for children and Adolescents<br><br>Ziprasidone was not found to be superior to placebo for treating adolescent schizophrenia, (Findling et al., 2013), and therefore is not recommended for treating schizophrenia in this age group. | Twice daily; take with ≥500 calorie meal | None related to youth  |
| Lurasidone*** | Latuda®  | 40 mg per day   | 40 mg to 80 mg per day   | Schizophrenia - adolescents (13-17 years) (2.1)   | Once daily taken with >350 calorie meal  | None related to youth  |
| Brexpiprazole | Rexulti® | Insufficient Evidence   | Insufficient Evidence  | Not approved for children and adolescents   | Insufficient Evidence                    | Antidepressants increased the risk of suicidal thoughts and behavior in children, adolescents, and young adults in short-term studies. |
| Cariprazine   | Wraylar® | Insufficient Evidence   | Insufficient Evidence  | Not approved for children and adolescents   | Insufficient Evidence                    |  |

### Patient Monitoring Parameters

- Fasting plasma glucose level or hemoglobin A1c—at baseline, at 3 months, then every 6 months.
- Lipid screening—at baseline, at 3 months, then every 6 months.
- CBC as clinically indicated.
- Pregnancy test—as clinically indicated
- Blood pressure, pulse rate, height, weight and BMI measurement - at every visit
- Sexual function—inquire for evidence of galactorrhea/ gynecomastia, menstrual disturbance, libido disturbance or erectile/ ejaculatory disturbances in males (Priapism has been reported with **Iloperidone, Risperidone** and **Ziprasidone**). This inquiry should be done at each visit for the first 12 months and every 6 months thereafter.
- EPS evaluation (examination for rigidity, tremor, akathisia)— before initiation of any antipsychotic medication, then weekly for the first 2 weeks after initiating treatment with a new antipsychotic or until the dose has been stabilized and weekly for 2 weeks after a dose increase.
- Tardive Dyskinesia evaluation—every 3 months.

- Vision questionnaire—ask whether the patient has experienced a change in vision and should specifically ask about distance vision and blurry vision-yearly.
- EKG—Baseline and as clinically indicated
- **Clozapine** Monitoring Parameters: Clozapine is associated with severe neutropenia (absolute neutrophil count (ANC) less than 500/ $\mu$ L). The requirements to prescribe, dispense, and receive clozapine are incorporated into a single, shared program called the Clozapine Risk Evaluation and Mitigation Strategy (REMS).
- Prescribers and pharmacies must certify the use of Clozapine at [www.clozapinerems.com](http://www.clozapinerems.com)

| Warnings and Precautions   |  |
|--|--|
| • Extrapyramidal side effects  | • Leukopenia, neutropenia, and agranulocytosis   |
| • Neuroleptic Malignant Syndrome   | • Lowers seizure threshold   |
| • Tardive Dyskinesia   | • Cognitive and motor impairment potential   |
| • Hyperglycemia and Diabetes Mellitus  | • Hyperthermia   |
| • Prolactinemia and gynecomastia (most common with risperidone and paliperidone) | • Dysphagia  |
| • Weight gain  | • Extrapyramidal side effects  |
| • Dyslipidemia   | • <b>Olanzapine</b> can cause a rare but serious skin reaction known as DRESS (Drug Reaction with Eosinophilia and Systemic Symptoms). |
| • Orthostatic Hypotension  | • Presence of a fever with a rash and swollen lymph glands, or swelling to the face requires immediate medical attention.              |

\* Generic available

+ XR, extended-release

\*\* While iloperidone alone can cause QTc prolongation, concomitant administration with a CYP2D6 inhibitor (e.g., paroxetine) or a CYP3A4 inhibitor (e.g., ketoconazole) can double QTc prolongation compared with administering iloperidone alone. No long acting injectable antipsychotic formulations are FDA-approved for use in children and adolescents.

\*\*\*Latuda is pregnancy category B (FDA).



## Antipsychotics: First Generation (Typical)

| Drug (generic)  | Drug (brand) | Initial Dosage   | Literature Based Maximum Dosage  | FDA Approved Maximum Dosage for Children and Adolescents   | Schedule                 | Black Box Warning     |
|-----------------|--------------|--|--|--|--------------------------|-----------------------|
| Chlorpromazine* | Thorazine®   | Age >6 months:<br>0.25 mg/lb every 4-6 hours, as needed<br><br>Adolescents:<br>10-25 mg/dose every 4-6 hours         | Age <5 years:<br>40 mg/day<br><br>Age 5-12 years:<br>75 mg/day<br><br>Age >12 years:<br>800 mg/day   | Approved for treatment of severe behavioral problems (age 6 months-12 years)<br><br>Outpatient Children:<br>0.55 mg/kg every 4-6 hours, as needed<br><br>Inpatient Children:<br>500 mg/day<br><br>Approved for the management of manifestations of Psychotic Disorders (age >12 years):<br>1000 mg/day | One to six times daily   | None related to youth |
| Haloperidol*    | Haldol®      | Age 3-12 years weighing<br><br>15-40 kg: 0.025-0.05 mg/kg/day<br><br>≥40 kg:<br>1 mg/day<br><br>Age >12:<br>1 mg/day | Age 3-12 years:<br>0.15 mg/kg/day or 6 mg/day, whichever is less<br><br>Age >12 years:<br>Acute agitation:<br>10 mg/dose<br><br>Psychosis:<br>15 mg/day<br><br>Tourette's Disorder:<br>15 mg/day | Approved for treatment of Psychotic Disorders, Tourette's Disorder, and severe behavioral problems (age ≥3 years):<br><br>Psychosis:<br>0.15 mg/kg/day<br><br>Tourette's Disorder and severe behavioral problems:<br>0.075 mg/kg/day<br><br>Severely disturbed children:<br>6 mg/day                   | One to three times daily | None related to youth |
| Perphenazine*   | Trilafon®    | Age 6-12 years:<br>Insufficient Evidence<br><br>Age >12 years:<br>4-16 mg two to four times daily                    | Age 6-12 years:<br>Insufficient Evidence<br><br>Age >12 years:<br>64 mg/day  | Approved for treatment of psychotic disorders (age ≥12 years):<br><br>Outpatient: 24 mg/day<br><br>Inpatient: 64 mg/day  | Two to four times daily  | None related to youth |
| Pimozide        | Orap®        | Age ≥7 years:<br>0.05 mg/kg  | Age 7-12 years:<br>6 mg/day or 0.2 mg/kg/day, whichever is less<br><br>Age ≥12 years:<br>10 mg/day or 0.2 mg/kg/day, whichever is less   | Approved for treatment of Tourette's Disorder (age ≥12 years):<br><br>10 mg/day or 0.2 mg/kg/day, whichever is less  | Once or twice daily      | None                  |

## Patient Monitoring Parameters

- Same as Second Generation Antipsychotics

| Warnings and Precautions                       |  |
|--|--|
| • Tardive Dyskinesiaq                          | • Extrapyrmidal symptoms   |
| • Neuroleptic Malignant Syndrome               | • Ocular changes   |
| • Leukopenia, neutropenia, and agranulocytosis | • Hyperprolactinemia   |
| • Drowsiness                                   | • Anticholinergic effects (constipation, dry mouth, blurred vision, urinary retention) |
| • Orthostatic hypotension                      | • Risk of prolonged QTc interval and torsades de pointes (particularly with pimozide)  |
| • EKG changes                                  |  |

\*Generic available

## Depression (6–17 years of age)

### CLINICAL PEARLS:

- Approximately 2% of children and at least 4% of adolescents suffer from depression at any given time; by the end of high school, one in five will have had at least one episode of depression.
- First-line treatment for mild depression is psychotherapy and an addition of a Selective Serotonin Reuptake Inhibitors (SSRIs), for moderate-to-severe depression not responsive to therapy.
- If abuse is suspected, ensuring the safety of the patient is the first priority of treatment.
  - OK DHS Child Abuse and Neglect Hotline: 1-800-522-3511
- Depression is closely associated with suicidal thoughts and behavior; thus, it is imperative to evaluate these symptoms at the initial and subsequent assessments.
  - National Suicide Prevention Lifeline: 1-800-273-TALK (8255)
  - Removing access to firearms and other lethal means in an important part of suicide prevention (refer to [Section 15: Adolescent Suicide](#) for more details)
- Comorbid diagnoses (anxiety, disruptive disorders, ADHD, substance use disorder) are common; depression increases the risk of the development of non-mood psychiatric problems (e.g., conduct disorder, substance abuse disorders).

### RATING SCALES:

- Center for Epidemiological Studies Depression Scale for Children (CES-DC): ages six–17  
[https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces\\_dc.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf)
- Patient Health Questionnaire (PHQ-9) Modified for Adolescents (PHQ-A): ages 11–17  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjxs\\_zor7zjAhVFWs0KHc9hAsAQFjAAegQIAhAC&url=https%3A%2F%2Fwww.psychiatry.org%2FFile%2520Library%2FPsychiatrists%2FPractice%2FDSM%2FAPA\\_DSM5\\_Severity-Measure-For-Depression-Child-Age-11-to-17.pdf&usg=AOvVaw35XhmW8SFxp4QR6NyDN9MA](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjxs_zor7zjAhVFWs0KHc9hAsAQFjAAegQIAhAC&url=https%3A%2F%2Fwww.psychiatry.org%2FFile%2520Library%2FPsychiatrists%2FPractice%2FDSM%2FAPA_DSM5_Severity-Measure-For-Depression-Child-Age-11-to-17.pdf&usg=AOvVaw35XhmW8SFxp4QR6NyDN9MA)

### TREATMENT APPROACH:

**Stage 1:** Diagnostic assessment (DSM-5 criteria with concurrent therapy in place, mild-to- moderate depression can be diagnosed and treated in the medical home.

- 1A: Several psychiatric and medical disorders may co-occur with or mimic major depressive disorder (e.g. hypothyroidism, mononucleosis, side effects to medications).

**Stage 2:** For patients with mild or brief depression: supportive therapy (education, support, and case management related to stressors in the family and school).

2A: Monitor for response to supportive therapy (four to six weeks) with rating scale

- If improving, continue treatment.

**Stage 3:** For patients who do not respond to supportive psychotherapy or who have moderate- to-severe depression (including chronic or recurrent depression, psychosocial impairment, suicidality, agitation, and psychosis) there are recommended specific types of psychotherapy and/or antidepressants:

- Cognitive-behavioral therapy (CBT) or interpersonal therapy (IBT); and
- Selective Serotonin Reuptake Inhibitors (SSRIs): fluoxetine is FDA approved in ages eight and older; escitalopram is FDA approved in ages 12 and older.

**Black Box Warning: Antidepressants can increase the risk of suicidal thinking and behavior in children, adolescents, and young adults with MDD. Patients of all ages should be closely monitored for clinical worsening and emergence of suicidal thoughts and behaviors.**

- Despite the above black box warning, SSRIs are first-line pharmacotherapy for pediatric/ adolescent depression. It is important to note that depression is closely associated with suicidal thoughts and behavior, and untreated depression increases the risk of suicide.

**National Suicide Prevention Lifeline: 1-800-273-TALK (8255)**

<https://suicidepreventionlifeline.org/help-yourself/youth/>

3A: Monitor for treatment response (four to six weeks) with rating scale; also monitor for suicidal thoughts and behaviors.

- If improving, continue treatment.
- If tolerating treatment but incomplete response, consider increasing SSRI dose (or consider adding SSRI or psychotherapy, if not already on combination of SSRI + psychotherapy).
- If not tolerating treatment/side effects, stop treatment/SSRI and consider alternative treatments (alternative SSRI and/or psychotherapy).
- If no or minimal response after at least eight weeks of treatment (including dose optimization) with two different SSRIs, consider consultation with mental health specialist (and referral, if appropriate).

**Stage 4:** For depressed patients with psychosis or bipolar disorder, specific treatments may be required (atypical antipsychotics plus antidepressants, light therapy, mood-stabilizing agents). Consultation (and/or referral) with mental health specialist is indicated.

**Stage 5:** Once the patient has been asymptomatic for six to 12 months, the prescriber should determine if maintenance therapy (and the type and duration of therapy) is indicated, taking into account the severity of the episode of depression and/or number of recurrences, with the goal of fostering healthy growth and development and preventing recurrences.

| <b>FDA-Approved Antidepressants for Pediatric Use</b>                     |              |   |   |
|---|--------------|---|---|
|   | <b>MDD</b>   | <b>Other Pediatric Indications</b>  | <b>Starting Dose and Typical Dosage Ranges</b>  |
| <b>Selective Serotonin Reuptake Inhibitors (SSRIs)</b>                    |              |   |   |
| Escitalopram tabs & oral soln (Lexapro®)                                  | ages 12-17   | n/a   | 5mg (10mg-20mg)   |
| Fluoxetine IR tabs, caps, & oral soln (Prozac®, Sarafem®)                 | ages 8-17    | OCD: ages 7-17<br><br>Depressive episodes asso. w/bipolar I d/o (in combo w/ olanzapine): ages 10-17* | 10mg (20mg-40mg)<br><br>*Higher dosage may be indicated for anxiety titrate to treatment effect |
| Fluvoxamine IR tabs (Luvox®)  | n/a          | OCD: ages 8-17  | 25mg (50-200mg)   |
| Sertraline tabs & oral soln (Zoloft®)                                     | n/a          | OCD: ages 6-17  | 25mg (100mg-200mg)  |
| <b>Selective Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs)</b> |              |   |   |
| Duloxetine caps (Cymbalta®)   | n/a          | Generalized anxiety d/o: ages 7-17  | 30mg (40-60mg)  |
| <b>Tricyclic Antidepressants (TCAs)<sup>α</sup></b>                       |              |   |   |
| Amitriptyline tabs (Elavil®)  | ages 12-17*  | n/a   | 1/3mg.kg (Max 5mg/kg day)   |
| Clomipramine (Anafranil®)   | n/a          | OCD: ages 10-17   | 25mg (Max 3mg/Kg/Day)   |
| Imipramine tabs (Tofranil®)   | n/a          | Nocturnal enuresis: ages 6-17   | 10mg (Max 5mg/Kg/Day)   |
| Nortriptyline caps & oral soln (Pamelor®)                                 | adolescents* | n/a   | 30mg (30-150mg)   |
| Trimipramine caps (Surmontil®)  | adolescents* | n/a   | 50mg (50-100mg)   |

| Atypical Antidepressants |  |  |                     |
|--------------------------|--|--|---------------------|
| Bupropion                |  | Adolescents (also considered 4th line in ADHD) | 100mg (150mg-300mg) |
| Mirtazepine              |  | Adolescents (pediatric data is limited)        | 7.5mg (15mg-45mg)   |

¥ Zyprexa® (olanzapine) is indicated for depressive episodes asso. w/bipolar I d/o in ages 10-17 (in combination with fluoxetine); Symbyax® (fluoxetine/olanzapine) is also FDA approved for depressive episodes asso. w/bipolar I d/o in ages 10-17.

α TCAs are not recommended as first line treatment of pediatric depression.

\* FDA approved for depression (not MDD)

FDA = U.S. Food and Drug Administration; MDD = major depressive disorder; n/a = not applicable; tabs = tablets; soln = solution; caps = capsules; OCD = obsessive-compulsive disorder; asso. = associated; w/ = with; d/o = disorder; combo = combination; IR = immediate-release

The above drug information was compiled using IBM Micromedex® and the prescribing information for individual products, where applicable.

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## OTHER RESOURCES:

- American Academy of Child and Adolescent Psychiatry (AACAP): Depression Resource Center  
[https://www.aacap.org/AACAP/Families\\_and\\_Youth/Resource\\_Centers/Depression\\_Resource\\_Center/Resources\\_for\\_Clinicians\\_Depression.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Resource_Centers/Depression_Resource_Center/Resources_for_Clinicians_Depression.aspx)
- AACAP/American Psychiatric Association (APA): Depression: Parents' Medication Guide  
[https://www.aacap.org/App\\_Themes/AACAP/docs/resource\\_centers/resources/med\\_guides/DepressionGuide-web.pdf](https://www.aacap.org/App_Themes/AACAP/docs/resource_centers/resources/med_guides/DepressionGuide-web.pdf)
- Guidelines for Adolescent Depression in Primary Care (GLAD-PC) Toolkit  
<http://www.glad-pc.org/>
- National Institute of Mental Health (NIMH): Major Depression  
<https://www.nimh.nih.gov/health/statistics/major-depression.shtml>
- Substance Abuse and Mental Health Services Administration (SAMHSA): Evidence-Based Practices Resource Center  
<https://www.samhsa.gov/ebp-resource-center>
- National Federation of Families for Children's Mental Health (NFFCMH): Resources  
<https://www.ffcmh.org/resources>

# Disruptive Mood Dysregulation Disorder (DMDD)

## CLINICAL PEARLS

- DMDD is a relatively new diagnosis with limited evidence to support pharmacological treatment of core symptoms.
- Core symptoms include temper outbursts that occur at frequent intervals that are not considered developmentally appropriate.
- It is important to rule out other diagnoses that have supported evidence-based treatments (e.g. ADHD, Depression, Anxiety, ODD, etc.) If co-morbid diagnoses exist treatment should include addressing those as well.
- First-line treatment should include therapeutic support.
- Medication uses often guided by post-hoc studies on disruptive behavior disorders.

## RATING SCALES

- The Modified Overt Aggression Scale can be used to screen and track treatment response.  
<https://depts.washington.edu/dbpeds/Screening%20Tools/Modified-Overt-Aggression-Scale-MOAS.pdf>

## TREATMENT APPROACH

**Stage 1:** Behavioral therapy focusing on targeted behaviors. Current supported therapies include Delayed Goal Attainment; Cognitive Behavioral Therapy, Play Therapy, Interpretation Bias Training, Dialectical Behavioral Therapy adapted for children.

1A: Monitor for treatment response with rating scale. If improving continue therapy, if not improving follow up with therapist.

**Stage 2:** If symptoms of aggression persist consider the [aggression guidelines](#).

**Stage 3:** Consider use of methylphenidate if concerns with impulsivity/hyperactivity and DMDD symptoms (caution with co-morbid trauma-reactive symptoms).

**Stage 4:** If symptoms are severe and not responsive to stimulant medication, stop stimulant medications and include a trial of second-generation antipsychotic (e.g. risperidone or aripiprazole).



## **RESOURCES**

- Child Mind Institute  
<https://childmind.org/guide/guide-to-disruptive-mood-dysregulation-disorder/>
- National Institute of Mental Health  
<https://www.nimh.nih.gov/health/topics/disruptive-mood-dysregulation-disorder-dmdd/disruptive-mood-dysregulation-disorder.shtml>

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## Eating Disorders (ages 6–18 years)

- Anorexia Nervosa
  - Restricting type
  - Binge-eating/purging type
- Bulimia Nervosa
- Binge-Eating Disorder

Please note that DSM-5 includes with the eating disorders the feeding disorders of pica, rumination disorders, and avoidant/restrictive food intake disorder. These will not be discussed in the context of these guidelines.

All Pediatricians and mental health clinicians should screen child and adolescent patients for eating disorders. Early intervention does lead to better outcomes.

### SCREENING TOOLS: ADOLESCENTS

- The Eating Disorder Examination Questionnaire (EDE-Q): <http://cedd.org.au/wordpress/wp-content/uploads/2014/09/Eating-Disorder-Examination-Questionnaire-EDE-Q.pdf>
- Eating Disorder Inventory (EDI): <https://www.parinc.com/Products/Pkey/103>
- Eating Attitudes Test (EAT): <https://www.seattlechildrens.org/globalassets/documents/healthcare-professionals/pal/ratings/eat-26-rating-scale.pdf>
- SCOFF Questionnaire: <https://www.bmj.com/content/319/7223/1467>

### SCREENING TOOLS: YOUNGER CHILDREN

- The Kids' Eating Disorder Survey (KEDS), <https://www.ncbi.nlm.nih.gov/pubmed/8340308>
- Child-Eating Attitudes Test (CHEAT), <https://www.ncbi.nlm.nih.gov/pubmed/7833961>
- SCOFF, <https://www.bmj.com/content/319/7223/1467>

### CLINICAL PEARLS: ANOREXIA NERVOSA (AN)

AN has a crude mortality rate of approximately 5% per decade either from medical complications or suicide. This is the HIGHEST MORTALITY rate of all mental health disorders.

- Prevalence with AN for females to males is 10:1.

- 55.2% of patients have a lifetime comorbidity of at least one other psychiatric disorder.
- BMI is used to rate (mild to extreme), based on age and gender norms.
- Possible diagnostic clues: avoidance of “fattening” foods, frequent weighing, excessive exercise, baggy or layered clothes, excessive water intake.
- Children with AN are less likely than adults to engage in purging and bingeing behaviors.
- AN and Obsessive Compulsive Disorder (OCD) share obsessional preoccupations and obsessions and make it difficult to differentiate the two disorders.
- The course of AN is often marked by remission and exacerbation.

### **CLINICAL PEARLS: BULIMIA NERVOSA (BN)**

- BN has a crude mortality of 2% per decade from medical complications or suicide.
- Co-occurring psychopathology in children and adolescents is quite high at a rate of up to 88% lifetime risk. Depression, anxiety, and substance abuse are most common.
- Weight is often normal or high-normal for age, gender, and height.
- Female to male ratios range from 1:3 to 1:10.
- The course is marked by remission and exacerbation.
- The disorder has typically been present five years before diagnosis.

### **CLINICAL PEARLS: BINGE-EATING DISORDER (BED)**

- May be the most common eating disorder in the overall population. Rates in Children/Adolescents are estimated to be 2.3% in adolescent females and 0.8% in adolescent males.
- 9% of adolescents have reported binge episodes without meeting the diagnostic criteria for the disorder.
- Onset is usually in later adolescence or early adulthood.
- The child or adolescent is often overweight or obese.
- BED heritability lies between 30–80% and tends to aggregate in families.

**TREATMENT APPROACH:**

We have listed stage 1 and stage 2 in treatment approach. Below is a summary table adapted from the AACAP “Practice Parameters for the Assessment and Treatment of Children and Adolescents with Eating Disorders” at the end of this segment. PLEASE NOTE: The research into use of medications with eating disorders in children and adolescents is very limited. The morbidity and mortality of eating disorders in children and adolescents is very serious. The psychotherapy and pharmacotherapy for eating disorders is highly specialized and should be undertaken ONLY by a physician or clinician experienced and skilled in treating eating disorders in a young population.

| <b>Treatments for Child and Adolescent Eating Disorders Adapted from American Academy of Child and Adolescent Psychiatry Practice Parameters for the Assessment and Treatment of Children and Adolescents with Eating Disorders</b> |  |  |  |
|---|--|--|--|
| <b>Treatment</b>  | <b>Treatment Targets</b>   | <b>Evidence Base</b>   | <b>Recommendations</b>   |
| Family-based treatment (FBT)  | Family therapy supports parental management of eating and related behavior until adolescent demonstrates improvement       | Six randomized controlled trial (RCTs) support efficacy for AN; superiority over other treatments unclear; two RCTs supporting usefulness for BN | Useful for most cases of short-duration AN and BN in young patients          |
| Adolescent-focused therapy  | Individual therapy targets autonomy and self-efficacy in the context of adolescent development                             | This treatment has been the subject of two RCTS in which it performed worse than FBT for AN but was still effective                              | Useful for adolescents with AN when FBT is not feasible                      |
| Cognitive-behavioral therapy (CBT)  | Individually-focused therapy targets adolescent management of behaviors and distorted cognitions associated with AN and BN | This treatment has been the subject of one RCT and one case series No published studies of CBT for adolescent AN                                 | Adolescent version of CBT for adolescents may be appropriate for use with BN |
| Interpersonal psychotherapy (IPT)   | IPT focuses on changing problematic interpersonal relationships that trigger or maintain eating disorder symptoms          | Two RCTs in adults with BN and BED support the use of IPT for these disorders;   | Useful for cases of BN and BED as an alternative to CBT.                     |

|                         |  |  |  |
|-------------------------|--|--|--|
| Antidepressants         | Symptoms of obsessionality, anxiety, and depression in AN and BN; targets binge eating and purging in BN | One uncontrolled trial suggests that antidepressants are tolerated and maybe helpful for adolescent BN | Useful for comorbid disorders; and may be a second-line treatment for adolescent BN                |
| Atypical antipsychotics | Body image distortion, weight-gain fears, and anxiety related to AN                                      | Case series data and three pilot RCTs insufficient evidence to suggest efficacy for use in AN          | Useful for comorbid conditions; further study needed to determine efficacy for core symptoms of AN |

Note: AN = anorexia nervosa; BED = binge eating disorder; BN = bulimia nervosa; CBT = cognitive-behavioral therapy; FBT = family-based treatment; IPT = interpersonal psychotherapy; RCT = randomized controlled trial.

### Stage 1: Diagnostic assessment.

- This includes a complete physical exam, BMI, and EKG. It also includes complete lab studies. The differential diagnosis for weight loss in children and adolescents is extensive and requires an experienced clinical evaluation.
- Psychological testing is recommended. It is strongly recommended the assessment be done by clinicians who are experienced with the evaluation of eating disorders in children and adolescents and their families.

**Stage 2:** Treatment of eating disorders in children/adolescents involves a multidisciplinary team that is skilled in the care of children and adolescents in the treatment of eating disorders. This team may include physicians, nutritionists, psychologists, therapists, occupational therapists, family members, teachers, etc.

### Anorexia Nervosa:

1. Physical signs and medical complications need to be treated.
2. Treatment is usually begun in an outpatient setting. The treatment settings may range from inpatient, residential, partial hospitalization, or outpatient based on the severity and needs of the patient. Hospitalization is usually indicated if there is substantial or rapid weight loss, especially weight below 75% of normal age-appropriate weight. It is also indicated if in the bulimic subtype because there are significant medical issues like low potassium, unstable vital signs, or uncontrolled insulin abuse. Hospitalization may also be indicated with severe depression, suicidal plans, substantial psychiatric comorbidity, or substantial substance abuse. Hospitalization can be considered if there is diagnostic uncertainty with high probability of eating disorder and severe medical symptoms.
3. Therapy: Therapeutic approaches usually combine individual psychotherapy, family therapy, nutritional counseling, and group therapy.

4. Medications: There are NO medications approved for treatment of AN in children or adolescents. There are very limited studies of use of medications in AN in children or adolescents. The results overall have shown little or no benefit of use of medications in this population for actual treatment of the eating disorder.

Antidepressants are often used to treat comorbid depressive, anxiety, or obsessive-compulsive symptoms in adults and adolescents with AN. Tricyclic antidepressants and monoamine oxidase inhibitors should be avoided in this population due to sensitivity to side effects. Wellbutrin (bupropion) should NOT be used in eating disorders where PURGING is present because of the lowering of the seizure threshold. Wellbutrin is contraindicated any time there are purging behaviors.

Cyproheptadine (antihistamine) and mirtazapine (antidepressant) have been used to increase appetite and help with sleep in some adults and adolescents with AN.

Olanzapine (antipsychotic) and quetiapine (antipsychotic) have been used with some success to assist with weight restoration and sleep in adults and adolescents. They have been used to assist with the almost delusional and obsessive aspect that can sometimes be observed in AN.

### **Bulimia Nervosa:**

1. Therapy: Therapeutic approaches usually combine individual psychotherapy, family therapy, nutritional counseling, and group therapy. It is strongly recommended that the clinicians treating BN in children/adolescents be well experienced in the treatment of eating disorders.
2. There is NO medication approved to treat BN in children or adolescents.
3. Fluoxetine in doses up to 60mg per day is approved for BN in adults. It is often used in combination with CBT. Fluoxetine reduces the risk of relapse of BN in adults. The study of fluoxetine use for BN in adolescents has been very limited but overall had positive results. Other SSRI's have been used with BN at various doses in adolescents. The response was positive but not as robust as with fluoxetine. Wellbutrin (bupropion) SHOULD NOT be used in eating disorders where PURGING is present because of the lowering of the seizure threshold. Wellbutrin is contraindicated any time there are purging behaviors.
4. Bulimia is usually treated outpatient. Hospitalization should be considered for patients with severe depression, self-harming behaviors, suicide plans, or severe medical complications (hypokalemia).

## **Binge-Eating Disorder (BED):**

1. Therapy: Therapeutic approaches usually combine individual psychotherapy, family therapy, nutritional counseling, and group therapy. CBT is considered a main stay. Therapy may include dialectical behavior therapy (DBT) and interpersonal therapy since BED tends to be seen in older adolescents and young adults.
2. There are NO medications FDA-approved for BED in children and adolescents.
3. Vyvanse (lisdexamfetamine) is approved for BED in adults. It is thought to reduce the impulsivity associated with the disorder.
4. Fluoxetine and other SSRIs are often used for BED in adults and adolescents. They are used to reduce associated anxiety, depression, and the frequency of binge-eating episodes. Wellbutrin (bupropion) should not be used in eating disorders where PURGING is present because of the lowering of the seizure threshold. Wellbutrin is contraindicated any time there are purging behaviors.

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## Intellectual Disability (Early childhood–17 years)

- Intellectual Disability/Intellectual Developmental Disorder
- Global Developmental Delay (prior to age five)
- Older terminology: Mental retardation, Static encephalopathy
- Severity: Mild, Moderate, Severe, Profound

### CLINICAL PEARLS

- Intellectual disability (ID) requires an individual to have deficits in both intellectual and adaptive functioning (conceptual, social, and practical domains) prior to age 18.<sup>3</sup>
- Behavioral issues such as aggression, property destruction, self- injurious behavior, or verbal outbursts can occur in individuals with ID. These behaviors are often the primary reason children with ID present for behavioral health treatment.
- Challenging behaviors can be driven by medical problems, behavioral health disorders, and/ or response to the environment. As such, these behavioral problems warrant interdisciplinary assessment and treatment.
- Nearly all behavioral health disorders can be observed in children and adolescents with ID, with stability of diagnoses through adulthood. Diagnosis can be challenging due to limitations in ability to self-report internal experiences. Disorders often go undiagnosed and untreated.
- Assessment often relies on behavioral observation with inferences about underlying meaning. Using information about change from baseline behavior can be an effective approach.<sup>13</sup> Standardized rating scales used to assess and monitor behavioral conditions in children without ID (e.g. ADHD, anxiety, depression) can be helpful tools, although they often have not been validated in children with ID and warrant careful interpretation.

### ASSESSMENT & TREATMENT OF CORE SYMPTOMS IN INDIVIDUALS WITH INTELLECTUAL DISABILITY

**Step 1:** Confirm and classify diagnosis of ID with neuropsychological testing to assess intelligence (IQ), adaptive functioning, and system of supports for the individual.<sup>4</sup>

**Step 2:** Obtain a medical evaluation including assessment for potential causes of ID (genetics, metabolic disorders, prenatal exposures) and associated medical illnesses. Genetic testing can identify congenital syndromes with specific “neurobehavioral phenotypes” and associated medical conditions to monitor for throughout the child’s development.<sup>11</sup>

**Step 3:** Early interventions should be in place including appropriate educational placement and supports (Individualized Education Program), family support, and ancillary therapies (speech, occupational, and physical therapy).



## ASSESSMENT & TREATMENT OF CHALLENGING BEHAVIORS IN CHILDREN WITH INTELLECTUAL DISABILITY

An interdisciplinary approach is most effective. Consider the developmental level of the individual including his or her capacity to learn problem-solving skills. Also consider biological, psychological, and social/environmental factors.<sup>4</sup>

**Step 1:** Encourage continuity of care with the same medical and behavioral health providers so the individual's baseline level of behavior and functioning is understood.

**Step 2:** Initial assessment of challenging behaviors involves the following steps:

- Assess and address the “ABC’s” of behavior (Antecedent-Behavior-Consequence) to help understand the function of the behavior.  
<https://www.rvaschools.net/site/handlers/filedownload.ashx?moduleinstanceid=1713&dataid=620&FileName=ABCAnalysisSheet.DATASHEETS.pdf>
- Some potential causes of behavioral problems can include: desire to avoid certain tasks, environmental stressors, need for attention, sensory needs, medical problems, or underlying behavioral health disorder. Inability to communicate needs can also contribute to behavioral problems, so addressing communication skills is important.

**Children with ID are at higher risk for being victims of abuse or neglect.**

**Any child who is suspected of being the victim of abuse or neglect should be reported to the Oklahoma Child Abuse Hotline: 1-800-522-3511.**

**Step 3:** Obtain a comprehensive medical history and physical examination to rule out underlying medical causes if there is a change in behavior from baseline. Obtain appropriate labs as necessary and refer to appropriate medical specialist if needed (e.g. neurologist if concern for seizure disorder.) Common medical conditions to rule out include infections (urinary tract, ear), skin concerns, constipation, seizure disorders, pain, sleep problems, and medication side effects.

**Step 4:** If no medical condition is identified and behavior persists, consider the following:

- Referral to a speech/language therapist if language is delayed. A provider with experience in augmentive communication strategies can help provide alternative communication options for the child.
- Referral to a professional trained in therapy for behavioral management. A professional trained in applied behavioral analysis can perform a functional behavior assessment to characterize behaviors and develop a plan for management. A functional behavior assessment can also be requested by the child's school if the behavior is affecting the child's education. Other therapies studied in children without ID that may be helpful in children with intellectual disability can include, but are not limited to: cognitive-behavioral therapy or parent-child interaction therapy.

**Step 5:** Medications for challenging behaviors should be considered only after other potential causes have been evaluated and addressed or when behavior is severe enough to pose a safety risk. Primary care providers can treat straightforward behavioral health conditions in children with ID, such as ADHD, depression or anxiety. For more complex behavioral issues or increased comorbidity, consider referral to a specialist (such as a developmental-behavioral pediatrician, psychiatrist, or psychologist) for a comprehensive behavioral health evaluation and treatment plan to diagnose and treat co-occurring behavioral health conditions.

## **MEDICATION TREATMENT GUIDELINES**

- Symptoms of behavioral health disorders may present differently in children with ID compared to children without ID. Some may have limitations in communication skills making it difficult to express internal states. Observation of behavioral challenges and comparison to baseline behavior is crucial along with obtaining collateral information from family and caretakers.
- A specialized manual, Diagnostic Manual-Intellectual Disability-2, can assist in diagnosing behavioral health conditions in individuals with Intellectual Disability.<sup>5</sup>
- Obtain appropriate informed consent with patient and/or legal guardian.
- Identify target symptoms for medication and track at regular intervals.
- Start with lowest effective dose and titrate slowly to minimize adverse side effects.
- Minimize polypharmacy to improve medication compliance and lower risk of adverse events/med interactions.
- Try lowering or discontinuing medication after a period of stability, at least yearly.<sup>7</sup>

**Adrenergics:** Alpha agonists such as guanfacine and clonidine have been shown to be effective for symptoms of ADHD and other challenging behaviors in children with ID and other developmental disabilities.<sup>1,14</sup>

**Stimulants:** Stimulants have been shown to be helpful in treating inattention, hyperactivity, and impulsivity in children with ID, but response rates are lower when compared to children without ID. Children with ID are also more susceptible to side effects such as sleep problems and weight loss.<sup>7</sup>

**Antidepressants:** Antidepressant usage has limited studies to support its use in children with ID, but have been shown to be effective for depression and anxiety in children without ID. Concern for higher rates of side effects and low response rates, especially when assessing treatment of repetitive behaviors is notable. Behavioral activation is more common in children with ID and very low dosages should be used to start.<sup>4</sup>

**Antipsychotics:** Antipsychotic medications have been shown to be effective in decreasing challenging behaviors in the short-term. Atypical antipsychotics like risperidone are the most studied in this population, but some studies have also found first generation antipsychotics such as haloperidol and chlorpromazine to be helpful. Aripiprazole and risperidone have FDA approval to treat irritability in children with autism spectrum disorder. It is important to regularly assess the

potential risks and benefits of treatment, which symptoms are being treated with the medication, and document continuing need or attempt to taper off the medicine annually.<sup>12</sup>

**Antiepileptics/Mood stabilizers:** Children with ID have higher rates of seizure disorders. Some antiepileptic medications are also used to treat challenging behaviors. Though the literature is limited, valproic acid, lithium, and carbamazepine have been studied in individuals with ID and other developmental disabilities. Most of the studies supporting their use are in adults or individuals with autism.<sup>7,8</sup>

**Sleep problems:** Focus on sleep hygiene strategies. While not FDA-approved, melatonin and clonidine can be considered.<sup>10</sup>

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#### **OTHER RESOURCES:**

- American Association on Intellectual and Developmental Disabilities  
<http://aaid.org/>
- OHCA Behavioral Health Provider Directory  
<http://apps.okhca.org/providersearch/>
- OHCA Provider Directory: ABA therapists, speech/occupational therapy  
<http://apps.okhca.org/providersearch/>
- Oklahoma Department of Human Services Developmental Disabilities Services (DDS)  
<http://www.okdhs.org/services/dd/Pages/default.aspx>
- Oklahoma Department of Rehabilitation Services  
<http://okrehab.org/>
- Oklahoma Family Network: Informs and connects individuals with special health care needs and disabilities, their families and professionals to services and supports in their communities.  
<http://oklahomafamilynetwork.org/>
- Oklahoma Parents Center: Parent Training and Information Center funded through the U.S. Department of Education, Office of Special Education Programs and Oklahoma State Department of Education. <http://oklahomaparentscenter.org/>

- Oklahoma Systems of Care: 405-248-9200. Systems of care is a comprehensive spectrum of mental health and other support services that are organized into coordinated networks to meet the multiple and changing needs of children, adolescents and their families with a serious emotional disturbance.  
[https://www.ok.gov/odmhsas/Mental\\_Health/Children\\_Youth\\_and\\_Family\\_Services/Systems\\_of\\_Care/index.html](https://www.ok.gov/odmhsas/Mental_Health/Children_Youth_and_Family_Services/Systems_of_Care/index.html)
- Oklahoma University Child Study Center: Provides interdisciplinary evaluations and ongoing medical treatment for children with disabilities as well as other CME trainings for medical providers.  
<https://www.oumedicine.com/department-of-pediatrics/department-sections/devbehav/child-study-center/>
- Sooner SUCCESS: Provides resource specialists in 18 Oklahoma counties to promote a comprehensive, coordinated system of health, social and educational services for Oklahoma children and youth with special needs in their Community.  
<https://soonersuccess.ouhsc.edu/>
- TARC: Advocacy organization that works to ensure a high quality of life for individuals with developmental disabilities and their families through education, empowerment, support, and advocacy. <http://www.ddadvocacy.net/>

# Nightmares

## CLINICAL PEARLS

- Nightmares are common in children and typically resolve by age six (but may increase again during adolescence), reassurance of parental anxiety is important.
- Nightmares are a core feature in Post-Traumatic Stress Disorder and are also seen in anxiety and affective disorders; ruling out an underlying diagnosis is important.
- Nightmares and other sleep disturbances can cause stress on family systems.
- First-line treatment should include psychoeducation and behavioral management.
- Medications (if indicated) for treatment should be short-term and in conjunction with behavioral therapy.
- Nightmares differ from night terrors which are often more distressing to the family opposed to the child.

## RATING SCALES

- Limited scales for assessment, consider use of a sleep log that documents sleep and nightmares. [https://www.choc.org/wp/wp-content/uploads/2016/04/Children-Sleep-Diary-Vers\\_2.pdf](https://www.choc.org/wp/wp-content/uploads/2016/04/Children-Sleep-Diary-Vers_2.pdf)

## TREATMENT APPROACH

**Stage 1:** Review current prescribed and over-the-counter medications to ensure they are not exacerbating problem (e.g. antidepressants, stimulants and neuroleptics).

1A: Sleep Hygiene (see resources below).

**Stage 2:** In-office techniques; progressive muscle relaxation, imagery rehearsal, etc. (see resources below).

**Stage 3:** Refer to licensed therapist for therapy.

**Stage 4:** If therapy not effective, consider use of prazosin<sup>1</sup> (important to counsel family on the expectation of decreased number of nightmares as opposed to total elimination).\*

\*Long-term treatment with medications is not recommended.

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## **OTHER RESOURCES**

- American Academy of Sleep Medicine: <https://aasm.org/>
- National Sleep Foundation: <https://www.sleepfoundation.org/articles/children-and-bedtime-fears-and-nightmares>

# Obsessive Compulsive Disorder (OCD)

## CLINICAL PEARLS

- Pediatric OCD has a prevalence rate of about 1-2%, but it often goes undiagnosed due to secretive nature of symptoms. A substantial number of pediatric-onset OCD cases will become sub-clinical over time. About one third of adult OCD cases have childhood onset.<sup>1</sup>
- OCD is strongly familial. Non-genetic factors have also been studied, including immune response to Group A beta-hemolytic strep infection (i.e. PANDAS).<sup>2</sup>
- Children and adolescents have higher rates of aggressive/harm obsessions (fear of catastrophic events, such as death or illness of a loved one or themselves).
- For compulsions, hoarding is seen more often in children and adolescents than adults. As with adults, children and adolescents typically have multiple obsessions and compulsions.
- Children may present primarily with compulsive behaviors, with poor insight into obsessions or limited ability to communicate them due to developmental stage.<sup>1</sup>
- Medication alone leads to 30-40% reduction in OCD symptoms, leaving clinically significant symptom burden in moderate-to-severe cases. For this reason, combination treatment with cognitive behavior therapy (CBT) and medication is strongly recommended.<sup>3</sup> Alone or in combination with medication, patients treated with CBT show higher probability of improvement and remission.<sup>4</sup>
- OCD is frequently comorbid with other psychiatric disorders.

## RATING SCALE

- Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS)  
<https://iocdf.org/wp-content/uploads/2016/04/05-CYBOCS-complete.pdf>

## TREATMENT APPROACH

**Stage 1:** Diagnostic assessment including clinical interview based on DSM-5 criteria and CY-BOCS administered by a clinician. Assessment for comorbid psychiatric disorders should be included. 2

**Stage 2:** Cognitive behavior therapy with elements of exposure and response prevention is first line treatment for OCD and can be used as monotherapy in mild-to-moderate cases. 2

**Stage 3:** For moderate-to-severe OCD (CY-BOCS score >23) or failure to respond to CBT alone, combination treatment with CBT and medication is indicated.

- Start an SSRI (sertraline, fluoxetine, fluvoxamine) with titration to the maximum effective dose over first four weeks of treatment.<sup>5</sup>



**Stage 4:** If minimal or no response after eight to 10 weeks on maximum recommended or maximum tolerated dose, switch to another SSRI.<sup>2</sup>

**Stage 5:** Medication augmentation should be considered if partial response to initial SSRI treatment or no response to two adequate SSRI trials. Augmentation of SSRI with low dose clomipramine (dose 25–75 mg) has been shown to be effective.<sup>3</sup>

- Clomipramine has risk of arrhythmia and should be used with caution if personal or family history of heart disease. Baseline EKG should be obtained. It can interact with some SSRIs, leading to increases in serum clomipramine levels.<sup>2</sup>
- Caution and monitoring for medication interactions. CYP-450 2D6 inhibitors (fluoxetine) can increase serum clomipramine levels.

**Stage 6:** If only partial response or no response to adequate trials of two SSRI or SSRI and augmentation with clomipramine, consider augmentation with an atypical antipsychotic. Risperidone and aripiprazole have the most evidence in pediatric populations.<sup>2</sup>

- Baseline and follow-up weight, fasting lipid, and serum glucose profiles required.

| Drug          | Typical Dose Range |
|---------------|--------------------|
| Sertraline    | 50 mg - 200 mg     |
| Fluoxetine    | 10 mg- 80 mg       |
| Fluvoxamine   | 50 mg – 300 mg     |
| Citalopram*   | 10 mg – 40 mg      |
| Escitalopram* | 10 mg – 20 mg      |

\*Citalopram and Escitalopram are not FDA approved for OCD and were not included in large studies for pediatric OCD.

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## OTHER RESOURCES

- International OCD Foundation: Provides educational resources, community events, outreach programs, advocacy, and professional training opportunities. <https://iocdf.org/>
- Obsessive Compulsive Disorder Resource Center American Academy of Child & Adolescent Psychiatry. [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Obsessive-Compulsive-Disorder-In-Children-And-Adolescents-060.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Obsessive-Compulsive-Disorder-In-Children-And-Adolescents-060.aspx)
- Talking Back to OCD: The Program That Helps Kids and Teens Say “No Way”—and Parents say “Way to Go” by Dr. John March. [https://www.amazon.com/Talking-Back-OCD-Program-Parents/dp/1593853556/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1477686075&sr=1-1&keywords=talking+back+to+ocd](https://www.amazon.com/Talking-Back-OCD-Program-Parents/dp/1593853556/ref=sr_1_1?s=books&ie=UTF8&qid=1477686075&sr=1-1&keywords=talking+back+to+ocd)

# Oppositional Defiant Disorder and Conduct Disorder

## CLINICAL PEARLS

- Opposition Defiant Disorder (ODD) and Conduct Disorder (CD) are considered a spectrum of disruptive behavior disorders.
- First-line treatment should include a culturally-sensitive family-based therapy.
- Conduct Disorder with callous and unemotional traits holds a worse prognosis.
- Co-Morbidity with ADHD, anxiety, substance use, depression, and trauma-related symptoms is common. If indicated pharmacological treatment should focus on co-morbid diagnosis if therapy is not effective.
- Medications are typically reserved for severe disruptive and aggressive behavior.

## RATING SCALES

- Vanderbilt Assessment Scales  
[https://www.nichq.org/sites/default/files/resource-file/NICHQ\\_Vanderbilt\\_Assessment\\_Scales.pdf](https://www.nichq.org/sites/default/files/resource-file/NICHQ_Vanderbilt_Assessment_Scales.pdf)
- Children's Aggression Scale  
<https://www.parinc.com/products/pkey/38>

## TREATMENT APPROACH

**Stage 1:** Family-based therapy (e.g. Parent-Child Interaction Therapy for ODD, Multisystemic therapy, functional family therapy for CD) is considered first-line, including school and other systems when indicated.\*

### **THERAPY PRINCIPLES**

1. Reduce positive reinforcement of disruptive behavior.
2. Increase reinforcement of prosocial and complaint behaviors (parental attention is imperative).
3. Apply consequences for disruptive behavior.
4. Make parental responses predictable, contingent and immediate.

1A: Monitor for treatment response with rating scale (if improving continue therapy, if not improving f/u with therapist)

**Stage 2:** If symptoms persist or co-morbid anxiety/depression/ADHD ensure adequate treatment for co-morbid disorders

**Stage 3:** Monitor for treatment response if not improving and/or aggression is severe consider protocol for managing **aggressive** behaviors.

\*Boot Camps, scared-straight scenarios are not recommended.

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## **OTHER RESOURCES**

- Lives in the Balance <https://www.livesinthebalance.org/>
- The Explosive Child, by Dr. Ross Green
- Blueprints for healthy youth development <https://www.blueprintsprograms.org/program-search/>

## PTSD and Trauma-Related Disorders 6–17 years

- Posttraumatic Stress Disorder (lasting over one month)
- Acute Stress Disorder (lasting up to one month)
- Adjustment Disorders (occurring within three months of stressor, not meeting criteria for above)

### CLINICAL PEARLS

- Exposure to trauma is common, by the end of adolescents more than half of young people will have been exposed to a traumatic event; screening for trauma/stressors when behavioral/emotional problems emerge is imperative to accurate diagnosis.
- First line-treatment is a trauma-focused therapy (e.g. Trauma-Focused Cognitive Behavioral Therapy, Eye-Movement Desensitization and Reprocessing Therapy)<sup>10</sup>
- Screening for abuse and trauma should occur in a developmentally-appropriate environment, which includes interviewing the child/adolescent alone
- If abuse is suspected the DHS hotline should be called 1-800-522-3511
- Co-Morbidity with ADHD, Anxiety, Substance Use, Depression and others is common. If co-morbid diagnosis is not improving with treatment, a trauma-focused treatment should be implemented.<sup>14</sup>

### RATING SCALES

- Child and Adolescent Trauma Screen (CATS)  
<http://oklahomatfcbt.org/audiences/tf-cbt-therapists/assessment-resources/>

### TREATMENT APPROACH

**Stage 1:** Trauma-Focused Therapy including Parent/Guardian (Trauma-Focused Cognitive Behavioral Therapy, Seeking Safety, Cognitive-Behavioral Interventions for Trauma in Schools, Eye-Movement Desensitization and Reprocessing Therapy).

1A: Monitor for treatment response with rating scale. If improving continue therapy, if not improving follow up with therapist.

**Stage 2A:** With Co-Morbid Anxiety or Depression: If symptoms persist or co-morbid anxiety/depression consider starting SSRI<sup>10</sup>(e.g. citalopram<sup>11</sup>) four to six weeks for treatment response in combination with trauma-focused therapy.

**Stage 2B:** with Co-Morbid Hypervigilant Response/Hyperarousal: Monitor for treatment response if not improving consider clonidine<sup>3</sup>/guanfacine<sup>4</sup> (four to six weeks for treatment response) in conjunction with a trauma-focused therapy.

**Stage 3:** If symptoms persist, are severe and are more consistent with hypervigilance and paranoia, and are not helped with SSRI and/or alpha agonist there is very limited data to support the use of an atypical antipsychotic (quetiapine<sup>12</sup>, risperidone<sup>8</sup>)—although studies are small.

**Stage 4:** If symptoms are not improving, consider referral to child and adolescent psychiatry.

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### **OTHER RESOURCES**

- National Child Traumatic Stress Network: [www.nctsn.org](http://www.nctsn.org)
- Oklahoma TF-CBT: <http://oklahomatfcbt.org/audiences/tf-cbt-therapists/assessment-resources/>



## Sleep-Onset Insomnia

### CLINICAL PEARLS:

- Approximately 25% of all children will experience a form of sleep disorder during childhood. The spectrum ranges from transient difficulty with sleep onset or night awakenings to obstructive sleep apnea.
- Consider entire family routines / circumstances, sleep environment, and previous interventions
- Rule out sleep-disordered breathing, adverse effect of other pharmacologic treatment, and neuropsychiatric co-morbidities (i.e. autism or anxiety)
- Behavioral modification is the mainstay of treatment. Adjunctive pharmacotherapy may be considered when tailored to patient age and co-morbidities
- The Food and Drug Administration (FDA) has not approved any prescription hypnotic for use in people younger than 18 years of age. The family should be informed of “off label” use.
- A lack of adequate well-designed clinical trials in children translates to a paucity of data on dosing, efficacy, tolerability, and safety profiles of medications AND no FDA approval.

### RATING SCALES:

- Children’s Sleep Habits Questionnaire:  
<http://njaap.org/wp-content/uploads/2016/04/Childrens-Sleep-Habits-Questionnaire.pdf>
- Pediatric Insomnia Severity Index:  
<https://academic.oup.com/jpepsy/article-pdf/42/4/466/13062627/jsw077.pdf> [Figure 1 at top of page 468]
- BEARS Sleep Screening Tool:  
<https://www.med.upenn.edu/cbti/assets/user-content/documents/BEARS%20Sleep%20Screening%20Tool.pdf>
- Pediatric Sleep and Autism Clinical Global Impressions Scale:  
[https://download.lww.com/wolterskluwer\\_vitalstream\\_com/PermaLink/JDBP/A/JDBP\\_2016\\_04\\_01\\_MALOW\\_15-198\\_SDC1.pdf](https://download.lww.com/wolterskluwer_vitalstream_com/PermaLink/JDBP/A/JDBP_2016_04_01_MALOW_15-198_SDC1.pdf)

### TREATMENT APPROACH:

**Stage 1:** Behavioral supports in the home: sleep logs to monitor sleep, stimulus control therapy, Sleep hygiene therapy, behavior modification therapy.

**Stage 2:** Referral for therapy/mental health support.

**Stage 3:** Non-prescription drug: melatonin 2.5–10 mg by mouth one-to-two hours before bedtime.

**Stage 4:** Prescription drug: clonidine immediate release 0.05mg by mouth one hour before bedtime. Titrate dose in 0.05mg not to exceed 0.2mg of immediate release concerns for hypotension and rebound hypertension. Medications for sleep should be time limited.

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3. Gingras, P., Nit, T., Breddy, J., Frydman-Maron, A., Findling, R. 2017 Efficacy and Safety of Pediatric Prolonged-release Melatonin for Insomnia in Children with Autism Spectrum Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(11):948–957
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### **OTHER RESOURCES:**

- [American Academy of Pediatrics](#)
- [American Family Physician](#)
- [Healthychildren.org](#)

# Substance Abuse

## CLINICAL PEARLS

- Tobacco, alcohol, and marijuana are the most common non-prescription agents abused by Oklahoma high school students. Pain medications and stimulants are the most common prescriptions abused by Oklahoma high school students.
- Substance abuse correlates with risk-taking behaviors (e.g. unprotected sex, impaired driving).
- Confidential care and screening is recommended every time an adolescent receives medical care. Drug and substance use or abuse of alcohol meets criteria for self-consent by minor in Oklahoma. Parent involvement should be encouraged when appropriate, but not mandated.
- Substance abuse goes undetected by nearly two-thirds of primary care providers.
- Providers are encouraged to use medications with lower abuse potential when treating co-morbid conditions (e.g. atomoxetine for ADHD).

## RATING SCALES:

- Screening to Brief Intervention (S2BI): [https://www.mcpap.com/pdf/S2BI\\_postcard.pdf](https://www.mcpap.com/pdf/S2BI_postcard.pdf)
- Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT): [https://www.integration.samhsa.gov/clinical-practice/sbirt/CRAFFT\\_Screening\\_interview.pdf](https://www.integration.samhsa.gov/clinical-practice/sbirt/CRAFFT_Screening_interview.pdf)

## TREATMENT APPROACH:

### **Screening, Brief Intervention, Referral to Treatment (SBIRT)**

Use of the SBIRT process is an evidence-based practice model shown to identify, reduce, and prevent substance abuse. The model is designed for use across multiple medical settings including primary care and community health centers. Physician and administrative champions are helpful when implementing an SBIRT approach, however specific screening and assessment functions can be effectively accomplished by medical assistants and other clinical and administrative staff.

|  |  |  |
|--|--|--|
| <b>Stage 1:<br/>Screening</b>          | <ul style="list-style-type: none"> <li>• Anticipatory guidance: Encourage parents to discuss healthy, substance-free means to express or resolve feelings such as elation, stress, disappointment, or pain.</li> <li>• Recommend abstinence as the best health advice for teens and advise parents to set a clear “no use” policy around alcohol, tobacco, and other drug use.</li> <li>• Administer S2BI screening tool every time an adolescent patient receives medical care to address use of tobacco, alcohol, and other legal and illegal drugs.</li> <li>• Implement use of the “5 A’s” tobacco-specific tool when patients and/or parents express a desire to stop smoking.</li> </ul> |  |
| <b>Stage 2:<br/>Brief Intervention</b> | Screening result<br><b>“Never”</b>   | Provide positive reinforcement.  |
|  | Screening result<br><b>“Once or twice”</b>   | <ul style="list-style-type: none"> <li>• Unlikely to have substance abuse disorder.</li> <li>• If opioid abuse is suspected or confirmed, provide patient training on use of naloxone.</li> <li>• If opioid abuse is suspected or confirmed, provide patient training on use of naloxone.</li> <li>• Provide physician-delivered advice to quit, combined with a brief explanation of the negative impacts on health. (See Appendix C of Adolescent Toolkit for complete discussion of negative health consequences.)<br/> <a href="http://files.hria.org/files/SA3541.pdf">http://files.hria.org/files/SA3541.pdf</a> </li> </ul> |
|  | Screening result<br><b>“Monthly”</b>   | <ul style="list-style-type: none"> <li>• Provide motivational interventions: short, structured conversations based on the principles of motivational interviewing (MI); clinician explores problems, recognize ambivalence, listens for “change talk.”</li> <li>• Implement use of the “5 R’s” to increase tobacco-specific motivation to quit.</li> <li>• Use CRAFFT questions to generate interventions.</li> <li>• Provide clear advice to quit.</li> <li>• Co-develop a specific change plan to target high-risk behaviors.</li> <li>• Schedule follow-up appointment.</li> </ul>  |

|   |   |  |
|---|---|--|
| <b>Stage 2:<br/>Brief Intervention</b>    | Screening result<br><b>“Weekly or more”</b>   | <ul style="list-style-type: none"> <li>• Offer referral to counselors who are skilled at working with youth substance use disorders (motivational interviewing, cognitive behavioral therapy, contingency management, etc.). Using MI techniques may facilitate referral acceptance.</li> <li>• Ask for permission to discuss screening results with parents/guardians.</li> <li>• Evaluate and treat co-occurring mental health disorder(s).</li> <li>• Establish plan for ongoing toxicology screenings.</li> </ul>  |
|   | Acute danger  | <ul style="list-style-type: none"> <li>• Evaluate suicidality risk.</li> <li>• Assess risk of abuse from parent/guardian, then explain need to break confidentiality. Inform parents/guardians with input from patient.</li> <li>• Initiate “safety plan” until next appointment.</li> <li>• Refer to substance abuse specialist for urgent evaluation.</li> <li>• Provide monitoring advice for parents, including use of naloxone.</li> <li>• (See pg. 27 of Adolescent SBIRT Toolkit.) <a href="http://files.hria.org/files/SA3541.p">http://files.hria.org/files/SA3541.p</a></li> </ul> |
| <b>Stage 3:<br/>Referral to Treatment</b> | <ul style="list-style-type: none"> <li>• Conduct comprehensive biopsychosocial assessment.</li> <li>• Refer to least restrictive environment that supports clinical needs.             <ul style="list-style-type: none"> <li>○ Outpatient, inpatient and residential <a href="#">treatment options</a> are available to children and adolescents</li> </ul> </li> <li>• Use medical home to provide continuity of care and coordinate specialty services.</li> <li>• Review hepatitis A and B vaccination status and complete missing vaccinations.</li> <li>• Alcohol abuse:             <ul style="list-style-type: none"> <li>○ Medications to target alcohol cravings and withdrawal have not been evaluated for use in children and adolescents. Their use could be considered in the most treatment-resistant circumstances. Agents include:                 <ul style="list-style-type: none"> <li>▪ Alcohol craving: naltrexone, acamprosate, ondansetron</li> </ul> </li> </ul> </li> <li>• Alcohol withdrawal: benzodiazepine</li> </ul> |  |

**Stage 3:  
Referral to  
Treatment  
(Additional  
Treatments  
for Opioid Use  
Disorder)**

- Opioid use disorder:
  - Medication-assisted treatment (MAT) is currently recommended by the American Academy for Pediatrics (AAP) for adolescents and young adults with severe opioid use disorder.
    - Buprenorphine is approved for patients age  $\geq 16$  years and is available as SL film/tablets, as a single agent or in combination with naloxone.
      - Prescriber must [obtain DEA-X waiver](#) to prescribe.
    - Vivitrol® (naltrexone ER injection) is approved for patients age  $\geq 18$  years.
      - Monthly injections; patients must be opioid-free for a minimum of 7 to 10 days prior to initiation of treatment.
    - Federally-funded methadone clinic regulations prohibit treatment of patients under age 18 years.
  - Behavior-based treatments are recommended and include counseling, social support, problem solving, encouragement, and skills training.
    - Face-to-face and/or telephonic assistance are recommended and may be delivered individually or in a group setting.
    - Helpline support services are offered at no charge for Oklahoma citizens; services have no restrictions associated with income, insurance coverage, or age.
  - Pharmacotherapy can be considered as an option for adolescents with moderate to severe tobacco dependence.
    - Medication treatment recommendations for adults include first line agents (bupropion SR, varenicline, and nicotine replacement)
      - No medications are currently FDA-approved for treatment of tobacco dependence for patients age  $\leq 17$  years.
      - Nicotine replacement has been shown to be safe for adolescents. It is not currently recommended due to inconsistent efficacy results.
      - Electronic cigarettes and/or “vaping” products are not recommended to treat tobacco dependence.
- Tobacco use:
  - Behavior-based treatments are recommended and include counseling, social support, problem solving, encouragement, and skills training.
    - Face-to-face and/or telephonic assistance are recommended and may be delivered individually or in a group setting.
    - Helpline support services are offered at no charge for Oklahoma citizens; services have no restrictions associated with income, insurance coverage, or age.
  - Pharmacotherapy can be considered as an option for adolescents with moderate to severe tobacco dependence.
    - Medication treatment recommendations for adults include first line agents (bupropion SR, varenicline, and nicotine replacement)
      - No medications are currently FDA-approved for treatment of tobacco dependence for patients age  $\leq 17$  years.
      - Nicotine replacement has been shown to be safe for adolescents. It is not currently recommended due to inconsistent efficacy results.
      - Electronic cigarettes and/or “vaping” products are not recommended to treat tobacco dependence.

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- Rural Health Information Hub. Substance Abuse in Rural Areas. Available online at: <https://www.ruralhealthinfo.org/topics/substance-abuse>.
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- Micromedex® 2.0, Truven Health Analytics, Greenwood Village, Colorado, USA. <http://www.micromedexsolutions.com/>.

## **OTHER RESOURCES:**

Oklahoma State Law – Minor’s ability to consent to confidential health services:

<http://tulsacampaign.org/wp-content/uploads/Oklahoma-State-Law.pdf>

Prevention and Treatment of Substance Use Disorders in Rural Communities Toolkit:

<https://www.ruralhealthinfo.org/toolkits/substance-abuse>

Quick Guide: Adolescent Screening, Brief Intervention, Referral for Treatment (SBIRT):

<http://files.hria.org/files/SA3543.pdf>

University of Oklahoma SBIRT Collaborative:

<http://www.ou.edu/cas/socialwork/centers-programs/csw/sbirt> (not pediatric specific)

Toolkit: [https://www.ok.gov/odmhsas/documents/SBImanualfinal4\\_16\\_SBIRT.pdf](https://www.ok.gov/odmhsas/documents/SBImanualfinal4_16_SBIRT.pdf)

Adolescent SBIRT Toolkit—including S2BI tool: <http://files.hria.org/files/SA3541.pdf>

Students Against Destructive Decisions: <https://sadd.org/>

Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide—including motivational interventions: <https://www.niaaa.nih.gov/sites/default/files/publications/YouthGuide.pdf>

National Institute of Mental Health Suicidality Risk Assessment:

[https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/asq-tool/screening-tool\\_155867.pdf](https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials/asq-tool/screening-tool_155867.pdf)

Oklahoma Substance Abuse Referral: <https://www.ok.gov/odmhsas/>

National Suicide Prevention Lifeline Safety Plan:

[https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown\\_StanleySafetyPlanTemplate.pdf](https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown_StanleySafetyPlanTemplate.pdf)

National Suicide MY3 Suicide Prevention app: <https://my3app.org/>

Oklahoma Prescription for Change Naloxone Training: <https://okimready.org/overdose/>

U.S. Department of Health and Human Services Abuse Risk Assessment:

<https://www.childwelfare.gov/topics/systemwide/assessment/family-assess/id-can/>

Substance Abuse Treatment Locator: <https://www.samhsa.gov/find-treatment>

Oklahoma Tobacco Helpline: <https://okhelpline.com/>, 1-800-QUIT-NOW

Adolescent version of MAT training available for members of AAP: [www.aap.org](http://www.aap.org)

World Health Organization: Toolkit for delivering the 5 A’s and 5 R’s brief tobacco interventions in primary care: [https://apps.who.int/iris/bitstream/handle/10665/112835/9789241506953\\_eng.pdf;jsessionid=70EEDF9FBEED2F7C91E30619253ACC80?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/112835/9789241506953_eng.pdf;jsessionid=70EEDF9FBEED2F7C91E30619253ACC80?sequence=1)

SoonerCare Tobacco Cessation Benefit: <http://www.okhca.org/providers.aspx?id=2735>

Poster: Benefits of Quitting Tobacco: <http://www.okhca.org/publications/pdflib/English%20-TSET%20OHC%20SoonerCare%20Bookmark%20Benefits%20Card-Updated2017.pdf>



## Suicidal Ideation

### CLINICAL PEARLS:

- Rates of completed suicide in the United States have consistently risen over the last two decades with significant increase in 44 states and it is the second leading cause in children and adolescents among age 10 to 19 years.
- Universal Screening is important given 17% of all high school students reported suicidal ideation in the last year. While 8% of American High School Students report a suicide attempt.
- When treating youth with depression and/or suicidal ideation; psychoeducation about removal of access to firearms, lethal weapons, medications and other potential self-harming items is important in prevention.
- Almost half of suicide attempters have had a primary care physician visit within 30 days of attempting.
- When treating psychiatric disorders it is important to use evidence-based treatments. SSRIs are first-line treatments for depressive disorders. Psychotherapeutic interventions with strongest support to address suicidality include Dialectical Behavior Therapy, Cognitive Behavior Therapy and mentalization-based therapies.
- Ketamine has no evidence to help with suicidality and may increase suicide in some instances.

### OBSERVABLE WARNING SIGNS THAT ARE HIGH RISK FACTORS:

Each patient is unique and a comprehensive assessment of risk factors helps identify the level of intervention needed. Intervention can vary from outpatient treatment to inpatient treatment and assessment helps identify the level of treatment needed. Certain warning signs are higher risk and stated below.

- Seeking means to kill oneself, non-suicidal self-injurious behavior and suicide attempts.
- Hopelessness, purposelessness, not belonging.
- Expressions of anger, mood, recklessness.
- Withdrawal from activities.
- Seeking out internet sites on how to commit suicide.

## RATING SCALES

- Columbia Suicide Rating Scale is freely available validated widely utilized scale:  
<https://suicidepreventionlifeline.org/wp-content/uploads/2016/09/Suicide-Risk-Assessment-C-SSRS-Lifeline-Version-2014.pdf>
- Suicidal Behaviors Questionnaire (SBQ) is a highly recommended free resource:  
<https://mfr.osf.io/render?url=https://osf.io/vg2sn/?action=download%26mode=render>
- Patient Health Questionnaire (PHQ-9) Modified for Adolescents (PHQ-A): ages 11-17:  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjxs\\_zor7zjAhVFWs0KHc9hAsAQFjAAegQIAhAC&url=https%3A%2F%2Fwww.psychiatry.org%2FFile%2520Library%2FPsychiatrists%2FPractice%2FDSM%2FAPA\\_DSM5\\_Severity-Measure-For-Depression-Child-Age-11-to-17.pdf&usg=AOvVaw35XhmW8SFxp4QR6NyDN9MA](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjxs_zor7zjAhVFWs0KHc9hAsAQFjAAegQIAhAC&url=https%3A%2F%2Fwww.psychiatry.org%2FFile%2520Library%2FPsychiatrists%2FPractice%2FDSM%2FAPA_DSM5_Severity-Measure-For-Depression-Child-Age-11-to-17.pdf&usg=AOvVaw35XhmW8SFxp4QR6NyDN9MA)
- Center for Epidemiological Studies Depression Scale for Children (CES-DC):  
[https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces\\_dc.pdf](https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf)

## RESOURCES

- Download this card and additional resources at <http://www.sprc.org>
- Resource for implementing The Joint Commission 2007 Patient Safety Goals on Suicide <http://www.sprc.org/library/jcsafetygoals.pdf>
- SAFE-T** drew upon the American Psychiatric Association Practice Guidelines for the Assessment and Treatment of Patients with Suicidal Behaviors [http://www.psychiatryonline.com/pracGuide/pracGuideTopic\\_14.aspx](http://www.psychiatryonline.com/pracGuide/pracGuideTopic_14.aspx)
- Practice Parameter for the Assessment and Treatment of Children and Adolescents with Suicidal Behavior. *Journal of the American Academy of Child and Adolescent Psychiatry*, 2001, 40 (7 Supplement): 24s-51s

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## National Suicide Prevention Lifeline 1-800-273-TALK (8255)



<http://www.sprc.org>



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Printed 2009

# SAFE-T

## Suicide Assessment Five-step Evaluation and Triage

1

**IDENTIFY RISK FACTORS**  
Note those that can be modified to reduce risk

2

**IDENTIFY PROTECTIVE FACTORS**  
Note those that can be enhanced

3

**CONDUCT SUICIDE INQUIRY**  
Suicidal thoughts, plans, behavior, and intent

4

**DETERMINE RISK LEVEL/INTERVENTION**  
Determine risk. Choose appropriate intervention to address and reduce risk

5

**DOCUMENT**  
Assessment of risk, rationale, intervention, and follow-up



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Substance Abuse and Mental Health Services Administration  
[www.samhsa.gov](http://www.samhsa.gov)

*Suicide assessments should be conducted at first contact, with any subsequent suicidal behavior, increased ideation, or pertinent clinical change; for inpatients, prior to increasing privileges and at discharge.*

### 1. RISK FACTORS

- ✓ **Suicidal behavior:** history of prior suicide attempts, aborted suicide attempts, or self-injurious behavior
- ✓ **Current/past psychiatric disorders:** especially mood disorders, psychotic disorders, alcohol/substance abuse, ADHD, TBI, PTSD, Cluster B personality disorders, conduct disorders (antisocial behavior, aggression, impulsivity)  
Co-morbidity and recent onset of illness increase risk
- ✓ **Key symptoms:** anhedonia, impulsivity, hopelessness, anxiety/panic, global insomnia, command hallucinations
- ✓ **Family history:** of suicide, attempts, or Axis I psychiatric disorders requiring hospitalization
- ✓ **Precipitants/Stressors/Interpersonal:** triggering events leading to humiliation, shame, or despair (e.g., loss of relationship, financial or health status—real or anticipated). Ongoing medical illness (esp. CNS disorders, pain). Intoxication. Family turmoil/chaos. History of physical or sexual abuse. Social isolation
- ✓ **Change in treatment:** discharge from psychiatric hospital, provider or treatment change
- ✓ **Access to firearms**

### 2. PROTECTIVE FACTORS *Protective factors, even if present, may not counteract significant acute risk*

- ✓ **Internal:** ability to cope with stress, religious beliefs, frustration tolerance
- ✓ **External:** responsibility to children or beloved pets, positive therapeutic relationships, social supports

### 3. SUICIDE INQUIRY *Specific questioning about thoughts, plans, behaviors, intent*

- ✓ **Ideation:** frequency, intensity, duration—in last 48 hours, past month, and worst ever
- ✓ **Plan:** timing, location, lethality, availability, preparatory acts
- ✓ **Behaviors:** past attempts, aborted attempts, rehearsals (tying noose, loading gun) vs. non-suicidal self injurious actions
- ✓ **Intent:** extent to which the patient (1) expects to carry out the plan and (2) believes the plan/act to be lethal vs. self-injurious.  
Explore ambivalence: reasons to die vs. reasons to live
- \* **For Youths:** ask parent/guardian about evidence of suicidal thoughts, plans, or behaviors, and changes in mood, behaviors, or disposition
- \* **Homicide Inquiry:** when indicated, esp. in character disordered or paranoid males dealing with loss or humiliation. Inquire in four areas listed above

### 4. RISK LEVEL/INTERVENTION

- ✓ **Assessment of risk level** is based on clinical judgment, after completing steps 1-3
- ✓ **Reassess** as patient or environmental circumstances change

| RISK LEVEL | RISK/PROTECTIVE FACTOR   | SUICIDALITY   | POSSIBLE INTERVENTIONS   |
|------------|--|---|--|
| High       | Psychiatric diagnoses with severe symptoms or acute precipitating event; protective factors not relevant | Potentially lethal suicide attempt or persistent ideation with strong intent or suicide rehearsal | Admission generally indicated unless a significant change reduces risk. Suicide precautions              |
| Moderate   | Multiple risk factors, few protective factors  | Suicidal ideation with plan, but no intent or behavior  | Admission may be necessary depending on risk factors. Develop crisis plan. Give emergency/crisis numbers |
| Low        | Modifiable risk factors, strong protective factors   | Thoughts of death, no plan, intent, or behavior   | Outpatient referral, symptom reduction. Give emergency/crisis numbers                                    |

(This chart is intended to represent a range of risk levels and interventions, not actual determinations.)

- 5. **DOCUMENT** Risk level and rationale; treatment plan to address/reduce current risk (e.g., medication, setting, psychotherapy, E.C.T., contact with significant others, consultation); firearms instructions, if relevant; follow-up plan. For youths, treatment plan should include roles for parent/guardian.

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## **OTHER RESOURCES:**

- National Suicide Prevention Lifeline: <https://suicidepreventionlifeline.org/>
- Safety planning app developed by National Suicide Foundation outlines a safety plan including warning signs, coping mechanisms: <https://my3app.org/>
- Assessment card :SAFE-T The SAFE-T card guides clinicians through five steps, which address the patient’s level of suicide risk and suggest appropriate interventions:  
<https://store.samhsa.gov/system/files/sma09-4432.pdf>  
<https://www.sprc.org/resources-programs/suicide-assessment-five-step-evaluation-and-triage-safe-t-pocket-card>
- Calm: Counseling on access to lethal means is a free online training resource for professionals on this topic: <http://www.sprc.org/resources-programs/calm-counseling-access-lethal-means>
- Mobile Crisis Response Teams are a 24-hour, 7-day-per-week service that provides assistance for mental health and substance abuse crises through telephone or face-to-face assessments:  
[https://www.ok.gov/odmhsas/Mental\\_Health/Enhanced\\_Childrens\\_Mobile\\_Crisis.html](https://www.ok.gov/odmhsas/Mental_Health/Enhanced_Childrens_Mobile_Crisis.html)

# USE OF COMPLEMENTARY AND ALTERNATIVE TREATMENTS (CBD, MELATONIN, AND HERBAL PRODUCTS)

## GENERAL INFORMATION

- Always ask patients and caregivers about any non-prescription products a patient may be taking. Ask specifically about over-the-counter medications, herbal and dietary supplements, and nutraceuticals.
- Evaluate medication list of prescription and non-prescription medications for drug-drug, drug-disease, and drug-food interactions that may impact care.
- Dietary supplements and herbal products are not FDA-approved and therefore are not regulated by the same rules prescription medications are, increasing chances of product strength variation.

## SPECIFIC PRODUCTS, CATEGORIES, AND PEARLS

- Cannabis and derivatives:
  - The cannabis plant contains many derivatives; the two most well-known are delta-9-tetrahydrocannabinol ( $\Delta^9$ -THC, or THC) and cannabidiol (CBD).<sup>5,11</sup>
  - CBD is most commonly formulated into oil. Ideally this oil would be purely CBD, but most report having some THC too. The maximum allowable amount of THC that can be present in CBD oil sold in the U.S. is 0.3%, or 3 mg/mL.<sup>8</sup>
  - THC has been linked to the development of schizophrenia and is a contributor to neurodevelopment deficits in adolescents.<sup>3,11</sup> There are no indications for medical marijuana for pediatric patients with mental health disorders, sleep disorders, anxiety, pain, post-traumatic stress disorder.<sup>7</sup>
  - We do not recommend the use of medical marijuana in pediatric patients. Both the American Academy of Child and Adolescent Psychiatry and American Academy of Pediatrics opposed marijuana legalization for both medical and recreational use because of the danger to children and adolescents with increased access, decreased perception of harm, and increased marijuana use among parents and caretakers.<sup>1,2</sup>
  - In a sample of 84 products purchased online, less than 50% of the products had accurate amounts of CBD concentration. Also, THC was detected in 21% of the samples with concentrations as high as 6.43 mg/mL.<sup>4</sup> This raises concern about what concentration of CBD and THC a consumer is purchasing without oversight by the FDA.
  - Pure CBD oil has been FDA-approved for Lennox-Gastaut and Dravet syndrome in pediatric patients.<sup>16</sup> It is, however, not recommended to prescribe or recommend non-prescription, over-the-counter CBD oil, THC, or any other cannabis-derived products for children.

- Melatonin<sup>6</sup>
  - Melatonin is considered a dietary supplement and is therefore not regulated by the FDA.
  - Melatonin is used for multiple indications with differing instructions. When used as a sleep inductor, recommend the patient take 1–3mg by mouth 30 minutes before bedtime. When used to regulate circadian rhythm, start with a low dose of 0.2–0.5mg fast release melatonin 3–4 hours before bedtime and increase in 0.2–0.5mg increments every week as needed.
  - Melatonin can lose its efficacy due to slow metabolism through the CYP 1A2 enzyme. If this occurs, consider decreasing the dose, therefore decreasing the serum concentration levels, until effect is seen. If ineffective, discontinue melatonin due to it suppressing endogenous production.
- Herbal Medications
  - Herbal medications are dietary supplements and are not regulated by the FDA.
  - There is little evidence to support the use of herbal medications in pediatric patients. It is important for clinicians to ask patients about herbal medications.
  - If the physician, pharmacist, and patient agree that an herbal medication should be tried, only use herbal products that have been verified by the United States Pharmacopoeia (USP). The USP initiated a voluntary dietary supplement verification program that provides consumers with products that have met regulatory standards for purity, accuracy of ingredient labels, and good manufacturing practices.<sup>17</sup> A list of these herbal products can be found at:  
<https://www.usp.org/dietary-supplements/reference-standards>
  - Information about herbal products can be found at Natural Medicines Comprehensive Database, Consumer Version:  
<http://naturaldatabaseconsumer.therapeuticresearch.com/home.aspx?cs=&s=NDC>
- L-Methylfolate
  - L-Methylfolate is a dietary supplement not regulated by the FDA. This supplement is thought to assist in patients with errors of folate metabolism who may be more vulnerable to oxidative stress.<sup>15</sup>
  - L-Methylfolate is thought to augment treatment of major depressive disorder in adults with partial or no response to selective serotonin reuptake inhibitors.<sup>12</sup> There have been a small number of positive studies to support l-methylfolate in pediatric patients with treatment-resistant depression.<sup>9,13</sup>
  - If L-Methylfolate is started in a pediatric patient, initiate at 7.5mg by mouth daily and increase to 15mg by mouth daily maximum.
  - Adverse effects seen in pediatric studies include impaired sleep and increased anxiety, although the frequency of these effects is low.<sup>13</sup>

- Omega-3 Fatty Acids
  - Pediatric Bipolar Depression, treatment resistant: Omega-3 fatty acids have been suggested for patients diagnosed with pediatric bipolar depression who are treatment resistant. The suggested dose is 500 mg to 1000 mg by mouth twice daily. Products with eicosapentaenoic acid (EPA) to docosahexaenoic acid (DHA) ratios of 2:1 are preferred. Do not use as monotherapy for pediatric bipolar major depression.<sup>18</sup>
  - Autism Spectrum Disorder: Omega-3 fatty acids do not reduce core symptoms of ASD, but these are not likely to be harmful.<sup>3,10,14</sup> Doses used in studies were 1.3–1.5 grams per day, although no specific indication-specific recommendations exist.
  - Omega-3 fatty acids' common adverse effects are primarily gastrointestinal in nature (i.e. nausea, diarrhea, belching).

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