Taming Little Lions: Treatment Options for Irritability, Aggression, and Outbursts

Dr. Kristina R. Jiner

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NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.℠

THE OHIO STATE UNIVERSITY
COLLEGE OF MEDICINE

Disclosures:

- I have no financial relationships to disclose

- The off-label use of medication will be discussed ★

Learning Objectives:

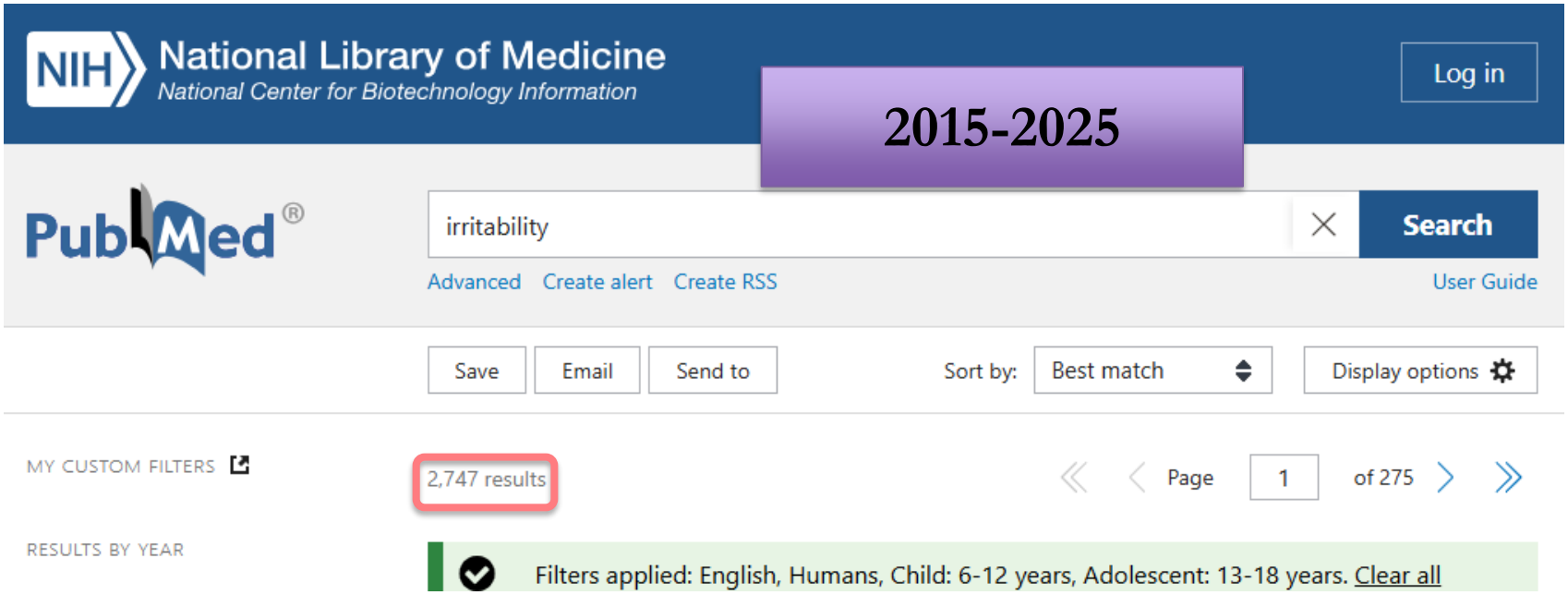
1) Distinguish among the causes & determine how to identify which is the cause for your patient

2) Specify pharmacological interventions based on the identified cause

3) Name nonpharmacological interventions

4) Identify when and how to contact child psychiatry

Irritability:



Irritability: What is it and what's typical?

"Propensity to react with anger, grouchiness, or tantrums disproportionate to the situation"

- Two components:

  1) Tonic: Angry, cranky, grouchy, grumpy mood

  2) Phasic: Anger outbursts

-Great Smoky Mountains Study: 1420 children/teens

-Phasic: 51.4%

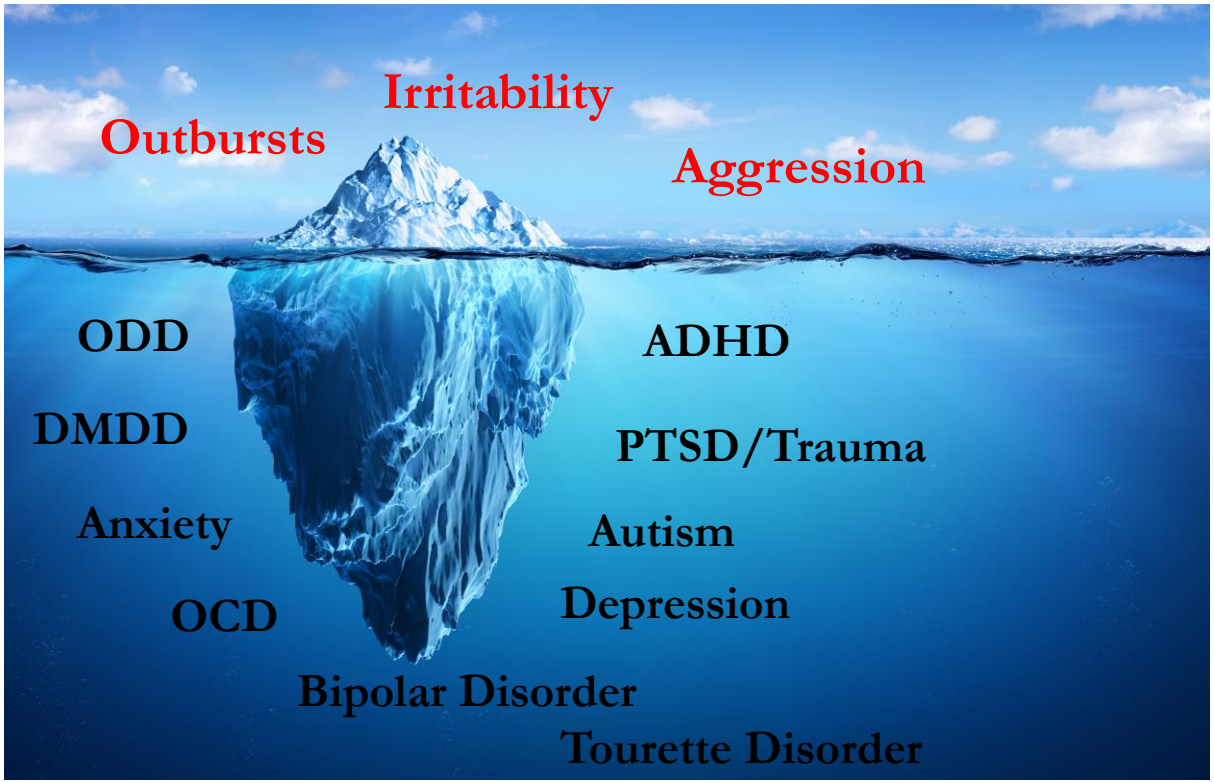
-Tonic: 28.3%

-Rates decreased from middle childhood → adolescence

-No differences between sexes

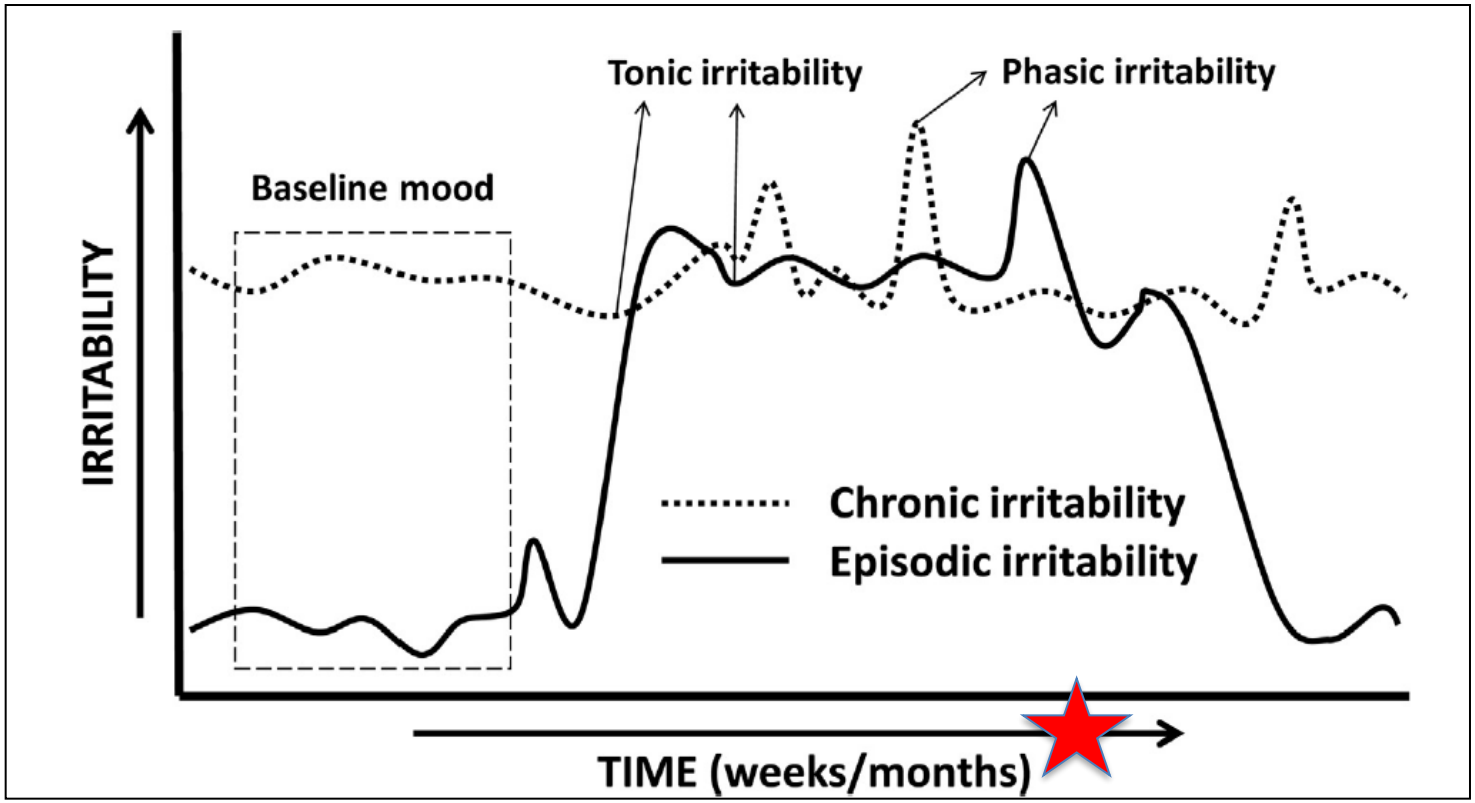
Aggression: uncommon, even in those with excessive irritability*

Causes of Irritability/Aggression



Determining the cause: Bipolar Disorder

Is the irritability episodic or chronic?



Vidal-Ribas, P., & Stringaris, A. (2021)

Determining the cause: Bipolar Disorder

- **Bipolar Disorder = Episodic irritability**
  - -An episode lasts **at least 4 days**
- Questions to ask:
  - -How long does an episode last?
  - -Is there a decreased need for sleep?
  - -Are behaviors different from those before and after the episode?
  - -Have others observed the changes in behavior?
- Further assessment and treatment → Child Psychiatry

Determining the cause: Bipolar Disorder

What about Rapid Cycling Bipolar Disorder?

Rapid Cycling defined as: ***At least 4 episodes*** (depressive, manic, or hypomanic) in the past **12 months**

Determining the cause: Depression

- **Depression = Episodic irritability**
  - -An episode lasts **<u>at least 2 days</u>**
    - -Major Depressive Episode lasts **<u>at least 14 days</u>**
  - -Associated symptoms:
    - -Sadness
    - - Anhedonia
    - -Excessive guilt or worthlessness
    - -Low energy
    - -Poor concentration
    - -↑↓ appetite
    - -Psychomotor agitation or slowing
    - -↑↓ sleep
    - -Suicidal ideation

Determining the cause: ADHD

- Irritability is common!

  -Related to: emotional impulsivity and deficient emotional regulation

- 40-50% experience:

  -significant anger

  -low distress tolerance

  -rages/tantrums/outbursts

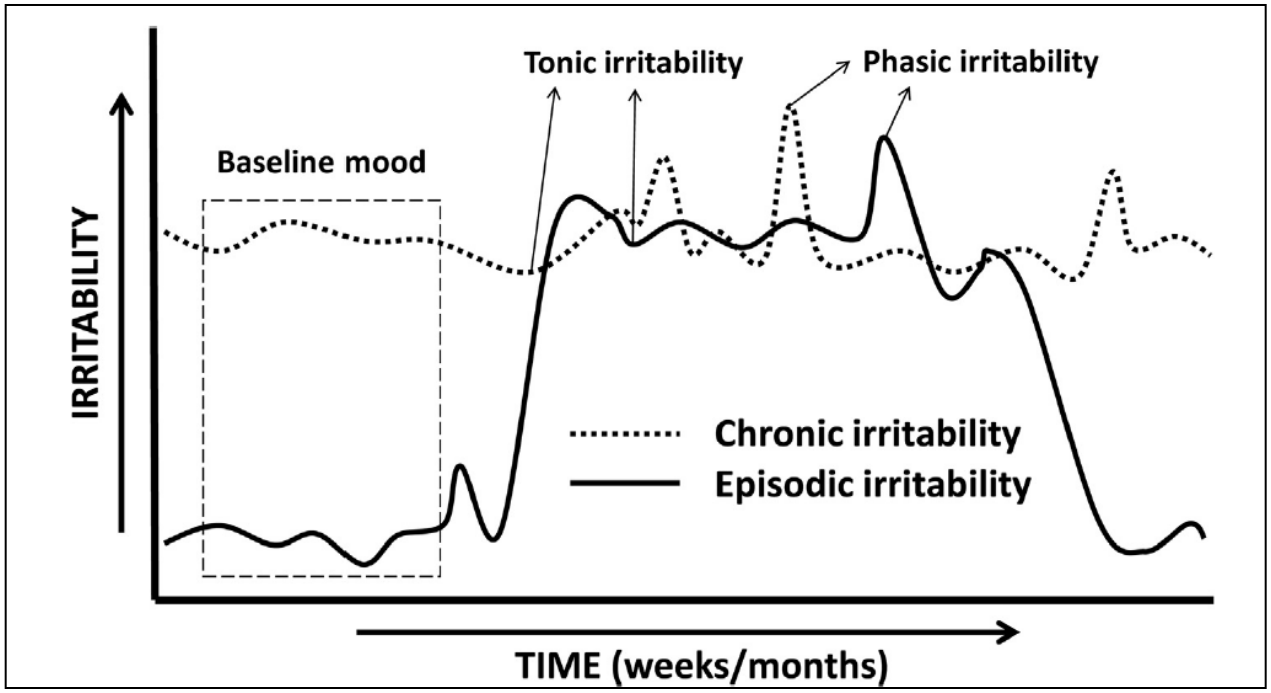
- Up to 30% will have a persistent angry/irritable mood required for Disruptive Mood Dysregulation Disorder (DMDD)

Determining the cause: DMDD

- Onset: 6-10 years old
- Symptoms present ≥ 12 months and present in at least 2 settings
- All four of the following:
    - -Severe, recurrent outbursts
        - -Intensity/duration out of proportion to trigger
    - -Outbursts are not developmentally appropriate
    - -Frequency of outbursts: On average at least 3x/week
    - -Mood between outbursts is ***persistently irritable***
        - -Most of the day, nearly every day
        - -Observable by others

Determining the cause: DMDD

DMDD = Chronic/persistent irritability



Vidal-Ribas, P., & Stringaris, A. (2021)

Determining the cause: DMDD

Questions to assess for chronic/persistent irritability:

1) When she is getting her way, is she happy/content or still cranky/grumpy/grouchy?
2) When he has a tantrum and you give in, does his mood improve or does he remain upset?
3) If no one is bothering you, do you still feel annoyed or irritated?
4) If no one is bothering you, does your brain still think about things that annoy/irritate you?

Oscar the Grouch | First appearance: November 10, 1969. | Oscar the grouch, Grouch, Sesame street muppets (pinterest.com)

Determining the cause: Anxiety

- **55.1%** (7-13yo) experienced a rage episode in the past month
  - -OCD: **53%** (6-16yo) experienced a rage attack in the past month
- Hypervigilant: Brain is constantly searching for danger inside/outside the body
  - -Neutral events seen as threatening OR
  - -Mild threats are perceived as moderate/severe threats
- Major coping skill: Avoidance
  - -Reinforced by child and oftentimes parent/caregiver
  - -If unable to avoid trigger → Outburst
    - -Child anticipates a trigger → Pre-emptive outburst
    - If avoidance persists child will not learn to cope and/or adapt
      - ->Worsening of anxiety

Determining the cause: PTSD/Trauma

- Twice as likely to have problems with emotion regulation
- Emotion dysregulation is a result of
    - -Trauma
    - -Trauma's impact on development and attachment
        - Amygdala: more active
        - Impaired language processing

Determining the cause: Autism Spectrum Disorder

- 50-80%: irritability, aggression, tantrums/outbursts, agitation, and non-suicidal self-injury (NSSI)
- Reasons for this:
  1) Social-communication deficits: difficulty understanding/expressing emotions
  2) Restricted/repetitive behaviors: strong predictor of emotion dysregulation
  3) Sensory sensitivities
  4) Sleeping problems
  5) Picky eating/constipation
  6) Perseveration
     - on trigger
     - on distress itself

Pharmacological Interventions

Pharmacologic Interventions for Irritability: A Step-wise Approach

Step 1: Treat insomnia:

Step 2: Treat underlying disorder:

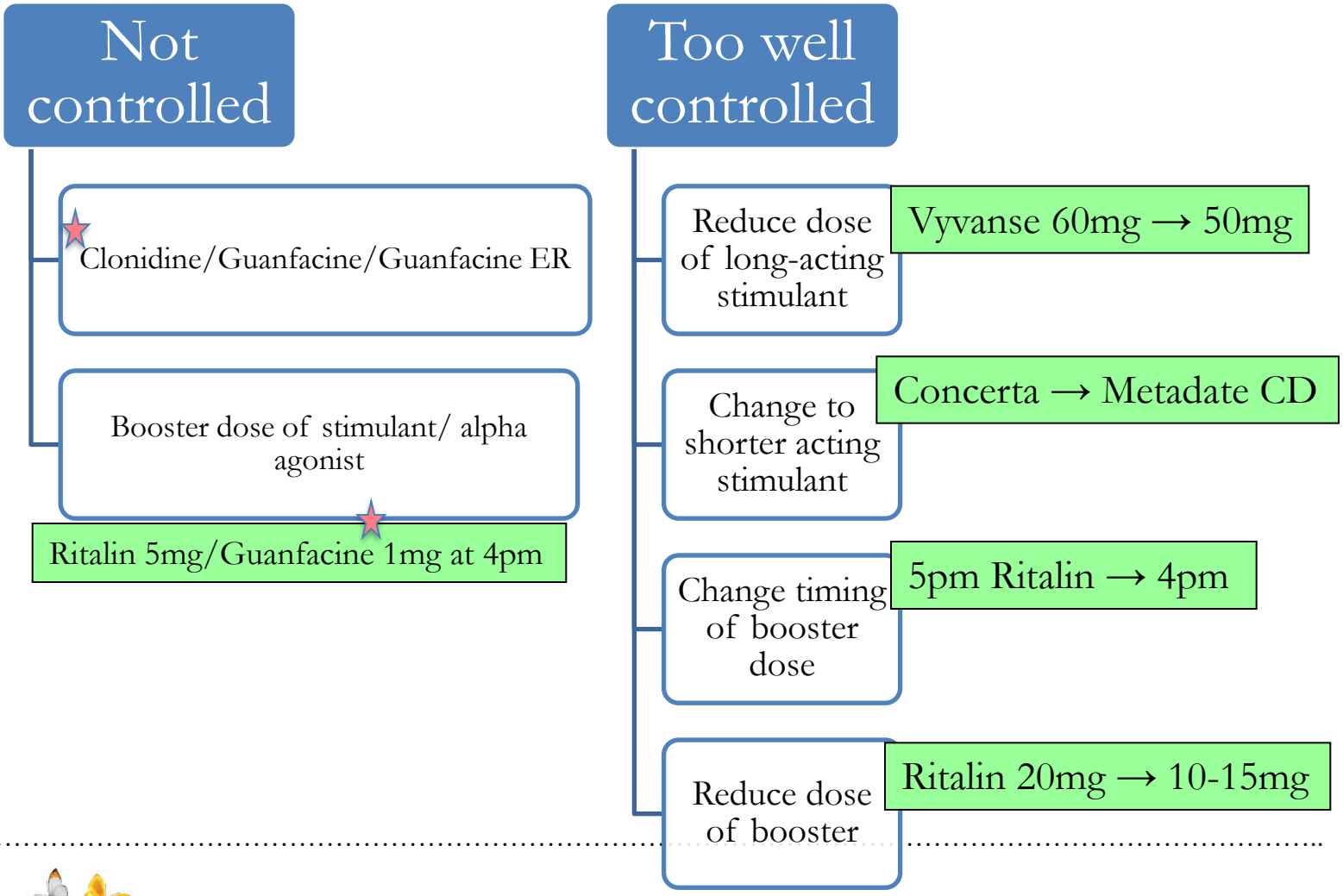
Step 3: Atypical Antipsychotic:

Pharmacologic Interventions for Irritability: A Step-wise Approach

Step 1: Treat insomnia: tired children/teens are irritable!

- #1: Good sleep hygiene
- #2: Melatonin
- #3: Depends on the cause
    - ADHD/DMDD/ASD
    - Anxiety/Trauma/Depression

Step 1: Treat insomnia: ADHD



Off label use

Step 1: Treat insomnia: Anxiety, Trauma, Depression

- Clonidine : 0.05 – 0.2mg one hour before bed
- Hydroxyzine: 10-50mg one hour before bed
  -Vistaril > Atarax
- Trazodone: 25-100mg one hour before bed

Off label use

Pharmacologic Interventions for Irritability: A Step-wise Approach

<u>Step 2: Treat underlying disorder</u>:

- Depression/Anxiety/ASD: SSRIs
- PTSD/Trauma: SSRIs and/or alpha agonists (Intuniv)

SSRI	Minimum Dose	Max Dose
Escitalopram (Lexapro)	10-15mg	20mg
Fluoxetine (Prozac)	20-40mg	60mg
Sertraline (Zoloft)	50-100mg	200mg

Should see some improvement by 2 weeks

Off label use

Step 2: Treat underlying disorder: ADHD/ASD/DMDD

- Long-acting stimulants are 1st line
- Dose of stimulant should be increased until:
  - Benefit is achieved
  - Max dose is reached
  - Side effects develop
- Not necessary to observe for longer than 7-10 days on a stimulant
  - It is safe to titrate faster!
- If irritability worsens, look at timing
  - Within 1-2 hours of admin → stimulant likely responsible
  - >2 hour after admin → Rebound effect
- Consider adjunctive treatments: Alpha-agonists

Off label use

Step 2: Treat underlying disorder: DMDD

- Maximize treatment for ADHD ★
- SSRI ★

★ Off label use

Step 3: Atypical Antipsychotic: ASD

Irritability = Aggression towards self or others

FDA approved for irritability:

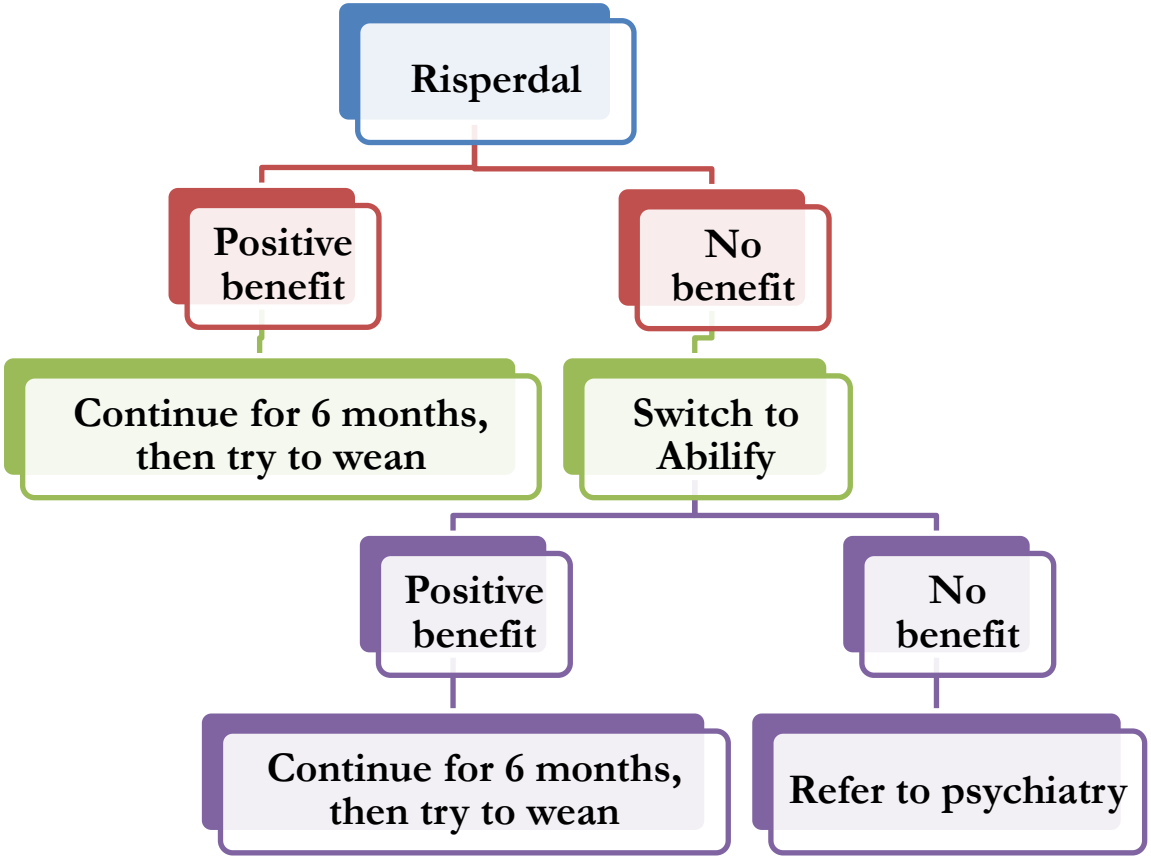
- Risperidone (Risperdal): 5-17 years old
- Aripiprazole (Abilify): 6-17 years old

Not FDA approved for:

1) ADHD
2) Anxiety/Depression
3) DMDD
4) Trauma/PTSD

Used when there are safety concerns or severe functional impairment

Step 3: Atypical Antipsychotic: Big picture



Step 3: Atypical Antipsychotic:

Risperidone (Risperdal) - 1st choice

Split dose BID
Can give 2nd dose in late afternoon

Weight	Starting Dose	After 4 days	Titration	Final Dose
15-30kg	0.25mg qhs	0.5mg qhs	↑ 0.25mg qhs every 2 weeks	1mg
≥ 30kg	0.5mg qhs	1mg qhs or 0.5mg BID	↑ 0.5mg qhs every 2 weeks	2.5-3mg

Dose forms: 1mg/ml
0.25mg, 0.5mg, 1mg, 2mg tabs or M-tabs

Step 3: Atypical Antipsychotic:

If on Prozac: decrease dose of Abilify by 50%

Aripiprazole (Abilify) – 2nd choice

Starting Dose	After 1 week	Titration	Final Dose
1-2mg qhs	2-5mg qhs	↑ 2.5-5mg qhs every week	15mg qhs

Dose forms: 1mg/ml
2mg, 5mg, 10mg, 15mg tabs

Step 3: Atypical Antipsychotic: Side effects

Sedation	Nausea/vomiting	EPS: Akathisia
QTc Prolongation	Constipation	EPS: Dystonic reaction
Weight gain	Suicidal ideation (Abilify)	EPS: Tardive Dyskinesia
Elevated lipids	Elevated glucose	Prolactin elevation (Risperdal)

Do not check levels!

Step 3: Atypical Antipsychotic: Side effects

Extrapyramidal Symptoms: Parkinson's Disorder like symptoms

- akathisia
- rigidity
- bradykinesia
- dysphagia
- tremor
- acute dystonic reactions
  - torticollis
  - retrocollis: neck extension
  - oculogyric crisis
  - opisthotonos: severe arching of back

*Treated with diphenhydramine

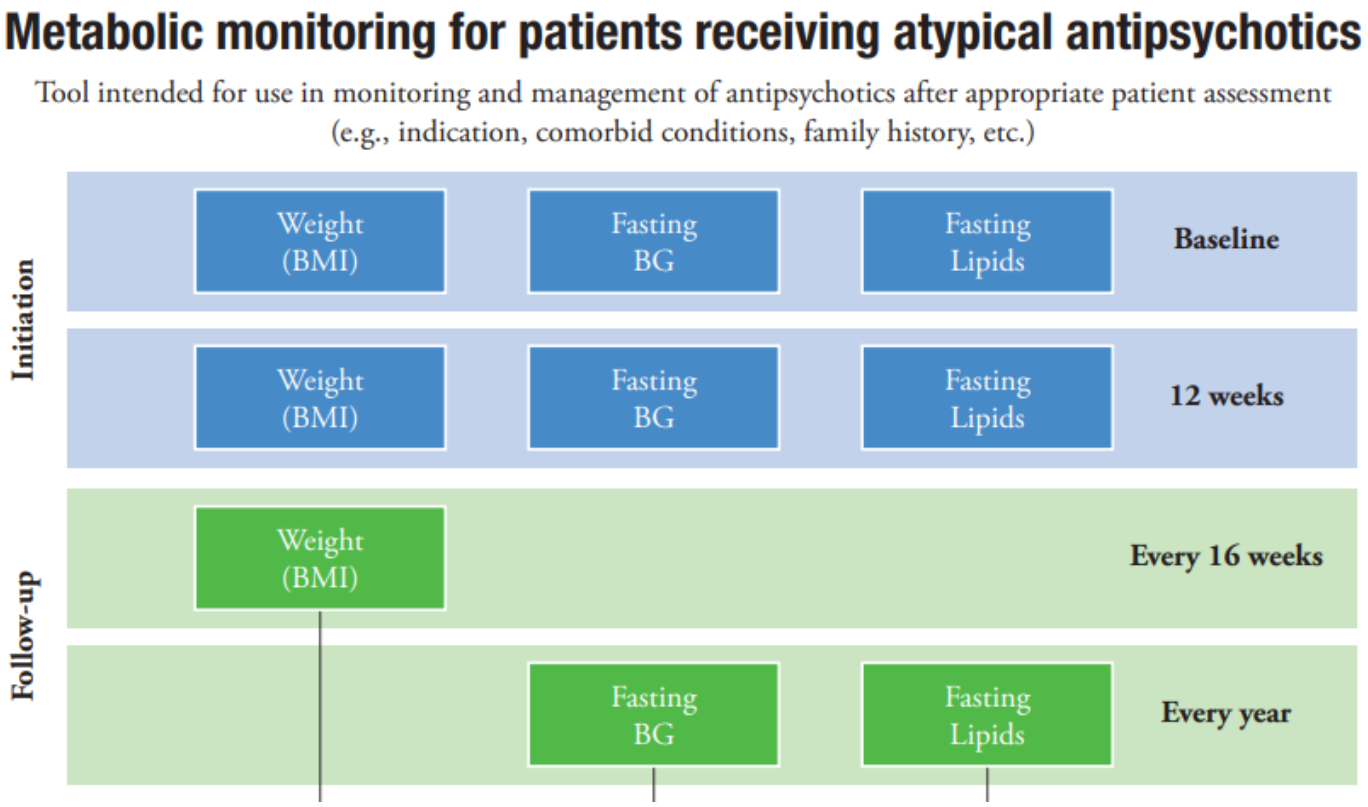
Step 3: Atypical Antipsychotic: Side effects

Tardive Dyskinesia: Extremely uncommon

- Children/teens far more likely to have withdrawal dyskinesia
- Typically involve mouth, lips, tongue
- Can include any part of the body

** Ask patient and family if they have noticed any new or abnormal movements.

Step 3: Atypical Antipsychotic:



Metabolic-Monitoring-for-Patients-Receiving-Atypical-Antipsychotics_NCH.pdf

Non-Pharmacological Interventions

Non-pharmacologic interventions

1) Education for families, caregivers, school, etc.
   - Disorder
   - Function(s) of behavior
   - Treatment expectations: medications and therapy

2) Two main types of treatments
   - Parent Management Training
   - Child Directed Cognitive Behavioral Therapy

Non-pharmacologic interventions

Parent Management Training: Based on Operant Conditioning

- Examples: Triple P, Parent Child Interaction Therapy (PCIT), Incredible Years, RUBI: Parent Training for Disruptive Behavior (ASD specific)

- Successful programs:

↑ Positive parent-child interactions

↑ Emotion communication skills

↑ Parental consistency

Have parents practice skills

Non-pharmacologic interventions

Child-Directed Cognitive Behavioral Therapy:

- Goals: Improve emotion regulation
  social problem-solving skills
- Content areas:
  1) Anger control training (ACT)
  2) Problem-solving skills training
  3) Social skills training

** Parents actively involved!

When and how to contact Child Psychiatry

Contact child psychiatry when . . .

1) Concerned about safety

2) Concerned about Bipolar Disorder

3) Not responding to medication trials as expected

4) Concerns about side effects

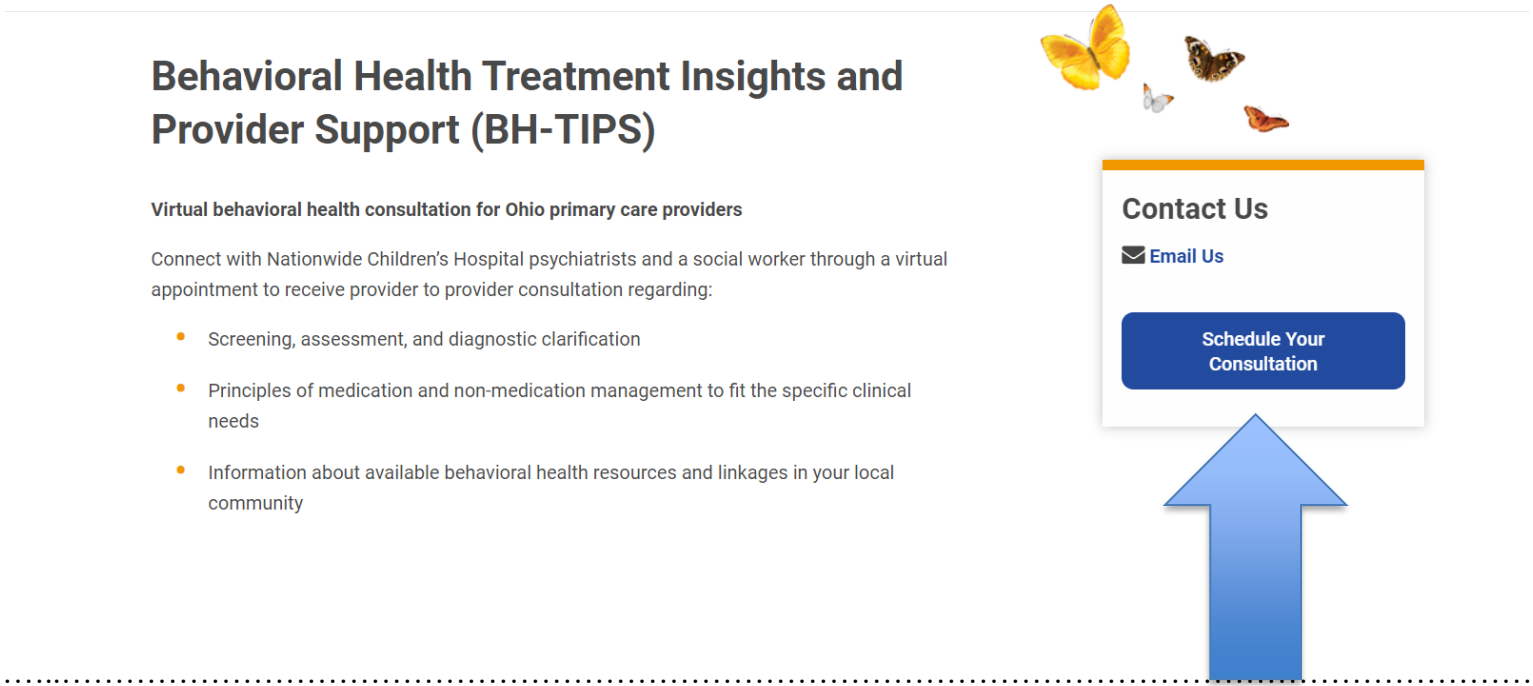
Any Questions

Behavioral Health Treatment Insights and Provider Support (BH-TIPS)

- Available to any primary care provider in Ohio
- Monday – Friday: 12-2pm
- Tuesday & Wednesdays: 730-830am
- 15-minute Zoom consultation with child psychiatrist and social worker
- Consultation for:
    - -Screening, assessment, and diagnostic clarification
    - -Treatment Options: Medication and non-medication
    - -Information about available behavioral health resources in your local community

Behavioral Health Treatment Insights and Provider Support (BH-TIPS)

- To sign-up: [Behavioral Health Treatment Insights and Provider Support (BH-TIPS)]



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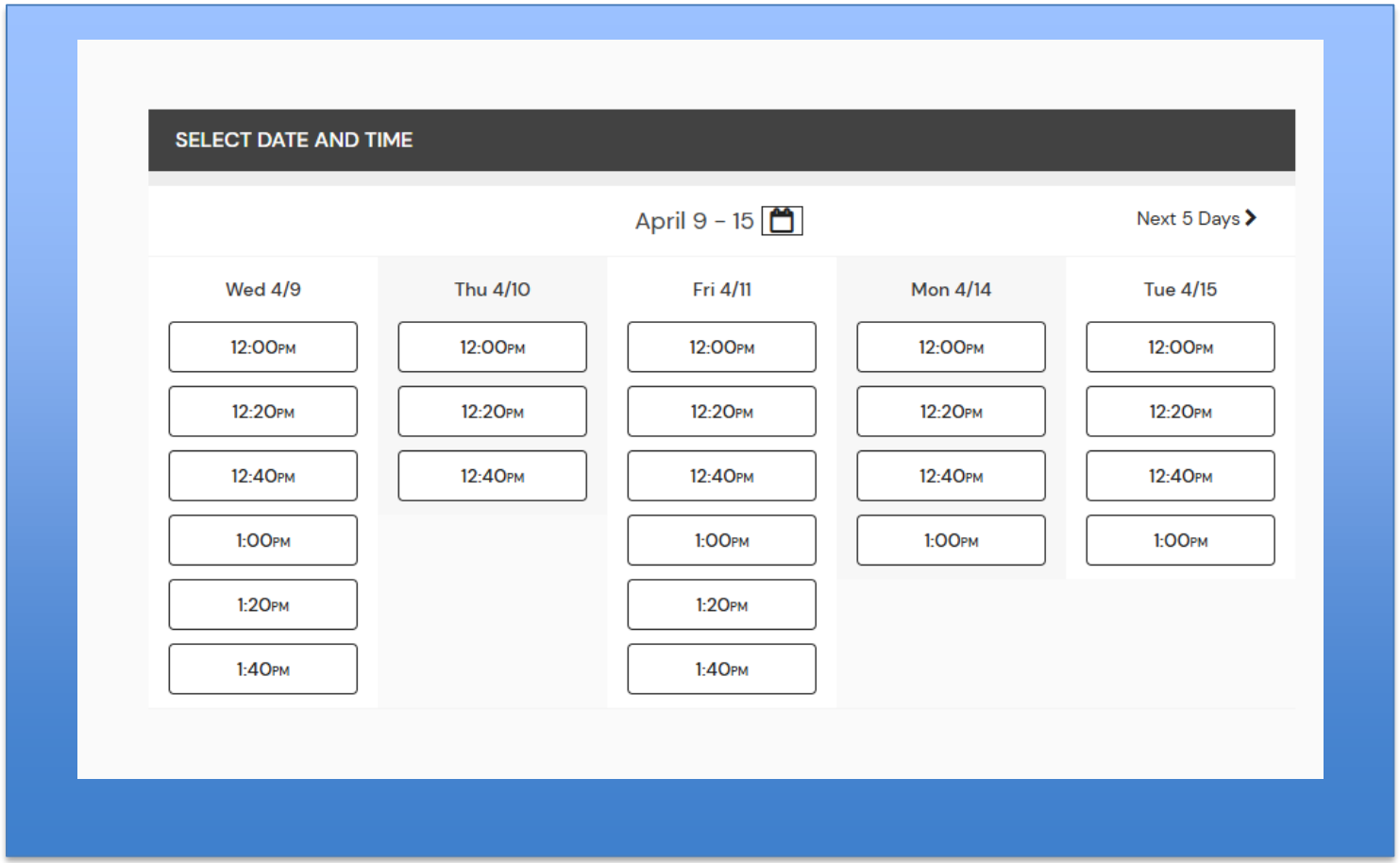


Behavioral Health Treatment Insights and Provider Support (BH-TIPS)

- <u>After signing up</u>:

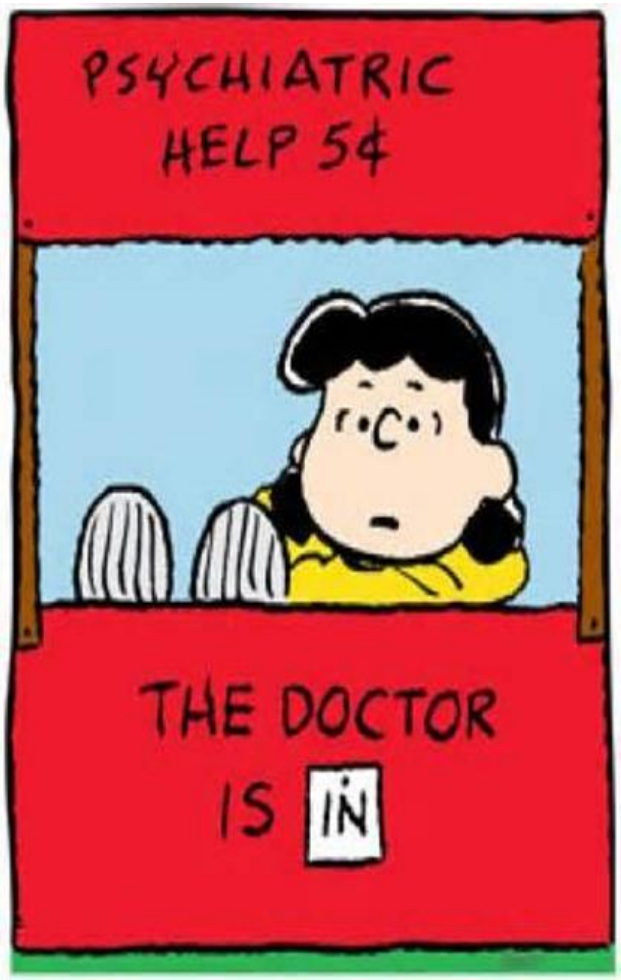
  -Receive confirmation email

  -Brief form requesting background info and specific questions

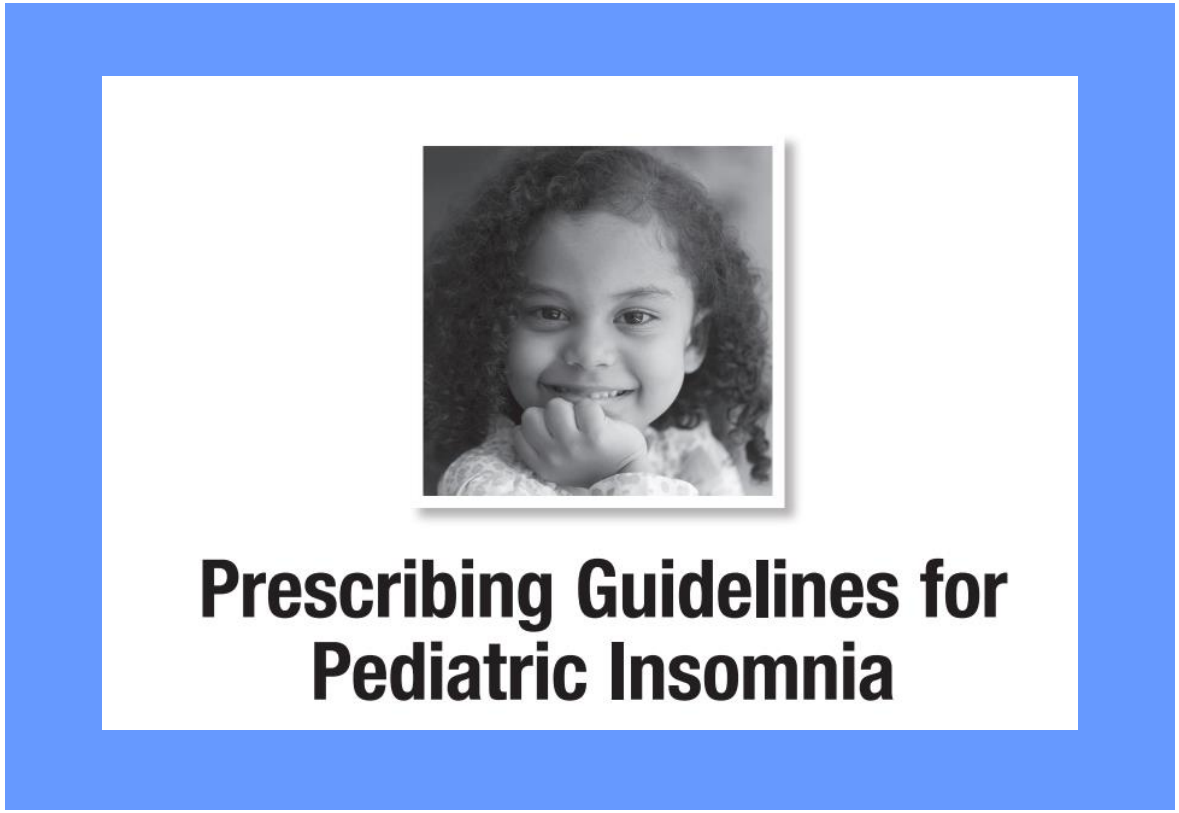
- <u>After consult</u>:

  -Receive summary of consultation including resources discussed

Questions?

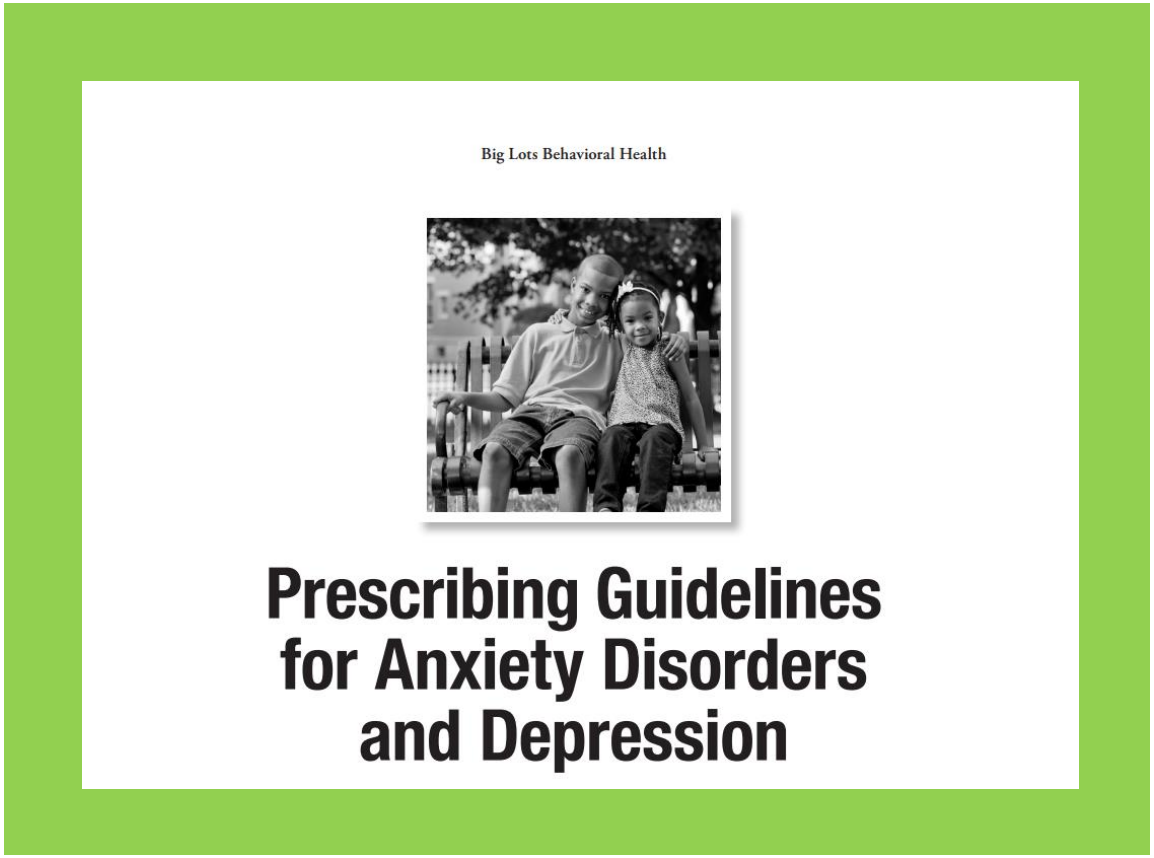


Resources:



[Practice Tool: Prescribing Guidelines for Pediatric Insomnia (nationwidechildrens.org)]

Resources:



Practice Tool: Prescribing Guidelines for Anxiety Disorders and Depression (nationwidechildrens.org)

Resources:

Prescribing Guidelines for Attention Deficit/ Hyperactivity Disorder (ADHD)

[Practice Tool: Prescribing Guidelines for ADHD (nationwidechildrens.org)]

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