More than Small Adults: A Deeper Look at Pediatric Depression

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Objectives

Review	Review the appropriate screening tools for pediatric depression
Understand	Understand the diagnostic criteria for Major Depressive Disorder and Persistent Depressive Disorder and how these differ in the pediatric population
Describe	Describe the various differential diagnosis for depression and how to do an appropriate medical work up
Know	Know the various types of therapy beneficial to depression treatment
Review	Review FDA approved treatments for depression

Case Study

- Patient is a 13 year old female who presents with mother to primary care due to concerns of changing behavior. She reports that her daughter was an outgoing and happy child, but since puberty she has noticed that her daughter is more irritable. At first she thought it was just some difficulties that come with adolescence, but her daughter is more irritable that her older son was when he was around the same age.
- Other concerns
  - She was once involved in volleyball, but notes she quit because "I just don't like it anymore"
  - She mostly stays in her room and she stays up late. Mom is sure staying up on the phone, but the teen insists, "I just can't sleep and then I wake up at like 4 am"
  - There are often fights about cleaning her room and her mother notes "I just can't get her motivated"
  - They are also fighting over her decline in grades as she has gone from making honor roll to making Bs and Cs.

Depression: When Should We Look For It?

- Epidemiology
  - Annual incidence rate is 1-2% at age 13
  - By age 15, incidence rate increases to up to 7%
  - Ratio of 1:1 between boys and girls during childhood
  - After puberty, ratio becomes 1:2 boys to girls

Risk Factors

Genetics

- Twin studies show a heritability of 60-70%
- Children whose parents have depression are 2-4 times more likely to have depression

Psychosocial Stresses

- Loss, maltreatment, romantic break-up, being bullied by peers, and parent-child conflicts.

Cognitive Risk Factors

- Rumination
- Dwelling excessively

Comorbid Medical Illness

- Epilepsy
- Diabetes

Medications

- Corticosteroids
- Interferons
- Mefloquine
- Progestin-releasing implanted contraceptives
- Propranolol

Substance Use

- Particularly Alcohol

Screening Guidelines

- The US Preventive Services Task Force (USPSTF) recommends screening for MDD in adolescents aged 12 to 18 years
- The recommended instrument is the PHQ-9

PATIENT HEALTH QUESTIONNAIR (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____

=Total Score: _____

Major Depressive Disorder: Diagnostic Criteria

- Symptoms must last 2 weeks (note they can last longer)
- Need 5 of the following symptoms
  - Sleep problems (lack of sleep or sleeping too much)
    - Most common sleep pattern is early morning awakening and decreased time in REM
  - Interest in things is diminished (anhedonia)
  - Guilty feelings which are inappropriate
  - Energy is low
  - Concentration is poor
  - Appetite problems (eating too much or too little)
  - Psychomotor unrest or retardation
  - Suicidal thoughts
    - Note can be passive: Ask about wishes to be dead or for things to just stop
- One symptom must be depressed mood or anhedonia
  - Note in the pediatric population mood can be irritable rather than depressed

Persistent Depressive Disorder: Diagnostic Criteria

- The patient must have a depressed mood for at least 1 year in children
  - Two years if an adult
- Symptoms cannot be absent for greater than 2 months.
- In addition to depressed/irritable mood, at least 2 of the following symptoms have to be present.
  - Eating too much or too little
  - Sleep Problems (either too much or not enough)
  - Low energy
  - **Low self-esteem**
  - Poor concentration
  - **Hopelessness**
- **Note someone can meet criteria for MDD and PDD at the same time. This is known as Double Depression**

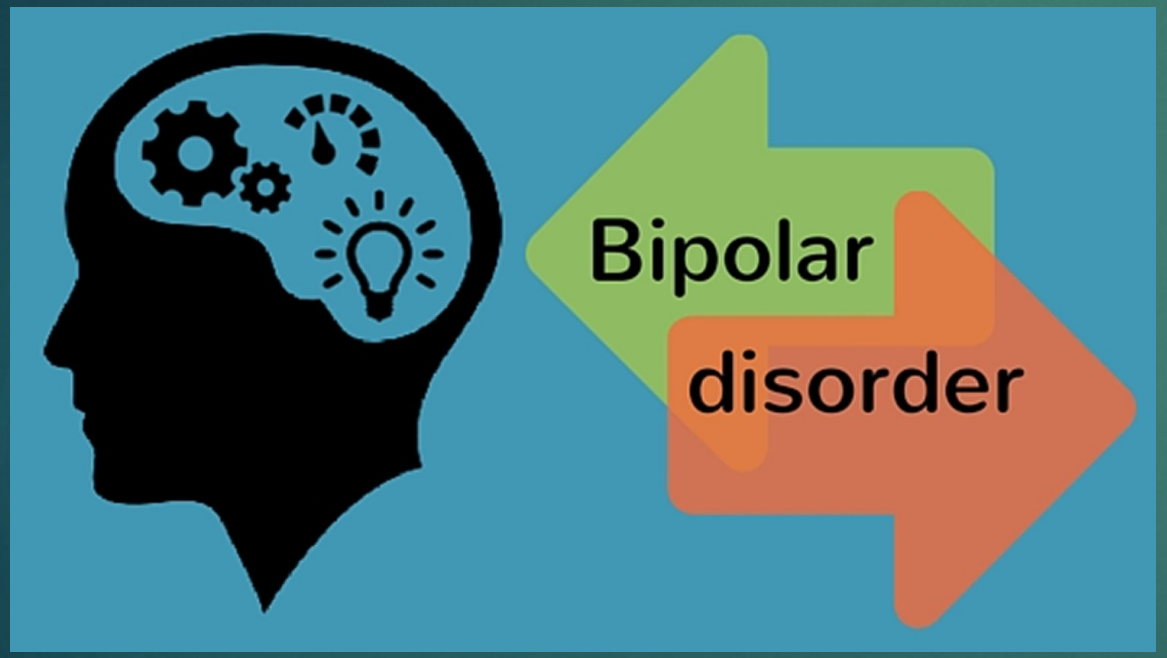
Psychiatric Differential Diagnosis

- A multitude of psychiatric disorders can share symptoms with depression
  - ADHD: poor concentration
  - DMDD: irritability
  - Anxiety: irritability, insomnia, poor concentration
  - PTSD: irritability, poor concentration, insomnia
  - Bipolar disorder: depressed mood, irritability, poor sleep, poor concentration
  - Psychotic disorder: social withdrawal, irritability, distractibility
  - Learning disorders: feelings of worthlessness around school performance

Psychiatric Differential Diagnosis Continued

- Within an interview it is always important to ask about trauma
- It is important to ask about any recent losses.
  - Grief is normal up to a year after the loss of a loved one.
- Perhaps most importantly. ASK ABOUT MANIA
  - 3 or more of the following lasting either a week (mania) or four days (hypomania)
    - D: Distractibility
    - I: Irritability
    - G: Grandiosity
    - F: Flight of Ideas
    - A: Activity (increased in goal directed or risky behavior)
    - S: Sleep (decreased need for sleep)
    - T: Talkativeness (pressured speech)

Risk Factors that Might Indicate Bipolar Depression over Unipolar



- A systematic literature review of 11 articles in 2017 identified the following risk factors for manic switching during treatment of depression in children/adolescents
  - Positive family history of mood disorders
  - Emotional and behavioral dysregulation
  - Subthreshold mania
  - Psychosis (28% chance of switch)
- Note Bipolar Depression is associated with
  - Higher levels of depression severity
  - Psychiatric comorbidity with oppositional defiant disorder, conduct disorder, and anxiety disorders
  - A family history of mood and disruptive behavior disorders in first-degree relative

Medical Evaluation

- Do a complete physical exam
- Review and reconcile all medications
- Ask about substance use and alcohol use
- Labwork could include
  - CBC with diff
  - Comprehensive Metabolic Panel
  - TSH
  - Vitamin D
  - Urine Drug Screen

The Four Ps

- We want to access the patient from a biological and psychosocial perspective
  - Predisposing Factors (Family History)
  - Precipitating Factors (Stressors that precede symptom onset)
  - Perpetuating Factors (Things prolonging the problem)
  - Protective Factors (Strengths)

First Things First: Safety

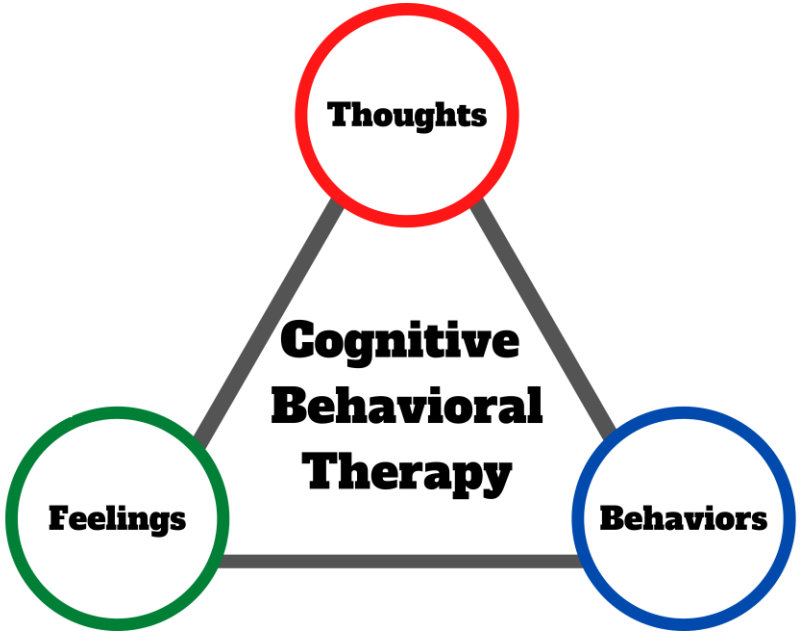
- When there are depressive symptoms always make sure we are screening for childhood adversities
  - If present report to CPS
- Need to screen for risk of self harm/suicide
  - Note the number one predictor of suicidal behavior is previous suicidal behavior
  - Risk Factors
    - High impulsivity
    - Feelings of inferiority
    - Poor coping skills
    - Hopelessness about the future
    - Concrete thinking styles
    - Psychotic symptoms
    - Substance Use
    - Early loss
    - Parental conflict
    - Chaotic or inflexible family structures
    - Abuse/neglect
    - Parental suicidal behaviors

We Gotta Talk About it: Therapy

- AACAP suggests that cognitive-behavioral therapy and interpersonal therapy could be offered to adolescents and children with major depressive disorder or persistent depressive disorder

Cognitive Behavioral Therapy

- Core Principles
  - Psychological problems are based on unhelpful ways of thinking (cognitive distortions)
  - Psychological problems are based on learned patterns of unhelpful behavior
  - People suffering from psychological problems can learn better ways of coping with them, thereby relieving symptoms
- Treatment focuses on
  - Learning to recognized one's distortions are creating problems and then to reevaluate
  - Gaining a better understanding of behavior and the motivation of others
  - Using problem-solving skills to cope with different situations
  - Learning to develop self confidence
  - Facing one's fears
  - Using role playing to prepare for problematic interactions
  - Learning to calm one's mind and relax
- There is also an emphasis on homework and working on these strategies even outside of session

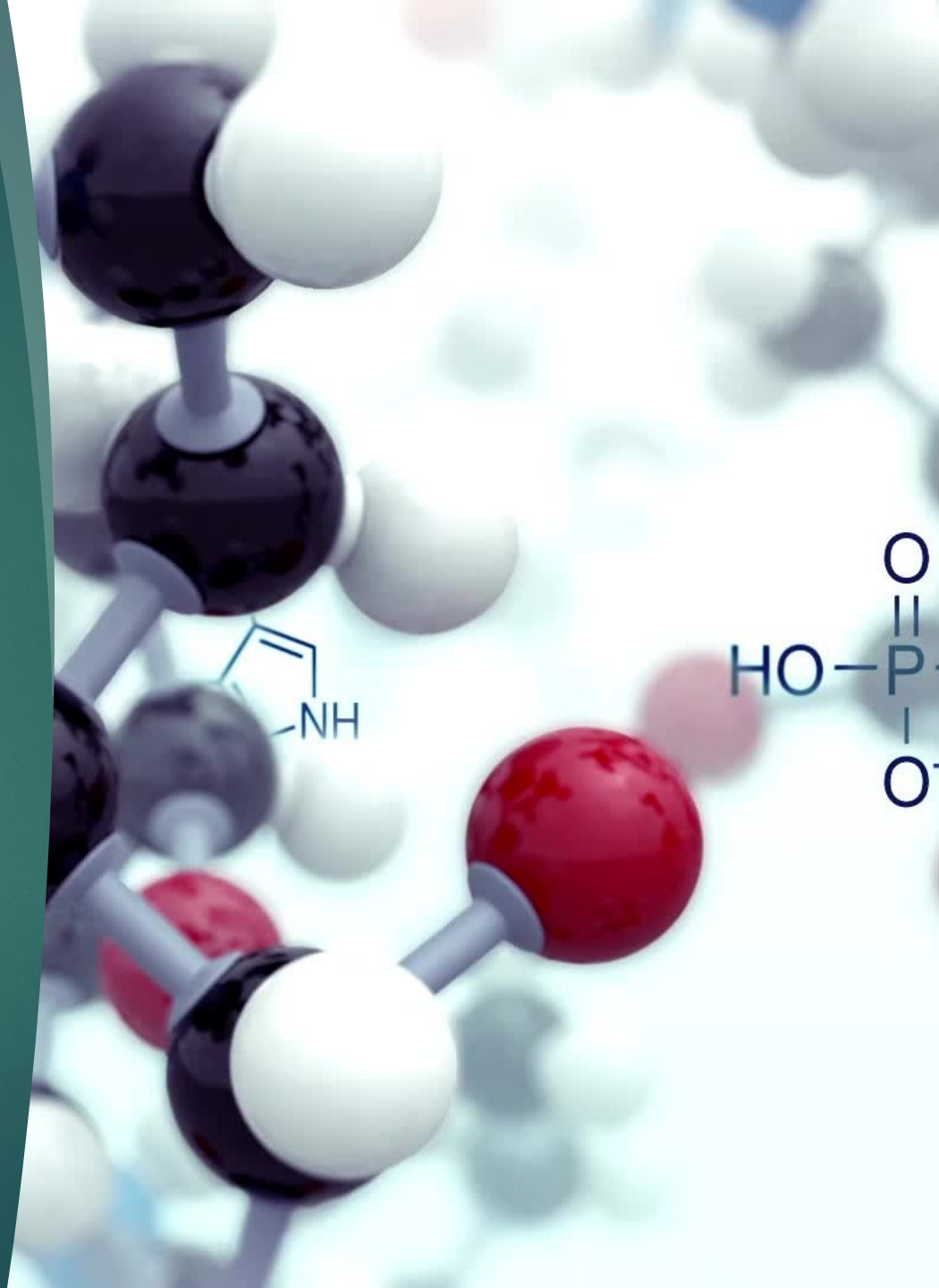


Interpersonal Therapy

- A short term therapy (12-16 sessions) that focuses on interpersonal relationships and social interactions
- Initial Phase
  - Therapist also elicits an "interpersonal inventory", a review of the patient's patterns in relationships, capacity for intimacy, and particularly an evaluation of current relationships
  - Therapist links depression to the interpersonal inventory
- Middle Phase
  - Therapist Uses strategies to deal with whatever of the four potential problem areas is the focus
    - Complicated bereavement
    - Role dispute
    - Role transition
    - Interpersonal deficits
- Final Phase
  - Therapist helps the patient to feel more independent and capable as therapy ends
  - May potentially continue monthly as a maintenance in recurrent Major Depressive Disorder

Medication Management

- AACAP suggests that selective serotonin reuptake inhibitor medication (except paroxetine), preferably fluoxetine, could be offered to adolescents and children with major depressive disorder.

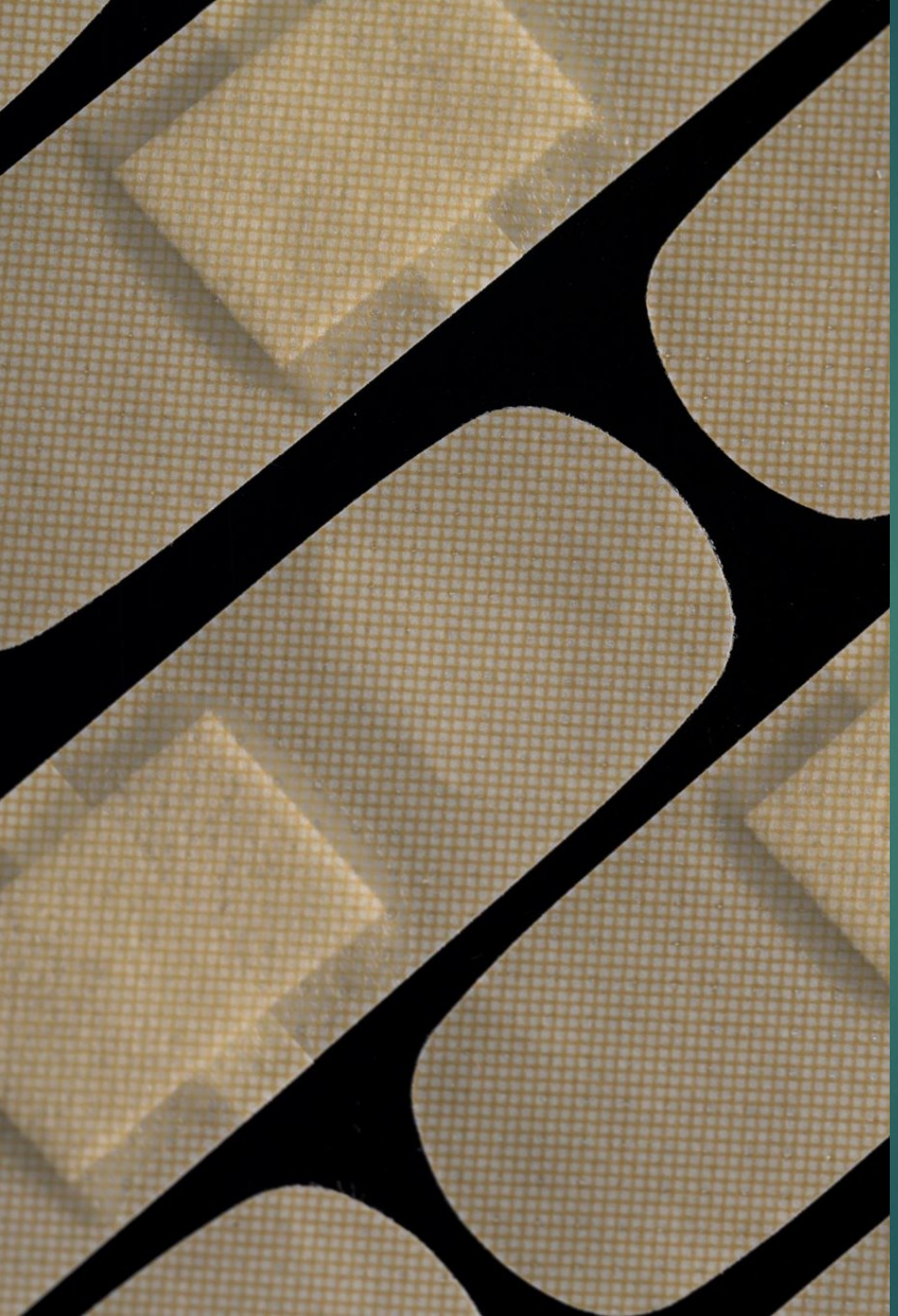


Fluoxetine

- FDA approved for Depression in children ages 8 and up
- Has the most evidence and randomized controlled trials for children
- Starting dose is 10 mg, but the lowest effective dose is 20 mg
- Maximum dose is 80 mg
- Due to its long half life it does not need to be tapered when discontinued
- Best to give in the morning

Escitalopram

- FDA approved for depression in children age 12 and up
- Starting dose is 5 mg, but lowest effective dose is 10 mg
- Maximum dose is 20 mg



Considerations with SSRIs

- An adequate trial of an SSRI means the patient consistently taking the medication at an effective dose for 4-6 weeks
- Most Common Side Effects
  - Nausea, diarrhea, heartburn, headache
  - Sexual side effects can occur and should be discussed with teens
- Watch out for behavioral activation/manic switch
- There is a box warning for suicidality for all antidepressants in patients under age 24
  - Note that the risk different between SSRIs vs placebo is 1%
- Make sure to check medication lists to try and avoid multiple serotonergic drugs (ask about nutritional supplements)

If at first you don't succeed

- In the Treatment of Resistant Depression in Adolescents (TORDIA) study, 55% of adolescents with MDD who were nonresponders to an initial SSRI demonstrated a significant response when prescribed a second SSRI or an SNRI with CBT.

SNRIs

- Note none of the SNRIs have FDA approval for depression in children
- Duloxetine
  - Has FDA approval in children for juvenile fibromyalgia and generalized anxiety
  - Less withdrawal symptoms when tapering compared to other SNRIs
  - Goal dosing of 60 mg daily
- Desvenlafaxine
  - No FDA approval in children
  - Has been studied at doses of 25-50 mg and shown to be tolerated in the pediatric population
- Venlafaxine
  - No FDA approval in children
  - Would recommend avoiding in this population due to short half life

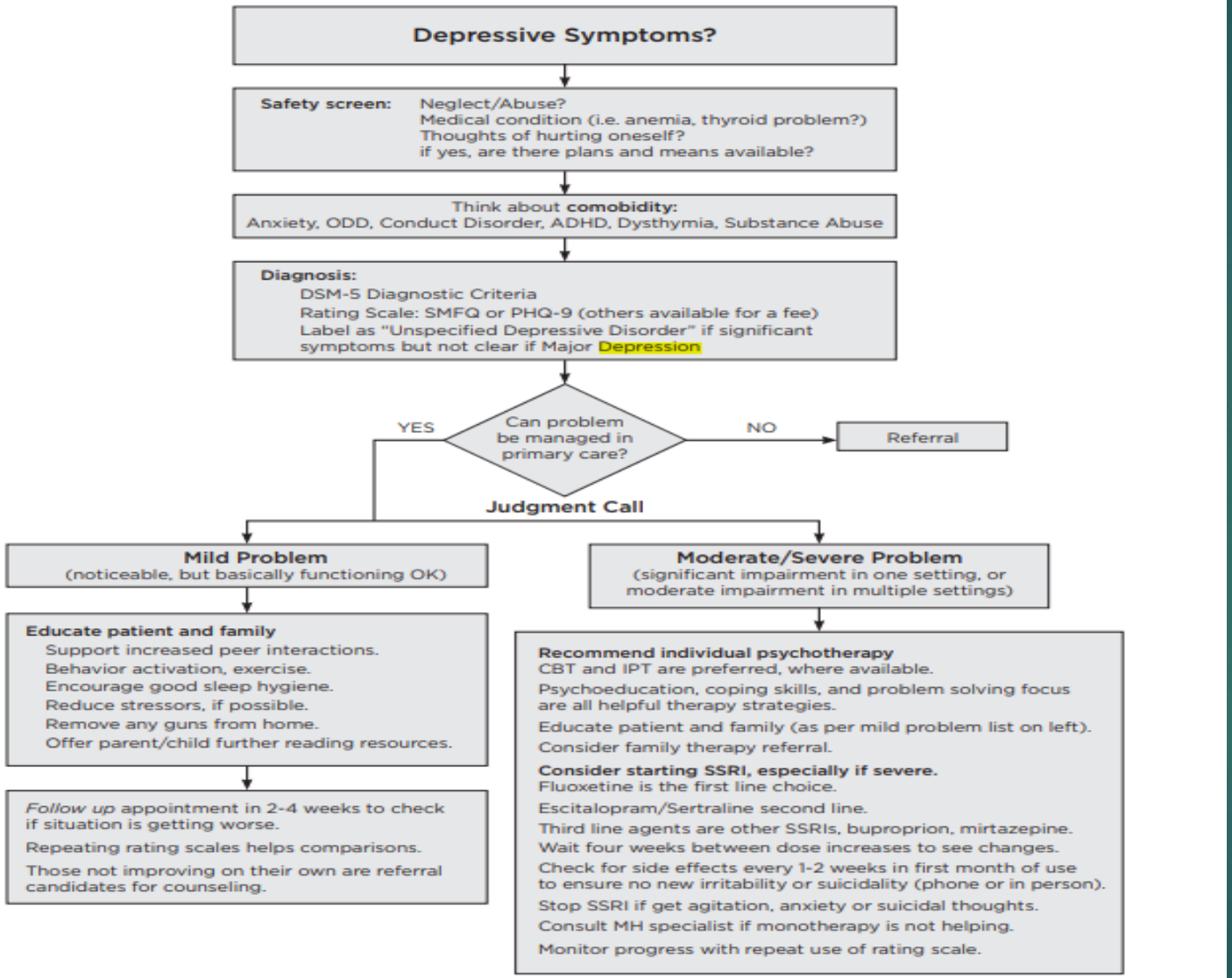
Depression Augmentation Strategies

- If a patient has a partial response to an SSRI or SNRI, you can consider adding a medication for augmentation
  - Second Generation Antipsychotics (ex. Aripiprazole)
  - Lithium
  - Bupropion
  - Stimulants
  - Thyroid Hormone
  - Lamotrigine
- **The augmentation strategy with the most evidence in the literature is Cognitive Behavioral Therapy**

When do we stop

- AACAP's clinical recommendation is continued antidepressant treatment of youth with MDD for 6 to 12 months post remission

Algorithm


Depressive Symptoms?
Safety screen: Neglect/Abuse?
Medical condition (i.e. anemia, thyroid problem?)
Thoughts of hurting oneself?
if yes, are there plans and means available?
Think about comobidity:
Anxiety, ODD, Conduct Disorder, ADHD, Dysthymia, Substance Abuse
Diagnosis:
DSM-5 Diagnostic Criteria
Rating Scale: SMFQ or PHQ-9 (others available for a fee)
Label as "Unspecified Depressive Disorder" if significant symptoms but not clear if Major Depression
YES
Can problem be managed in primary care?
NO
Referral
Judgment Call
Mild Problem
(noticeable, but basically functioning OK)
Educate patient and family
Support increased peer interactions.
Behavior activation, exercise.
Encourage good sleep hygiene.
Reduce stressors, if possible.
Remove any guns from home.
Offer parent/child further reading resources.
Follow up appointment in 2-4 weeks to check if situation is getting worse.
Repeating rating scales helps comparisons.
Those not improving on their own are referral candidates for counseling.
Moderate/Severe Problem
(significant impairment in one setting, or moderate impairment in multiple settings)
Recommend individual psychotherapy
CBT and IPT are preferred, where available.
Psychoeducation, coping skills, and problem solving focus are all helpful therapy strategies.
Educate patient and family (as per mild problem list on left).
Consider family therapy referral.
Consider starting SSRI, especially if severe.
Fluoxetine is the first line choice.
Escitalopram/Sertraline second line.
Third line agents are other SSRIs, buproprion, mirtazepine.
Wait four weeks between dose increases to see changes.
Check for side effects every 1-2 weeks in first month of use to ensure no new irritability or suicidality (phone or in person).
Stop SSRI if get agitation, anxiety or suicidal thoughts.
Consult MH specialist if monotherapy is not helping.
Monitor progress with repeat use of rating scale.
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Questions

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