



Primary Care Behavioral Health Symposium 2026

Ruth Benca, MD, PhD & James Rachal, MD

Thursday, February 26th - Friday February 27th, 2026

Credit Information

Primary Care Behavioral Health Symposium 2026

Accreditation Statement



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INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, Advocate Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

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Faculty Disclosure Announcement

The following faculty speakers and/or planning committee members have disclosed the following

Name	Role	Nature of Relationship	Company
Ruth Benca, MD, PhD	Course Director/ Speaker/ Moderator/SME	Grant Support	Alkermes
		Consultant	Eisai, Haleon, Idorsia, Biogen, Alkermes, Seaport Therapeutic Genentech
		Grant Recipient paid to institution	Eisai

The other planner(s) and speaker(s) have indicated that there are no relevant financial relationships with any ineligible companies to disclose. All of the relevant financial relationships listed for [this individual/these individuals] have been mitigated.

The following companies are virtually exhibiting at this educational activity.

Please thank them for their support of our seminar by visiting each breakout room.

Bristol Myers Squibb

Teva Pharm

Primary Care Behavioral Health Symposium 2026

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Wake Forest University School of Medicine

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Wake Forest University School of Medicine

Layla Soliman, MD

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Primary Care Behavioral Health Conference

February 26-27, 2026

AGENDA

Thursday, February 26, 2026

8:00am - 8:30am	Check-in & Visit Exhibits
8:30am - 8:40am	Introduction & The Link between PC and BH <i>James Rachal, MD</i> <i>Ruth Benca, MD, PhD</i>
8:40am - 9:40am	Primary Care Psychiatric Interview and Mental Status Examination <i>Celeste Peay, MD, JD</i>
9:40am - 10:40am	Motivational Interviewing <i>Sebastian Kaplan, PhD</i>
10:40am - 11:00am	Break & Visit Exhibits
11:00am - 12:00pm	PTSD <i>James Rachal, MD</i>
12:00pm - 12:45pm	Break & Visit Exhibits
12:45pm - 1:45pm	Mood Disorders <i>Sahil Munjal, MD</i>
1:45pm - 2:45pm	Anxiety Disorders <i>Kathleen Peniston, NP</i>
2:45pm - 3:00pm	Break & Visit Exhibits
3:00pm - 4:00pm	Psychotic Disorders <i>Matt Filippo, MD</i>
4:00pm - 5:00pm	Suicide Risk Assessment, Violence Risk Assessment & Capacity Evaluation <i>Layla Soliman, MD</i>
5:00pm - 5:30pm	Visit Exhibits



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For additional information & details:
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Primary Care Behavioral Health Conference

February 26-27, 2026

AGENDA

Friday, February 27, 2026

7:30am - 8:00am	Check-in & Visit Exhibits
8:00am - 9:00am	Somatic Symptom & Pain Disorders <i>Afrayem Morgan, MD</i>
9:00am - 10:00am	Insomnia & Sleep Disorders <i>Ruth Benca, MD, PhD</i>
10:00am - 10:15am	Break & Visit Exhibits
10:15am - 11:15am	Substance Use Disorders <i>Kelsie Pierre, MD</i>
11:15am - 12:15pm	Agitation & Delirium <i>Julie Owen, MD</i>
12:15pm - 1:00pm	Break & Visit Exhibits
1:00pm - 2:00pm	Psychiatric Assessment and Emergency Evaluation in Pediatric Populations <i>Ryan Livingston, MD & Katherine Penny, MA</i>
2:00pm - 3:00pm	Pediatric Anxiety & Depression <i>Laura Yahr Nelson, MD</i>
3:00pm - 3:15pm	Break & Visit Exhibits
3:15pm - 4:15pm	Attention Disorders <i>Rabiya Hasan, MD</i>
4:15pm - 5:15pm	Autism <i>Naomi Leslie, MD</i>
5:15pm - 5:30pm	Visit Exhibits



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Primary Care Behavioral Health Symposium 2026

Primary Care Psychiatric Interview and Mental Status Examination

Celeste Peay, MD, JD

Thursday, February 26th | 8:40 AM – 9:40 AM



Primary Care Psychiatric Interview and Mental Status Examination

Celeste Peay, MD, JD
Assistant Professor of Psychiatry and Behavioral Health

2/26/26



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INTERNAL

1

Learning Objectives

- 1) Identify the elements of the psychiatric interview.
- 2) Integrate elements of the psychiatric interview into the primary care setting.
- 3) Recognize major elements of the mental status examination and incorporate relevant elements into the primary care setting.



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I. Psychiatric Interview

“The psychiatric interviewer is supposed to be doing three things: considering what the patient could mean by what he says; considering how she herself can best phrase what she wishes to communicate to the patient; and, at the same time, observing the general pattern of the events being communicated. In addition to that, to make notes which will be of more than evocative value, or come anywhere near being a verbatim record of what is said, in my opinion is beyond the capacity of most human beings.”

- Harry Stack Sullivan



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I. Psychiatric Interview

- History & Physical +
- Shared Elements:
 - Chief complaint
 - History of Present Illness
 - Medical Review of Systems
 - Past Medical History*
 - Past Surgical History
 - Allergies
 - Medications*
 - Family History*
 - Social History*



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I. Psychiatric Interview

- History & Physical +
- Shared Elements:
 - Chief complaint
 - History of Present Illness
 - Medical Review of Systems
 - **Past Medical History***
 - Past Surgical History
 - Allergies
 - Medications*
 - Family History*
 - Social History*



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I. Psychiatric Interview

Past Medical History

- History of head trauma: (prior concussions, any LOC episodes)
- History of seizures: (semiology, prior EEGs)
- History of stroke: (residual effects, post-stroke mood changes)
- History of thyroid disease:

- Number of lifetime pregnancies/births:
- Last menstrual period: (focus on mood symptoms during luteal phase)
- Current birth control method:



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I. Psychiatric Interview

- History & Physical +
- Shared Elements:
 - Chief complaint
 - History of Present Illness
 - Medical Review of Systems
 - Past Medical History*
 - Past Surgical History
 - Allergies
 - **Medications***
 - Family History*
 - Social History*



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I. Psychiatric Interview

- **Medications**
 - Always check the PDMP in 100% of patients.
 - Consider putting in a hard stop in your notes to ensure you ALWAYS check PDMP.
 - Often will insert photo of PDMP list to ensure all provides on same page
- Supplements?
 - Many marketed OTC supplements for “mental health” can interact with prescribed medications
 - St. John’s Wort
 - OTC lithium orotate or aspartate



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I. Psychiatric Interview

- History & Physical +
- Shared Elements:
 - Chief complaint
 - History of Present Illness
 - Medical Review of Systems
 - Past Medical History*
 - Past Surgical History
 - Allergies
 - Medications*
 - **Family History***
 - Social History*



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I. Psychiatric Interview

Family History

Hx Psychiatric Disorders:

- *“Has anyone in your family ever seen a mental health provider?”*
- *“Has anyone ever needed to go to the hospital for a mental health reason?”*
- *“Has anyone ever taking any psychiatric medications?”*

Hx of Substance Use:

- *“Has anyone ever struggled with using or misusing substances?”*
- *“Has anyone needed to go for substance use treatment?”*

Hx of Suicide:

- *“Has anyone in the family ever attempted or completed suicide?”*



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I. Psychiatric Interview

- History & Physical +
- Shared Elements:
 - Chief complaint
 - History of Present Illness
 - Medical Review of Systems
 - Past Medical History*
 - Past Surgical History
 - Allergies
 - Medications*
 - Family History*
 - **Social History***



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I. Psychiatric Interview

Social History

- Born and raised:
- Family of Origin:
- Developmental History:
 - Fetal development:
 - Milestones:
- Education:
 - Started school at age
 - Public/private:
 - IEP/accommodations:
 - Grades:
 - Highest level of school:
- Employment/Income:
 - Age began working
 - Total jobs and job course
 - Longest period of employment
- Current Relationship Status/children:
- Current Living Arrangement:
- Primary Supports:
- Spiritual:
- Access to Weapons: (storage, etc)
- Hx of Domestic Violence Exposure:
- Current Abuse or Intimidation:



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I. Psychiatric Interview

- Unique Elements
 - Psychiatric Review of Systems
 - Psychiatric History
 - Legal History



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I. Psychiatric Interview

- Unique Elements
 - **Psychiatric Review of Systems**
 - Psychiatric History
 - Legal History



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I. Psychiatric Interview

Psychiatric Review of Systems

- Depressive/Dysthymic: Patient denies/endorsed active anhedonia, changes in sleep, poor energy, poor concentration/memory, changes in appetite, and/or feelings of hopelessness/worthlessness.
- Anxiety: Patient denies/endorsed active excessive worry, sleep disturbances from anxiety, inner tension from anxiety, fatigue from anxiety, and/or physical symptoms secondary to anxiety (diaphoresis, diarrhea, dizziness, dry mouth, dyspnea, SOB, faintness, flushing, HA, nausea, palpitations, paresthesias, urinary frequency, vomiting).
- Panic: Patient denies/endorsed history of panic attacks.
- Manic/Hypomanic: Patient denies/endorsed a history of discrete periods of euphoria, increased energy, grandiosity, decreased need for sleep, increased pleasure-seeking, impulsivity, and/or distractibility.
- Psychotic: Patient denies/endorsed experiencing auditory/visual hallucinations, thought insertion/ thought withdrawal, thought blocking, and/or ideas of reference.



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I. Psychiatric Interview

Psychiatric Review of Systems II

- Obsessions/Compulsions: Patient denies/endorsed obsessions and/or compulsions.
- Personality: Patient denies/endorsed tumultuous relationships, deliberate self-harm (cutting, burning, head banging), difficulties with impulsivity (eating binges, spending sprees, verbal outbursts, drinking excessively), extreme moodiness, frequent feelings of anger or using sarcastic tone, distrust of others, derealization, chronic emptiness, identity diffusion, and/or making attempts to avoid being abandoned.
- Trauma: Patient denies/endorsed a history of trauma.
 - Patient denies/endorsed intrusion symptoms (intrusive memories, trauma related nightmares, flashbacks, distress at exposure to cues reminding of event, or physiologic reactions to cues).
 - Patient denies/endorsed avoidance of stimuli associated with the trauma by avoiding memories/thoughts/feelings associated with event or avoiding external reminders of event (people, places, conversations).
 - Patient denies/endorsed negative alterations in cognitions or trauma related mood changes like inability to remember important aspect of trauma, persistent and exaggerated negative beliefs about oneself, distorted cognitions about cause/consequences of trauma, persistent negative emotional state, diminished interest or participation in activities, detachment/estrangement, and inability to have positive emotions.
 - Patient denies/endorsed changes in arousal/reactivity such as irritability w/ anger outbursts, reckless/destructive behavior, hypervigilance, and sleep disturbance.
- Somatic/Eating Behaviors: Patient denies/endorsed history of disordered eating including restrictive behaviors, purging behaviors, or preoccupations with body image.
- Cognitive: Patient denies/endorsed a history of cognitive impairment and/or memory difficulty.
- Neuropsychiatric: Patient denies/endorsed head trauma, seizures, developmental disorders, other neurological conditions, or thyroid disorders.



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I. Psychiatric Interview

- Unique Elements
 - Psychiatric Review of Systems
 - **Psychiatric History**
 - Legal History



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I. Psychiatric Interview

Psychiatric History

Previous diagnoses:

- age when dx, how diagnosed?

Previous psychiatric medication trials/therapies:

- Anti-depressants:
- Anxiolytics:
- Stimulants:
- Sleep Aids:
- Mood Stabilizers:
- Anti-psychotics:
- History of ECT or TMS or ketamine?

Previous psychiatrists/ pharm providers:

Previous psychotherapy:

Previous psychiatric hospitalizations:

- Date, location, reason/indication

Previous suicide attempts:

- date, method, medical intervention?

Self-injurious behavior/risky behavior:

- method, location, most recent time, medical intervention needed?

History of violence:

History of trauma:



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I. Psychiatric Interview

- Unique Elements
 - Psychiatric Review of Systems
 - Psychiatric History
 - **Legal History**

I. Psychiatric Interview

Legal History

- Justice involved?
 - Active Charges?
 - Open case?
 - Probation?
 - Conditions of probation?
 - Parole?
 - Conditions of parole?

II. Mental Status Examination

Constitutional

Musculoskeletal and Neurologic

Psychiatric

Cognitive



II. Mental Status Examination

Constitutional

Musculoskeletal and Neurologic

Psychiatric

Cognitive



II. Mental Status Examination

Constitutional

- Vitals
- Appearance
 - Age (older than, younger than)
 - Race/ethnicity
 - Clothing (clean/soiled, type of clothing, appropriate to season?)
 - Visible tattoos/piercings/cuts on arm
 - Malodorous?
 - Alone or accompanied?



II. Mental Status Examination

Constitutional

Musculoskeletal and Neurologic

Psychiatric

Cognitive



II. Mental Status Examination

Musculoskeletal and Neurologic

- Motor: Agitation? Retardation? Abnormal movements?
- Neuro: Cranial Nerve symmetry? Able to move all extremities?
 - EPS symptoms? Tremor? Myoclonus?
 - Gait: (just describe what you see!)



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II. Mental Status Examination

Constitutional

Musculoskeletal and Neurologic

Psychiatric

Cognitive



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II. Mental Status Examination

Psychiatric

- Behavior:
- Speech:
- Mood:
- Affect:
- Thought process:
- Thought content:
- Perceptions:
- Insight:
- Judgment:



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II. Mental Status Examination

Psychiatric

- Behavior:
- Attitude: Cooperative, seductive, guarded, hostile, controlling, critical
 - Eye contact: good, intermittent, poor
 - Odd mannerisms?
 - Tics?



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II. Mental Status Examination

Psychiatric

Speech:

- Rate – pressured, slowed, regular
- Rhythm/prosody – flattened, sing-song, odd inflections
- Articulation – dysarthria (think speech in mouth)
- Phonation – hoarseness (think vocal cords)
- Volume - loudness
- Production – amount of speech (hypervocal)
- Tone – angry, anxious
- Spontaneous/latent – are you prodding for information?



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II. Mental Status Examination

Psychiatric

Mood

“In your own words how would you say you feel?”



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II. Mental Status Examination

Psychiatric

Affect:

Type: euthymic, euphoric, dysphoric

Relation to mood: congruent?

Range: flat (none); blunted (shallow); constricted (limited); full (average)

Motility: sluggish, labile

Appropriateness to content: laughing about a death?



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II. Mental Status Examination

Psychiatric

Thought process:

- "Getting to the point": linear, circumstantial (you get to the point but take scenic byways), tangential (you never reach the destination but in the ballpark), loosening of associations (no logical connection from one topic to another)
- Flight of ideas: thoughts change abruptly from one idea to another
- Neologisms: Made up words
- Word Salad: incoherent collection of words
- Clanging: words connected by rhyming
- Goal-directed?



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II. Mental Status Examination

Psychiatric

Thought content

- Amount/Volume of ideas: Poverty of thought, overabundance of ideas
- Delusions:
 - Type: Grandiose, Paranoid, Erotomantic, Somatic, Religious
 - Bizarre vs. Non-bizarre (possible)
- Suicidal Ideation
- Homicidal Ideation
- Violent Ideation
- Obsessions: repetitive, intrusive thoughts
- Phobias



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II. Mental Status Examination

Psychiatric

Perceptions/Perceptual Disturbances:

- Hallucinations: sensory perceptions that occur in the absence of an actual stimulus
 - Sensory modality: auditory (most common), visual (very rare, neurologic), olfactory, tactile (substances), gustatory
 - Details: describe details of the experience with any command features
 - Hypnagogic/hypnopompic?
- Illusions: inaccurate perception of existing sensory stimuli
- Derealization/depersonalization: feeling detached from one's surroundings/feeling detached from one's body



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II. Mental Status Examination

Psychiatric

Insight: Level of awareness and understanding of their problem.

- Full
- Partial
- Limited
- None



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II. Mental Status Examination

Psychiatric

Judgment: Patient's ability to understand the outcome of their actions and use this in decision-making.

- Help-seeking
- Help-accepting
- Help-rejecting



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II. Mental Status Examination

Constitutional

Musculoskeletal and Neurologic

Psychiatric

Cognitive



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II. Mental Status Examination

Cognitive

- Orientation/Sensorium: alert/drowsy; person, place, time
- Memory: Immediate, recent/short-term, remote/long-term
- Attention/Concentration: Serial 7s, WORLD backwards; Luria hand sequence



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Questions?



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Primary Care Behavioral Health Symposium 2026

Motivational Interviewing in Primary Care

Sebastian Kaplan, PhD

Thursday, February 26th | 9:40 AM – 10:40 AM

MOTIVATIONAL
INTERVIEWING IN PRIMARY
CARE

February 26, 2026

Sebastian G. Kaplan, PhD

Department of Psychiatry

Department of Family Medicine

1

TRUE OR FALSE?

The reason people engage in
unhealthy lifestyles is because they're
not informed about the dangers of
smoking, fast food, inactivity, etc...

2

TRUE OR FALSE?

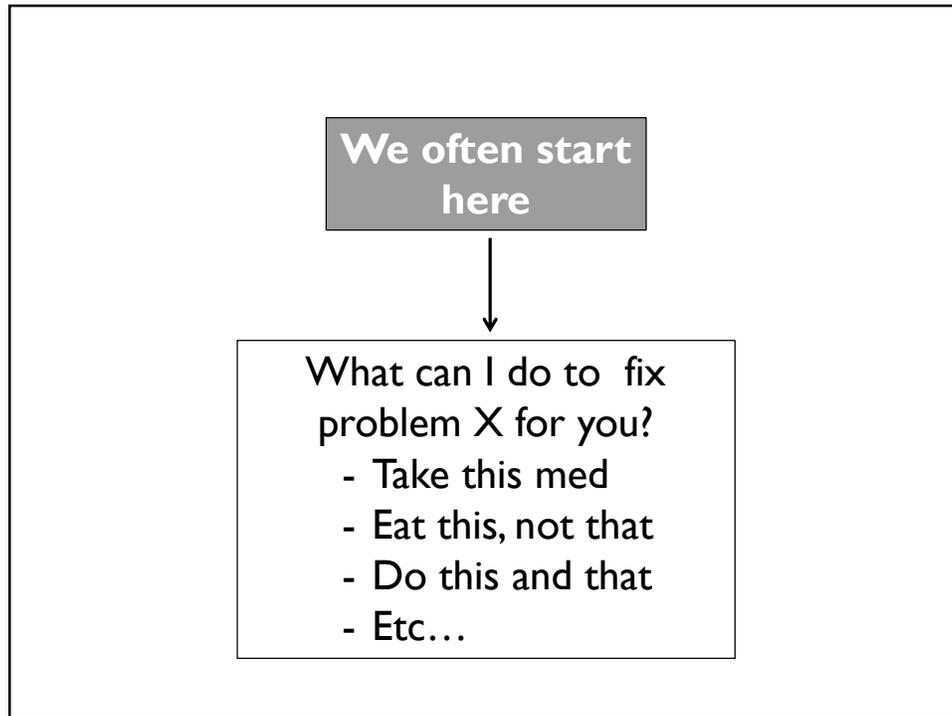
Because doctors know all the best health information their rates of unhealthy behavior are near zero.

3

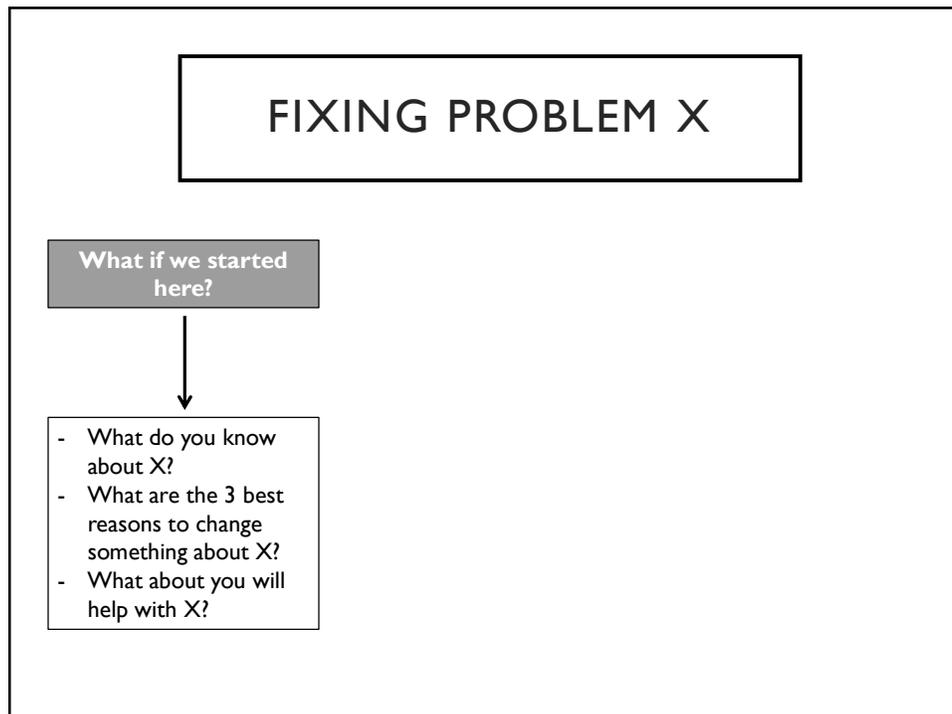
OPEN QUESTION

If providing knowledge alone is insufficient for motivating people towards healthy lifestyles, what else can we do as health care providers?

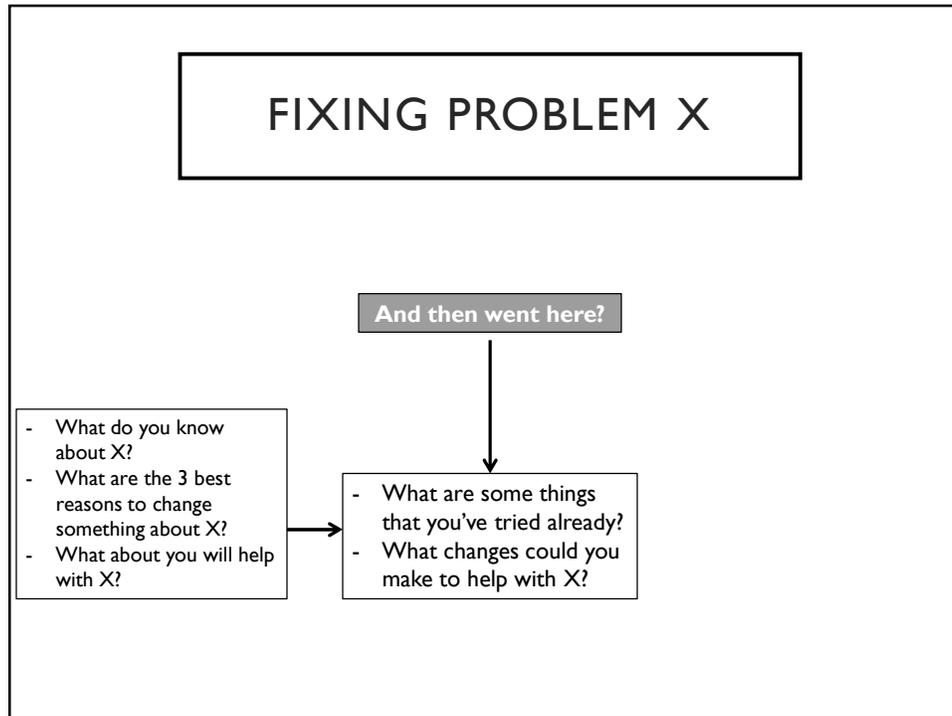
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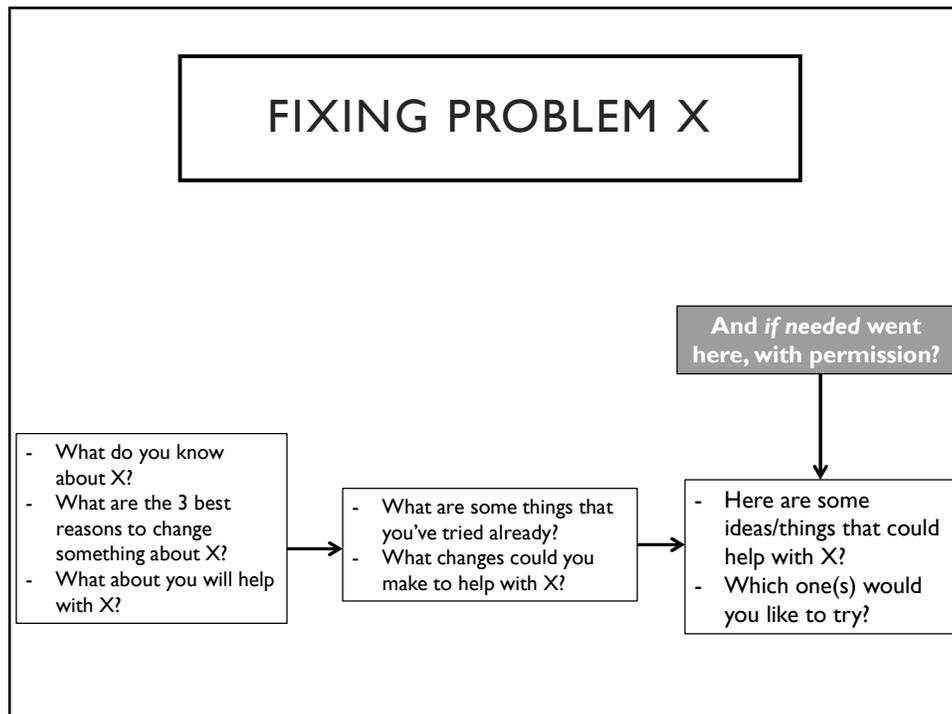
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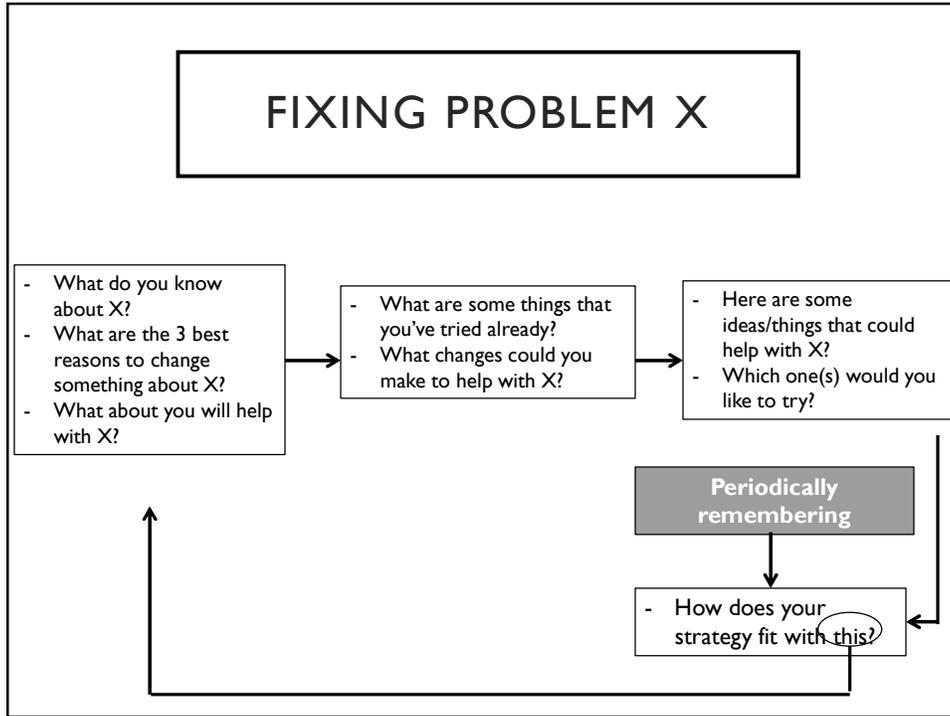
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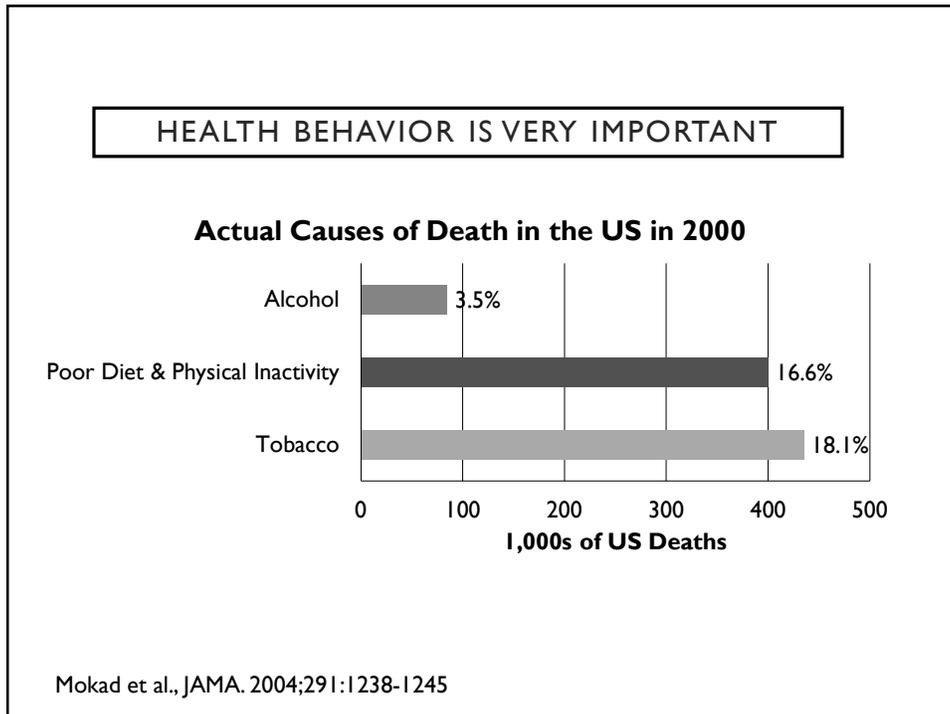
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9



10

META-ANALYSIS OF MI IN PRIMARY CARE

- Significant effect sizes for all outcomes (BP, substance use, weight loss, physical activity, adherence)
- Largest effect sizes for weight loss, blood pressure, and substance use
- Many used brief models (1-3 sessions)

VanBuskirk, K.A. & Wetherell, J.L. (2013). Motivational interviewing with primary care populations: A systematic review and meta-analysis. *Journal of Behavioral Medicine*. DOI 10.1007/s10865-013-9527-4.

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MI CAN IMPROVE PATIENT SATISFACTION

- 40 PC physicians and 320 patients with overweight/obesity
- Audio recordings of encounters coded for MI skills
- Findings:
 - Higher ratings of physician empathy associated with improved patient satisfaction
 - Use of any reflections by physician associated with higher ratings of autonomy support for patient
 - Patient confidence in ability to lose weight and comfort discussing weight were associated with patient satisfaction, autonomy support

Pollak, K.I. et al., (2011). Physician Empathy and Listening: Associations with Patient Satisfaction and Autonomy. *Journal of the American Board of Family Medicine*, 24, 665– 672.

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THINKING ABOUT CHANGE

1. **Think of a change that you've made, tried to make, are making, or are planning to make.**
2. **What led to your decision to consider/make a change?**
3. **How did it go? How is it going? How will it go?**

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AMBIVALENCE

Simultaneous and contradictory attitudes or feelings (as attraction and repulsion) toward an object, person, or action.

<http://www.merriam-webster.com/dictionary/ambivalence>

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DEFINITION

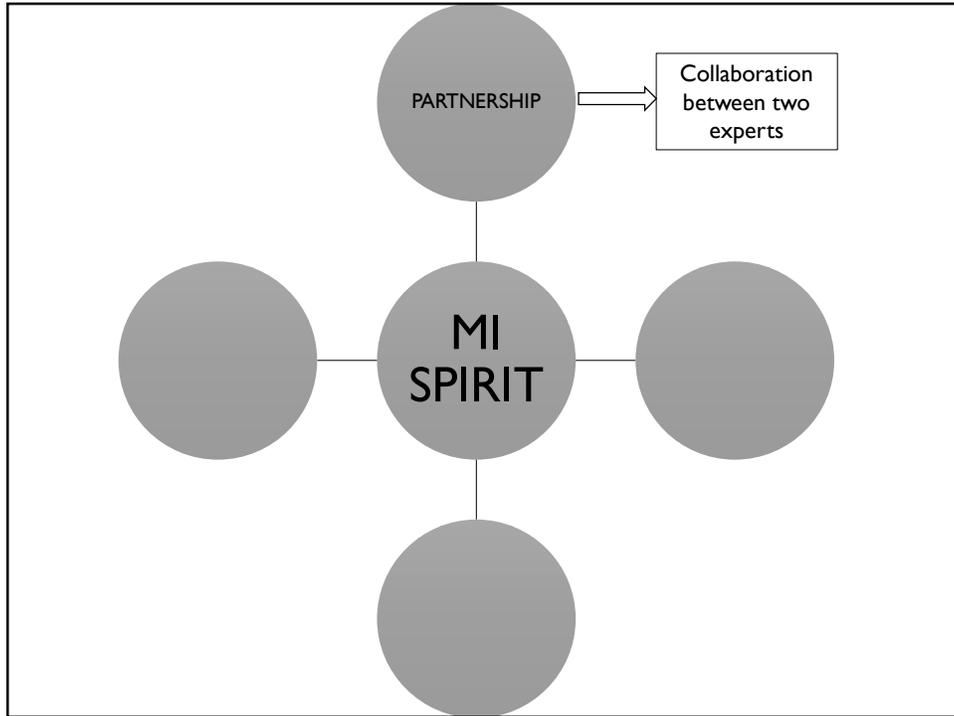
- “Motivational Interviewing is a particular way of talking with people about change and growth to strengthen their own motivation and commitment”

• Miller and Rollnick (2023)

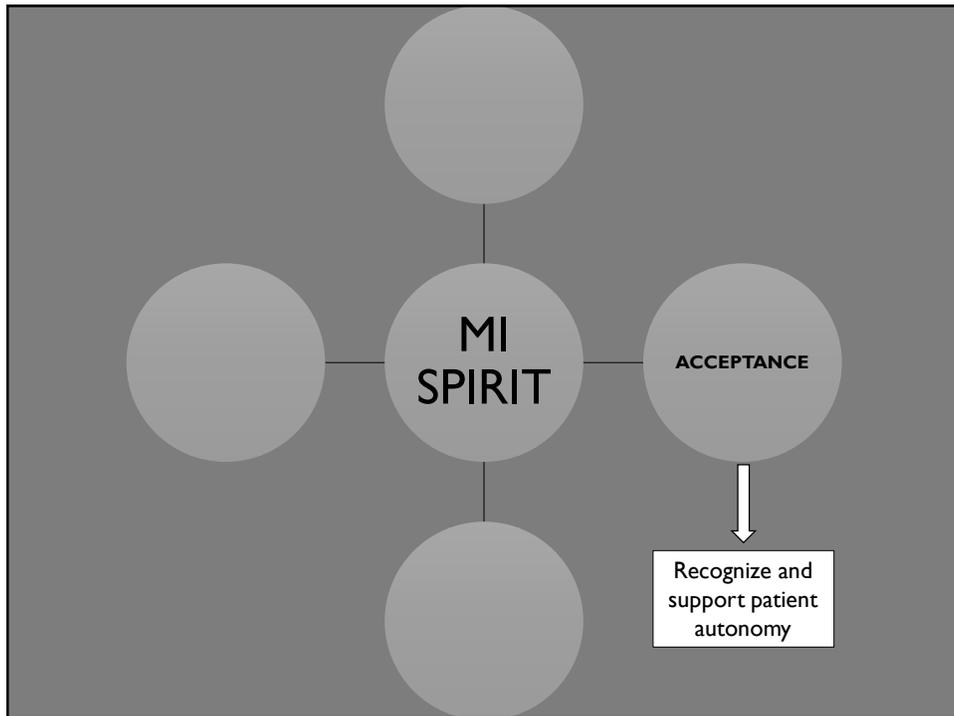
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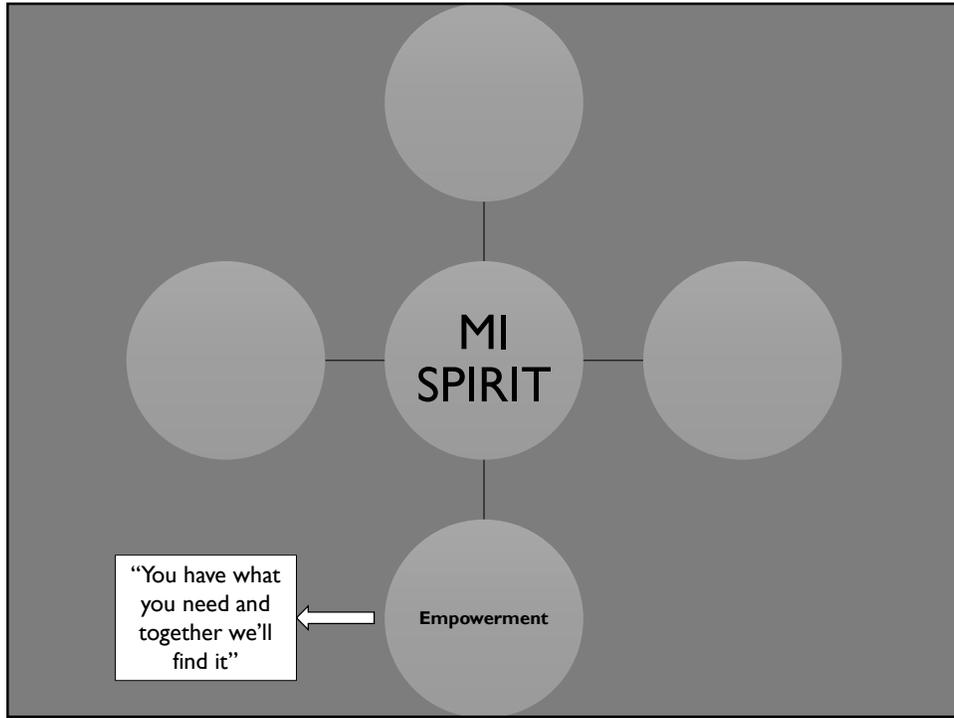
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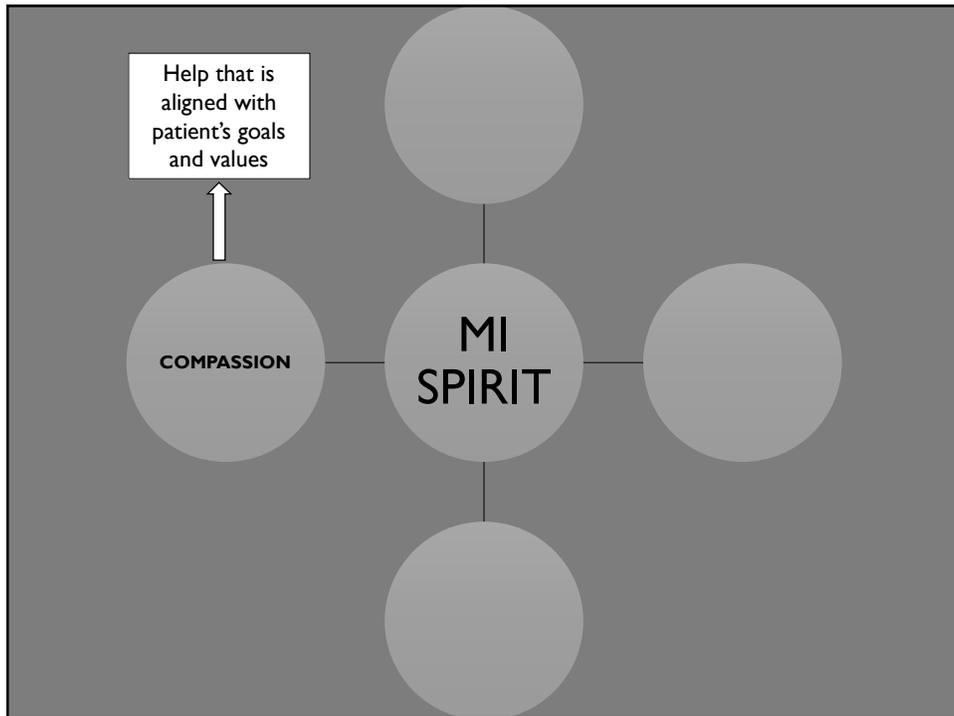
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19



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While a good rule of thumb, in many instances, is to try to talk less than your patient, there's so much more to effective listening...

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REFLECTIVE LISTENING

- Reflection: a mini-summary that is important for the following reasons:
 - Expresses empathy
 - Shows your effort to understand the patient and his/her experience
 - Creates a more active role for the patient

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TWO TYPES OF REFLECTIONS

- Simple
 - Briefly restating what client has just said; meant to keep momentum going in a session; can use some new words/language

- Complex
 - Adds additional meaning, more than what was said
 - Can emphasize elements such as feeling, tone, body language
 - Can be used to shift direction, although not too suddenly
 - Other types of complex reflections include:
 - Double-sided
 - Amplified
 - Continuing the paragraph

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REFLECTION PRACTICE

“Wow I didn’t realize that I was developing diabetes. I mean I know I’ve gained some weight and people are always on my case about what I eat, but I just thought everyone was making a big deal out of nothing.”

1. “Let’s discuss what options you have now.”
2. “This comes as a big surprise to you.”
3. “What concerns you the most about this?”
4. “I’m going to refer you to a diabetes educator now.”
5. “Well I guess they were right after all.”

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REFLECTION PRACTICE

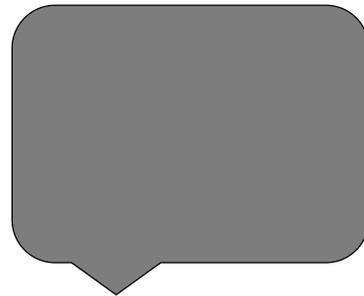
“I’m fine with making some changes in how I eat. I was even thinking about joining the gym. But taking this blood pressure medicine every day? I really don’t feel good about that.”

1. “Here’s a pamphlet we give our patients that are first learning about this medication.”
2. “Well, you’re going to feel a lot worse if you don’t start taking this medication.”
3. “Which gym are you going to join?”
4. “You have some concerns about the medication and seem ready to make some other changes to improve your blood pressure.”
5. “Those lifestyle changes are all fine but medication is something you really have to consider.”

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REFLECTION EXAMPLE

“I’ve been thinking about quitting for years but it is just so hard. I couldn’t imagine going a day without a cigarette.”



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2) SEARCHING FOR STRENGTHS

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AFFIRMATIONS

- An affirmation is a statement about who the individual is as opposed to praising behavior:
 - “You are the kind of person that rises to meet a challenge.”
 - “When you set your mind to something you follow through.”
 - “You care deeply about your children.”

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AFFIRMATION PRACTICE

“I’ve been fighting this for years but I’ve finally decided to go to therapy. I used to say that I could just do this on my own but lately I’ve realized how I’m just repeating the same mistakes.”

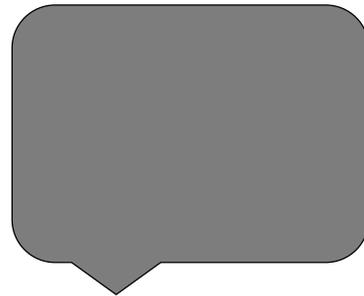
Affirmation – Yes or No?

1. “I’m so proud of you for making this decision.”
2. “You really know how to listen to your doctor.”
3. “You are someone that recognizes your limits and when things need to change.”
4. “You’ve got this. You are going to do great.”
5. “I can see how much you’ve thought about this.”

31

AFFIRMATION EXAMPLE

“Before my heart attack I never really stopped to consider what I was doing to my body. Now, especially after seeing how scared my grandkids are, I have to make some difficult decisions about my smoking and my diet. It won’t be easy but I’m ready to make these changes.”



32

3) DRAWING OUT *NOT* PUTTING IN

33

EVOCAATION

1. What does the patient know, think, believe, feel, value, etc...
2. Assuming there is health and competence in the patient and drawing it out.
3. Giving information is *less* important (but still important in some situations)

34

4) WHAT'S IN IT FOR YOU?

35

CHANGE TALK

Patient language that is
in favor of health:

The patient, not the
clinician, makes the
argument for change.

36

"DARN + CATS"

- Desire for change: "I want to stop drinking"
 - Ability for change: "I know I can do this if I put my mind to it."
 - Reasons for change: "If I don't start eating better I'll develop diabetes."
 - Need for change: "Now that I'm leaving the hospital I really need to take this seriously."
- PLUS
- Commitment to change: "I will start going to the gym."
 - Activation: "I am ready to use my new cookbook."
 - Taking Steps (What has happened already): "I went for my first walk last night!"

37

EVOKING CHANGE TALK

- Problem Recognition
 - "What kinds of health problems have you had?"
- Expressed Concern
 - "What worries you about your blood sugar?"
- Reason, Goals, and Values
 - "How does your daily routine fit with your value of taking care of your priorities?"
 - "What are the three best reasons for you to quit smoking?"

38

EVOKING CHANGE TALK

- Decisional Balance

Pros of “not smoking”	Cons of “not smoking”
Pros of “continuing to smoke”	Cons of “continuing to smoke”

- Careful not to spend too much time on the “negative” side of change (i.e. the unhealthy behaviors)

39

EVOKING CHANGE TALK

- Ruler questions

- Clinician: “On a scale of 1 to 5, with 1 being not important and 5 being extremely important, how important is it for you to start eating meals as a family?”
- Client: “Maybe around a 3.”
- Clinician: “So somewhere in the middle. And why do you think you are at a 3 and not a 2 (or something lower)?”
 - Can explore importance, confidence, and/or readiness for change

40

EVOKING CHANGE TALK

- Querying Extremes
 - “What would be the best thing about cutting back on your smoking?”
 - “What would be the worst thing if you didn’t cut back on your smoking?”

- Looking forward/back
 - “What do you imagine life to be like in a couple of years? How does your drug use fit with that?”
 - “What was it like when you weren’t using drugs?”
 - “If you were to stop smoking in the future, what would lead you to do that?”

41

WHICH IS THE REFLECTION OF CHANGE TALK?

“I tried and tried to quit smoking, but it just hasn’t happened yet. I just get back to the office and things start piling up and before you know it I’m out in the smoking area lighting up again.”

- A. You’ve tried hard, but it just isn’t working for you.
- B. You really want to quit smoking.
- C. It’s hard to imagine what will work for you.

42

WHICH IS THE REFLECTION OF
CHANGE TALK?

“I don’t like to control what I drink. I suppose I should, but I don’t like to feel restricted. Everyone likes to get in my business.”

- A. You feel like you should change your drinking.
- B. You don’t like to feel boxed in.
- C. People really care about you.

43

HOW WOULD YOU REFLECT THE
CHANGE TALK?

“I’m definitely ready to quit drinking and popping pills. Now weed, that’s a different story. I mean it’s practically legal now and no one gets addicted to it anyway. I think my parents will be fine with that.”

44

5) ADVICE, IF NECESSARY, WITH
PERMISSION

45

ADVICE, MI STYLE

1. Find out what the patient already knows.
2. Get permission to share information or signal that you want to hear what the patient thinks about what you will offer.
3. Offer information that is “evidence” based.
4. Find out what the patient thinks/feels about what you’ve offered.

46

ELICIT-PROVIDE-ELICIT

Clinician: Elicit – “We’ve talked a lot today about depression. Tell me what thoughts you have right now as you think about what we’ve discussed.”

Client: – “It’s helpful but it’s a lot as well. I have a lot of decisions to make about how I live my life. Hard to know where to start.”

Clinician: Provide – “You are taking this seriously despite how hard things have been. Can I offer a suggestion? (**client agrees**) Research suggests that the best treatment for moderate to severe depression is a combination of medication and therapy. There are several options in terms of medication, and forms of therapy.”

Clinician: Elicit – “What do you think about discussing those two parts of treatment as your main discharge plan, and then you and your outpatient team can reevaluate based on your progress in the next couple of months?”

Client: – “Well as long as it’s going to help I’m willing to try.”

Collaborative discussion proceeds from there

47

MENU OF OPTIONS

- Providing patient with multiple options/ideas about ways to change that the patient can then consider which makes most sense to them
- Rather than series of “you should try this…” statements, which are often rejected one by one

48

MENU OF OPTIONS – FROM THE BRENNER FIT PROGRAM

Brenner FIT Healthy Habits	Example of how to get started
1. Eating more fruits and veggies	1. Our family will try to include 1-2 fruits & vegetables a day
2. Choosing more water and sugar-free drinks	2. Our family will try Propel and flavored waters this week
3. Eating 3 meals a day	3. Our family will eat breakfast most days
4. Eating slowly, tasting every bite!	4. We will put down our fork between bites at dinner
5. Snacking smart	5. Try different foods for snacks
6. Preparing more family meals at home	6. Our family will eat at home one extra night
7. Noticing hunger and fullness to eat the right amount	7. Pay attention to how your stomach feels as you eat

49

RESOURCES

- MI Network of Trainers Website
 - <https://motivationalinterviewing.org/>
- MI Books
 - <https://www.guilford.com/books/Motivational-Interviewing/Miller-Rollnick/9781609182274>
- MI Videos (besides youtube...)
 - <http://www.psychotherapy.net/>
- MI Podcast (“Talking to Change: A Motivational Interviewing podcast”)
 - <https://itunes.apple.com/gb/podcast/talking-to-change-a-motivational-interviewing-podcast/id1395518686?mt=2>

50

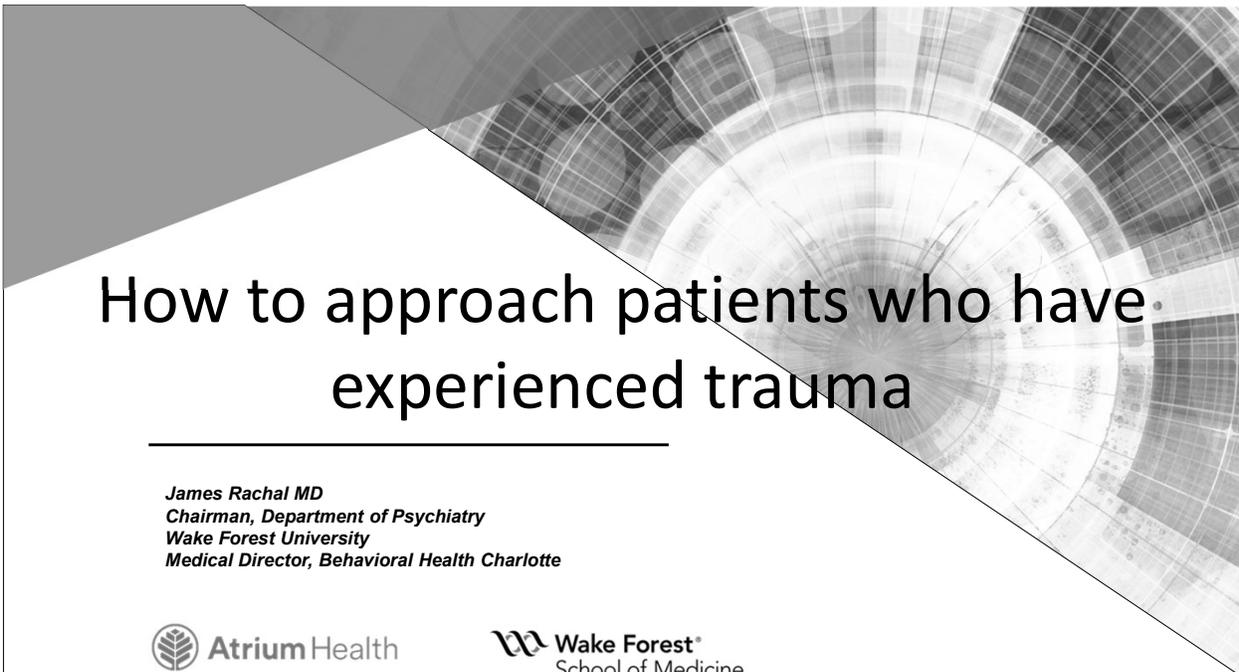


Primary Care Behavioral Health Symposium 2026

How to Approach Patients Who Have Experienced Trauma

James Rachal, MD

Thursday, February 26th | 11:00 AM – 12:00 PM



How to approach patients who have experienced trauma

James Rachal MD
Chairman, Department of Psychiatry
Wake Forest University
Medical Director, Behavioral Health Charlotte

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1

Learning Objectives

- Understand how the diagnosis of PTSD is made as well as how individual vulnerabilities as well as individual traumatic events influence the likelihood a patient is diagnosed with PTSD
- Outline the different models for understanding how PTSD affects patients behaviors
- Understand the neurocognitive impacts of PTSD
- Understand the different physiologic presentations of PTSD
- Understand the comorbid diagnosis associated with PTSD
- Discuss how to identify and approach patients with PTSD in the clinical settings

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2



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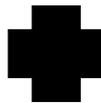
3

Factors that lead to PTSD



Larry Downing / Reuters

Trauma



Individual

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4

PTSD Vulnerability

- Stimulus Factor: Objective
 - Type
 - Intensity
 - Severity
 - Duration
 - Proximity
 - Expectedness
 - Intentionality

- Stimulus Factor: Subjective
 - Perception
 - Responsibility
 - Beliefs



[NIMH » Post-Traumatic Stress Disorder \(nih.gov\)](#)



5

PTSD Vulnerability

- Age
- Sex
- Prior Trauma
- Prior Psychiatric Diagnosis
- Developmental Factors
- Substance Abuse
- Recovery Environment



[Post-traumatic stress disorder, resilience and vulnerability](#)
 | [Advances in Psychiatric Treatment](#) | [Cambridge Core](#)



6

Protective Factors

- IQ
- High visual and verbal learning memory
- Relationship/Social Support
- Employment
- Coping Skills
- Education
- Purpose



Protective Factors Associated With Post-traumatic Outcomes in Individuals With Experiences of Psychosis - PubMed (nih.gov)



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7

Prevalence by Type of Event

- Proportion of exposed individuals who develop PTSD
 - 8% of UN peacekeepers (e.g. Somalia)
 - 30% of the civilians in war zones
 - 30% of Vietnam veterans (lifetime)
 - 40% of abused children
 - 50% of POWs and concentration camp survivors
 - 90% of survivors of Zeebrugge ferry disaster

Post-traumatic Stress Disorder (PTSD) Statistics: 2023 Update - CFAH



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8

PTSD in Pentagon Employees

- Survey conducted two years after 9/11
- Present at work on 9/11
 - 22% of those who were at work
 - 6% of those who were not at work
- Those injured on 9/11 or in the clean-up effort
 - 47% of those hurt
 - 10% who were unhurt
- Overall 13% have PTSD

Grieger, et al. *Psych Services* 2005; 56(11):1374-8.



9

Resilience

- People are amazingly resilient and courageous
 - Exposure to trauma is common (61% among men and 51% among women), PTSD is not (3.6% men and 10% women)
 - Up to 75% of people confronted with irrevocable loss do not show PTSD symptoms

Post-traumatic Stress Disorder (PTSD)
Statistics: 2023 Update - CFAH



10

Acute Stress Disorder

- A. Exposure to actual or threatened death, serious injury, or sexual violation in one (or more) of the following ways:
 - Directly experiencing the traumatic event(s).
 - Witnessing, in person, the events(s) as it occurred to others.
 - Learning that the traumatic events(s) occurred to a close family member or close friend. Note: In cases of actual or threatened by death of a family member or friend, the events(s) must have been violent or accidental.
 - Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).
 - Not due to media



11

Acute Stress Disorder

- B. Presence of nine (or more) of the following symptoms from any of the five categories beginning or worsening after the traumatic event(s) occurred:
 - Intrusion
 - Negative mood
 - Dissociative
 - Avoidance Sx
 - Arousal Sx



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Acute Stress Disorder-Intrusion Sx (4)

- Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
- Recurrent distressing dreams in which the content and/or affect of the dream are related to the events(s).
- Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings).
- Intense or prolonged psychological distress or marked physiological reactions in response to internal or external cues that symbolize or resemble an aspect of the traumatic events.



13

Acute Stress Disorder

- Negative Mood Persistent inability to experience positive emotions
- Dissociative Symptoms (2)
 - An altered sense of the reality of one's surroundings or oneself
 - Inability to remember an important aspect of the traumatic events(s)
- Avoidance symptoms (2)
 - Efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
 - Efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).



14

Acute Stress Disorder-Arousal Sx (5)

- Sleep disturbance (e.g., difficulty falling or staying asleep, restless sleep)
- Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
- Hypervigilance
- Problems with concentration
- Exaggerated Startle Response



15

Acute Stress Disorder

- C. The duration of the disturbance (symptoms in Criterion B) is 3 days to 1 month after trauma exposure.
 - Note: Symptoms typically begin immediately after the trauma, but persistence for at least 3 days and up to a month is needed to meet disorder criteria.
- D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The disturbance is not attributable to the physiological effects of a substance (e.g., medication or alcohol) or other medical condition (e.g., mild traumatic brain injury) and is not better explained by brief psychotic disorder."



16

Diagnostic Criteria for PTSD

- Exposure to actual or threatened death, serious injury or sexual violence
 - Directly experiencing the traumatic event
 - Witnessing the event in person as it occurs to others
 - Learning that the traumatic event occurred to a close family member or close friend-In cases of actual or threatened death the events must be accidental or violent
 - Experiencing repeated or extreme exposure to aversive or details of the traumatic event –does not apply to exposure through electronic media or pictures unless it is work related
 - Must be more than one month



17

Diagnostic Categories for PTSD (4)

- Intrusion symptoms
- Persistent avoidance
- Negative alterations in cognition and mood
- Marked alteration in arousal and reactivity associated with traumatic event



18

Diagnostic Criteria for PTSD-Intrusive symptoms

- Intrusive symptoms (one or more)
 - Intrusive memories
 - Nightmares
 - Dissociative reaction
 - Prolonged psychological distress when exposed to cues
 - Physiologic response to cues



19

Diagnostic Criteria for PTSD (Avoidance/negative cognition)

- Persistent avoidance of stimuli (one)
 - Avoidance of thoughts, memories or feelings associated with the traumatic event
 - Avoidance of external reminders of the traumatic event
- Negative alterations in cognitions and mood associated with the traumatic event and beginning or worsening after event (two)
 - Inability to remember important aspect of the traumatic event
 - Persistent and exaggerated negative beliefs of self, others or world
 - Persistent distorted cognitions about cause or consequence of event
 - Persistent negative emotional state
 - Markedly diminished interest in participating in events
 - Feeling of detachment or estrangement from others
 - Persistent inability to experience positive emotion



20

Diagnostic Criteria for PTSD (arousal)

- Marked alterations in arousal and reactivity (two)
 - Irritable and angry outburst typically with verbal or physical aggression
 - Reckless or self destructive behavior
 - Hypervigilance
 - Exaggerated startle response
 - Problems with concentration
 - Sleep disturbance



21

- 31 year old woman is hospitalized after sustaining multiple rib fx from MVA. 48 hours later she complains nurses are constantly hiding in her room and making fun of her. After speaking with the nurses there is no evidence of this. VSS, patient has no psychiatric hx, denies smoking or recreational drugs four standard drinks daily. On the sixth day of hospitalization, the patient no longer is agitated and no longer has the same complaints. What is the likely dx?



22

- A. Paranoid personality disorder
- B. Brief Psychotic Disorder
- C. Adjustment Disorder
- D. Alcohol hallucinosis
- E. PTSD



23

PTSD differs from acute stress disorder in that

- A. ASD occurs earlier than PTSD
- B. PTSD is associated with at least 3 dissociative sx
- C. Avoidance of stimuli is associated with the trauma is only associated with PTSD
- D. Reexperiencing the trauma is not found in ASD
- E. PTSD lasts less than 1 month after a trauma



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25

- Models for Understanding PTSD
- Models for Understanding PTSD
- Models for Understanding PTSD

MODELS FOR UNDERSTANDING PTSD

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26

Information Processing Theory

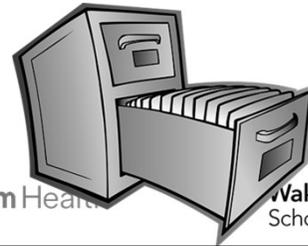
- Schema
 - Assimilation
 - Accommodation



Information
Processing | Simply
Psychology



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27

Two Factor Theory

- Classical Conditioning initiates response, Operant Conditioning Maintains
 - Response Voluntary
 - Response could cancel the event
 - Response motivated by fear
 - Escape response negatively reinforced by fear reduction
- Explains Maladaptive behavior
- Utilized in exposure therapy

[Behavioral interventions for trauma and posttraumatic stress disorder. \(apa.org\)](https://www.apa.org)



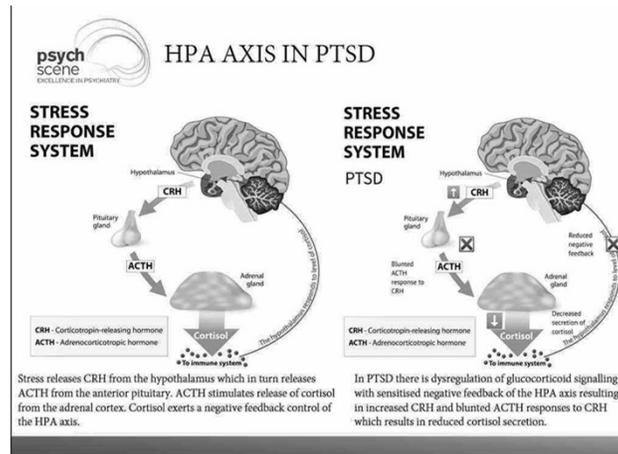
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28

Dysfunction of HPA



Post Traumatic Stress Disorder (PTSD) - Neurobiology and Management (psychscenehub.com)



29

Neurocognitive changes

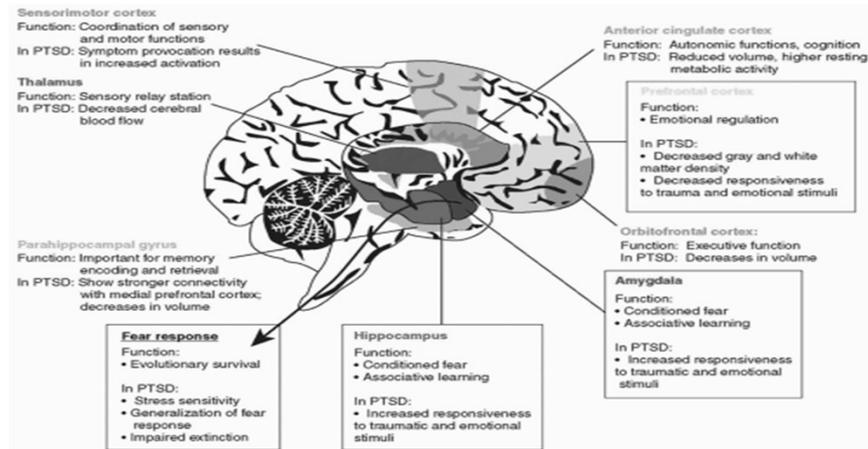
- Abnormality in memory primary contributors to a number of symptoms
- Dysfunction in attentional processing, including attentional bias toward threat, persistent enhancement of attention to salient but extraneous cues and problems with attentional control over trauma related thoughts
- Dysfunction in attention, speed of informational processing working memory, episodic memory, verbal and visual recall, and executive functioning

The neurocognitive profile of post-traumatic stress disorder (PTSD), major depressive disorder (MDD), and PTSD with comorbid MDD - Koopowitz - 2021 - Brain and Behavior - Wiley Online Library



30

Neurocognitive changes



<https://neupsykey.com/anxiety-disorders-posttraumatic-stress-disorder-and-obsessive-compulsive-disorder/>



31

Psychological activity associated with PTSD include all except

- A. Decreased parasympathetic tone
- B. Elevated baseline heart rate
- C. Excessive Sweating
- D. Increased circulating thyroxine
- E. Increased blood pressure



32



“The good news is that it’s not my problem.”



33

PTSD Physiologic Effects

- Effect neuroendocrine and inflammatory effects
- Direct effects on CNS
 - Changes in sleep wake (87%)
 - Effects on consciousness
- Effect peripheral organ system
 - Cardiovascular
 - Immune System

[PTSD and Physical Health - PTSD: National Center for PTSD \(va.gov\)](#)

[Sleep Problems and PTSD - PTSD: National Center for PTSD \(va.gov\)](#)



34

PTSD Impacts

- CVD
- Cancer
- Asthma
- TBI
- Organ Transplants
- Metabolic Syndrome

[Review of somatic symptoms in post-traumatic stress disorder - PubMed \(nih.gov\)](#)

[Physical health burden of PTSD, depression, and their comorbidity in the U.S. veteran population: Morbidity, functioning, and disability - ScienceDirect](#)



35

Somatic effects from insular activation

- Joint ache
- Burning and prickling sensation
- Vasomotor flush
- Dyspnea
- Sexual arousal
- Vagal inputs

[Review of somatic symptoms in post-traumatic stress disorder - PubMed \(nih.gov\)](#)



36

Common Psychogenic Presentation

- Seizure (very common in trauma)
- Movement Disorders
 - Tremor
 - Dystonia
 - Parkinsonism
 - Paroxysmal Dyskinesia
 - Gait Disorder
- Paralysis
- Visual Symptoms

Characteristics of psychogenic nonepileptic events among veterans with posttraumatic stress disorder: An association of semiology with the nature of trauma - ScienceDirect

Functional (psychogenic) movement disorders – Clinical presentations - ScienceDirect



37

Other Neurologic Manifestation

- Tinnitus
- Chronic Dizziness
- Chronic Fatigue Syndrome
- Chronic Daily Headache
- Episodic Migraine
- Nondermatomal Somatosensory Deficit



38

“Don't be alarmed, folks—he's completely harmless unless something startles him.”

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39

Presentation in Clinic

- Easily Overwhelmed
- Difficulty Staying Present
- Unable to Integrate Feelings
- Make Sense of Experiences
- Sensitive to Criticism
- Help Rejecting

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40

May present as

- ADHD
- Depression
- Anxiety
- Psychosis
- Borderline PD
- Substance Abuse
- Bipolar
- Suicidality
- Insomnia
- OCD



41

Comorbid

- Substance abuse
- Panic Disorder
- Depression (20-96%)
- Schizophrenia/Schizoaffective (41-47% have PTSD)
- Anxiety Disorder (67%)
- Pain Disorder
- Conversion Disorder
- Bipolar (7-40%)



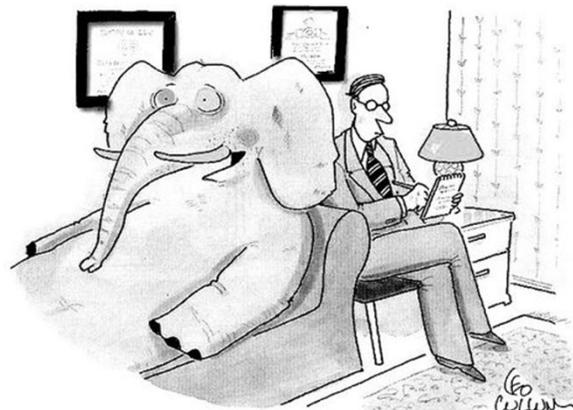
42

22 year old male c/o recurrent nightmares, flashbacks, and feeling like he is in a daze 2 weeks after an MVA in which his GF died.

- A. Acute Stress Disorder
- B. Adjustment Disorder
- C. Complicated Grief
- D. PTSD



43



"I'm right there in the room, and no one even acknowledges me."



44

Approach to the Traumatized Patient

- Safe Environment
- Asked open ended questions
- Be Curious
- Be Transparent
- Collaborate
- Empower
- Be wary of countertransference
- Be wary of dependency



45

PTSD treatments

- Cognitive Behavioral Therapy/Cognitive Processing Therapy
- Prolonged Exposure Therapy
- EMDR (Eye Movement Desensitization Reprocessing)
- DBT
- Seeking Safety
- Dream Scripting
- Narrative Exposure Therapy



46

PTSD treatments-likely to stay in

- Only 30% of Veterans stay in treatment after 9 sessions.
- Veterans who chose pharmacotherapy with or without psychotherapy had greater symptoms than those who chose psychotherapy alone
- Lower education achieved more likely to drop out
- Comorbid drug use
- Lower income
- Greater disability status/lower social support
- Higher pretreatment severity
- History of accidents/other trauma types (physical assault lowest rate of dropout)



47

PTSD/Anti-depressants Treatment

- SSRI (sertraline, paroxetine, fluoxetine)-Serotonin Transport Deficiency has been found in Amygdala
- Venlafaxine-combined SSRI/norepinephrine reuptake inhibitor
- Mirtazapine may be helpful for sleep
- TCA (no difference between tertiary and secondary) (amitriptyline recommended against)
- MAOI-effective but difficult to use
- Careful with hypnotics



48

Adjunct Treatments-Mood Stabilizers/Antipsychotics

- Topiramate-possible evidence to support use after fail first line/may also decrease alcohol consumption
- Lamotrigine - limited data
- Carbamazepine/divalproex sodium - mixed at best
- Risperidone is contraindicated
- Not enough information on the other antipsychotics



49

Adjunct treatment

- Prazosin-nightmares/flashbacks/alcohol cravings
- Buspirone-hyperarousal symptoms-little evidence to support use
- Beta blocker-hyperarousal-little evidence
- Benzodiazepine-no more than 5 days-studies suggest it causes poorer outcomes



50

Oxytocin

- Given Internasal
- Given after traumatic event/before therapy session
- Decrease Amygdala hyperactivity thus decreasing fear response
- Promotes prefrontal control of amygdala and thus enhances top down inhibition of amygdala by increasing connectivity of ventromedial pre frontal cortex
- May also modulate HPA axis and ANS



51

Other future therapies

- Doxazosin
- Riluzole-acts by inhibiting glutamate and inactivating sodium channels (glutamate involved in fear and emotion circuits)
- Cortisol-after trauma or before therapy
- Ketamine (NMDA antagonist)
- Cycloserine (Partial NMDA agonist)-used in association with Short Imagery Rescripting

- Baclofen with citalopram hydrobromide



52

Which anti-andrenergic medication is recommended for tx nightmares in PTSD

- A. Clonidine
- B. Guanfacine
- C. Prazosin
- D. Propranolol



53

Which class of medication has a relative contraindication for tx of sx of PTSD

- A. Atypical Antipsychotic
- B. BDZ
- C. SSRI
- D. TCA



54

Case Presentation

- A family medicine colleague request a quick “bedside consult.” He has a 41 year old female military spouse has seen many times for coccyx pain and anxiety. She is on venlafaxine for anxiety. She states the only thing that helps is oxycodone/acetaminophen. The physician prescribed 2 tabs tid for pain and also started her on a pain contract. She is seen monthly and she often presents quite labile. Her husband is frequently gone and she is often quite stressed when this occurs. She is planning a trip to see her family and coincidentally she has run out of medication early. She is asking for a refill.



55

Case Presentation

- How should he handle this situation?
- Is there any more information you need?
- Are there any other diagnosis you should consider?
- Is there anything reassuring in the presentation?



56

Questions



Primary Care Behavioral Health Symposium 2026

Mood Disorders

Sahil Munjal, MD

Thursday, February 26th | 12:45 PM – 1:45 PM



Mood Disorders

Sahil Munjal, MD, FAPA, FACLP
Program Director, Psychiatry Residency Program
Associate Professor, Psychiatry and Behavioral Medicine
Atrium Wake Forest Baptist

02/26/2026



1

Learning Objectives

- Identify the **criteria** to diagnose mood disorders- MDD/Bipolar
- Identify common **differential diagnosis**
- Review first- and second-line **management** strategies for mood disorders
- Identify when to **refer** patient to a psychiatric provider



2

Major Depressive Disorder



3

Epidemiology

- **12-month prevalence:** ~6%
- **Lifetime risk:** ~15–18%
- **Rank:** 2nd leading cause of disability in the USA and worldwide
- **Primary care:** 1 in 10 patients show depressive symptoms
- **Economic impact:** \$4 return for every \$1 spent on depression care
- **Treatment gap:** Only half of patients receive adequate treatment

Kessler 2013, Malhi 2018, Nihalani 2016, Boschloo 2014, Angst 2009, Steinart 2014,, McCarron 2021, Rotenstein 2023



4

Epidemiology contd..

- **Typical onset:** Mid-20s (median age 25; range 18–43)
- **Gender difference:** 2X in women
- **Course:** Episodic illness
 - 50% recover within 6 months
 - 75% recover within 1 year
 - 25% develop chronic depression
- **Recovery:** More stable in community/primary care settings than hospital settings
- **Recurrence:** Risk increases with each episode
- **Suicide risk:** 2%–15% of patients with MDD die by suicide



5

Comorbidity

- **Heart Disease:**
 - Major depression occurs in **16–23%** of patients.
 - Acts as an independent risk factor for sudden death and morbidity.
- **Cancer:**
 - More associated with pancreatic, lung, brain, and oropharyngeal cancers.
 - Prevalence: **17–32%** (meta-analysis of 24 studies).
 - Often comorbid with anxiety (in ~50% of cases).
 - Decreased treatment compliance; can also result from chemotherapy or steroids.
- **Diabetes:**
 - Up to **one-third** of patients with Type 2 diabetes have depression.
 - Depression worsens compliance and medical outcomes.

Koenig et al 1997



6

Diagnosis

- DSM 5 TR ≥ 5 in 2 w

Depressed mood

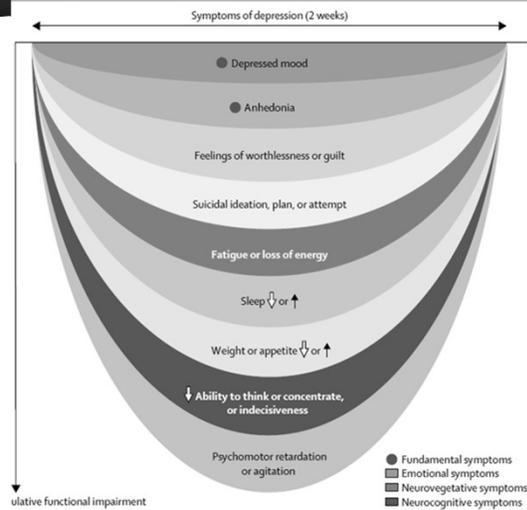
Anhedonia

Guilt/Worthlessness
Loss of energy (Fatigue)
Concentration
Weight changes
Psychomotor changes
Sleep disturbance
Suicidal ideations

- Functional impairment.
- None are pathognomic
- Sx more specific are **anhedonia, diurnal variation** and intensified **guilt**
- PDD/Dysthymia- >2 yrs without remission >2 m

Malhi 2014, DSM-5 2013, Malhi 2018
 Wake Forest University
 School of Medicine

 ADVOCATE HEALTH



7

Detection and Screening

•Routine Screening:

- USPSTF recommends routinely asking all patients about mood and anhedonia.

•Screening Tools:

- PHQ-9:** Scores range from 0–27; scores ≥ 10 suggest possible MDD.
- PHQ-2:** Focuses on depressed mood and anhedonia.

•Improving Diagnosis & Treatment:

- Educational programs can enhance detection and management.
- Attention may shift to other medical conditions; staff turnover can affect outcomes

Siu et al 2016, Mann 2005, Rutz 1992, Siu 2016
 Wake Forest University
 School of Medicine

 ADVOCATE HEALTH

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Differential Diagnosis/Workup

- When to do additional workup:**

Atypical psychiatric symptoms (age of onset, neurological signs, OCD symptoms)

- Recommended tests:**

- CBC with differential
- CMP
- Thyroid panel:** TSH (add free T3, T4 if TSH abnormal)
- Vitamin B12
- Urine toxicology
- Pregnancy test
- EKG: if using TCA, lithium, or antipsychotics

- Consider additional tests based on presentation:**

- RPR and HIV
- MRI: for neurologic/cognitive symptoms
- Urinalysis: elderly patients
- Sleep study: suspected OSA or sleep-related signs

- Rule out:**

Depressive disorder due to another medical condition

Munjal et al 2016



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Pathology

Monoamine Hypothesis

Serotonin, noradrenaline, and dopamine

MAO/TCA work

Why antidepressants take weeks to work.

Hypothalamic–pituitary–adrenal axis changes

Severe depression associated with increased plasma cortisol.

Successful translation of this knowledge into clinically effective treatments has not occurred, and treatments that modify HPA axis function

Cytokines

Peripheral cytokine concentrations have been linked to brain function, wellbeing, and cognition.

Interferon Gamma induces depression

Malhi 2018



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Pathology

- **Neuroplasticity and neurogenesis**
 - The process of neurogenesis, is controlled by regulatory proteins- (BDNF) which are ↓ ↑ with treatment.

Structural and functional brain changes

- Hippocampal volume is smaller
- Certain circuits are overactive/underactive
- **Genes**
 - Moderately heritable. First degree relatives 3X rate
- **Environmental Milieu/Adversity**
- **Epigenetics**



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Management- General Principles

- **Goal:** Complete remission using psychological therapy, pharmacotherapy, or both.
- **Address contributing factors:**
 - Stop drugs that lower mood (e.g., steroids, opioids)
 - Treat substance misuse
- **General measures:**
 - Sleep hygiene, regular exercise, yoga, healthy diet
 - Behavioral activation to break depressive cycle
- **Support:**
 - Support groups, online therapy, mobile apps
 - Psychoeducation for adherence
- **Treatment approach:**
 - **Mild cases:** Psychological therapy alone (CBT); avoid meds
 - **Psychotherapy:** For interpersonal issues, psychosocial stressors, or personality disorder
 - **Severe cases:** Medication first-line; consider neuromodulation if no response
 - **Efficacy:** All antidepressants > placebo; limited difference among them

APA Practice guidelines 2010, Gartlehner et al 2016 Weitz 2015



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Medication Options- SSRI

- SSRIs:** First-line antidepressants
- Onset:** 6–12 weeks for measurable benefit
- Common side effects:**
 - Sexual dysfunction
 - GI symptoms
 - Headaches
 - Discontinuation symptoms
 - Apathy
 - Serotonin syndrome
 - Weight gain
- Specific agents & notes:**
 - Fluoxetine:** Bulimia, long half-life, may cause anxiety/insomnia, CYP2D6 interactions
 - Sertraline:** Nausea/Vomiting
 - Escitalopram:** Well tolerated
 - Citalopram:** QTc prolongation risk
 - Paroxetine:** Shortest half-life, sexual side effects, weight gain, anticholinergic, sedating, CYP2D6 interactions



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Medication Options- Other monoaminergic agents

- SNRIs:**
 - Venlafaxine/Desvenlafaxine:** Risk of discontinuation symptoms, ↑ BP
 - Duloxetine:** Useful for fibromyalgia and neuropathic pain
- NDRI:**
 - Bupropion:** Smoking cessation, no sexual side effects, no weight gain, no sedation, improves attention (ADHD); risks: insomnia, seizure
- NaSSA:**
 - Mirtazapine:** Weight gain, sedation, anti-nausea, possibly faster onset
- Newer Antidepressants:**
 - Vilazodone:** Take with food, 5-HT1A partial agonist
 - Vortioxetine:** Multimodal, pro-cognitive, fewer sexual side effects
 - Levomilnacipran:** SNRI variant



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Medication selection

Choosing the antidepressant comes down to **clinical judgement-**

- Specific depressive symptoms
- Comorbid conditions
- Safety
- Side effect profile (e.g., sedating, weight gain, impact on sexual functioning)
- Drug interactions
- Ease of use (e.g., frequency of administration)
- Patient preference or expectations
- Cost and insurance coverage
- Response to antidepressants during prior episodes
- Family (first degree relative) history of response to antidepressants

Gartlehner et al 2012



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Follow up

•Adequate trial:

- 4–8 weeks at therapeutic dose
- Elderly may need ≥12-week trial

•Monitor for:

- Hyponatremia, GI bleeding, serotonin syndrome
- Emergence of mania
- Increased suicide risk in children, adolescents, and young adults (black box warning)

•Follow-up schedule:

- Every 2–4 weeks
- Reinforce education, assess adherence, reassess danger to self/others, address adverse events

•Combination therapy:

Adding psychological therapy to pharmacotherapy (or vice versa) improves outcomes

•Adjunct for insomnia/anxiety:

Short course (2 weeks) of sedative-hypnotic (e.g., trazodone, benzodiazepine like clonazepam)



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How long to treat after remission?

•Continuation Phase:

Maintain full dose for **6–12 months** after remission.

•Maintenance Treatment:

•Indicated for **recurrent depression** to prevent relapse.

•Recommended if:

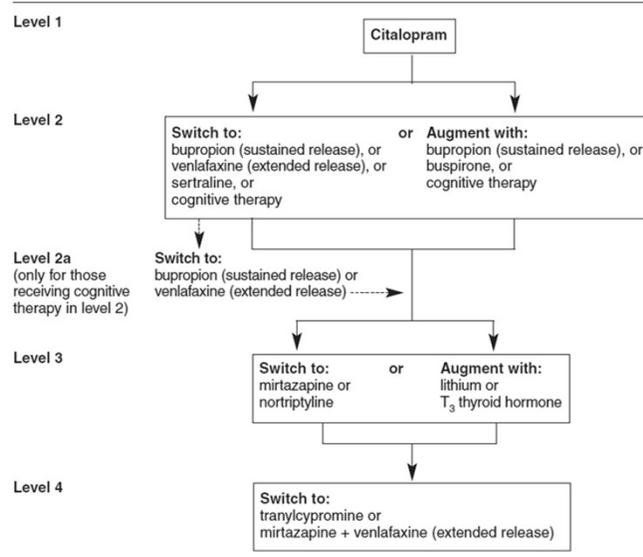
- > **2–3 episodes**
- Family history of depression
- Early onset
- Severe episodes
- Use **same dose** as acute treatment

Moret 2019, Cipriani 2018

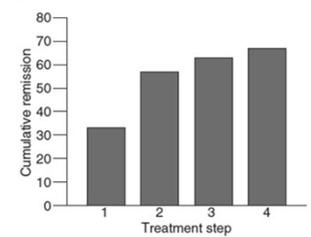


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STAR*D



Cumulative remission rate by STAR*D treatment level



Gaynes et al. Wake Forest University School of Medicine



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Generic(Brand) Year FDA Approved * generic availability	FDA Indication(s)	Available Strengths (mg)	Usual Adult Dosage Range (starting-max) (mg)
Citalopram* 1998	MDD	10, 20, 40, 10/5 mL	20-40
Escitalopram* 2002	MDD (12+ yrs), GAD	5, 10, 20, 5/5 mL	10-20
Fluoxetine* 1987	MDD (8+ yrs), OCD (7+ yrs), panic disorder, bulimia, PMDD	10, 20, 40, 60, 20/5 mL	20-80
Fluvoxamine* 1992	OCD (8+ yrs)	25, 50, 100	50-300
Paroxetine* 1992	MDD, OCD, panic disorder, social anxiety, GAD, PTSD, PMDD	7.5 (Brisdelle), 10, 20, 30, 40, 10/5 mL CR-12.5, 25, 37.5 ER	20-60 25-62.5
Sertraline* 1991	MDD, OCD (6+ yrs), panic disorder, PTSD, PMDD, social anxiety	25, 50, 100, 150, 200, 20/mL	50-200

* Indicates generic




Sahil Munjal

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Desvenlafaxine* 2008	MDD	25, 50, 100 ER	50-100
Duloxetine* 2004	MDD, GAD (7+ yrs) (diabetic peripheral neuropathy, fibromyalgia, chronic musculoskeletal pain)	20, 30, 40, 60 DR	40-120
Levomilnacipran 2013	MDD	20, 40, 80, 120 ER	20-120
Venlafaxine ER* 1997	MDD, GAD, social anxiety disorder, panic disorder	37.5, 75, 150, 225 ER	75-225
Bupropion* 1996/2003	MDD, Smoking cessation, SAD	100, 150, 200 150,300	150-400 150-450
Mirtazapine* 2011	MDD	7.5,15,30,45	15-45
Vilazodone* 2011	MDD	10, 20, 40	10-40
Vortioxetine 2013	MDD, GAD, social anxiety disorder, panic disorder	5,10,20	10-20




Sahil Munjal

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1st line agent not working, now what?

↑ dose could overcome pharmacokinetic limitations. ↑ bioavailability and enhance receptor binding.

Switch

- Same class- SSRI/SNRI immediate switch except Paroxetine (cross taper over 2 weeks)
- Discontinuation- 25% each week for 4 weeks
- STAR*D

Augmentation

- Combine meds with pharmacological synergy (e.g., **Venlafaxine + Mirtazapine**).
- **Antipsychotics:** Aripiprazole (2–15 mg), Brexpiprazole (0.5–1 mg), Cariprazine, Quetiapine XR (150–300 mg), Olanzapine – monitor for EPS/metabolic side effects.
- **Lithium:** 0.4–0.8 mmol/L.
- **Thyroid hormone:** T3 (5–50 mcg).
- **Stimulant:** Methylphenidate (5–20 mg).

Jobst 2016, Adli 2005, Malhi 2018, Nunez 2022



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Augmentation

- **Best-studied augmentation agents:** Antipsychotics
- **Effectiveness:** None clearly superior; choice depends on side effect profile and patient symptoms
- **Augmentation > placebo**
- **Relative Risk (RR) for response:**
 - Aripiprazole: **1.57 (CI 1.36–1.82)**
 - Brexpiprazole: **1.56 (CI 1.15–2.11)**
 - Cariprazine: **1.20 (CI 1.01–1.42)**
 - Lisdexamfetamine: **1.18 (CI 1.03–1.37)**
 - Lithium: **1.25 (CI 1.00–1.56)**
 - Modafinil: **1.26 (CI 1.07–1.48)**
 - Nortriptyline: **2.05 (CI 1.02–4.11)**
 - Olanzapine: **1.23 (CI 1.00–1.50)**
 - Quetiapine: **1.34 (CI 1.14–1.56)**
 - T3: **1.90 (CI 1.16–3.11)**



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Other options

- **Neuromodulation:**
 - **ECT:** Indicated for melancholic, psychotic, or catatonic features.
 - **TMS:** Consider after failure of at least 1 antidepressant.
- **Other/Emerging Treatments:**
 - **Esketamine** for treatment-resistant depression.
- **Special Cases:**
 - **MDD with psychotic features:** Antidepressant + Antipsychotic.
 - **MDD with mixed features:** Use SGA or mood stabilizer.
- **CAM (Complementary & Alternative Medicine):**
 - SAME, St. John's Wort, omega-3, 5-HTP, L-methylfolate – limited evidence.



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When to refer to a psychiatrist

- **Immediate referral situations:**
 - Need for hospitalization
 - Need for ECT
 - Suicidal patients
 - Inability to provide basic self-care
- **Diagnostic or treatment complexity:**
 - Diagnostic consultation
 - Severe, recurrent, or psychotic depression
 - Comorbid multiple medical problems or cognitive compromise
 - Need for intense psychotherapy
 - Partial response or medication-resistant depression (>2 failed treatments)
- **Special cases:**
 - Perinatal period
 - Children and adolescents (differences in clinical presentation and biology)
- **Other reasons:**
 - Patient request
 - Poor adherence
 - Symptom breakthrough after initial positive response

Alarcon 1998, Malhi 2018



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Summary

- Primary care physicians play a key role in treating affective disorders.
- **MDD is highly treatable**—clinicians familiar with:
 - **2 SSRIs** (e.g., escitalopram/citalopram, sertraline)
 - **1 SNRI** (e.g., venlafaxine XR)
 - **Bupropion XL**
- **DSM-5 criteria** are the standard for diagnosing MDD.
- Always assess **suicide risk** and comorbid mental/physical illness.
- If uncertain about diagnosis, suicide risk, or hospitalization needs → **psychiatric consultation recommended.**
- **Psychotherapy should not be overlooked**; knowing local options is helpful.

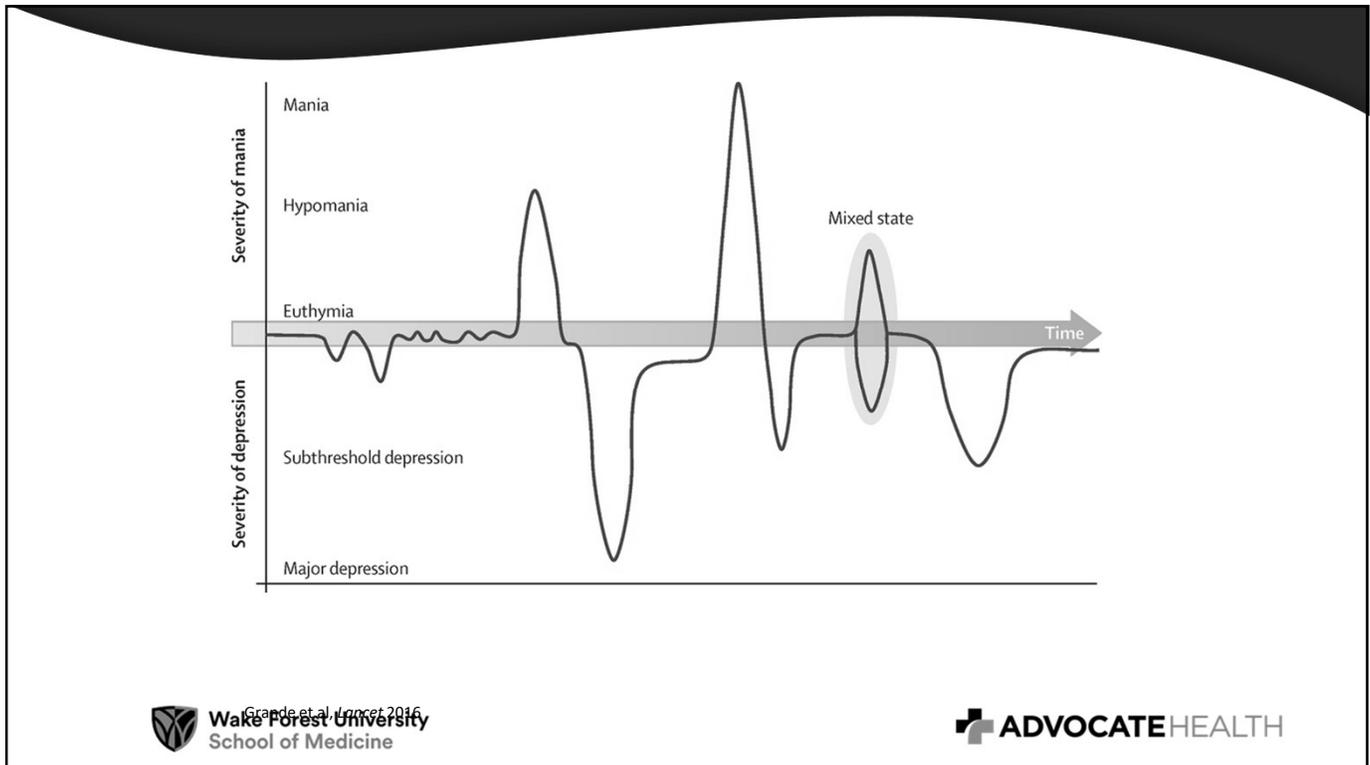


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Bipolar Disorder



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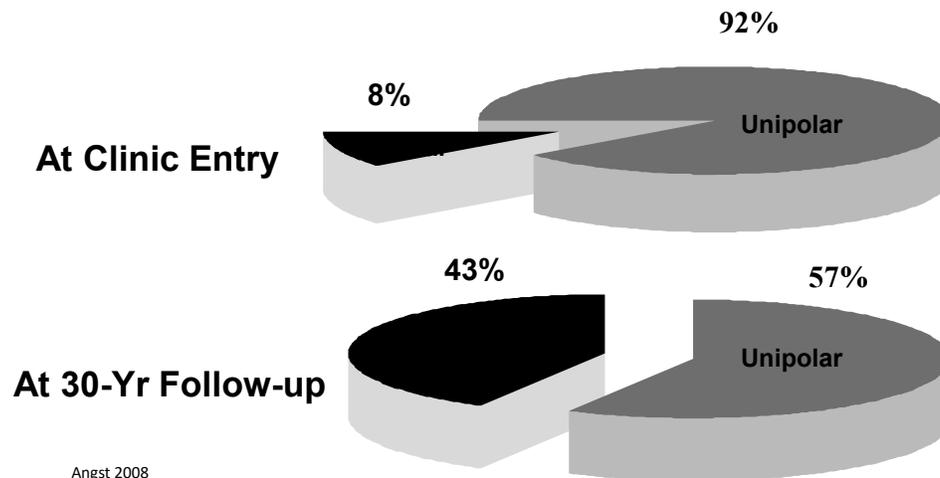
Highlights

- **Heritability:** Highly heritable (60–80%)
- **Suicide risk:**
 - 33–50% attempt suicide
 - 15–20% complete suicide
- **Psychotic symptoms:** Present in 50% at some point
- **Substance abuse:** Common (50–60%)
- **Seasonal pattern:** Often observed
- **Course:** Usually starts with depressive episodes
- **Diagnosis delay:** Mean delay between onset and diagnosis is 5–10 years
- **Disability rank:** 6th leading cause of disability
- **Primary care role:**
 - In any given year, 25% of persons with BD managed in primary care
 - 44% receive primary care management at some time during their lives

Johansson et al 2019, Grande 2016, Fabbri et al 2020, McIntyre 2020, Messer et al 2017, Merikangas 2007

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Unipolar or Bipolar Disorder



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Bipolar I Features

- Lifetime prevalence of bipolar I disorder: 1%(worldwide)
- Male = Female
- Average age of onset: 19 years
- No racial differences

Weissman et al 1996., Grande et al 2016

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Diagnosis

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Bipolar I Disorder Diagnosis

- Criteria met for at least 1 manic episode
 - Not better explained by a psychotic disorder
 - Not due to a substance or AMC
 - **Marked impairment** (present in mania): major discriminator between mania and hypomania
- No other mood episode necessary for bipolar I diagnosis
- Longitudinal

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Manic Episode Criteria

- A distinct period of
 - Abnormally and persistently elevated, expansive or irritable mood
 - And persistently increased goal-directed activity or energy (**DSM-5**)
- Presence ≥ 3 symptoms (4 if mood only irritable)
 - Decreased need for sleep
 - Flight of ideas or subjective racing thoughts
 - Increase in goal-directed activity
 - Inflated self-esteem or grandiosity
 - More talkative or pressure to keep talking
 - Distractibility
 - Activities with high potential for bad consequences
- Duration: 1 week or hospitalization



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Hypomanic Episode Criteria

Everything same except-

- Duration: at least 4 consecutive days
- Functioning less impaired

Change from baseline

- Change is observable by others- collateral



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Screening for Bipolar Disorder: Rapid Mood Screener

Item	Response	
1. Have there been at least 6 different periods of time (at least 2 weeks) when you felt deeply depressed?	Yes	No
2. Did you have problems with depression before the age of 18?	Yes	No
3. Have you ever had to stop or change your antidepressant because it made you highly irritable or hyper?	Yes	No
4. Have you ever had a period of at least 1 week during which you were more talkative than normal with thoughts racing in your head?	Yes	No
5. Have you ever had a period of at least 1 week during which you felt any of the following: unusually happy; unusually outgoing; or unusually energetic?	Yes	No
6. Have you ever had a period of at least 1 week during which you needed much less sleep than usual?	Yes	No

Tool	Sensitivity	Specificity	PPV	NPV
RMS	0.88	0.80	0.80	0.88
MDQ	0.86	0.78	0.78	0.86



4/6 items need to be positive



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Bipolar II Diagnosis & Features

•Diagnostic Criteria:

- Requires **hypomanic and depressive episodes**
- No manic episodes**

•Key Features:

- Lifetime prevalence: **1.1%**; **2.4%** have subthreshold symptoms
- Depression is more prominent than hypomania
- High episode frequency
- High rates of psychiatric comorbidities
- Hypomanias make up a small proportion of mood destabilizations
- Suicide rates comparable to bipolar I disorder
- Rapid cycling is common

Vieta et al Bipolar Disord 2008



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Manic or Hypomanic Episode with Mixed Features

•Criteria:

- Full criteria met for manic or hypomanic episode
- Plus ≥ 3 **depressive symptoms** present during most days of the episode

•Depressive symptoms include:

- Prominent dysphoria or depressed mood
- Diminished interest or pleasure
- Psychomotor retardation
- Fatigue or loss of energy
- Feelings of worthlessness or guilt
- Suicidal thoughts or behaviors

•Key clinical markers:

4 A's: Anxiety, Agitation, Anger-irritability, Attentional disturbance (distractibility)

McIntyre et al 2020



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Clinical Features Predicative of Bipolar Disorder

- Family history of bipolarity
- Early age of onset
- Recurrent episodes- abrupt onset and offset of short duration
- Postpartum depression with psychotic features
- Hypomania associated with antidepressants
- Depressive mixed states
- Repeated loss of efficacy of antidepressants after initial response.

Kaplan and Saddock 11e, McIntyre 2020, Nowrouzi et al 2016, Moreno et al 2007



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Differential Diagnosis

Bipolar vs MDD

- Earlier age at onset of illness
- Phenomenology (hyperphagia, hypersomnia, and psychosis)
- Higher frequency of affective episodes,
- Family history
- Insufficient response to antidepressants
- Amplification of anxiety, dysphoria, and mood instability in a person administered antidepressants

Forty et al 2008



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Differential Diagnosis contd.

ADHD vs Bipolar

1. Earlier age of onset of symptoms
2. Absence of psychosis and affective episodes

Borderline personality disorder vs Bipolar

1. Core disturbance in attachment
2. Syndromal affective episodes, disturbances in circadian rhythm are not prominent
3. Rapid shifts in mood states associated with interpersonal dysfunction
4. Attenuates with age.

Grande et al 2016



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Differential contd.

Alcohol/Substance use vs Bipolar disorder

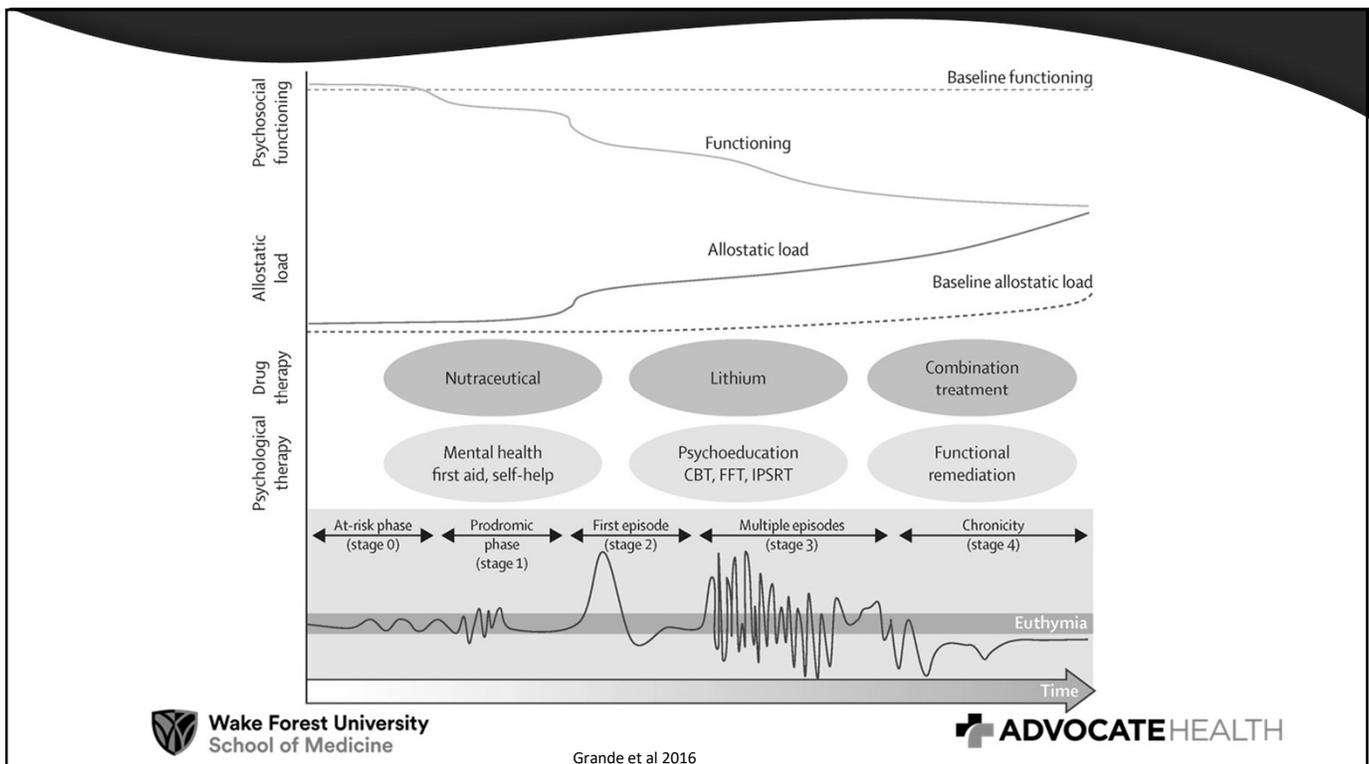
1. Association between consumption of psychoactive substances and the presence of psychopathology
 2. Observation during periods of sobriety (where possible)
- All these disorders are potentially comorbid and additional rather than diagnoses of exclusion.

Schizophrenia vs Bipolar disorder

1. Longitudinally psychosis is predominant, less mood sx
2. Greater psychosocial impairments
3. Severe disease trajectory

Grande et al 2016

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Grande et al 2016

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Comorbidity

- **Lifetime prevalence of psychiatric and medical comorbidities:** ~90%
- **Polymorbidity (≥3 comorbid conditions):** ~50%
- **Common psychiatric comorbidities:**
 - Anxiety disorders: up to 70%
 - Substance/alcohol use disorders: 30–50%
 - ADHD: 25–45%
 - Personality disorders: 20–40%
 - Binge eating disorder: 10–20%
- **Medical comorbidities:**
 - 80% have at least one active physical health condition
 - Elevated rates of metabolic, cardiovascular, respiratory, and other disorders

McIntyre 2020, Merikangas et al 2007, Sylvia et al 2015



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Treatment

- Tailor choices according to the episode- Acute Hypo(Mania)/Acute Depression/Maintenance
- Psychoeducation-medication adherence, early-warning symptom identification, optimizing coping responses and lifestyle stabilization
- **Pharmacologic categories**
 - Lithium
 - Anticonvulsants- carbamazepine/divalproex/lamotrigine.
 - Second- generation antipsychotics



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FDA-Indicated Medications for Acute Mania

•Mood Stabilizers:

- Lithium
- Divalproex
- Carbamazepine

•Antipsychotics (FDA-approved for mania/mixed states):

- Aripiprazole:** Mania, mixed, maintenance; LAI option; risk of akathisia
- Asenapine:** Sublingual route; mania or adjunct with valproate/lithium
- Cariprazine:** Manic, mixed, bipolar depression
- Haloperidol**
- Olanzapine:** Mania and maintenance; OFC for depression; high metabolic effects
- Quetiapine:** Mania, mixed, bipolar depression, adjunct with valproate/lithium; low EPS; metabolic effects
- Risperidone:** Mania, maintenance; LAI available; risk of prolactin elevation
- Ziprasidone:** Mania, mixed, maintenance adjunct with valproate/lithium; less metabolic effects

•Combination treatment:

- Either aripiprazole, asenapine, olanzapine, quetiapine, or risperidone **plus lithium or divalproex**

McIntyre et al 2020



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Maintenance (FDA approved)

- Lithium
- Aripiprazole (oral and long-acting injectable)
- Asenapine
- Lamotrigine
- Quetiapine (adjunctive)
- Olanzapine
- Risperidone (long-acting injectable)



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Acute bipolar depression

Treatments approved by the US Food and Drug Administration:

- Cariprazine
- Lurasidone
- Quetiapine
- Olanzapine–fluoxetine
- Lumateprone

McIntyre et al 2020



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Mixed Features

- Stop antidepressant
- Assess for substance abuse
- Assess for other medication and substance use
- Assess for medical etiology
- Use valproic acid, carbamazepine, or SGA
- Lithium seems to be less effective



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Role of Antidepressants

When to avoid (ISBD taskforce):

- Adjunct for acute bipolar I or II depressive episode with ≥ 2 concomitant manic symptoms with psychomotor agitation or rapid cycling
- Monotherapy in bipolar I disorder
- Monotherapy in bipolar I or II depression with ≥ 2 concomitant manic symptoms
- Manic and depressive episodes with mixed features
- Past mania, hypomania, or mixed episodes emerging during antidepressant treatment
- High mood instability (increased number of episodes) or with a history of rapid cycling
- Predominantly mixed states

Pacchiarotti et al 2013

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Lithium

Dosing/Monitoring	Considerations
<p>Start: 300–600 mg qd (single daily dosing can reduce polyuria)</p> <p>Maximum: Target serum level of 0.8–1.2 mEq/L (0.4–0.8 mEq/L may be more effective in maintenance)</p> <p>Workup Serum creatinine concentration (or a 24-hour urine creatinine), Electrolytes, Thyroid function, CBC, ECG, Pregnancy test</p> <p>Monitor Measure levels (2–6 M) except signs of toxicity, dosage adjustments, noncompliance, electrolytes, BUN, creatinine, eGFR, TSH</p>	<p>Contraindications: Renal disease</p> <p>FDA pregnancy category: D (Ebstein anomaly, floppy baby syndrome)</p> <p>Drug interactions: NSAID, thiazides, and ACE inhibitors increase levels; caffeine decreases levels</p> <p>Adverse effects:</p> <p>Neurological- Sedation, Cognitive difficulties, Tremor</p> <p>Endocrine- Hypothyroidism (7–10%)/ Hyperthyroidism (rare), Hyperparathyroidism</p> <p>Cardiovascular- Benign T wave changes, Sinus node dysfunction</p> <p>Supraventricular and Ventricular arrhythmias</p> <p>Renal- Polyuria (25–35%)-Polydipsia Chronic renal insufficiency (after 10–20 years), DI (10%)</p> <p>Dermatological- Rash Acne Hair Loss</p> <p>Other- Lithium reduces risk of suicide(6-7X) In responders, relapses are 28 times more likely after discontinuation May reduce the incidence of dementia in bipolar</p>

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VPA

Dosing/Monitoring	Considerations
<p>Start: 250 mg bid</p> <p>Maximum: Target serum level of 50–125 mcg/mL</p> <p>Monitor: CBC, liver function pane after 6ml, amylase</p> <p>Pre treatment test: CBC,LFT, BMI</p>	<p>Contraindications: Hepatic disease, PCOS</p> <p>FDA pregnancy category: D (orofacial malformations, neural tube defects; lower cognitive scores in offspring)</p> <p>Drug interactions: Increases barbiturate, \ phenytoin, and carbamazepine levels; doubles lamotrigine levels; co-treatment with olanzapine increases weight gain risk, Doubles lamotrigine(inhibits glucuronidation)</p> <p>Displaced from plasma proteins by carbamazepine, diazepam, and aspirin.</p> <p>Displaces warfarin → toxicity</p> <p>Adverse effects:</p> <p>Common side effects- Nausea/vomiting, diarrhea, weight gain, sedation, Hyperammonemia: lethargy, delirium (avoid in patients with urea cycle diseases). tremor, ataxia, hair loss, 5%-40% with transient elevation in ALT, AST (3X)</p> <p>Serious side effects- Hepatotoxicity, Hemorrhagic pancreatitis Thrombocytopenia- Elderly- approx. 50%, check platelets in elderly</p> <p>PCOS(7X)</p>

McIntyre et al 2020, Kaplan and Saddock 15e, Bauer 2022



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Lamotrigine

Dosing/Monitoring	Considerations
<p>Start: 25 mg qd</p> <p>Maximum: Target serum level of 4–11 mcg/mL</p> <p>No monitoring</p> <p>retitrate if >4days missed dose</p>	<p>Contraindications: Prior SJS (1 in 5000)/dermatologic reaction</p> <p>FDA pregnancy category: C</p> <p>Drug interactions: Divalproex doubles levels; barbiturates, carbamazepine, and phenytoin decrease levels, decreases estrogen-containing oral contraceptive levels</p> <p>Adverse effects: SJS, TEN(dermatologic reactions occur in 2 in 10 000, typically within 2–8 weeks of initiation), benign drug rash, ataxia, headache, tinnitus</p>

Treatment	Weeks 1-2	Weeks 3-4	Weeks 4-5
Lamotrigine monotherapy	25	50	100-200
Lamotrigine + CBZ	50	100	200-500
Lamotrigine + VPA	25 every other day	25	50-200



Bauer 2022, Maudsley prescribing guidelines 2021

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Antipsychotics

Medication	Dosing/Monitoring	Considerations
Quetiapine (second-gen antipsychotic)	Start: 25–50 mg qd Maximum: 300–600 mg qd for depression; up to 800 mg qd for (hypo)mania Monitor: weight, lipid panel, fasting glucose	Contraindications: Poorly controlled diabetes, severe obesity, severe hyperlipidemia, dementia, TD Drug interactions: Carbamazepine decreases quetiapine levels; opiates increase hypotension risk Adverse effects: Weight gain, metabolic syndrome, diabetes; Somnolence, hypotension, EPS, TD
Risperidone (second-gen antipsychotic)	Start: 0.5–1 mg qd Maximum: 8 mg qd Monitor: weight, lipid panel, fasting glucose, prolactin	Contraindications: Dementia, TD Drug interactions: carbamazepine and barbiturates decrease levels; opiates increase hypotension risk Adverse effects: EPS, weight gain, metabolic syndrome, diabetes, Somnolence, TD, hypotension, hyperprolactinemia associated with sexual dysfunction, menstrual disturbances, galactorrhea, decreased bone mineral density

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Antipsychotics

Medication	Dosing/Monitoring	Considerations
Aripiprazole (second-generation antipsychotic)	Start: 5 mg qd Maximum: 30 mg qd Monitor: weight, lipid panel, fasting glucose	Contraindications: Dementia, TD Drug interactions: Carbamazepine decreases levels; fluoxetine and paroxetine increase levels Adverse effects: EPS, TD, weight gain, metabolic syndrome, diabetes, somnolence, Akathisia
Olanzapine (second-generation antipsychotic)	Start: 2.5–5 mg qhs Maximum: 20 mg qhs (may give in divided doses) Monitor: weight, lipid panel, fasting glucose	Contraindications: Poorly controlled diabetes, severe obesity, severe hyperlipidemia, dementia, tardive dyskinesia Drug interactions: Carbamazepine decreases levels; opiates increase hypotension risk Adverse effects: Weight gain, metabolic syndrome, diabetes, somnolence; Hypotension, EPS, TD

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Antipsychotics

Medication	Dosing/Monitoring	Considerations
Lurasidone (second-generation antipsychotic)	Start: 20 mg qd Maximum: 120 mg qd (take with >350 kcal food) Monitor: weight, lipid panel, fasting glucose	Contraindications: Dementia, TD Drug interactions: Carbamazepine, phenytoin, and diltiazem decrease levels; lithium, clarithromycin, erythromycin, and verapamil increase levels Adverse effects: EPS, TD, weight gain, diabetes, metabolic syndrome, diabetes, somnolence
Cariprazine (second-generation antipsychotic)	Start: 1.5 mg qd Maximum: 6 mg qd for manic symptoms, 3 mg qd for depressive symptoms Monitor: weight, lipid panel, fasting glucose	Contraindications: Dementia, TD, CKD Drug interactions: Carbamazepine decreases levels; ketoconazole increases levels Adverse effects: EPS, TD, weight gain, metabolic syndrome, diabetes, somnolence

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Test/Measurement	Initial Health Check up	Annual Health Check up	Antipsychotics	Li	VPA
Thyroid function	Yes	Yes		Start & every 6m	
LFT	Yes	Yes			Monthly(3m)→annually
Renal function(eGFR)	Yes	Yes		Start & every 6m, deterioration/DDI	
Electrolytes, urea, creatinine, Ca	Yes	Yes		Start & every 3-6m	
CBC	Yes	Yes		If indicated	3monthly(1y)→annually
Blood glucose	Yes	Yes	Start & every 4-6m(1m if olz)		
Lipid profile	Yes	Yes	Start & every 3-6m		
EKG	If CV risk factors		Start/titration if risk,	Start/titration if risk,	
Waist circumference/BMI	Yes	Yes	Monthly(3m)→annually	Start & every 6m	Every 3m(1y)→annually
Plasma levels				3-4d after initiation, every dose change until stable, every 3m(1y)→every 6m	Lack of effectiveness, poor adherence, toxicity

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When to refer to psychiatrist

- Diagnostic uncertainty
- Lack of improvement(failure on multiple regimens)
- Service not provided(inpatient management)
- Manic patients
- Condition beyond area of expertise(suicidality or psychosis)
- Counselling services not provided

Muzina DJ 2007



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Summary

•**Premature mortality:** Associated with suicide and cardiovascular disease.

•**Pathogenesis:** Unknown; ~70% of risk is heritable.

•**Screening:**

PCPs should screen patients with depressive symptoms for current/past hypomania/mania at initial and follow-up visits if treatment response is insufficient.

•**Differential diagnosis:**

Unipolar and bipolar depression present similarly; screening for (hypo)mania and family history is critical.

•**Treatment:**

•**Lithium:** Gold standard mood stabilizer; reduces suicidality; prioritize in for both mania and depression.

•**Options:**

•Several treatments available for bipolar depression and mania with varying metabolic tolerability.

•**Goal:**

Match the right medication to the right patient to enhance adherence and minimize side-effect burden.



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Questions?



Primary Care Behavioral Health Symposium 2026

Anxiety Disorders Diagnosis and Treatment Options

Kathleen Peniston, PMHNP-BC, DNP

Thursday, February 26th | 1:45 PM – 2:45 PM



Anxiety Disorders

Diagnosis and Treatment Options

Kathleen K. Peniston, PMHNP-BC, DNP
February 26, 2026



Wake Forest University
School of Medicine

1

Learning Objectives

1. Recognize the difference between normal and pathological anxiety as well as the key criteria for anxiety disorders.
2. Identify the most common medical and psychiatric co-morbidities of anxiety disorders in addition to understanding what other conditions can mimic and/or cause anxiety.
3. Be familiar with the recommended pharmacological and non-pharmacological interventions for the treatment of anxiety disorders.
4. Be aware of what the current research shows about cannabis products and anxiety disorders.



Wake Forest University
School of Medicine



ADVOCATE HEALTH

2



What is "normal" anxiety?

Anxiety is a normal emotion that most people feel at some point in their lives. It is generally triggered by something. Sometimes a person is not aware of the cause of the anxiety.

Anxiety is transient and although sometimes uncomfortable, does not greatly impact a person's ability to function and complete daily work, school or home requirements.

Anxiety is not always bad and is often necessary to motivate and/or respond appropriately to a toxic or stressful situation.

Psychiatry.org - What are Anxiety Disorders?

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3

DSM-5 Classification

Anxiety Disorders

- Social Anxiety
- Panic Disorder
- Agoraphobia
- Generalized Anxiety
- Specific Phobia

Additional Conditions with Anxiety

- Post-traumatic Stress Disorder
- Obsessive Compulsive

(American Psychiatric Association, 2013)

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DSM-5 Classification	Specific Disorder	Lifetime Prevalence	Key Criteria / Symptoms
Anxiety Disorders	Social Anxiety	7.1 % Women 2 X	Intense fear of being in social situations (at least 2) Avoidance of these situations Patient believes they are being judged by others (out of proportion)
	Specific Phobia	9.1 % Women 2 X	Intense fear and avoidance of specific object or situation Causes anxiety/panic; threat posed is out of proportion to reality
	Panic /Agoraphobia	4.7 % Women 2 X	Discreet, sudden onset of symptoms (both physical and psychological) Excessive worry and fear of having another panic attack Agoraphobia can have panic symptoms but do not have to
	Generalized Anxiety	3.1 % Women 2 X	Excessive worry and anxiety about several situations/topics Do not feel they can control the worry Causes additional issues / symptoms (decreased focus, muscle tension)
Trauma and Stressor –Related Disorders	Posttraumatic Stress	6.7 % Women 5 X	Event that threatens health and safety is experienced or witnessed Intrusive memories, dreams, or thoughts that cause distress/anxiety Hyperarousal that manifests is disturbed emotional deregulation
Obsession-Compulsive and Related Disorders	Obsessive-Compulsive	1.2 % Women 3 X	Obsessive and/or compulsive thoughts or behaviors Symptoms take extensive amounts of time and energy

*Statistics: National Institute of Mental Health (NIMH)
Diagnostic and Statistical Manual – 5, (APA, 2013)*

5

The Key Ingredient

Impairment!

When the anxiety symptoms lead to decline in ability to function in one or several areas.....

Treatment (of some kind) is warranted!






7



Why are we talking about anxiety disorders?

Anxiety Disorders are.....

- Common and treatable
- Highly co-morbid
- Impact overall health

(Latas et al., 2019)

8

Common Psychiatric Co-Morbidities

- Depression
- Substance Use
- ADHD
- Eating Disorders
- Personality Disorders

[Facts & Statistics | Anxiety and Depression \(adaa.org\)](#)




9

When Anxiety Looks Different

Patients can not always recognize or name anxiety

Several physical manifestations of anxiety

Three common systems: GI, neuro, cardiac

Consider when symptoms are transient or only at specific times



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(Parker et al., 2021)

10

Rule Out Anxiety Due to

Substance Use

- Active Use – stimulants, methamphetamine, cocaine
- Withdrawal – alcohol, benzodiazepines, opiates

Medication

- New medication – recent start or stop
- Most common offenders: stimulants, steroids, thyroid, bronchodilators

Medical Causes

- Thyroid Conditions (TSH)
- Heart Conditions (EKG)
- Diabetes (blood sugar)

(Brahmbhatt et al., 2021)

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Common Co-Morbid Medical Conditions



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Gastrointestinal

Central Nervous System

Cardiovascular

Respiratory

Endocrine

Infectious Disease

Musculoskeletal



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(Romanazzo et al., 2022)

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Anxiety Disorders: Highly Co-Morbid

System	Common Comorbid Diagnoses with Anxiety
CNS	Chronic Pain, Multiple Sclerosis, Epilepsy , Parkinson's Disease
Cardiac	Stroke, CV Disease . Ischemic Heart Disease, HTN
GI	Inflammatory Bowel Disease, GERD. Irritable Bowel Syndrome
Endocrine	Diabetes , Thyroid Disease
Respiratory	COPD, Asthma , Obstructive Sleep Apnea, Pulmonary HTN
Musculoskeletal	Osteoarthritis, Lupus, Fibromyalgia , Rheumatoid Arthritis

(Romanazzo et al., 2022)

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Research Co-Morbid Anxiety +

Epilepsy: Seizure control primary; anxiety treatment (meds and therapy) has been effective

CV Disease: 20% met criteria for severe anxiety; > 50% met criteria for depression; cardiac rehab first line and incorporates some anxiety treatment; bi-directional; symptom overlap

Irritable Bowel Disease: 25% + met criteria for an anxiety disorder; psychotherapy and antidepressants are effective; GI symptoms can improve with anxiety treatment alone

Diabetes: Anxiety Dx in up to 40%; linked with poor glycemic control; symptoms mimic one another; psychosocial + psychotherapeutic interventions have shown benefit

Asthma: Anxiety Dx in up to 45%; more likely to present to ED if have anxiety; symptom overlap; bi-directional; decreasing panic (which can lead to SOB) is primary goal

Fibromyalgia: Up to 60% have current Anxiety D/O; associated with increased severity and levels of pain; antidepressants and psychotherapy are first line treatments

(Latas et al., 2019)

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GAD-7 Anxiety

Over the <u>last two weeks</u> , how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid, as if something awful might happen	0	1	2	3

Column totals + + + =

Total score

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

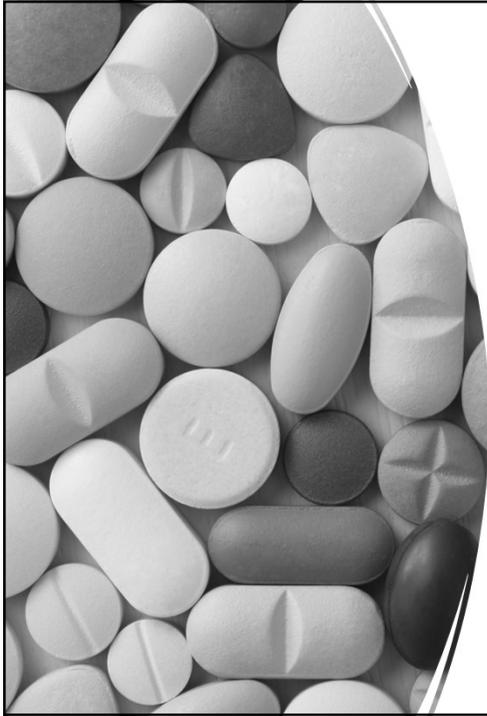
Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Scoring
0–4: minimal anxiety
5–9: mild anxiety
10–14: moderate anxiety
15–21: severe anxiety

GAD-7 Anxiety-updated 0.pdf (adaa.org)

15



Anxiety Disorders Pharmacological Management

- Antidepressants
- Benzodiazepines
- Buspirone, Hydroxyzine
- Off-Label Medications

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Tips for Successful Utilization of Antidepressants

A trial is at least 4 weeks. Some notable change (prior to 4 weeks) is possible but not guaranteed.

+
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○

Avoid switching medication during the first month unless side effects are unbearable.

Titrate before switching. Do not assume that if no effect at starting dose, there will be no effect at all doses.

When in doubt, taper rather than D/C abruptly. Cross taper when switching. Overlap should be 1-3 weeks.

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Antidepressants (SSRIs)

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Fluoxetine	20-80 mg	Panic, OCD	Long half life
Citalopram	10- 40 mg	OCD	>40mg = QT prolongation (EKG) Max dose 20 mg in age > 65
Escitalopram	10- 20 mg	GAD	QT prolongation (possible given above) Max dose 10 mg in age > 65
Sertraline	50-200 mg	Panic, SAD	
Paroxetine	20 – 60 mg	GAD, OCD, PTSD, SAD, Panic	Difficult discontinuation (requires taper) Not recommended in pregnancy
Fluvoxamine	100 – 300 mg	OCD	

(Stahl & Grady, 2017)

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Antidepressants (SNRIs)

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Venlafaxine XR	75-300 mg	Panic, GAD, SAD, PTSD	>225mg = BP elevations D/C syndrome (slow taper)
Desvenlafaxine	50-100 mg		renal impairment+ max dose is 50 mg daily; used for vasomotor Sx in menopausal women
Duloxetine	30-120 mg	GAD	Indication for pain
Levomilnacipran	40-120 mg		

(Melaragno, 2021) (Stahl & Grady, 2017)

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Antidepressants (Atypical)

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Mirtazapine	15-45 mg		weight gain, sedation
Trazodone	50-300 mg		sedation
Vortioxetine	10-20 mg		
Vilazodone	10-40 mg		Mechanism is SSRI+5-HT1A partial agonist (like SSRI+buspirone)
Bupropion	100 – 300 mg		Initial anxiety/restlessness Decreases seizure threshold

(Melaragno, 2021)

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Tricyclic Antidepressants (TCAs)

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Imipramine	100–300 mg		ACH – caution in elderly, lethal in OD; QT prolongation – baseline EKG
Desipramine	100–200 mg		ACH – caution in elderly, lethal in OD; QT prolongation – baseline EKG
Clomipramine	100–250 mg	OCD	ACH – caution in elderly, lethal in OD; QT prolongation – baseline EKG
Nortriptyline	50 – 150 mg		ACH – caution in elderly, lethal in OD; QT prolongation – baseline EKG

(Melaragno, 2021) (Stahl & Grady, 2017)

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Other Medications for Anxiety

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Hydroxyzine	12.5-50 mg BID-TID	Anxiety in W/D	Sedation
Buspirone	15-60 mg	GAD	monotherapy or in conjunction with AD
Propranolol	10-40 mg PRN	Performance anxiety	Monitor blood pressure
Gabapentin	300-3600 mg TID		Indicated for pain and ETOH dependence; renally excreted (decrease dose depending on creatinine clearance)
Quetiapine	25-150 mg BID/QHS		metabolic considerations, lower dose in elderly, orthostatic hypotension

(Melaragno, 2021) (Stahl & Grady, 2017)

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Benzodiazepines

Medication	Dose Range	FDA Indications (Anxiety)	Warnings / Considerations
Alprazolam	.25-2 mg TID-QID	Panic	Rebound anxiety,
Lorazepam	.5 - 2mg QD-TID	Anxiety	
Diazepam	2-10 mg BID-QID	Anxiety	Very long half-life
Clonazepam	.25-2 mg BID	Panic	

(Melaragno, 2021)

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Pharmacological Guidance

Anxiety Disorder	First Line	Second Line	Third Line
GAD	SSRI	SSRI, SNRI, Buspirone	TCA's, hydroxyzine, benzos
Panic	SSRI	SSRI/ SNRI+ Benzo, Hydroxyzine	TCSs, SSRI, SNRI
Social Anxiety	SSRI Beta-blocker (performance)	SSRI/SNRI + Benzo, Hydroxyzine	SSRI, SNRI, Atypical

(Melaragno, 2021)

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Benzodiazepine Warnings (Class)

Risk of Abuse (overtaking, getting a "high") and Dependence

Potentially dangerous withdrawal symptoms (seizures)

Physiological tolerance and need for escalating doses

Minimal evidence for treatment of long-term anxiety

Multiple interactions with medications (opiates) and ETOH

Risk of diversion due to monetary (street) value

Not recommended for geriatric population (cognitive, risk of falls)

(Tanguay Bernard et al., 2018)

25

Benzodiazepine Recommendations

- Avoid starting this type of medication (especially if anxiety is long term).
- Provide short supply if warranted for acute anxiety (2 weeks).
- Explain risks to patient and rationale for not prescribing / stopping.
- Document the conversation you have including risks vs benefit.
- Taper slowly: 5-25% every 4 weeks (based on time and dose).
- Encourage the patient to help plan the taper schedule – shared decision making.

(Tanguay Bernard et al., 2018)

26



Cognitive Behavioral Therapy (CBT)

- Efficacy demonstrated for anxiety disorders
- Effective alone or in conjunction with medication

(Bystritsky et al., 2013)
(Locke et al., 2015)

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Other Treatments for Anxiety

- Exercise: Shown to demonstrate mild to moderate effect in treatment of anxiety disorders
- Mindfulness Based Interventions: Shown to reduce anxiety and depression in RCTs
- Lavender: Oral has shown benefit in RTCs. Quality of studies with other formulations is lacking.



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(Donelli et al., 2019) (Ramos-Sanchez et al., 2021) (Cramer et al., 2018)

28

Suggestions for Anxious Patients

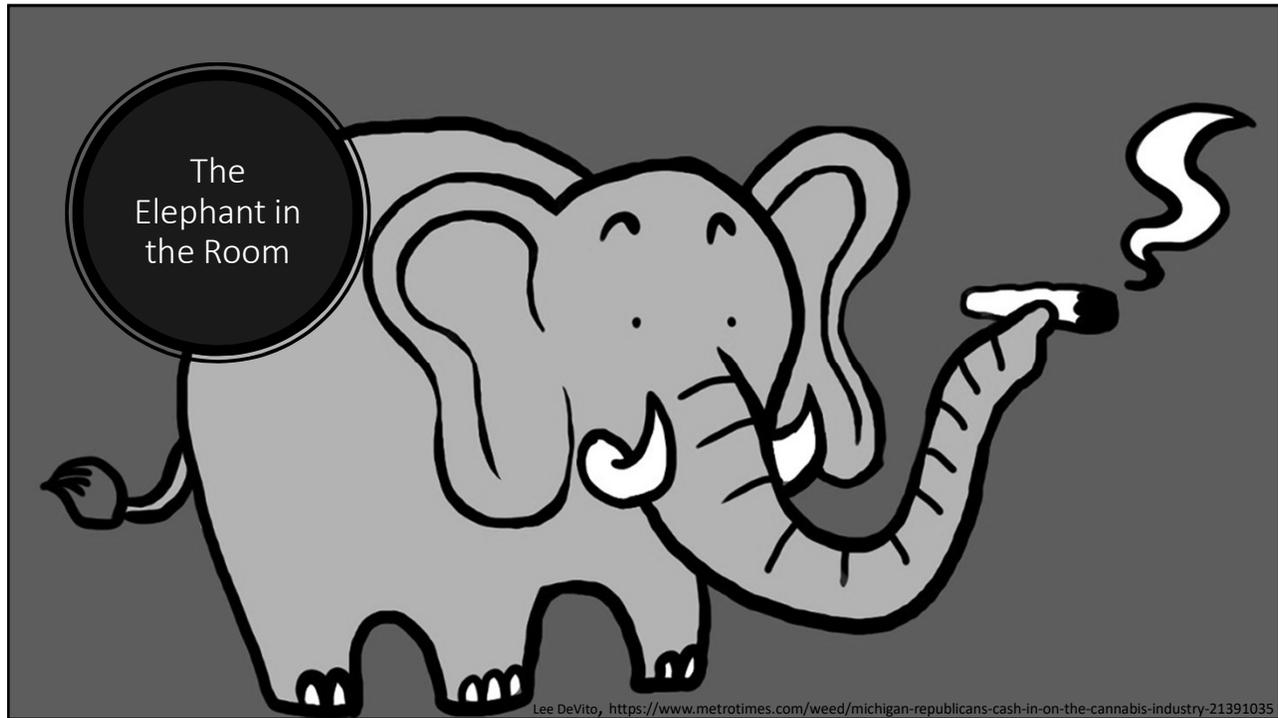
- Speak Calmly, Slowly, Directly
- Be Empathic / Attentive
- Suggest Breathing Exercises
- Acknowledge the Anxiety
- Inquire About the Anxiety – Is there a trigger?
- Try to Keep the Space Relaxing
- Consider Distraction when Appropriate



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[Reduce Anxiety Now: How to Calm Down Quickly \(psychcentral.com\)](https://psychcentral.com)

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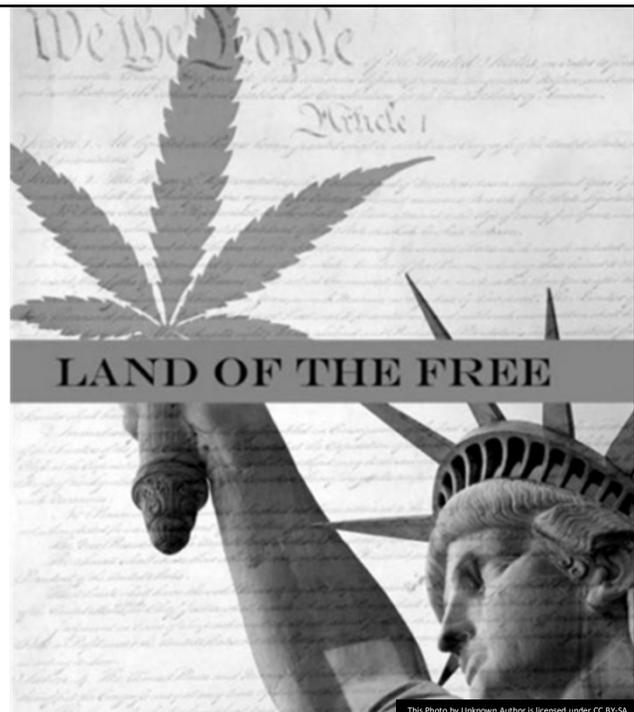
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Cannabis Use in the United States

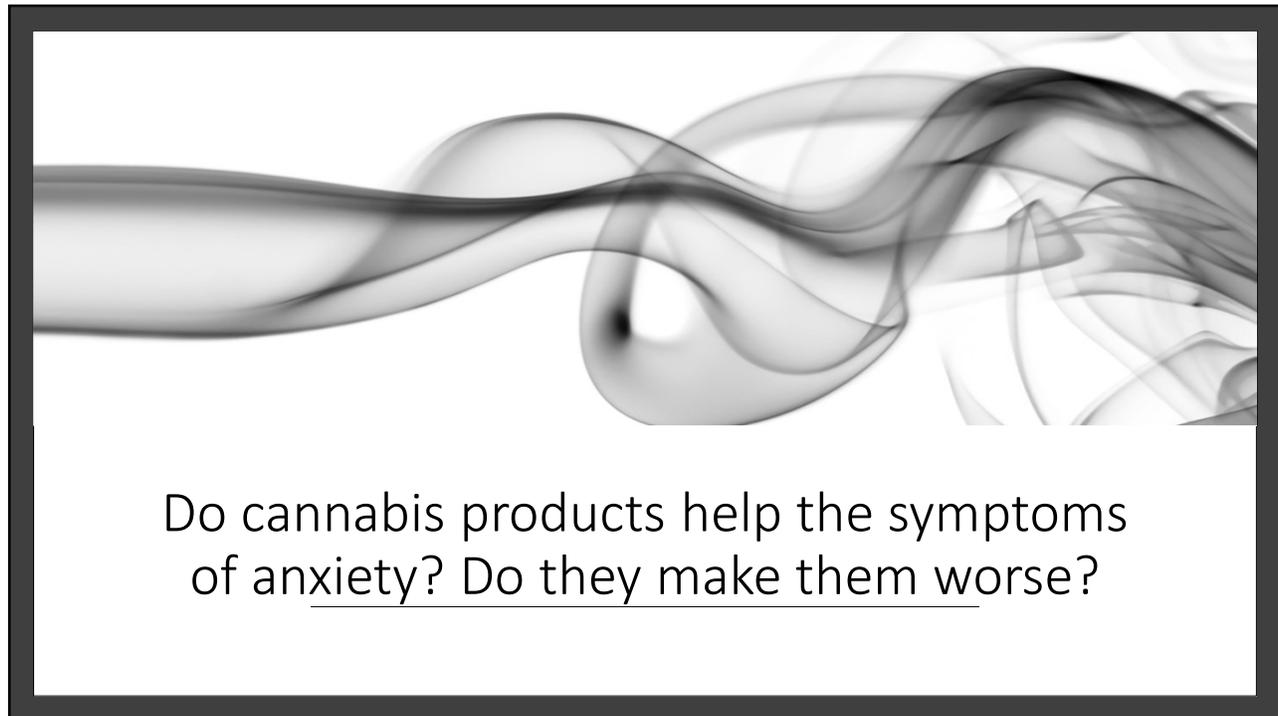
Per the 2024 National Survey of Drug Use and Health (NSDUH):

"Among people aged 12 or older, the percentage who used marijuana in the past year increased from 19.0 percent (or 53.2 million people) in 2021 to 22.3 percent (or 64.2 million people) in 2024. The percentage also increased among adults aged 26 or older, from 17.3 percent (or 38.2 million people) in 2021 to 21.7 percent (or 49.3 million people) in 2024 (Table A.13B). Percentages showed no change from 2021 to 2024 for adolescents aged 12 to 17 and young adults aged 18 to 25."

(SAMHSA, 2025)



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YES! NO! MAYBE???

- Some studies show that patients report relief with anxiety and insomnia after using Cannabinoids.
- Some studies show an increase in anxiety disorders with patients who use Cannabis products.
- The studies are generally limited by design and size and generally show low to moderate effect.
- Evidence shows about 3/10 Marijuana users develop a Cannabis Use Disorder.
- Minimal evidence suggests cannabis-based products are effective for the treatment of Anxiety Disorders.



(Stanciu et al., 2021)

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From STEM
(Systematically Testing the
Evidence on Marijuana)
[Anxiety-and-Mood-Disorders-2025-Update.pdf](#)

STEM **Cannabis for Anxiety and Mood Disorders**
Systematically Testing the Evidence on Marijuana

Summary: The role of THC-predominant cannabis in management of anxiety and mood disorders is unclear. CBD may reduce anxiety-related symptoms. Cannabis may be associated with increased risk of mania and poorer disease outcomes in those with bipolar disorder.

Data sources: Multiple databases searched from inception through May 2025 - 14 studies included	Population: Adults with anxiety or mood disorders (depressive disorder or bipolar disorder)	GRADE Certainty of Evidence: ●○○○ Very Low ●○○○ Low ●○○○ Moderate ●○○○ High
Study design: Living systematic review of controlled clinical trials and observational studies with comparison groups	Comparisons: Cannabis use (plant-based or synthesized) compared to no use or another intervention	Ongoing studies: 6 RCTs

Conditions	Outcome	Relationship with Cannabis Use	GRADE
Anxiety Disorders			
CBD	Symptom Control	Improved anxiety, depression, and other anxiety-related symptoms	●●○○
	QoL / Functioning	Improved functioning	●○○○
	Healthcare Utilization	No evidence	●○○○
THC	Safety	No association	●○○○
	Symptom Control	Mixed findings	●○○○
	QoL / Functioning	No evidence	●○○○
Depressive Disorders			
Cannabis use (unspecified)	Symptom Control	Remission: No association Depression: Worsened following more cannabis use	●○○○
	QoL / Functioning	No association with suicidality, functionality, or QoL	●○○○
	Healthcare Utilization	No association	●○○○
Bipolar Disorders	Safety	No Evidence	●○○○
	Symptom Control	No difference for depression, response or remission rates, or mania	●○○○
	QoL / Functioning	No evidence	●○○○
CBD	Healthcare Utilization	No evidence	●○○○
	Safety	No difference	●○○○
	Symptom Control	Worsened mania Decreased likelihood of recovery/remission	●○○○
Cannabis use (unspecified)	QoL / Functioning	Decreased satisfaction Lower probability of relationship Increased work impairment	●○○○
	Safety	No evidence	●○○○

Abbreviations: CBD: cannabidiol; GRADE: Grading of Recommendations Assessment, Development and Evaluation; QoL: Quality of Life; RCT: randomized controlled trial; THC: tetrahydrocannabinol.
 For further details, visit us at www.CannabisEvidence.org
 Averb C et al. Cannabis for anxiety and mood disorders: The Systematically Testing the Evidence on Marijuana Project 2025.
 Funding provided by the U.S. Department of Veterans Affairs (VA) Office of Rural Health. Go to www.Bushnell.va.gov/bkum.html.

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The Bottom Line on Cannabis for Anxiety

Public perception of the efficacy of cannabis-based products for anxiety has far surpassed the research findings.

There are significant negative implications (both mentally and physically) to utilizing these products.

As providers, we need to meet patients where they are but provide them the most accurate information, which include the adverse effects and the lack of good evidence.

(Stanciu et al., 2021)

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Primary Care Behavioral Health Symposium 2026

**Psychosis in Primary Care:
What to do, What to Watch for, and When to Refer**

Matt Filippo, DO

Thursday, February 26th | 3:00 PM – 4:00 PM



Psychosis in Primary Care:

What to Do, What to Watch For, and When to Refer

Matt Filippo, D.O., ABPN, AOBNP, dipl. ABOM
02/26/2026



"Is this the real life? Is this just
fantasy? Caught in a
landslide, no escape from
reality."

— Queen, "Bohemian Rhapsody"



Why This Matters to You:

-You are on the front lines. You are often the first to see a First Episode Psychosis (FEP)

-You are often the **primary manager** of the #1 comorbidity: **Metabolic Syndrome**.

- Our Goals:
 - **Recognize** the "medical mimics" of psychosis (Delirium, Substances).
 - **Understand** the "Big 3" side effects you will see and manage.
 - **Know** when to call for an urgent psychiatric consult vs. sending to the ED.



3

What is Psychosis? (The 1-Minute Version)

-A "break" from reality. It's a *symptom*, not a single illness.

Positive Symptoms (Things that are *added*):

- **Hallucinations:** Sensory experiences (hearing voices, seeing things).
- **Delusions:** Fixed, false beliefs (e.g., "The FBI is monitoring me").

Negative Symptoms (Things that are *lost*):

- The "5 A's": **A**volition (no motivation), **A**logia (poverty of speech), **A**nhedonia (no pleasure), **A**ffective blunting, **A**sociality.

Disorganization:

- "Word salad," bizarre or agitated behavior.



4

The Big Picture: Epidemiology & Course

- **Prevalence:** ~1% of the U.S. population.
- **Peak Onset:** Males (18-25), Females (25-35).
- **Morbidity:** This is a serious medical illness. Life expectancy is reduced by **10+ years**, primarily due to heart disease.
- **Course:** Schizophrenia is a "relapsing-remitting" illness. Function declines with each psychotic relapse.
- **Our #1 goal is preventing relapse.**



5

Why Early Detection is Critical: The NAVIGATE Study

- This landmark NIMH study proved that **early, comprehensive care matters.**
- It compared "Community Care" (treatment as usual) to the "NAVIGATE" program (meds, therapy, family ed, supported employment) for First Episode Psychosis.
- **The Results:**
 - The NAVIGATE group:
 - Stayed in treatment longer.
 - Had *greater improvement* in symptoms and quality of life.
 - Were more likely to be in school or working.
 - **The Takeaway:** The *longer* a patient remains in an untreated psychosis (DUP > 74 weeks), the *worse* their long-term outcome.
 - **Your early referral directly changes their prognosis.**



6

Your #1 Job: The PCP Differential

Category	Always Rule This Out First
Delirium	Is this new & acute? Check for Infection (UTI in elderly), polypharmacy, metabolic disturbance. This is a medical emergency.
Substances	Ask about Meth/Cocaine, high-potency Cannabis, "bath salts," or Alcohol/Benzo Withdrawal.
Medical	Autoimmune (e.g., Anti-NMDA), B12/Thiamine, Syphilis, Thyroid, TBI, Stroke, new-onset Seizure, Porphyria.
Mood	Is this happening *only* during a severe depressive or manic (Bipolar I) episode?
Dementia	Psychosis with cognitive decline in an older adult (e.g., Parkinson's, LBD, Alzheimer's).
Schizophrenia	This is a diagnosis of exclusion, often made by psych after all of the above are ruled out.

7

Schizoaffective Disorder: The "Combo" Diagnosis

- **The Definition:**
- It is **not** just "Schizophrenia with mood swings."
- **The Math:** Schizophrenia (Chronic Psychosis) + A Major Mood Episode (Mania or Depression).
- **The Key:** The patient must have psychosis *even when their mood is stable* (unlike Bipolar Disorder with Psychotic Features).
- **The Treatment Strategy:**
- We often need a "Combo Platter":
- **1. Antipsychotic:** To treat the hallucinations/delusions.
- **2. Mood Stabilizer:** To treat the Mania/Depression cycling.

8

The Dopamine Problem: 1-Slide Pathophysiology

1. Mesolimbic

(The "Gas Pedal")

Problem: Too *much* Dopamine.

Result:
Positive Symptoms.

Our Goal:
Block this pathway.
(Therapeutic Target)

2. Nigrostriatal

(The "Motor" Pathway)

Problem: Normal dopamine

Side Effect:
Blocking this causes
EPS / Parkinsonism.

3. Tuberoinfundibular

(The "Hormone" Pathway)

Side Effect:
Blocking this causes
Hyperprolactinemia.

4. Mesocortical

(The "Brake Pedal")

Problem: Too *little* Dopamine.

Result: Negative Symptoms

Side Effect: *Blocking* this can worsen negative symptoms.

9

The Antipsychotic "Menu" (A Practical Grouping for PCPs)

Group	Meds	Key PCP Facts
The "-PINES"	Olanzapine Quetiapine	High Metabolic Risk. <i>PCP Pearl:</i> Very high risk of rapid weight gain & T2DM. Olanzapine levels are *lowered* by smoking.
The "-DONES"	Risperidone Paliperidone	High Prolactin & EPS Risk. <i>PCP Pearl:</i> If you see gynecomastia or amenorrhea, check a prolactin level. Doses > 4mg (Ris) act like Haloperidol.
The "Food" Group	Ziprasidone Lurasidone	Must take with food. <i>PCP Pearl:</i> If it's "not working," patient is likely taking it on an empty stomach. (Ziprasidone: 500 kcal).
The "-PIPs"	Aripiprazole Brexpiprazole	High Akathisia Risk. <i>PCP Pearl:</i> Can cause a severe, intense inner restlessness. Metabolically friendly.
The New Guy	Cobefny	New Muscarinic Mechanism. <i>PCP Pearl:</i> *No* D2 block = No EPS, No Prolactin. Side effects are GI (nausea/vomiting).

10

Problem 1: METABOLIC SYNDROME (The "-Pines")

The Threat

Olanzapine and Quetiapine can cause **20-40+ lb weight gain** and new-onset T2DM, often rapidly.

You are our partner in metabolic monitoring!

The Protocol & Action

Baseline (Day 1): Weight/BMI, Waist, BP, Fasting Glucose/A1C, Lipids.

Monitor: Weight (every visit), A1C/Lipids (at 3 months, then annually).

Action: If weight is up >5% or A1C/Lipids are climbing, **call us**. Consider starting **Metformin** (studies show it helps prevent/reduce weight gain), topiramate, or a GLP1.



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Problem 2: EPS & PARKINSONISM (The "-Dones")

The Threat: Drug-induced Parkinsonism (shuffling gait, cogwheel rigidity, resting tremor).

The "Neuroleptic Threshold": If your patient on Risperidone (or Haloperidol) starts to look like they have Parkinson's, their dose is **too high**.

Action: Call us. The treatment is to ***lower the dose***, not just add an anticholinergic.

Avoid Long-Term Benztropine: It's a "Band-Aid" that worsens cognition, is a risk factor for tardive dyskinesia, and adds anticholinergic burden.



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Problem 3: AKATHISIA (The "-Pips")

"I want to jump out of my skin."

— A Patient on Aripiprazole (probably)

The Threat: A severe inner restlessness. This is a **psychiatric emergency** and is highly correlated with suicidal ideation.

Action: Call us immediately. First-line treatment is Propranolol or lorazepam.



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Psychosis in Dementia:

THE BOXED WARNING

All antipsychotics (FGAs & SGAs) are associated with an **increased risk of death** (CV events, stroke) in elderly patients with dementia.

First-Line: Non-Pharma

Is the patient in pain? Constipated? Is there a new UTI? Are they bored?

If You MUST Use Meds:

This is an off-label, high-risk, last-resort decision. Use the ***lowest possible dose*** for the ***shortest possible time***.

FDA-Approved Exceptions:

Pimavanserin: For Parkinson's Disease Psychosis.

Brexpiprazole: Treatment of agitation associated with dementia due to Alzheimer's disease:



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Psychosis in Dementia

***BLACK BOX WARNING: All antipsychotics (FGAs & SGAs) are associated with an increased risk of death (CV events, stroke) in elderly patients with dementia.**

Medication	Typical Geriatric Start Dose	Key Risks & Side Effects	Clinical Pearl
Risperidone (Off-Label)	0.25 - 0.5 mg qHS	High EPS/Parkinsonism , High Prolactin, Sedation, Falls	Often the default, but high EPS risk in LBD. Watch for shuffling/rigidity.
Olanzapine (Off-Label)	2.5 mg qHS	Very High Metabolic Risk (T2DM), Very Sedating , Anticholinergic	Good for severe agitation + insomnia, but metabolically toxic. Comes in IM.
Quetiapine (Off-Label)	12.5 - 25 mg qHS	Very Sedating (H1), Orthostasis/Falls , Mod. Metabolic	Often chosen for its *low* EPS risk. Good for Parkinson's Disease Psychosis (off-label).
Brexpiprazole	0.5 mg daily	*Black Box Warning still applies*, Akathisia (low), Sedation	FDA-approved for Agitation in Alzheimer's . Metabolically kinder. Very expensive.
Pimavanserin	34 mg daily (start 17mg)	No D2 Blockade = No EPS . QTc Prolongation.	FDA-approved for Parkinson's Disease Psychosis . *Does not worsen motor symptoms.*
Citalopram (Off-Label)	10-20 mg daily	QTc Prolongation (max 20mg in elderly), Hyponatremia (SIADH)	A safe first attempt. Modest benefit for agitation (CATIE-AD)
Dextromethorphan/Quinidine	20mg/10mg daily	Dizziness, Falls, Drug Interactions (CYP2D6)	FDA-approved for Pseudobulbar Affect (PBA) . Sometimes used off-label for agitation



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The "C" Word: Clozapine

What it is: Our most effective antipsychotic. The gold standard for Treatment-Resistant Schizophrenia (TRS).

When We Use It: After **two** failed monotherapy trials (e.g., Risperidone failed, Olanzapine failed).

Your Role:

Know when to refer for it. If your patient has tried two meds and is still psychotic, they are a clozapine candidate.

Know we manage(d) the REMS program for *agranulocytosis* (CBC monitoring).

Know other side effects: Metabolic risk, sedation, *hypersalivation*, seizure risk.



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The "Old Guard": First-Generation Antipsychotics (FGAs)

- **Why are we still using them?**
- They are affordable, accessible, effective, and standard in the Emergency Department.
- You will see patients on these who have been stable for 30+ years.
- **The Mechanism:**
- They are "Sledgehammers" at the D2 Receptor.
- **The Trade-off:** They have **LOWER** metabolic risk than the new meds, but **HIGHER** neurological risk (EPS, Tardive Dyskinesia).
- **The Common Agents:**
- **Haloperidol:** High potency. The "go-to" for acute agitation.
- **Chlorpromazine:** Low potency. Very sedating.

Common First-Generation Antipsychotics — Dosing Quick Chart

<u>Medication</u>	<u>Typical Starting Dose</u>	<u>Usual Effective Range</u>	<u>Clinical Pearls</u>
Haloperidol	0.5–2 mg PO BID–TID	5–20 mg/day	High potency → High EPS risk. IM used for acute agitation
Chlorpromazine	25–50 mg PO TID	200–800 mg/day	Low potency → sedating, anticholinergic, orthostasis.
Perphenazine	4–8 mg PO BID–TID	16–32 mg/day	Mid-potency, cleaner than Thorazine.
Fluphenazine	1–2.5 mg PO BID–TID	5–10 mg/day	Very high potency. Also available as a long-acting injectable (decanoate).
Loxapine	10 mg PO BID	60–100 mg/day	Mid-potency with some SGA-like properties . Inhaled formulation for acute agitation exists (REMS)

Mood Stabilizers in Primary Care: What You Need to Know

- **Lithium (The Gold Standard for Mania)**
- **PCP Pearl:** Narrow Therapeutic Index. Toxicity can look like confusion, tremor, or ataxia.
- **The Enemy:** Dehydration and NSAIDs. (Ibuprofen can spike Lithium levels to toxic ranges).
- **Monitoring:** TSH (Hypothyroidism) and Creatinine (Kidney function).

- **Valproate**
- **PCP Pearl:** Great for mania, but "harsh" on the body.
- **Monitoring:** LFTs (Hepatotoxicity) and Platelets (Thrombocytopenia).
- **Teratogenicity:** Avoid in women of childbearing age if possible (Neural Tube Defects).

- **Lamotrigine**
- **PCP Pearl:** The "Antidepressant" mood stabilizer.
- **The Risk:** Stevens-Johnson Syndrome (SJS). If a patient develops a new rash in the first 8 weeks, stop it and investigate.



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Mood Stabilizers — Dosing Quick Chart

<u>Medication</u>	<u>Starting Dose</u>	<u>Target Dose / Level</u>	<u>Key Monitoring</u>	<u>PCP Pearls</u>
Lithium	300 mg PO BID	900–1500 mg/day (goal level 0.6–1.0)	BMP, TSH, Lithium level	Narrow therapeutic index. NSAIDs & dehydration raise levels
Valproate / Divalproex	500–750 mg/day	1000–2000 mg/day (goal level 50–125)	LFTs, Platelets	Great for mania; avoid in pregnancy.
Lamotrigine	25 mg/day × 2 wks	200 mg/day	None routine; watch rash	Titration prevents SJS. Depression > mania.
Carbamazepine	200 mg BID	800–1200 mg/day (goal level 4–12)	CBC, CMP, Tegretol level	Autoinducer → levels drop over time. Hyponatremia
Oxcarbazepine	150–300 mg BID	900–1200 mg/day	Sodium	Hyponatremia > carbamazepine; less DDIs.



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Emergency Management: The Agitated Patient

- The Goal:** Calm the patient to ensure patient and staff safety
- The "Project BETA" Approach:** American Association of Emergency Psychiatry (AAEP)
- 1. Verbal De-escalation:** Always the first attempt.
- 2. Oral Meds First:**
- Parenteral Options (When Danger is Imminent):**
- Psychosis-Driven Agitation:**
 - First Line:** Antipsychotic Monotherapy.
 - Examples:** Olanzapine IM (10mg) OR Haloperidol IM (5mg).
 - Note:** Avoid IM Olanzapine + IM Benzodiazepines together (respiratory depression risk).
- Alcohol/Unknown Agitation:**
 - First Line:** Benzodiazepines (e.g., Lorazepam 2mg IM).
- Current Guidelines:** Routine use of Diphenhydramine is **no longer recommended** as first-line.
- Why?** It adds anticholinergic burden (worsening delirium).
- When to use it:** Reserve for patients with a *known history* of acute dystonia or if dystonia actually occurs.



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Adherence & Long-Acting Injectables (LAIs)

The Problem: Non-adherence to oral meds is the #1 driver of relapse.

The Solution: Long-Acting Injectables (LAIs).

Key Facts:

They are **not** just for "non-compliant" patients. They are a **preference** for many.

We have 2-week, 1-month, 3-month, and 6-month versions, IM and SUBQ versions.

(e.g., Aripiprazole, Paliperidone/Paliperidone palmitate/Invega Hafyera, Risperidone)

Action: If you have a patient who is frequently relapsing, ask us about an LAI.



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The Referral Guide:

URGENT / SEND TO ED

New Onset Psychosis (FEP)
SI/HI/Command Hallucinations
Suspected Delirium
Suspected NMS (F-E-V-E-R)

URGENT / CALL MY OFFICE

Akathisia
Patient wants to stop meds
Rapidly climbing weight or A1C

ROUTINE REFERRAL

Patient has failed 1-2 oral antipsychotics (Clozapine eval!)

Persistent, non-urgent side effects (e.g., gynecomastia)

Patient is interested in an LAI



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Common Curbside Questions

- *Q: Can I stop the antipsychotic if the patient feels better?*
- **No.** Relapse rates are >70% within one year of stopping.
- *Q: Is it safe to use stimulants (amphetamine/ dextroamphetamine) in someone with a history of psychosis?*
- **Caution.** Dopamine release can trigger a psychotic relapse. Consult Psych first.
- *Q: What about Cannabis?*
- High-potency THC is a known risk factor for converting to Schizophrenia in vulnerable young adults.



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Key Takeaways for Your Practice

Always rule out DELIRIUM first. An acute change in mental status is medical until proven otherwise.

You are the METABOLIC co-manager. Please monitor **Weight, A1C, and Lipids** (especially on "-pines").

Akathisia is an EMERGENCY. It is a severe side effect, not "anxiety." Treat with **Propranolol** and call psych.

First Episode Psychosis (FEP) needs an urgent, full workup and referral to a specialty team (like NAVIGATE).

Refer to Psych after 2 failed trials for a Clozapine evaluation.



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Questions?

Thank you.



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Primary Care Behavioral Health Symposium 2026

The Big 3: Capacity, Risk, and IVC

Layla Soliman, MD

Thursday, February 26th | 4:00 PM – 5:00 PM



The Big 3: Capacity, Risk, and IVC

Layla Soliman, MD

02/26/2026



1

The clock is ticking!

Objectives:

- 1) Understand the elements of capacity and the NC scheme of substitute decision making
- 2) Discuss elements of risk assessment and when to send patients for emergency evaluation vs outpatient referrals
- 3) Describe IVC criteria in North Carolina



2



Part I: Decisional Capacity



3

Elements of Decision Making Capacity

Understand the diagnosis, treatment options – can they “teach back?”

Appreciate how the information applies specifically to them – why and how does this matter?

Reasoning ability re: risks and benefits of different options

Communicate a choice- clearly and consistently



4

Tips for a framework in primary care¹

Establish clinical context and decision to be made

ADEQUATE information disclosure

Assess understanding

Evaluate appreciation

Examine reasoning ability – how do they weigh options? Logical consistency?

Confirm the ability to express a choice

Document!



5

Notes on what capacity is NOT

Global –there's a bit of a sliding scale. Are we talking about a blood draw? Same day surgery? Chemotherapy?

Permanent – this is a point-in-time AND task-specific assessment

Defined as doing what we want them to do – take choices in the context of the patient's values and goals

We stay in our lane, and out of things outside of medicine



6

So your patient lacks capacity. . .call legal

- Advance directive
- Treat and stabilize an emergency. If not an emergency:
- HCPOA or Guardian- people with a guardian CANNOT consent
- Spouse
- Majority of patient's reasonably available parents and adult children
- Majority of adult siblings
- Individual with established relationship
- Two attending physicians

**In these cases, PLEASE consult risk/legal if there are issues.
This is ONLY a framework!!**



7



Part II: Risk Assessment



8

Why do we assess risk if we can't predict??

Prediction is not the point.

Mitigation and improving outcomes is the point – we do this work to improve our patients' quality of life.

If those are not good enough reasons, there are medicolegal and reimbursement requirements.



9

Regulatory Requirements: Joint Commission and CMS²

Screen all patients for SI using a validated risk assessment tool

Suicide risk assessment, using an evidence-based process, for all who screen positive (may use one tool/process to screen and assess risk)

Document level of risk and plan to mitigate risk

Follow up care and counseling (post discharge is high risk)



10

Assessing for Risk of Suicide and Violence: Why Both Together?

The risk factors overlap a lot

Two dreaded outcomes, both for the patient and those around them

Workplace Violence Reduction

Potential causes of action



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Types of Risk Factors/Considerations

Modifiable/Dynamic

Non-modifiable/static

General; across diagnoses

Risk factors specific to diagnostic categories

Conditional-specific to a particular patient



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General Risk Factors: Modifiable/Dynamic^{3,4}

Substance/etOH use
 Access to Firearms
 Insomnia
 Treatment non-adherence
 Homeless/unstable housing
 Active psychotic sx (especially + sx)
 Mood sx (mania, depression)
 Impulsivity
 Panic/anxiety
 SI/HI (current or recent)



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General Risk Factors: Non-modifiable/static

Recent loss (death, divorce)
 Traumatic past/exposure to violence
 History of suicide attempts
 Family history of suicide
 Legal issues (esp recent or impending incarceration)
 Gender/age (male, old or young)
 Maladaptive personality traits/personality disorder
 TBI
 Chronic Psychiatric Illness, chronic debilitating medical illness/pain



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Risk Factors: Bipolar Disorder⁵

Rapid cycling

Mixed state

Younger age of onset

Also look at the intensity of the mood state



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Risk Factors: Bipolar Disorder⁶

10-15% die by suicide (estimates vary, some studies say less)

Swedish study showed that in BPAD, suicidality more likely to be lethal and criminality more likely to be violent

Most suicide and first incidents of violent crimes were within 5 years of initial BPAD dx



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Risk Factors: Schizophrenia⁷

Suicide Risk

- early age of onset
- severity of illness
- frequent psychotic episodes and admissions
- comorbid depressive sx
- fear of mental disintegration
- risk is higher in the first couple of years after dx



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Risk Factors: Schizophrenia^{8,9}

Agitation/restlessness

Treatment non-adherence

Positive Symptoms

One literature review (Hor and Taylor, 2010) found that in addition to substance use in general, “alcohol misuse is a key factor”



18

PTSD Risk Factors¹⁰⁻¹²

Prominent arousal sx assoc. w/ increased risk

PTSD and MDD often co-morbid

Trauma, esp adverse childhood events (ACES) increase risk of PTSD and MDD, AND independently increase the risk of suicide attempts

Much of the risk of violence with PTSD attributable to co-occurring substance use



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Protective Factors¹³

Familial support

Meaningful Employment (as perceived by patient)

Educated (double-edged sword)

Future oriented

Motivated for treatment/engaged with treatment team

Attachment or responsibility to children or other family members

Spiritual belief against suicide or violence

Insight?? Double-edged sword.



20

Good Questions to Ask: Suicide

If patient having SI, how far have they gotten? Vague? Plan but no intent? Rehearsal (physical or mental)? Preparation?

Prior attempts? Circumstances? Medical sequelae?

Access to means? Firearms, chemicals, etc?

What keeps them from acting? Were they interrupted? Changed mind?

Reasons for living?

Spiritual beliefs?



21

Suicide Crisis Syndrome (SCS): Igor Galynker et al)¹⁴

Criterion A: Entrapment

Criterion B (need one from each dimension, B1-B4)

Affective dysregulation

Cognitive dysregulation

Overarousal

Social Withdrawal



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SCS: Criterion B Exactly As Described by Galynker, et al¹⁴

B1: Affective disturbance: emotional pain; depressive turmoil; extreme anxiety with unusual physical symptoms; acute anhedonia

B2: Cognitive dysregulation (loss of cognitive control): ruminations; cognitive rigidity; failed thought suppression; ruminative flooding with headache/head pressure

B3: agitation/restlessness; hypervigilance; irritability; insomnia.

B4: avoidance of social engagements and evasive communication with others.



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Workplace Violence

Immediate signs of affective (emotion-driven) violence

STAMP

Staring

Tone/volume

Anxiety/agitation

Mumbling

Pacing

There are lots of tools, this is but one example that we use in our system



24

Workplace Violence

Risk to Harm Flags

Take all threats seriously

If we're worried about threats to our teammates/facilities, we do have the Behavioral Threat Assessment and Management Team (BTAM)

BTAM is a model that recognizes people that pose a threat as being in crisis and helping them find the "off ramp" to keep others safe; consider situations like patient dismissals for behavior, teammate-on-teammate violence/threats, Intimate Partner Violence involving a teammate, staff dismissals



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Part III: North Carolina Involuntary Commitment Law



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The life cycle of a petition for involuntary commitment

- Initial petition
- Custody order
- First ERIC (if a licensed, certified professional did the petition they did this at the same time)
- Second ERIC (in a 122C facility, which is a 24 hour facility)
- Hearing: within 10 days of custody order, MUST have 72 hr notice (so if they're in an ED or general hospital, must re-file every 5-7 days)
- Outcome
- May be followed by an outpatient commitment



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So, what do you need to file a petition from your worksite?

- An institutional e-file account AND a notary
- Adequate licensure and training: anyone can go down to the magistrate's office and file the petition. To be able to submit electronically AND do the first ERIC, you must be a physician, certified APP, psychologist, LCSW, etc. . .this requires specific training and certification
- We CANNOT (typically) hold people in ambulatory settings if they want to go; some counties have law enforcement/EMS that will take the patient to ED if there are grounds, but most need a custody order



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What constitutes grounds?¹⁵

- Danger to self or others, flowing from a mental illness
- Can use grounds that further deterioration would “predictably result in dangerousness” but you have to draw a very clear line from here to there
- If the patient is not already in an ED or hospital, the custody order only allows them to be taken into custody for 24 hours
- They can be signed in by their legal guardian, but they are still entitled to a hearing
- If you file a petition, be prepared to testify (can usually be remote)

Example Petition

Respondent has a history of Bipolar Disorder, has not been taking his medications, and was in the street earlier today shouting that he wants to start a fight, that he is the Almighty, and has come to destroy the earth

-Danger to self if he starts a fight and gets hurt; danger to others if he starts one and hurts another

-Probably cannot make good enough decisions to care for himself

Example 1st ERIC

Patient admitted for [petition grounds]

He denies the allegations; he presents as manic, with rapid, pressured speech and continues to say that he is the Almighty

OR Maybe he looks a bit better:

He denies the allegations but seems guarded (minimal responses to questions); and further time is needed to evaluate him/gather collateral information



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After all this, if you **STILL** want to file a petition. . .

Avoid conclusory language! You can't just say a patient is "paranoid and aggressive" and have that be your whole statement. You can, and should, mention prior diagnoses and if they're not taking their meds, lack of hygiene, sleep, etc.

Better: "the patient has expressed that his parents are imposters and threw a chair at them this morning"

Best: "The patient has expressed to me that his parents are imposters. They reported that he threw a chair at them this morning. The patient tells me that he has to defend himself against the invaders in his home."



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Primary Care Behavioral Health Symposium 2026

Somatic Symptom and Related Disorders

Afrayem Morgan, MD

Friday, February 27th | 8:00 AM – 9:00 AM



Somatic Symptom and Related Disorders

Afrayem "Fry" Morgan, MD | 2/27/2026



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1

Learning Objectives

Upon completion of this activity, participants should be able to:

- Conceptualize spectrum of somatic symptom and related disorders
- Identify differentials for the spectrum
- Identify management approach



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DSM 4 Somatoform Disorders		DSM 5-TR Somatic Symptom & Related Disorders	
1.	Somatization disorder	1.	Somatic Symptom Disorder
2.	Undifferentiated somatoform disorder	2.	Illness Anxiety Disorder
3.	Conversion disorder	3.	Functional Neurological Symptom Disorder (Conversion Disorder)
4.	Pain disorder	4.	Psychological Factors Affecting Other Medical Conditions
5.	Hypochondriasis	5.	Factitious Disorder
6.	Body dysmorphic disorder (→ DSM 5-TR: OCD)	6.	Other Specified Somatic Symptom and Related Disorder
7.	Somatoform disorder NOS	7.	Unspecified Somatic Symptom and Related Disorder



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Edition	Publication date	Number of pages	Number of diagnoses	Revenue for the American Psychiatric Association
DSM-I	1952	132	128	Unknown
DSM-II	1968	119	193	\$1.27 million
DSM-III	1980	494	228	\$9.33 million
DSM-III-R	1987	567	253	\$16.65 million
DSM-IV	1994	886	383	\$120 million
DSM-IV-TR	2000	943	383	Unknown
DSM-5	2013	947	541	Unknown

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Summary of symptom repetition in each chapter of the DSM-5

DSM-5 chapter	Diagnoses				Symptoms			
	# of diagnoses represented	% diagnoses made up entirely of repeating symptoms	% diagnoses with any repetition	% diagnoses with zero repetition	# of distinct symptoms	% symptoms unique to a single diagnosis	% symptoms repeated within chapter	% symptoms repeated in other chapters
Ch1 - Neurodevelopmental	15	46.7%	80.0%	20.0%	79	65.8%	6.3%	30.4%
Ch2 - Schizophrenia spectrum and other psychotic	12	75.0%	75.0%	25.0%	58	5.2%	12.1%	89.7%
Ch3 - Bipolar and related	9	100%	100%	0.0%	57	0.0%	59.6%	100%
Ch4 - Depressive	10	70.0%	90.0%	10.0%	60	13.1%	33.3%	85.0%
Ch5 - Anxiety	7	0.0%	57.1%	42.9%	63	57.1%	0.0%	42.9%
Ch6 - Obsessive-compulsive related	12	0.0%	25.0%	75.0%	24	91.7%	4.2%	8.3%
Ch7 - Trauma-/stressor-related	4	50.0%	100%	0.0%	51	15.7%	37.3%	64.7%
Ch8 - Somatic symptoms	14	35.7%	57.1%	42.9%	30	53.3%	6.7%	43.3%
Ch11 - Elimination	3	0.0%	0.0%	100%	5	100%	0.0%	0.0%
Ch12 - Sleep-wake	15	46.7%	66.7%	33.3%	30	60.0%	16.7%	36.7%
Ch13 - Sexual dysfunctions	7	28.6%	57.1%	42.9%	18	77.8%	22.2%	5.6%
Ch14 - Gender dysphoria	2	0.0%	0.0%	100%	6	100%	0.0%	0.0%
Ch15 - Disruptive, impulse control and conduct	6	33.3%	83.3%	16.7%	41	43.9%	4.9%	56.1%
Ch16 - Substance-related and addictive	32	43.8%	96.9%	3.1%	135	38.5%	45.2%	42.2%
Ch17 - Neurocognitive	9	55.6%	100%	0.0%	97	28.9%	33.0%	53.6%
Ch18 - Personality	11	0.0%	100%	0.0%	104	51.0%	7.7%	45.2%
Ch19 - Paraphilic	19	0.0%	0.0%	100%	24	100%	0.0%	0.0%
All chapters	202	37.1%	69.3%	30.7%	638	63.2%	30.0%	24.7%

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5

Common feature:

prominent somatic symptoms + significant distress and impairment

Encountered in PC/other medical settings > psychiatric/MH settings

Can accompany diagnosed medical disorders

Incorrect to give mental disorder diagnosis solely because medical cause cannot be demonstrated

Grounding diagnosis on absence of explanation reinforces mind-body dualism



6

Prevalence

~5%-7% of general population

♀ : ♂ = 10:1

~17% of primary care patient population

D'Souza RS, Hooten WM. Somatic Syndrome Disorders. [Updated 2022 May 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK532253/?report=classic>



7

Somatic Symptom Disorder (SSD)

"Hypochondriasis" (75%)

- A. One or more physical symptoms, distressing/disrupting daily life
- B. Excessive thoughts, feelings, behaviors related to physical symptoms or health concerns with at least one of:
- Ongoing thoughts out of proportion with seriousness of symptoms
 - Ongoing high level of anxiety about health/symptoms
 - Excessive time and energy spent on symptoms/health concerns
- C. At least one symptom constantly present (may be different symptoms; symptoms may come and go)

Specifiers:

With predominant pain (*previously pain disorder*)

Persistent: >6 months

Severity:

Mild: only 1 of 2 Criterion B symptoms

Moderate: ≥ 2 Criterion B symptoms

Severe: ≥ 2 Criterion B symptoms + multiple somatic complaints or one very severe somatic symptom

Illness Anxiety Disorder (IAD)

"Hypochondriasis" (25%)

- A. Preoccupation with having/acquiring serious illness.
- B. Somatic symptoms **not** present or, if present, mild in intensity.
If another medical condition is present or high risk for developing a medical condition (e.g., strong family history), preoccupation is clearly excessive/disproportionate.
- C. High level of anxiety about health, easily alarmed about personal health status.
- D. Excessive health-related behaviors (e.g., repeatedly checks body for signs of illness) or exhibits maladaptive avoidance (e.g., avoids doctor appointments and hospitals).
- E. Illness preoccupation present for at least 6 months, but specific illness feared may change over that period.
- F. Illness-related preoccupation is not better explained by another mental disorder.

Specifiers:

- **Care-seeking type**, e.g., physician visits, undergoing/requesting tests and procedures
- **Care-avoidant type**



8

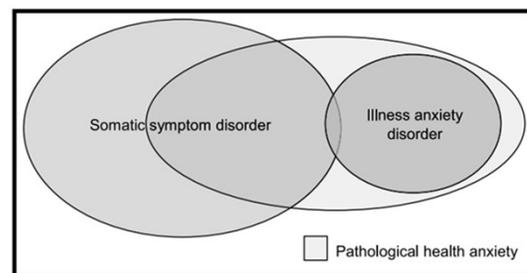
SSD	IAD
<ul style="list-style-type: none"> Emphasis not on somatic symptoms per se, but how they <i>present</i> and how individuals <i>interpret</i> them SSD and concurrent medical illness are not mutually exclusive 	<ul style="list-style-type: none"> Distress not primarily from physical complaint itself but from anxiety about meaning, significance, or cause of complaint If physical sign/symptom is present, often <ul style="list-style-type: none"> normal physiological sensation (e.g., orthostatic dizziness) benign self-limited dysfunction (e.g., transient tinnitus) bodily discomfort not generally considered indicative of disease (e.g., belching) If diagnosable medical condition present, anxiety/preoccupation excessive/disproportionate to severity of condition Easily alarmed about illness, e.g., hearing about someone else falling ill, reading health-related news story

“Pathological Health Anxiety” (GAD + OCD)?

Questionable validity, clinical utility of distinction **SSD vs. IAD**

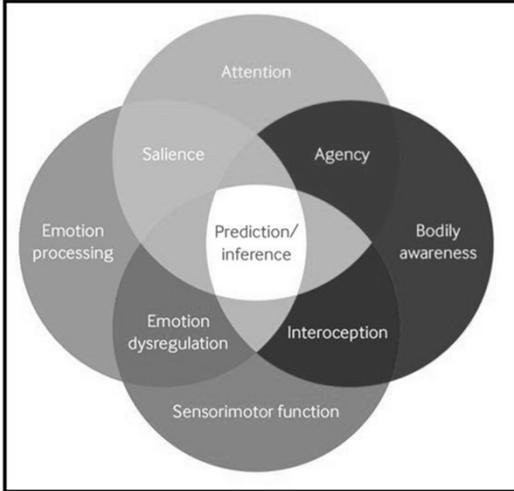
- Difference in severity rather than phenotype
- Minimal value predicting course, interventions to prioritize

Similar CBT outcomes regardless **SSD vs. IAD**



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1. Abnormal **attentional focus** on affected area
2. **Beliefs and expectations** about illness
 - Biased perception → *“Better safe than sorry” framework*
3. Deficits in **sense of control** over one’s actions
 - Self-concept of bodily weakness

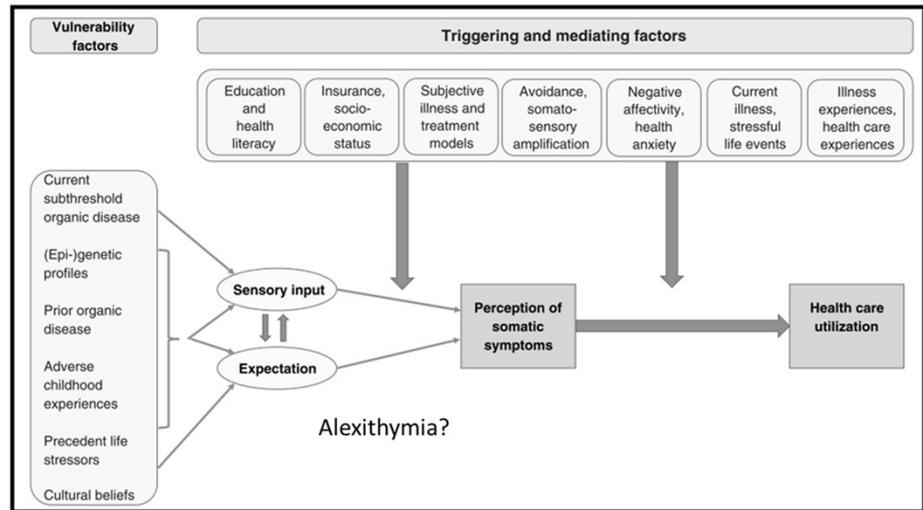
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12

The Two Arrows

"When touched with a feeling of pain, the [...] person sorrows, grieves, & laments, beats his breast, becomes distraught.

So he feels two pains, physical & mental.

Just as if they were to shoot a man with an arrow and, right afterward, were to shoot him with another one, so that he would feel the pains of two arrows[.]”

Sallatha Sutta: The Arrow

Translated from the Pali by Thanissaro Bhikkhu



Dirk Beyer, CC BY-SA 3.0, via Wikimedia Commons

Functional Neurological Symptom Disorder (Conversion Disorder)

Diagnostic Criteria

- A. One or more symptoms of altered voluntary motor or sensory function.
- B. Incompatibility between symptom and recognized neurological or medical conditions.
- C. Not better explained by another medical or mental disorder.
- D. Consequent clinically significant distress or impairment in functioning (social, occupational, etc.) or warrants medical evaluation.



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Specifiers

With

- weakness or paralysis
- abnormal movement (e.g., tremor, dystonic movement, myoclonus, gait disorder)
- swallowing symptoms
- speech symptoms (e.g., dysphonia, slurred speech)
- attacks or seizures
- anesthesia or sensory loss
- special sensory symptom (e.g., visual, olfactory, or hearing disturbance)
- mixed symptoms

Duration:

- Acute episode < 6 months
- Persistent \geq 6 months
- With or without psychological stressor (*specify stressor*)



16

Epidemiology

- Incidence *unknown*
- ~20% of psychogenic non-epileptic seizure (PNES) patients also have epileptic seizures
- 20-40% of unusual/intractable seizures admitted to epilepsy monitoring units are diagnosed with PNES rather than epileptic seizures
 - Randomized trial of 3 AEDs for status epilepticus (n = 384) found 10% of BZD-refractory generalized convulsive status epilepticus patients who were given additional AEDs to have PNES
 - massive AED doses → impaired consciousness, respiratory failure
 - unneeded endotracheal intubations + iatrogenic complications

Huff JS, Murr N. Psychogenic Nonepileptic Seizures. [Updated 2022 May 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK441871/>

Kapur, J., Elm, J., Chamberlain, J. M., Barsan, W., Cloyd, J., Lowenstein, D., Shinnar, S., Conwit, R., Meinzer, C., Cock, H., Fountain, N., Connor, J. T., Silbergleit, R., & NETT and PECARN Investigators (2019). Randomized Trial of Three Anticonvulsant Medications for Status Epilepticus. *The New England journal of medicine*, 381(22), 2103–2113. <https://doi.org/10.1056/NEJMoa1905795>



Wake Forest University
School of Medicine



17

PNES (“Pseudoseizures”)

- response to eye contact
- visually exploring room
- closed eyes/resistance to passive opening
- side-to-side head movements
- hyperventilation vs. epileptic stertorous breathing (low pitch sound during inspiration)
- asynchronous limb movements (*vs. frontal lobe seizures!*)
- arching back
- pelvis thrusting
- duration >2 minutes (*vs. status epilepticus!*)
- waxing & waning/irregular course
- event influenced by other people (alleviating/aggravating; startle reflex)
- preserved consciousness, able to encode memory, rapid recovery, no post-ictal confusion
- motor signs indicating abrupt stop of event, e.g., blinking, brief head shaking indicating the end, looking around

Ibid.



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Features suggesting **epileptic** seizures

- occurrence from physiological sleep
- post-ictal Babinski sign
- oral tongue laceration (usually lateral) observed/documentated by medical staff is specific for epilepsy

Urinary incontinence & self-injury can occur in **both** epileptic seizures & PNES

The PNES Diagnostic Suspicion Checklist

Suspect PNES if there are two or more of the following features during the seizure:

- | | |
|--|--------------------------|
| 1. The patient is awake.
<i>El paciente está despierto.</i> | <input type="checkbox"/> |
| 2. The movements are not/little stereotypic.
<i>El movimiento no es o es poco estereotipado.</i> | <input type="checkbox"/> |
| 3. The movements are bizarre.
<i>El movimiento es bizarro.</i> | <input type="checkbox"/> |
| 4. There are brief asynchronous muscle jerks.
<i>Hay breves sacudidas musculares asíncronas.</i> | <input type="checkbox"/> |
| 5. There are asynchronous limb movements beyond the seizure.
<i>Hay movimientos asíncronos de las extremidades más allá de la crisis.</i> | <input type="checkbox"/> |
| 6. The eyes are closed.
<i>Los ojos están cerrados.</i> | <input type="checkbox"/> |

Sobregrau, P., Baillès, E., Radua, J., Carreño, M., Donaire, A., Setoain, X., Bargalló, N., Rumià, J., Sánchez Vives, M. V., & Pintor, L. (2024). Design and validation of a diagnostic suspicion checklist to differentiate epileptic from psychogenic nonepileptic seizures (PNES-DSC). *Journal of psychosomatic research*, 180, 111656. <https://doi.org/10.1016/j.jpsychores.2024.111656>

Management: *interdisciplinary, multimodal, integrative*

Communicating diagnosis/Psychoeducation

Physiotherapy/Rehabilitation

- limited hands-on interventions
- encourage early weight bearing, avoid use of adaptive equipment where possible
- psychologically informed

Psychotherapy e.g., MBT, exposure, hypnosis

No evidence for superiority of one intervention over others

Psychopharmacology → Placebo? botulinum neurotoxin, rTMS

Wijnen, J., Van 't Hullenaar, G., Gordon, N. L., Pont, M. L., Geijselaers, M. W. H., Van Oosterwijk, J., & De Jong, J. (2022). An interdisciplinary multimodal integrative healthcare program for somatic symptom disorder, with predominant (spinal) pain. *Psychotherapy research : journal of the Society for Psychotherapy Research*, 1–14. Advance online publication. <https://doi.org/10.1080/10503307.2022.2144528>

Kaur, T., Ranjan, P., Sarkar, S., Kaloiya, G. S., Khan, M., Aakansha, & Bhatia, H. (2022). Psychological interventions for medically unexplained physical symptoms: A systematic review and meta-analysis. *General hospital psychiatry*, 77, 92–101. <https://doi.org/10.1016/j.genhosppsych.2022.04.006>



21

Big picture, bottom line

Introduce psychosocial factors as amplifiers rather than causes

Unclear benefits of diagnostic labels vs disadvantages/stigma

Label does not automatically result in treatment advice or improved self-management

Mechanism-based biopsychosocial explanation appears beneficial regardless of whether or not diagnostic label is given

Encourage functional attitudes/behaviors, e.g., positive thinking, relaxation techniques, graded exercise, self-help guides, groups

Symptomatic measures, e.g., pain relief, digestives; measures from complementary medicine per patient preferences

Appointments at regular intervals rather than patient initiated

Henningens P. (2018). Management of somatic symptom disorder. *Dialogues in clinical neuroscience*, 20(1), 23–31. <https://doi.org/10.31887/DCNS.2018.20.1/phenningsen>

Tattan, M., Rosmalen, J., & Hanssen, D. (2025). Factors associated with receiving a Functional Disorder diagnostic label: A systematic review. *PLoS one*, 20(1), e0317236. <https://doi.org/10.1371/journal.pone.0317236>



22

Factitious Disorder

“Munchausen Syndrome”



23

Baron Münchhausen

(1720-1797)

“Baron von Münchhausen's flight on a cannonball,”

by August von Wille, before 1872.

Public domain/via Wikimedia



24

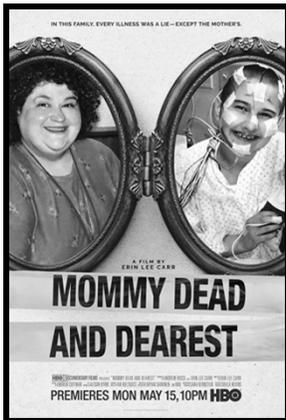
Diagnostic criteria

A. Falsification of physical or psychological signs/symptoms, or induction of injury or disease, associated with identified deception

Imposed on self	Imposed on other (by proxy)
B. Presents self to others as ill, impaired, or injured C. Absence of obvious external rewards D. Not better explained by another mental disorder	B. Presents another individual (victim) <i>The perpetrator, not the victim, receives this diagnosis</i>



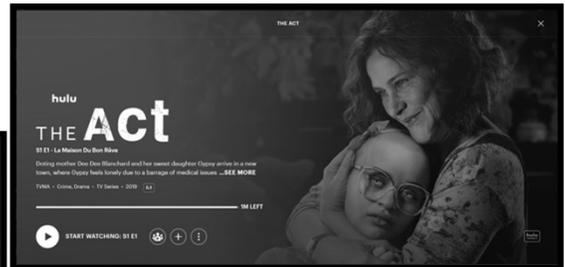
25



IMDb.com. (2017, March 11). Mommy Dead and Dearest. IMDb. Retrieved March 9, 2023, from <https://tinyurl.com/y4vas9tc>



Cipriano, A. (2019, April 13). The True Story of Gypsy Rose Blanchard. The Crime Sheet. Retrieved March 9, 2023, from <https://www.thecrimesheet.com/post/the-true-story-of-gypsy-rose-blanchard>



Hulu, LLC. (2019, March 20). The Act. Hulu. Retrieved March 9, 2023, from <https://tinyurl.com/yey5eua9>



26

Other Specified Somatic Symptom & Related Disorder

1. Brief somatic symptom disorder: <6 months.
2. Brief illness anxiety disorder: <6 months.
3. Illness anxiety disorder without excessive health-related behaviors
4. Pseudocyesis

Unspecified Somatic Symptom & Related Disorder

Malingering?

- No longer considered a clinical diagnosis, per DSM-5
- Motivation/gain is external, e.g., receiving money



27

Case study

59 yo M presented to ER reporting some numbness and tingling starting 2 days prior, concerned that he may have had a stroke. R side of his body (including face) feels numb.

Reports h/o TIA. Not on any antiplatelet or anticoagulation agents.

Denies trauma, injury, falls, chest pain.

Intoxicated. Feels shaky, feels he is going into alcohol withdrawal.

No findings on neuro exam.

Suspect some of his paresthesias 2/2 to peripheral neuropathy or vitamin deficiency from AUD. Not a code stroke or systemic tPA candidate.



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Admission workup

Normal CBC w diff, lipase, HbA1c, P, Mg, aPTT, INR, folate

CMP: Cl 97 mmol/L ↓, albumin 4.9 g/dL ↑, AST 64 U/L ↑, ALT 66 U/L ↑; otherwise wnl

PT 15.3 sec ↑

Vit B12 139 pg/mL ↓

Ethanol 301 mg/dL

UDS THC (+)

Lipids: ↑ cholesterol 210 mg/dL & LDL 127 mg/dL, ↓ HDL 58 mg/dL



29

Some history

Since teenage years h/o GAD, panic disorder; trials of citalopram, gabapentin, various BZDs

2009 RCC, L partial nephrectomy after incidental finding of renal mass on abdominal US for intermittent stomach pain

02/24/2022 Hemiparesis of left nondominant side, unspecified hemiparesis etiology (HCC/RAF)

Distribution of neuro deficit not consistent with localizing lesion directly (both sensory and motor transient deficits described, both UL & LL as well as full field visual loss).

Unlikely conversion reaction. Had been in rehab facility working on avoiding withdrawal days 3-4 .

Possible patient suffered seizure and subsequent postictal atypical Todd paralysis but not clear; no structural abnormalities noted on MRI report.



30

12/26/2022 CT head wo contrast

12/27/2022 MRI stroke protocol

12/28/2022 requested CT abdomen (*I have on and off pain in my side for years*)

12/29/2022 requested CT chest (*I smoke*)

12/30/2022 requested EKG (*My cholesterol is high*)

12/30/2022 TTE

?



Warner Bros., Public domain, via Wikimedia Commons



Primary Care Behavioral Health Symposium 2026

Primary Care Psychiatric Interview and Mental Status Examination

Ruth Benca, MD, PhD

Friday, February 27th | 9:00 AM – 10:00 AM



Insomnia and Sleep Disorders

Ruth Benca, MD, PhD

February 27, 2026



1

Learning objectives

- Describe associations between insomnia and other sleep disorders with psychiatric disorders
- Perform appropriate clinical assessments of sleep



2

Sleep disorders prevalent in psychiatric disorders

About 20% of the US population suffers from a significant sleep disorder

Rates significantly greater in psychiatric patients

Insomnia in majority of acutely ill psychiatric patients

Sleep apnea in up to 45% of depressed, 55% of schizophrenic patients

Circadian rhythm abnormalities also increased

Sleep disturbance highly correlated with risk for psychiatric disorders

Treatment of sleep problems may hasten improvement in psychiatric conditions

Naqvi HA et al., *Curr Psychiatry Rep* 2014;16:519. Spiegelhalter K. et al., *Curr Psychiatry Rep* 2013;15:364. Benca RM et al. *Arch Gen Psychiatry* 1992;49:651-668. Peterson MJ, Benca RM. *Psychiatr Clin North Am.* 2006;29:1009-32.



3

Case

- 28 yo woman with diagnoses of major depression, anxiety, and attention deficit disorder, presents with complaints of insomnia, daytime fatigue, and excessive sleep amount
- Meds: Sertraline 100 mg qam, amphetamine/dextroamphetamine XR 20 mg qam, amphetamine 20 mg q afternoon, buspirone 10 mg tid prn
- Caffeine: 2 green teas and 2 diet sodas daily
- No EtOH or substance use
- VS normal; BMI 22; CBC, TFTs, CMP, other labs all WNL



4

Types of sleep disorders

Category	Description
Insomnia	Difficulty falling or staying asleep
Sleep-related breathing disorders	Obstructive and central sleep apnea; sleep-related hypoventilation
Central disorders of hypersomnolence	Conditions causing severe daytime sleepiness (e.g., narcolepsy, idiopathic hypersomnia)
Circadian rhythm sleep-wake disorders	Sleep disturbances resulting from problems with the biological clock (e.g., delayed sleep phase, shift work problems)
Parasomnias (NREM, REM related)	Unusual behaviors or experiences during sleep (e.g., sleep terrors, sleepwalking, nightmares)
Sleep-related movement disorders	Periodic leg movements, body rocking



5

Types of sleep disorders

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6

Sleep assessment: 24 h history

- Sleep-related behaviors (“sleep hygiene”) and cognitions
- Temporal aspects of sleep
 - Bedtime (vs. sleep time)
 - Out-of-bed time (vs. wake time)
 - Day-to-day variability (e.g., weekends, vacations)
 - Daytime napping
- Sleep quality, satisfaction
- Daytime function
- Prior treatments and response (including self-medication)
- Sleep disorder symptoms

Schutte-Rodin et al. J Clin Sleep Med (2008) 4:487-504



7

Sleep Questionnaires

Insomnia Severity Index

7 Items

Validated to identify insomnia; sensitive to treatment response

Epworth **Sleepiness** Scale

8 items

Measures daytime sleep propensity; sensitive to treatment effects, but not strongly correlated with objective sleep testing (MSLT)

Sleep Diary

Collect at least 2 weeks of data

Helps to identify circadian rhythm disorders, sleep hygiene issues



8

Insomnia Severity Index

Validated to identify insomnia; sensitive to treatment response

Insomnia Problem	None	Mild	Moderate	Severe	Very Severe
1. Difficulty falling asleep	0	1	2	3	4
2. Difficulty staying asleep	0	1	2	3	4
3. Problems waking up too early	0	1	2	3	4

4. How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern?
 Very Satisfied 0 Satisfied 1 Moderately Satisfied 2 Dissatisfied 3 Very Dissatisfied 4

5. How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life?
 Not at all Noticeable 0 A Little 1 Somewhat 2 Much 3 Very Much Noticeable 4

6. How WORRIED/DISTRESSED are you about your current sleep problem?
 Not at all Worried 0 A Little 1 Somewhat 2 Much 3 Very Much Worried 4

7. To what extent do you consider your sleep problem to INTERFERE with your daily functioning (e.g. daytime fatigue, mood, ability to function at work/daily chores, concentration, memory, mood, etc.) CURRENTLY?
 Not at all Interfering 0 A Little 1 Somewhat 2 Much 3 Very Much Interfering 4

Scoring:

- 0-7 – No clinically significant insomnia
- 8-14 – Subthreshold insomnia
- 15-21 – Moderate severity insomnia
- 22-28 – Severe insomnia

Bastien CH et al., *Sleep medicine*. 2001;2(4):297-307.



9

Epworth Sleepiness Scale

*0 = would never doze; 1 = slight chance of dozing; 2 = moderate chance of dozing; 3 = high chance of dozing

	Chance of dozing (0-3)*			
Sitting and reading	0	1	2	3
Watching television	0	1	2	3
Sitting in a public place (i.e., theater, meeting)	0	1	2	3
As a passenger in a car for a straight hour	0	1	2	3
Lying down to rest in the afternoon	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch (w/o alcohol)	0	1	2	3
In a car while stopped in traffic	0	1	2	3

A self-assessment questionnaire to determine the general level of daytime sleepiness (Total score = 24)

- 11-12 Mild Excessive Daytime Sleepiness
- 13-15 Moderate
- 16-24 Severe



10

TWO WEEK SLEEP DIARY

INSTRUCTIONS:

- Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation.
- Put the letter "C" in the box when you have coffee, cola or tea. Put "M" when you take any medicine. Put "A" when you drink alcohol. Put "E" when you exercise.
- Put a line (|) to show when you go to bed. Shade in the box that shows when you think you fell asleep.
- Shade in all the boxes that show when you are asleep at night or when you take a nap during the day.
- Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn't get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7:00 in the morning.

Today's Date	Day of the week	Type of Day Work, School, Off, Vacation	Noon	1PM	2	3	4	5	6PM	7	8	9	10	11PM	Midnight	1AM	2	3	4	5	6AM	7	8	9	10	11AM
sample	Mon.	Work		E					A																	



<https://sleepeducation.org/resources/sleep-diary/>





Chronic Insomnia Disorder – ICSD 3-TR

Patient or patient's parent or caregiver report one or more of the following symptoms

- Difficulty initiating sleep
- Difficulty maintaining sleep
- Waking up earlier than desired
- Resistance to going to bed on an appropriate schedule (pediatrics)
- Difficulty sleeping without parent or caregiver intervention (pediatrics)

Other criteria:

- Sleep disturbance causes clinically significant distress or impairments in functioning
- Occurs at least 3 nights/wk for at least 3 mos
- Adequate opportunity for sleep
- Does not occur exclusively during course of another sleep disorder
- Not attributable to medications or substance abuse
- Coexisting medical or psychiatric disorders do not explain the insomnia

American Academy of Sleep Medicine. ICSD, 3rd ed. Text revision Darien, IL:AASM, 2023.





Insomnia Severity Index

Please rate the current (past 2-4 weeks) SEVERITY of your insomnia problem(s)

	None	Mild	Moderate	Severe	Very Severe
Difficulty falling asleep	0	1	2	3	4
Difficulty staying asleep	0	1	2	3	4
Problem waking up too early	0	1	2	3	4
How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern?	0 Very Satisfied	1 Satisfied	2 Moderately Satisfied	3 Dissatisfied	4 Very Dissatisfied
How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life?	0 Not at all noticeable	1 A little	2 Somewhat	3 Much	4 Very much noticeable
How WORRIED/DISTRESSED are you about your current sleep problem?	0 Not at all worried	1 A little	2 Somewhat	3 Much	4 Very much worried
To what extent do you consider your sleep problem to INTERFERE with your daily functioning (e.g. daytime fatigue, mood, ability to function at work/daily chores, concentration, memory etc.) CURRENTLY?	0 Not at all interfering	1 A little	2 Somewhat	3 Much	4 Very much interfering

Total score: 20

ISI scoring:

0-7 No significant insomnia

8-14 Subthreshold insomnia

15-20 Moderate severity

22-28 Severe insomnia

13

Insomnia and Psychiatric Disorders

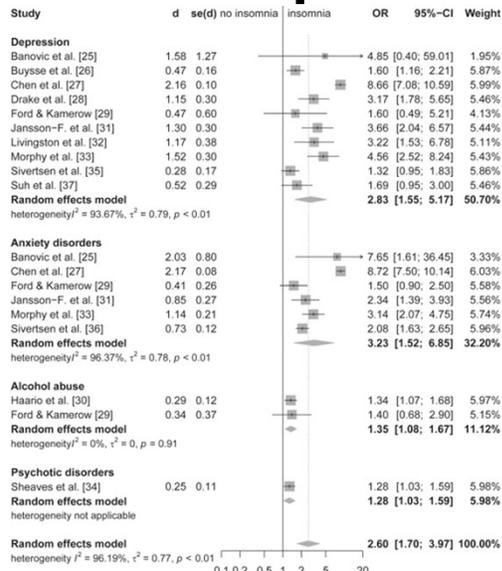
- Most insomnia (>90%) is comorbid with psychiatric or medical disorders
- **Sleep disturbance more strongly associated with psychiatric disorders than any other medical illnesses**
- Potential causes of insomnia in psychiatric patients
 - Symptom of the disorder
 - Side effect of treatment – SSRI and SNRI antidepressants, stimulants, NE reuptake inhibitors, etc.
 - Circadian dysregulation
 - Due to a primary sleep disorder

Peterson MJ, Benca RM. *Psychiatr Clin North Am.* 2006;29:1009-32

Brietzke E et al., *Expert Opinion on Pharmacotherapy* 20:11, 1341-1349, 2019.

14

Insomnia predicts psychiatric illness



Meta-analysis of longitudinal studies that investigated insomnia at baseline as a predictor of later onset of psychopathology with follow-up of at least 12 months.

Insomnia was a significant predictor for diagnosis of depression (OR 2.83), anxiety (OR 3.23), alcohol abuse (OR 1.35), and psychosis (OR 2.60).

Hertenstein E et al., Sleep Medicine Reviews 43:96-105, 2019.

15

Insomnia is a risk factor for suicide

- Over 40 studies have documented an epidemiological relationship between insomnia and suicidal ideation, behaviors, and deaths (suicide)
- Multiple studies have also shown association between short sleep duration with increased SI and suicidal behaviors, even after adjusting for psychiatric disorders

Bernert RA & Joiner TE, Neuropsychiatr Dis Treat (2007) 3:735-743; McCall WV & Black CG, Curr Psychiatry Rep (2013) 15(9):389; McCall WV et al., Clin Trials (2015) 12(3):189-198 Pigeon WR et al., J Clin Psychiatry (2012) 73:e1160-7; Woznica AA et al., Sleep Medicine Reviews (2015) 22:37-46. Drapeau CW & Nadorff MR, Nature and Science of Sleep (2017) 9:213-226.

16

Insomnia and substance abuse

- Insomnia associated with significantly higher odds of having alcohol use disorder (OR 2.0) and substance use disorder (OR 2.1)
- Insomnia predictive of increased risk of relapse for substance use disorders
- Individuals with substance use disorders often start using substances to treat their insomnia
- Tolerance to hypnotic effects and insomnia upon withdrawal occur with alcohol and cannabis

Dolsen MR & Harvey AG, *Addiction* 2017;112(6):1104-1111.
Chakravorty S et al., *Medical Clinics*. 2018;102(4):733-743.



17

Practice guideline for adults with chronic insomnia disorder from the American College of Physicians

- *Recommendation 1:* Adult patients receive cognitive behavioral therapy for insomnia (CBT-I) as the initial treatment for insomnia disorder. (Grade: strong recommendation, moderate-quality evidence)
- *Recommendation 2:* Clinicians use a shared decision-making approach, with discussion of the benefits, harms, and costs of medications, to decide whether to add pharmacological therapy when cognitive behavioral therapy for insomnia (CBT-I) alone was unsuccessful.

Qaseem, *Ann Int Med* (2016) 165 doi:10.7326/M15-2175



18

Cognitive-Behavioral Therapy for Insomnia (CBT-I): A Multi-Component Treatment

Technique	Aim
Sleep hygiene education	Promote habits that help sleep; eliminate habits that hurt sleep
Stimulus control	Strengthen bed/bedroom as sleep stimulus
Sleep restriction	Restrict time in bed to improve sleep depth/consolidation
Cognitive therapy	Address maladaptive thoughts and beliefs; behavioral experiments
Relaxation training	Reduce physical/psychological arousal

Morin C et al. JAMA, (1999) 281:991-999; Edinger JD et al., JCSM 17(2):255-262, 2021.



19

Cognitive Behavioral Therapy for Insomnia (CBT-I)

- Usually provided by trained therapist
- Computer-based forms available
 - Meta-analysis of 6 RCTs of computerized CBT-I¹
 - Treatment had good acceptability (78% completed)
 - Estimated that 1 in 4 patients will recover from chronic insomnia with computerized CBT-I
- Examples:
 - Sleepio (fee)
 - Somryst (FDA approved, requires Rx)
 - VA CBT-i Coach (free)
https://www.ptsd.va.gov/appvid/mobile/cbticoach_app_public.asp

1. Cheng SK and Dizon J, Psychother Psychosom (2012) 81:206-216.



20

Brief Behavioral Treatment (BBT) of Insomnia

4 behavioral recommendations

1. Reduce your time in bed. (*Set at average amount of time slept according to sleep log, but not less than 6 hours*).
2. Get up at the same time every day of the week, no matter how much you slept the night before.
3. Don't go to bed unless you're sleepy.
4. Don't stay in bed unless you're asleep.

Troxel et al., *Behav Sleep Med* (2012) 10:266-279;
Buysse, *Arch Int Med* (2011) 171:887-895.



21

BBT Treatment Plan: Patient instructions

- Sleep hygiene education
- Determine length of time patient allowed to be in bed based on average from sleep log, but not <6 hours
- Set bedtime and wake-up time; "Go to bed no earlier than X o'clock" and "Wake up no later than Y o'clock"
- Sleep medication if being used; timing and amount
- Complete sleep diary daily
- Follow up!

Troxel et al., *Behav Sleep Med* (2012) 10:266-279; Buysse, *Arch Int Med* (2011) 171:887-895.



22

TABLE 1
Common Obstacles and Approaches to Resistance to the Four "Rules" for Better Sleep

Rule	Common Obstacles and Approaches to Resistance
1. Reduce your time in bed	<p>"But I came in here to get more sleep and you are telling me to sleep less!"</p> <ul style="list-style-type: none"> Utilize sleep diaries to emphasize that "I am not cutting down on your actual sleep, I'm just going to cut down on the time you are AWAKE in bed." Acknowledge that daytime sleepiness is a likely potential side effect, but remind the patient that side effects are generally transient and will improve as sleep improves.
2. Get up at the same time of day every day of the week, no matter how poorly you slept the night before	<p>"If I actually get a good night sleep and am able to sleep in, I'm not going to force myself to get up!"</p> <ul style="list-style-type: none"> Utilize sleep diaries to show how "sleeping in" can lead to greater difficulty falling asleep the next night, due to reduced sleep drive. <p>"I don't need an alarm clock to get up in the morning. I'm always awake anyways."</p> <ul style="list-style-type: none"> Remind patient that that, although that may be true in the past, the treatment is designed to increase sleep drive, so "you may actually find that you are going to need an alarm clock to wake up. Wouldn't that be a sign of progress?"
3. Do not go to bed unless you are sleepy	<p>"If I wait to go to bed until I'm actually sleepy, what am I supposed to do to fill the extra time?"</p> <ul style="list-style-type: none"> Brainstorm with patient possible evening activities (e.g., with a focus on "things you always wanted to do but never have the time to do"). <p>"What if I don't get sleepy?"</p> <ul style="list-style-type: none"> Remind the patient that "by following all four rules for better sleep, we are directly targeting your body's sleep drive, and so you are very likely going to feel sleepy at your new bedtime or soon thereafter."
4. Do not stay in bed unless you are asleep	<p>"What am I going to do at 2:00 in the morning?"</p> <ul style="list-style-type: none"> Plan activities in advance. Identify at least one, but preferably two, relatively non-stimulating, but distracting, activities to engage in if not sleeping. <p>"How will I know when it's time to get out of bed?"</p> <ul style="list-style-type: none"> Advise the patient that their best estimate of when 30 min has past is generally good enough, and there is no need to look at the clock for confirmation.

23

Prescription agents used for insomnia

- Benzodiazepines (BDZ) and Benzodiazepine receptor agonists (BZRAs)
 - Increase GABA transmission
 - Adverse effects: complex sleep-related behaviors; psychomotor impairment; dependence; tolerance; abuse; rebound insomnia with abrupt discontinuation
- Melatonin receptor agonists (ramelteon)
 - Reduce sleep latency, stabilize circadian rhythm
 - Adverse effects: Increased prolactin, decreased testosterone levels
- Tricyclic antidepressant (doxepin)
 - Antihistaminergic
- Dual orexin receptor antagonists (suvorexant, lemborexant, daridorexant)
 - Block arousal systems (orexin wake-promoting)
 - Adverse effects: sleep-related hallucinations, abnormal dreams, sleep paralysis, morning somnolence, next-day driving impairment.

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Indicated for Insomnia by US FDA and/or AASM guidelines

Generic	T _{1/2} (Hours)	Dose (mg)	Drug Class	Indication ⁷
Temazepam	8-20	15-30	BZD	SO, SM
Triazolam	2-6	0.125-0.25	BZD	SO
Zolpidem ¹	1.5-2.4	5-10	BZRA	SO, SM
Zaleplon	1	5-20	BZRA	SO
Eszopiclone ²	5-7	1-3	BZRA	SO, SM
Zolpidem ER ^{1,2,3}	1.5-2.4	6.25-12.5	BZRA	SO, SM
Zolpidem SL ^{1,3,4}	1.4-3.6	1.75-3.5	BZRA	
Ramelteon ^{2,5}	1.5-5	8	MT agonist	SO
Doxepin ^{2,5}	15	3-6	TCA	SM
Suvorexant	9-13	10-20 ⁶	DORA	SO, SM
Lemborexant	17-19	5-10 ⁶	DORA	SO, SM
Daridorexant	6-10	25-50	DORA	SO, SM

1. Women start at lower dose.
2. No short-term use limitation
3. Modified formulation.
4. Use for middle-of-the-night awakening when ≥ 4 h remaining in bed.
5. Not a controlled substance.
6. 5-10 mg suvorexant, 5 mg lemborexant, 25 mg daridorexant with

- CYP3A inhibitor.
7. SO-sleep onset, SM-sleep maintenance insomnia, NR-no recommendation per clinical practice guideline

Satieia MJ et al, J Clin Sleep Med (2017) 13:307-349.



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Pharmacotherapy: Beers criteria

CNS drugs considered potentially inappropriate in older adults:

Anticholinergics (e.g., diphenhydramine, doxylamine, hydroxyzine)

Antidepressants (TCAs, paroxetine)

Antipsychotics

Benzodiazepines and BZRAs

Many drugs commonly prescribed for sleep should be avoided

2019 American Geriatrics Society Beers Criteria® Update Expert Panel



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Insomnia drugs not on the Beers list guidelines

Generic	T _{1/2} (Hours)	Dose (mg)	Drug Class	Indication ⁷
Temazepam	8-20	15-30	BZD	SO, SM
Triazolam	2-6	0.125-0.25	BZD	SO
Zolpidem ¹	1.5-2.4	5-10	BZRA	SO, SM
Zaleplon	1	5-20	BZRA	SO
Eszopiclone ²	5-7	1-3	BZRA	SO, SM
Zolpidem ER ^{1,2,3}	1.5-2.4	6.25-12.5	BZRA	SO, SM
Zolpidem SL ^{1,3,4}	1.4-3.6	1.75-3.5	BZRA	
Ramelteon ^{2,5}	1.5-5	8	MT agonist	SO
Doxepin ^{2,5}	15	3-6	TCA	SM
Suvorexant	9-13	10-20 ⁶	DORA	SO, SM
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- CYP3A inhibitor.
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Satieia MJ et al, J Clin Sleep Med (2017) 13:307-349.



27

Antidepressants for Insomnia: Considerations

Frequently used: doxepin, trazodone, mirtazapine, amitriptyline, imipramine

Hypnotic doses significantly lower than antidepressant doses

MOAs: H1 antagonism, anticholinergic, 5HT antagonism

Used for

Patients with psychoactive substance use disorder history (low abuse potential)

Patients with insomnia related to depression, anxiety

Treatment failures with BzRA

Suspected sleep apnea

Fibromyalgia

Not FDA-approved for use as hypnotics except for low-dose doxepin (3-6 mg)

McCall C & McCall WV. Curr Psychiatry Rep (2012) 14(5):494-502.



28

Insomnia, hypnotics, and suicide

- FDA labelling of all hypnotics includes warning that “**worsening of depression, including suicidal thought and actions (including completed suicides), has been associated with use of hypnotics**”; suvorexant label states that “**dose-dependent increase in suicidal ideation was observed**”
- Hypnotics frequently taken prior to suicide attempts, often with other drugs and alcohol; hypnotic users over-represented as suicide victims, but psychiatric diagnoses not considered
- Benzodiazepines and zolpidem used alone have resulted in suicide deaths
- **But insomnia is independently associated with suicidal ideation, behaviors, deaths**

McCall WV et al., Am J Psychiatry 174:18-25, 2017.



29

Reducing Suicidal Ideation Through Insomnia Treatment (REST-IT)

REST-IT assessed safety and efficacy of hypnotic (zolpidem) administration with SSRI in subjects with major depression, insomnia, and suicidal ideation (n=103 subjects)

Longitudinal, independent associations between insomnia and delayed sleep timing with suicide scores that remained even after covarying for depression ($p < 0.002$)

Mild signal that drug treatment of insomnia produced more suicide risk reduction over treatment with SSRIs alone

Results demonstrate that hypnotics may be used with caution in suicidal patients

McCall V et al., Am J Psych 176:957-965, 2019.



30

Circadian rhythm disorders

- Persistent or recurrent pattern of sleep disturbance due to
 - Alteration of circadian timing system, or
 - Misalignment between endogenous circadian rhythm and external factors
- Circadian-related disruption leads to insomnia and excessive sleepiness
- Increased prevalence in psychiatric patients:
 - Altered clock genes reported in mood and anxiety disorders, autism, schizophrenia, ADHD, substance abuse¹
 - Bipolar disorder, schizophrenia, PTSD, associated with eveningness, seasonality, and disrupted circadian rhythms²

1. Charrier A et al., Int J Mol Sci 18:938, 2017; Schuch JB et al., Am J Med Genetics, 2017.
2. Melo MCA et al. Sleep Med Rev 34:46-58, 2017. Dell'Osso L et al, BMC Psych 2014. Byrne EM et al., J Clin Psychiatry 76:128-34, 2015.



31

Hypersomnias

Excessive sleepiness includes one or more of the following:

Increased propensity to fall asleep in relaxed or sedentary situations, or a need to exert extra effort to avoid sleeping in these situations.

Prolonged duration of sleep (≥ 11 hrs over 24 h period)

Elevated Epworth Sleepiness Scale score

Multiple Sleep Latency Test average score < 8 min

Related symptoms include poor memory, reduced concentration or attention, and irritability.



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Sleepiness or Fatigue?

Usually not distinguished by patients or clinicians

Overlapping presentations

Fatigue

“Tiredness,” “lack of energy”

Often occurs with insomnia, medical and psychiatric disorders

Characterized by relatively normal results on multiple sleep latency test (MSLT)

Sleepiness

Reports of falling asleep in low-stimulus situations

Short sleep latencies on MSLT



33

Epworth Sleepiness Scale¹¹

How likely are you to nod off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your usual way of life in recent times.

Even if you haven't done some of these things recently, try to work out how they would have affected you. It is important that you answer each question as best you can.

Use the following scale to choose the most appropriate number for each situation.

	Would never nod off 0	Slight chance of nodding off 1	Moderate chance of nodding off 2	High chance of nodding off 3
Sitting and reading			X	
Watching TV			X	
Sitting, inactive, in a public place (e.g., in a meeting, theater, or dinner event)		X		
As a passenger in a car for an hour or more without stopping for a break		X		
Lying down to rest when circumstances permit			X	
Sitting and talking to someone		X		
Sitting quietly after a meal without alcohol				X
In a car, while stopped for a few minutes in traffic or at a light	X			

Add up your points to get your total score. A score of 10 or greater raises concern: you may need to get more sleep, improve your sleep practices, or seek medical attention to determine why you are sleepy.

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11-12 Mild Excessive Daytime Sleepiness

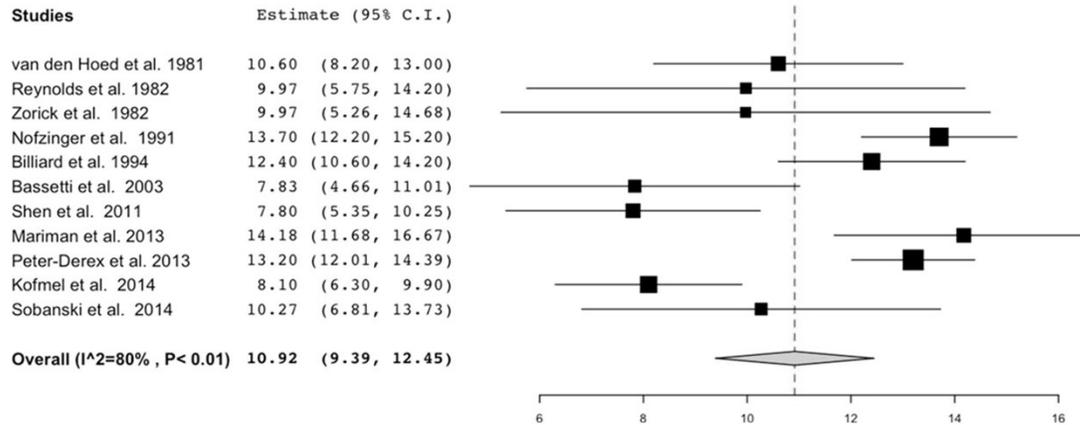
13-15 Moderate

16-24 Severe



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Hypersomnia in psychiatric disorders – MSLT data in psychiatric hypersomnolence



Psychiatric patients, mostly with mood disorders, with complaints of excessive sleepiness or prolonged sleep duration. Mean SL 10.92 (95%CI: 9.39–12.45 minutes). 25% had MSLT values averaging < 8 min.

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Hypersomnia symptoms in depression

- “Non-imperative” sleepiness
- Long, non-refreshing naps
- Long sleep time
- Sleep inertia
- Objective studies generally fail to demonstrate extended nocturnal sleep or reduced sleep latencies on MSLT in mood disorder patients with subjective hypersomnia

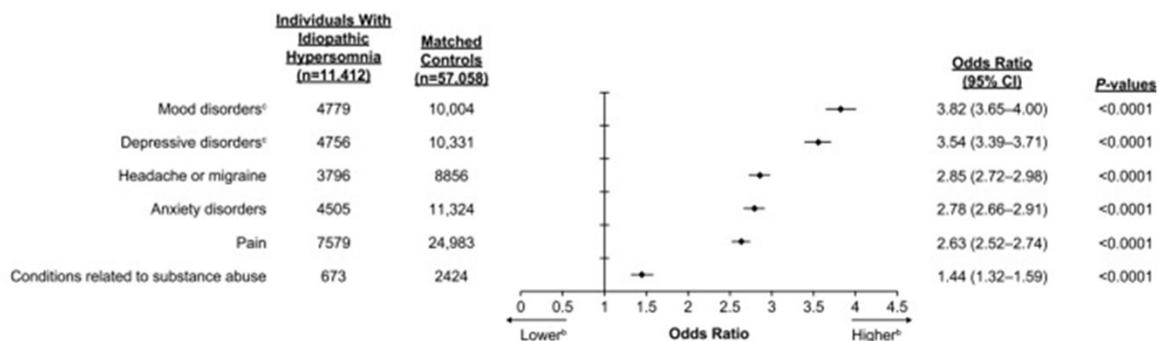
36

Idiopathic hypersomnia

- Daytime lapses into sleep or irrepressible need to sleep daily for at least 3 months, not due to insufficient sleep
- One of the following:
 - Average sleep latency ≤ 8 min on MSLT with < 2 sleep onset REM periods (or no SOREMPs if REML on PSG ≤ 15 m)
 - Total 24 h sleep time at least 660 min (measured in sleep lab or by at least 7 d of actigraphy)
- No cataplexy

37

Idiopathic hypersomnia associated with psychiatric illness



Subject with US insurance claims for idiopathic hypersomnia (11,412) compared with non-IH subjects (57,058) matched for age, sex, region, insurance type and entry date.

Saad R et al., Nat Sci Sleep 17:1743-1755, 2025.

38

Narcolepsy symptoms may include

Cataplexy

Partial or complete loss of bilateral muscle tone in response to any strong emotion, most commonly laughter

Almost exclusive (pathognomonic) to narcolepsy

60 to 100% of narcoleptics; most common “auxiliary symptom”

Hypnagogic hallucinations

Can rarely occur in normal patients

More commonly reported by patients with psychotic tendencies

Sleep paralysis

Complete, brief paralysis occurring during the transition from sleep to wakefulness or from wakefulness to sleep

Can occur in normal subjects

Honda Y, Juji T, eds. HLA in Narcolepsy. Berlin: Springer-Verlag; 1988:24-57



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Treatment of excessive sleepiness

- Avoid sleep deprivation
- Promote good sleep hygiene
- Treat comorbid psychiatric, medical and sleep disorders
- Eliminate medications that can produce sleepiness if possible
- Consider use of stimulant medications



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Indicated for Hypersomnia by US FDA guidelines

Generic	MOA	T _{1/2} (Hours)	Daily Dose (mg)	Schedule	Indication
Modafinil	Inhibit DA reuptake	13	100-600	IV	N,O,S
Armodafinil	same	13	50-250	IV	N,O,S
Methylphenidate	Increase release, block reuptake of NA/DA	3.5	20-60	II	N
Dextroamphetamine	Same	12	5-60	II	N
Methamphetamine	Same	10	5-40	II	N
Sodium oxybate	GABA B agonist	0.5-1	4.5-9 grams	III	N
Pitolisant	H3 receptor Antagonist/ inverse agonist	10-12	17.8-35.6	None	N
Solriamfetol	DNRI	5-6	37.5-150	III	N,O

N – Narcolepsy; O – Obstructive Sleep Apnea with EDS; S – Shiftwork Sleep Disorder



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Circadian rhythm disorders

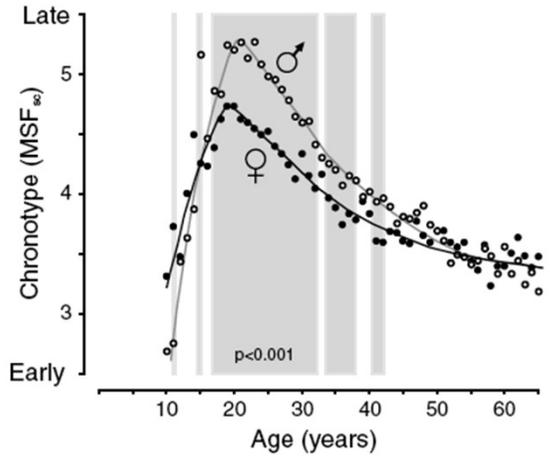
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1. Charrier A et al., Int J Mol Sci 18:938, 2017; Schuch JB et al., Am J Med Genetics, 2017.
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Circadian Phase Preference and Age



Delayed Sleep Phase Disorder

- Usually appears in adolescence due to developmental delay in rhythm
- Presents as severe insomnia at the beginning of the night and difficulty waking in the morning
- Sleep initiation not problematic with delayed bedtime

Wake Forest University
Roenneberg et al., Curr Biol, 2004

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TWO WEEK SLEEP DIARY

AASM | SLEEP EDUCATION

INSTRUCTIONS:
 (1) Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation. (2) Put the letter "C" in the box when you have coffee, cola or tea. Put "M" when you take any medicine. Put "A" when you drink alcohol. Put "E" when you exercise. (3) Put a "B" in the box to show when you go to bed. Put a "Z" in the box that shows when you think you fell asleep. (4) Put a "Z" in all the boxes that show when you are asleep at night or when you take a nap during the day. (5) Leave boxes empty to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, had a sleep around Midnight, woke up and couldn't get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7 AM.

Date	Day of the week	Type of Day (Work, School, Day Off, Vacation)	Noon	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Midnight	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM
sample	Mon	Work		E					A	Z				B	Z	Z	Z	Z	Z	Z	Z	C	M			
	W		Z	M										B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	Th		Z	Z	M											B								Z	Z	Z
	F		Z	M										B					Z	Z	Z	Z				
	Sa		M												B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	Su		Z	Z	Z	Z			Z	Z	Z	Z	Z	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	Mo		M											B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	Tu		M												B									Z	Z	Z
	W				M									B										Z	Z	Z
	Th		Z	Z	Z	Z	Z	Z	Z					B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	F		Z		M									B						Z	Z	Z	Z	Z	Z	Z
	Sa		Z	Z	M										B									Z	Z	Z
	Su		Z	Z	M									B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
	Mo		Z		M									B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
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Average daily sleep amount is ~7.8 hours

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Evaluation and Treatment of DSPS

Sleep log and/or **actigraphy** to document sleep pattern

Treatment:

Stabilize sleep schedule (sleep scheduling)

Morning bright light

Suggest 5,000-10,000 lux for at least 30 min, although optimal timing, dose, and duration have not been established

Melatonin, taken approximately 7-9 pm

Doses from 0.3-5 mg can shift rhythms

Side effects can include worsening of depression

Although not in practice guidelines, suggest avoiding bright light, intense physical activity prior to bedtime

Culnan E et al., Neurologic Clinics (2019) 37(3):527-543; Auger RR et al., J Clin Sleep Med (2015) 11(10):1199-1236,



45

Rhythms and suicide

- Suicide attempts tend to occur in the evening, with peak occurrence in spring
- Individuals with evening chronotype and greater seasonality have increased risk for suicide behavior in depressed and non-depressed adolescents and adults

Reviewed in Rumble M et al., J Affect Disorders, 227:721-730, 2018.



46

Risk factors for sleep apnea

Obesity

Male sex

Increased neck girth (17" men, 16" women)

Heart disease

CAD, HTN, atrial fibrillation and other arrhythmias

Type 2 diabetes

>75% prevalence in obese diabetics

Psychiatric disorders

36% prevalence in MDD

25% prevalence in bipolar disorder

15% prevalence in schizophrenia

Tasali et al., Chest 133:496-506 2008
Stubbs et al, J Affect Disord 197:259-67, 2016
Ohayon, J Clin Psych 64:195-1200, 2003



47

Psychiatric medications increase apnea risk

- OSA exacerbated by obesity; many psychiatric drugs promote weight gain:
 - Antidepressants (TCAs, MAOIs, SSRIs, mirtazapine)
 - Antipsychotics
 - Anticonvulsants (valproate, carbamazepine, gabapentin)
 - Lithium
- Avoid use of medications that can
 - Increase arousal threshold (benzodiazepines)
 - Lower oxygen saturation in sleep (Z-drugs, benzodiazepines)
 - Increase relaxation of upper airway muscles (benzodiazepines)
 - Increase central apneas (narcotics, some anticonvulsants, sodium oxybate)

Jullian-Desayes I et al., Br J Clin Pharmacol (2017) 83(4):688-708.

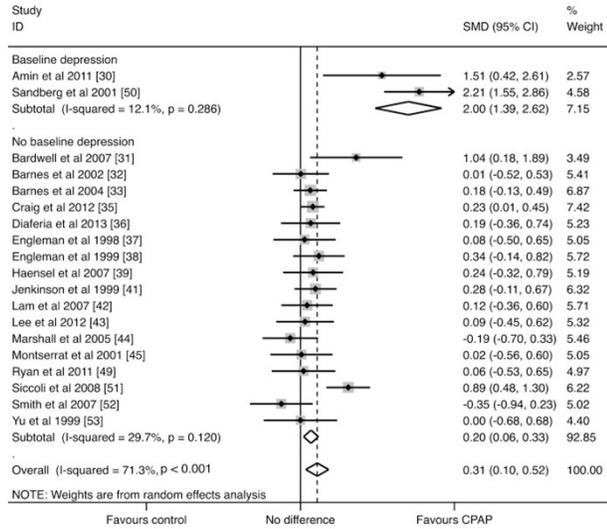


48

Meta-analysis: CPAP treatment of OSA improves depressive symptoms

Greater effect in those with MDD:

Significant reduction in depressive symptoms even in those not meeting criteria for MDD:



Povitz M et al., PLoS Med 11:e1001762, 2014.



Questions?





Primary Care Behavioral Health Symposium 2026

Substance Use Disorders

Kelsie Pierre, MD

Friday, February 27th | 10:15 AM – 11:15 AM



Substance Use Disorders

Primary Care Behavioral Health Conference

Kelsie J Pierre, MD
February 27th 2026



1

Objectives

Define substance use disorders (SUDs) and identify the spectrum of SUDs

Review Regulatory and Clinical Updates

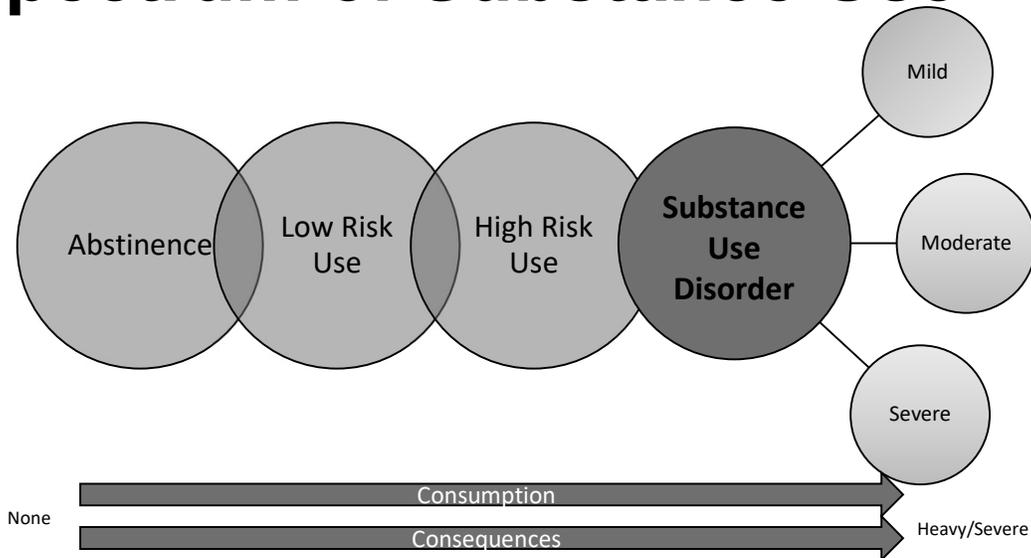
Review Harm Reduction

Review Coding & Billing Pearls



2

Spectrum of Substance Use



3

Substance Use Disorder = Addiction

4

A relapsing chronic disease
 characterized by compulsive or
 uncontrollable, drug seeking or use
 despite harmful consequences and
 changes in the brain which can be
 long lasting.

5

DSM- 5 Criteria for SUD

1. Hazardous use
2. Social/Interpersonal problems caused or made worse by use
3. Neglect of major roles because of use
4. Withdrawal
5. Tolerance
6. Cravings
7. Used in larger amounts/longer
8. Repeated attempts to quit/control use
9. Much of time spent using
10. Physical/Psychological problems related to use
11. Activities given up because of use

Mild: 2-3 criteria

Moderate: 4-5 criteria

Severe: > 6 criteria

6

This matters because...

SUD care is no longer niche or optional in primary care

Opioid overdose deaths remain high

Polysubstance exposure is now the norm rather than the exception



7

Policy Updates



8

Policy Updates

- MAT Act

X Waiver Elimination is permanent!

Section 1262 of the Consolidated Appropriations Act, 2023 (also known as Omnibus bill), removed the federal requirement for practitioners to submit a Notice of Intent (have a waiver) to prescribe buprenorphine

- MATE Act

A one time 8-hour SUD training course is now required for DEA registration or renewal since June 2023



9

Policy Updates

- Telehealth Flexibilities

DEA & DHS extended the *COVID-19 Telemedicine Flexibilities for the Prescription of Controlled Medications Rules* through December 31, 2026.

Enables rural access, follow-up flexibility, and quicker treatment starts.



10

Policy Updates

- Farm Bill updated
- Cannabis/Marijuana ? rescheduling from Schedule I to Schedule III



11

Treatment Updates



12

OUD Treatment Updates: Medication

Higher doses!

Maintenance doses of buprenorphine of 24-40mg/day
or Methadone >100mg associated with

Better treatment retention

Lower overdose related and all cause mortality

Longer time to ED/Hospital readmission



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OUD Treatment Updates: Medication

Early “take homes”

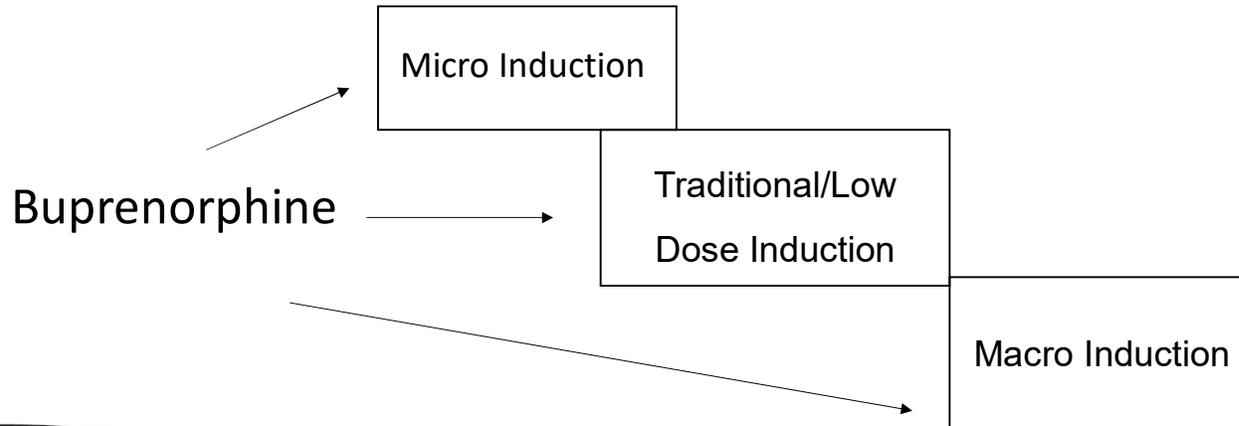
For buprenorphine – give a month prescription

For methadone - as early as one month after initiation



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OUD Treatment Updates: Medication



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OUD Treatment Updates: XR-BUP

Buprenorphine: Weekly or Monthly

Sublocade: Monthly (300mg or 100mg)

Benefits:

- Non inferior or superior outcomes

- Hospital initiation improves engagement post discharge

- Decreases AMA discharges and recurrent hospitalizations

- Improves outpatient medication adherence especially in patients with housing



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OUD Treatment Updates: XR- NTX

A closely supervised rapid induction protocol (5-7 days) is effective in an appropriately chosen subset of patients with OUD.



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AUD Treatment Updates: Medication

- MAUD

First Line meds: Oral Naltrexone & Acamprosate

- Extended-release Naltrexone (XR-NTX)

- Risk Stratified “Detox” Care

Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

Luebeck Alcohol Withdrawal Risk Scale (LARS)

- Increasing emphasis on prevention of Wernicke-Korsakoff Syndrome



18

StimUD Treatment Updates: Medication?

- There are currently no FDA-approved medications to treat stimulant use disorder

Combination XR-NTX + XR-BUP for cocaine use disorder research ongoing

Combination Bupropion/Naltrexone shows modest benefit for methamphetamine use disorder

Mirtazapine has some evidence in MSM populations for reduced methamphetamine use.

- **Contingency management is first line treatment!**



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Harm Reduction Updates



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Principles of Harm Reduction

Accepts, for better or worse, that **licit and illicit drug use is part of our world** and chooses to work to minimize its harmful effects rather than simply ignore or condemn them

Understands drug use as a complex, multi-faceted phenomenon that encompasses a continuum of behaviors from severe use to total abstinence, and acknowledges that **some ways of using drugs are clearly safer than others**

Establishes quality of individual and community life and well-being — not necessarily cessation of all drug use — as the criteria for successful interventions and policies

Calls for the **non-judgmental, non-coercive provision of services and resources** to people who use drugs and the communities in which they live to assist them in reducing attendant harm



21

Principles of Harm Reduction

Ensures that people who use drugs and those with a history of drug use routinely have a real voice in the creation of programs and policies designed to serve them

Affirms people who use drugs themselves **as the primary agents of reducing the harms of their drug use** and seeks to empower PWUD to share information and support each other in strategies which meet their actual conditions of use

Recognizes that the realities of poverty, class, racism, social isolation, past trauma, sex-based discrimination, and other **social inequalities** affect both people's vulnerability to and capacity for effectively dealing with drug-related harm

Does not attempt to minimize or ignore the real and tragic harm and danger that can be associated with illicit drug use



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OUD Treatment Updates: Harm Reduction

- Naloxone
 - Statewide standing order allows pharmacist dispensing naloxone without a patient specific prescription.
 - Clinicians and bystanders are protected from civil liability when prescribing or administering naloxone
- Good Samaritan Law
 - NC law protects patients & callers from prosecution for minor possession when calling 911 for an overdose, provided identifying information is given
- Safe Syringe & Supplies Programs (SSPs)
 - Legal!
 - Participants and staff are protected from prosecution for possession of syringes and residual drugs



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AUD Treatment Updates: Harm Reduction

- Patient defined goals & Anticipatory guidance regarding change
 - Fewer drinking days
 - Lower daily intake (volume and/or alcohol content)
 - Avoiding drinking in high-risk situations
- Managed alcohol programs (MAPs)



24

StimUD Treatment Updates: Harm Reduction

Early intervention for risky use

Cardiovascular risk screening

Safer use counselling

Sleep & Nutrition counseling



25

Hospital Based Care Updates



26

OUD Treatment Updates: Hospital Based Care

Hospitalization is a high value opportunity to start MOUD – not just “bridge therapy”

Inpatient and ED-initiated MOUD initiation and linkage to outpatient treatment services is a CMS covered event.

CMS strongly supports point of care Naloxone distribution including standing orders



27

OUD Treatment Updates: Hospital based care

Naloxone does not reverse xylazine

Xylazine (“Tranq”) Wounds are now a common issue

Wounds are not limited to injection sites

Ongoing substance use is NOT a contraindication to wound care

Multidisciplinary care is essential

Avoid aggressive surgical debridement unless systemic infection is present

Use autolytic or conservative debridement



28

AUD Treatment Updates: Hospital based Care

Alcohol withdrawal mgmt. is no longer considered “complete care” by itself

Screen for alcohol use disorder

Initiate MAUD prior to discharge



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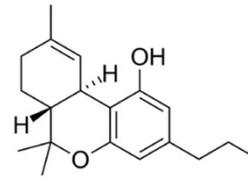
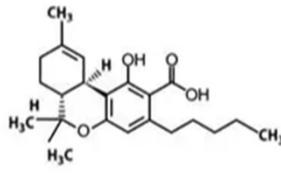
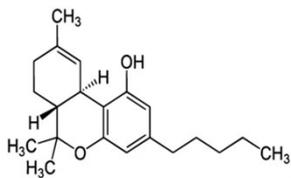
My patient uses
WHAT now?!



30

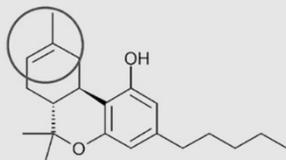
Cannabis

THC	THC-a	THC-v
"Weed"		"Diet weed"
Primary psychoactive cannabinoid	Nonpsychoactive acidic cannabinoid found in the raw cannabis plant	

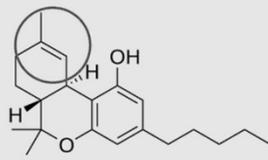


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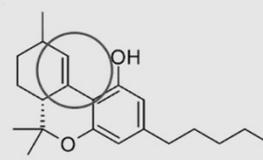
Cannabis



Delta 8 THC



Delta 9 THC



Delta 10 THC

32

Kratom

Mitragyna speciosa

Mitragynine & 7-hydroxymitragynine

Adverse effects: psychosis, hepatitis,
seizures, development of substance
use disorder



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Tinaeptide

“Gas station heroin” or “zaza”

Not FDA approved for any medical use; not recognized as safe for use in food, and it does not meet the statutory definition of a dietary ingredient

Adverse effects: prolonged QT, respiratory depression, sedation, death, development of substance use disorder



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Novel Psychoactive Substances (NPS)

- Synthetic Opioids (Fentanyl analogues, Nitazenes)
- Novel Stimulants (Cathinones, Phenylamines)
- Novel Depressants/ Dissociative (designer benzodiazepines, GHB analogues etc.)



Increased potency

Narrow
therapeutic
windows

Frequent
adulterants

Effects not
mediated by
typical or mono
pathways

“Ozempic Abuse”

- Misuse not addiction
- Main risks:
 - Rapid dosing –overdose
 - Unsupervised/under supervised use
 - Inappropriate indications
- Eating disorder screening is essential
- A harm reduction, non shaming approach improves safety and engagement.

GLP1s for Addiction Tx ?

Still theoretical ...

In patients with opioid use disorder, a GLP-1 medication reduced cravings for opioids by 40% over three weeks

People with opioid or alcohol use disorder who took GLP-1s had a 40% lower rate of opioid overdose and a 50% lower rate of alcohol intoxication than people who weren't on the medications.



37

Billing & Coding Updates



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CMS Billing & Coding Updates for SUD Care 2024-2025

Substance Use Screening & Brief Intervention (SBIRT)

Service	Code(s)
Alcohol misuse screening	G0442/ 99408
Brief intervention (15-30mins)	G0443/ 99409
Drug use screening	T1014 / G0396 – G0397



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CMS Billing & Coding Updates for SUD Care 2024-2025

Office based OUD Treatment

Service	Code(s)
E/M for MOUD management	99202-99215
Care co-ordination (optional add on)	G2211
Behavioral health Integration	99484, 99492-99494



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CMS Billing & Coding Updates for SUD Care 2024-2025

ED and Hospital initiated MOUD

Service	How to Bill
ED Buprenorphine initiation	ED E/M + medication
Inpatient Buprenorphine initiation	Standard inpatient E/M (99221-99233)
Post discharge follow up calls	G2250 – G2252



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Take Home Messages!

Prescribe MOUD confidently – regulatory barriers are gone

Expect complications related to adulterations & polysubstance use

Use telemedicine strategically

Normalize harm reduction

Treat SUD like any other chronic disease- Bill!



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Primary Care Behavioral Health Symposium 2026

Agitation & Delirium

Julie Owen, MD

Friday, February 27th | 11:15 AM – 12:15 PM



Agitation & Delirium

Primary Care Behavioral Health Conference

Julie Ruth Owen, MD, MBA, FAPA

Vice President & Chief Medical Officer

Mental Health Emergency Center (Milwaukee)

02/27/2026



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Part 1: Agitation/Aggression/ Violence



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- Healthcare workers are **5x more likely** to experience workplace violence than employees in other industries
- HCWs account for 73% of all nonfatal workplace injuries/illnesses due to violence*
- There is NO national standard or requirement for health systems to perform hazard assessments, train employees about dangers, or inform them of their rights**

*US Bureau of Labor Statistics. Workplace Violence in Healthcare, 2018. April 2020. Available at: <https://www.bls.gov/iif/factsheets/workplace-violence-healthcare-2018.htm>.

Apr 14, 2020 - Health

Recent hospital violence fuels effort to create workplace protections

WJZ NEWS

Nurse reveals brutal attack in the ER as Maryland healthcare workers increasingly face violence on the job

CRIM

Officer, gunman killed after hostages taken in 'targeted' attack at UPMC Memorial Hospital ICU

Anthony Menna
York Dispatch

Feb 23, 2020 - Updated Feb 23, 2020, 5:08 a.m. ET

Florida nurse attacked: Family wants to see change in wake of brutal beating by Baker Act patient



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3

Objectives

1

Identify contextual, environmental, and patient **risk factors** associated with agitation and aggression.

2

Discover approaches to the **evaluation and assessment** of agitation and aggression.

3

Explore non-pharmacological and pharmacological **interventions** to manage agitated and aggressive behaviors



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Key Terms Defined

AGITATION: “excessive verbal and/or motor behavior”; a state of “pathologically intense emotional arousal and motor restlessness”

AGGRESSION: hostile, threatening, and violent actions directed at persons/objects, sometimes without provocation

VIOLENCE: overtly aggressive actions directed at persons/objects

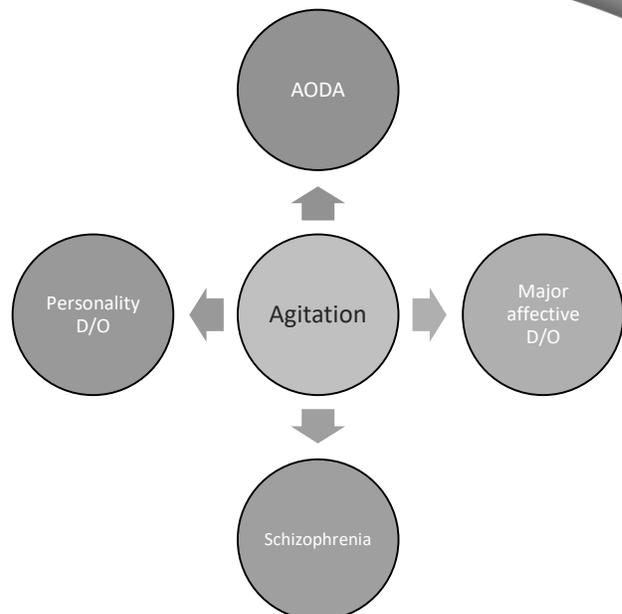
Most violence that is not premeditated is preceded by a **prodrome**

5

Epidemiology

→ Mental illness alone does not predict violent behavior

→ Individuals with severe mental illness are more frequently the **victims** of violence rather than the perpetrators



6

Risk Factors



Patient

- Clinical: AODA, perceived threats, treatment nonadherence
- Historical: H/O violence, involvement in legal system, trauma
- Social: recent loss



Environmental

- Overcrowding
- Sensory overload
- Provocation
- Staff anxiety
- Poor staff training
- Staff attitudes/communication styles

Settings

Aggression has been observed/reported in all settings; frequency varies according to specific population and setting

Especially common in **emergency care settings**

→ Most common in large EDs (>60K annual visits)

Most likely perpetrators: males, repeat offenders, residents of deprived communities, and intoxicated

Beyond the ED: general hospital and ICU settings

Mechanisms

Impulsive

- Reactive, emotional, sometimes explosive
- Cognitive deficits, psychotic states, high emotional sensitivity
- Autonomic arousal

Instrumental

- "Premeditated"
- Purposeful, controlled, predatory/pathological
- Low sensitivity
- Low autonomic arousal

Evaluation & Assessment

Continuum of agitation, evaluation/assessment of agitation

AGITATION: “An acute emergency that ‘requires immediate intervention to control symptoms and decrease the risk of injury’ to the patient or others.”

Anxiety Agitation

High anxiety Aggression

Underlying emotions

Irritability and/or heightened response to stimuli

Thoughts

Motor activity

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Evaluation/ Assessment

- Environmental considerations
- Rule out medical etiologies
- Strive to be as thorough as possible
- Use **objective scales** to measure agitation and mitigate staff “defensive behaviors”
 - Ex: BARS > 4 should trigger an urgent evaluation
 - Ex: Brøset 1-2, considered “moderate risk” with meds indicated

Table 1. Behavioural Activity Rating Scale (BARS).²¹

- 1 = Difficult or unable to rouse
- 2 = Asleep but responds normally to verbal or physical contact
- 3 = Drowsy, appears sedated
- 4 = Quiet and awake (normal level of activity)
- 5 = Signs of overt (physical or verbal) activity, calms down with instructions
- 6 = Extremely or continuously active, not requiring restraint
- 7 = Violent, requires restraint

THE BRØSET VIOLENCE CHECKLIST – BVC ◦

The BVC is a short checklist to help in prediction of violent behaviour during the following 24 hours. The items in the BVC have all shown a high correlation with violent behaviour.

Patient’s project no: _____

Filed in by:	Day one, dayshift	Date:
To be filled in before 10 a.m.		
Confused		
Irritable		
Boisterous		
Physically threatening		
Verbally threatening		
Attacking objects		
SUM:		

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Interventions

Verbal de-escalation, pharmacological interventions, restraints

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Verbal/Environmental De-escalation

- Maintain appropriate environment and respect personal space
- Establish verbal contact
- Obtain urgent medical information
- Identify chief concern and patient wants/needs
- Offer validation, ensure safety
- Invite patient suggestions and actively listen
- Offer non-medical suggestions and solutions (giving options)
- Set clear limits
- Offer medication solutions (giving options)

<https://youtu.be/musgq94q8GQ>

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Pharmacological Interventions: Algorithm

- Project BETA (Best practices in Evaluation and Treatment of Agitation)
- **Etiology-based** approach
- Medication ≠ restraint... should be used to **calm**, not sedate

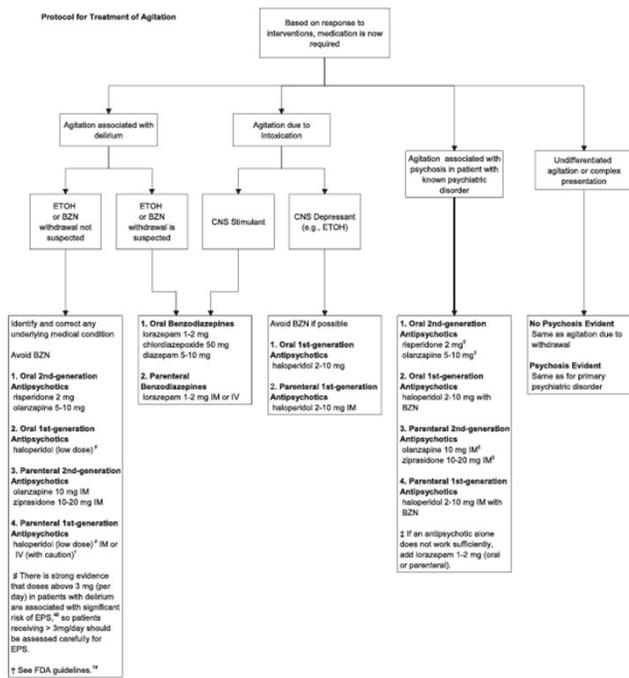


Figure. Protocol for treatment of agitation. BZN, benzodiazepine; EPS, extrapyramidal side effects; ETOH, alcohol; IM, intramuscular.

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Pharmacological Interventions: Doses and Timing

Table. Medications recommended in the treatment of agitation.

	Initial dose, mg	Tmax*	Can repeat [†]	Maximum dose (per 24 hours), mg
Oral medication				
Risperidone	2	1 h	2	6
Olanzapine	5-10	6 h	2	20
Haloperidol [‡]	5	30-60	15 min	20
Lorazepam	2	20-30	2	12
Intramuscular medication				
Ziprasidone	10-20	15	10 mg q 2 h, 20 mg q 4 h	40
Olanzapine	10	15-45	20 min	30
Aripiprazole	9.75	1 h	2	30
Haloperidol [‡]	5	30-60	15 min	20
Lorazepam	2	20-30	2	12
Intravenous medication				
Haloperidol [‡]	2-5	Immediate	4	10 [§]

q 2 h, every 2 hours; q 4 h, every 4 hours.
 * Values are expressed as minutes unless otherwise indicated.
 † Values are expressed as hours unless otherwise indicated.
 ‡ Likely to cause higher incidence of extrapyramidal side effects than other recommended drugs.
 § Administering haloperidol intravenously increases risk of QT prolongation. Therefore, avoid if possible, especially in patients with borderline QT or taking other medication that can prolong QT. If given intravenously, limit dose and provide cardiac monitoring.

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Restraints

A manual method that immobilizes or reduces the ability of a patient to move arms/legs/body/head freely

Should be discontinued at the earliest possible time

Medications **SHOULD** be administered if pt is physically restrained, with the **goal of minimizing time in restraints**

Should only be used when less restrictive interventions would be ineffective to protect patients/staff



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Part 2: Delirium



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Objectives



Review **clinical, criteria-based definition** of delirium.



Review **prevalence**, as well as **pathophysiology** and possible/common **etiologies** for delirium.



Discuss appropriate **testing/work-up** to aid in diagnosis.



Identify appropriate **treatment** approaches.



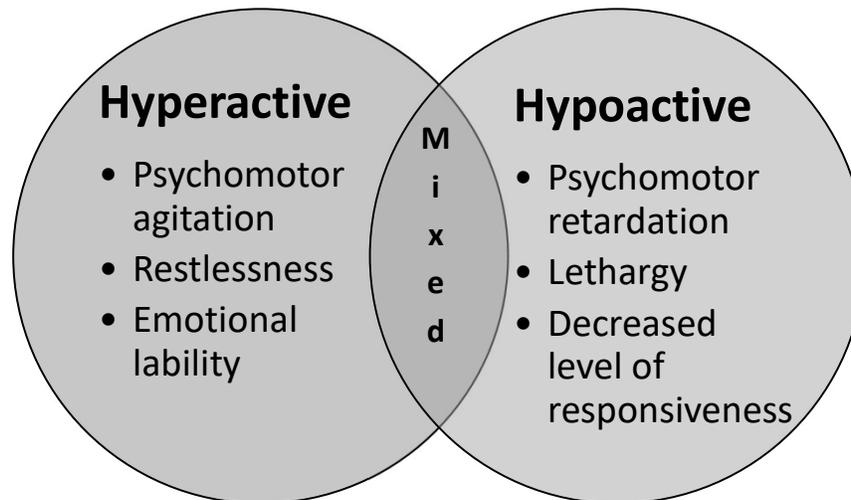
19

Diagnosing Delirium



20

Phenotypic Subtypes



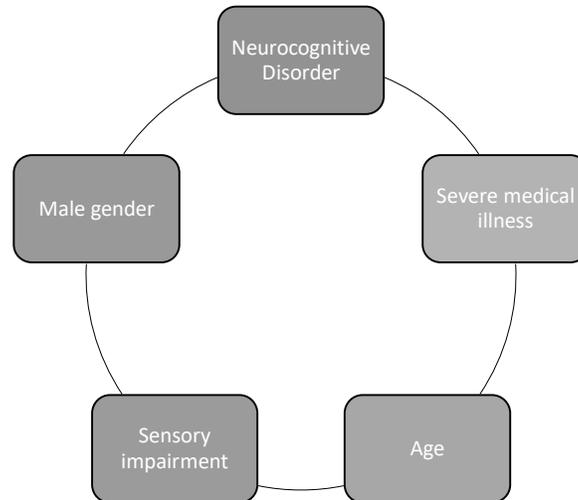
21

Other Terminology

- ▣ Acute confusional state
- ▣ Encephalopathy
- ▣ Acute brain failure
- ▣ ICU psychosis
- ▣ Altered mental status
- ▣ Acute reversible psychosis

22

Risk Factors



23

Incidence/Prevalence

Delirium is the most common neuropsychiatric syndrome found in the general hospital setting.



Delirium often goes unrecognized.



Thom et al, 2019.

24

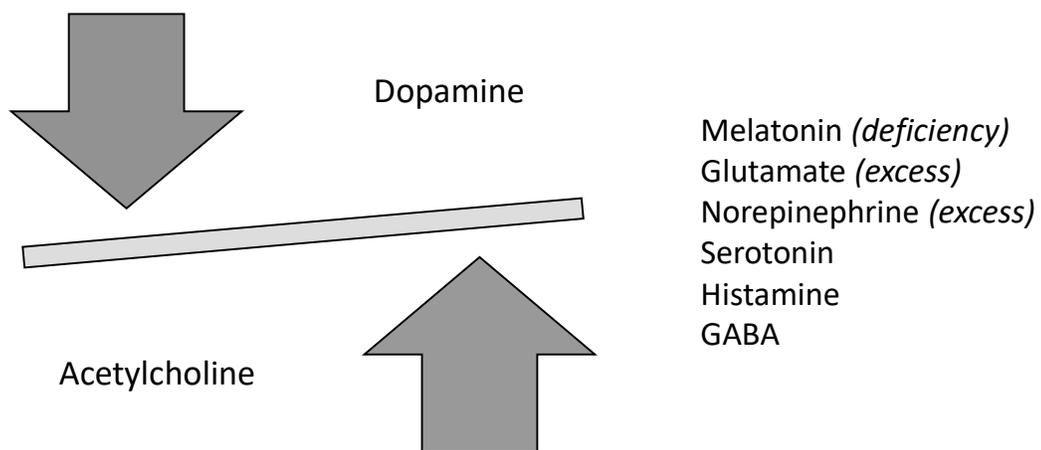
Impact

Increased morbidity
 Increased mortality
 Financial sequelae



25

Pathophysiology



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Etiologies

I	nfection	HIV, syphilis, toxoplasma, CMV, UTI, <i>etc.</i>
W	ithdrawal	drugs of abuse, medications
A	cute metabolic	hyper-/hypoglycemia
T	rauma	TBI
C	NS pathology	tumor, <i>seizures, dementia</i>
H	ypoxia	severe <i>anemia, CO</i>
D	eficiencies	B12, thiamine
E	ndocrinopathies	hypothyroidism
A	cute vascular	stroke, hypotensive crisis, shock
T	oxins or drugs	pesticides, NMS
H	heavy metals	mercury, <i>lead</i>

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Etiologies

E	lectrolyte imbalance, dehydration
N	eurologic d/o and injury
D	eficiencies (nutritional)
A	ge & gender
C	ognition
U	Tox (intoxication & withdrawal)
T	rauma
E	ndocrine disturbance
B	ehavioral, psychiatric
R	x & other toxins
A	nemia, anoxia, hypoxia, and low perfusion states
I	nfections
N	oxious stimuli (pain)
F	ailure (organ)
A	PACHE score (severity of illness)
I	solation & immobility
L	ight, sleep, and circadian rhythm
U	remia & other metabolic disorders
R	estrains
E	mergence delirium

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Assessment

- History, history, history!
- Physical & neurological exam
- Mental status
- Cognitive tests

Studies to Consider

- BMP
- CBC
- LFTs
- TSH
- B12, folate
- RPR (?HIV?)
- Serum drug levels
- UA, culture
- UDS
- CXR
- LP
- Paraneoplastic panel
- EEG
 - *Helpful to confirm diagnosis*
 - *Typically: generalized slowing*
 - *Alcohol/BZD withdrawal: low voltage fast activity*
- Structural neuroimaging
 - *Consider if focal neurologic signs*
 - *History of or concern for head trauma*
 - *No clear cause of delirium found*

Prevention

- No clear evidence supporting the use of medications to prevent delirium.
- Environmental considerations:
 - Make sure there is a visible clock/calendar
 - Frequent orientation
 - Hearing aids/glasses/dentures!
 - Encourage fluid intake
 - Avoid catheter use!
 - Avoid disturbing patient during sleep periods
 - Encourage mobility
 - Pain management



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Treatment: Dual Purpose

- Identify and reverse the reason(s) for the delirium!**
- Reduce psychiatric or behavioral symptoms of delirium
 - Environmental manipulation
 - Medication



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Environmental Modifications

Goals:

- Cognitively non-demanding
- Encourage appropriate sleep/wake cycle
- Limit the risk of harm to self/others

Strategies:

- Avoid interruption of sleep at night (e.g., "bundle cares")
- Room patient close to nursing station
- 1:1 observation (sitter)
- Consistent caregivers
- Clocks, updated calendar
- Encourage familiar objects from home
- Ensure adequate lighting in room (keep blinds open during the day)
- Sensory aids available (e.g., glasses, hearing aids)

Medications

Major classes of medications utilized (none are FDA approved):

- Antipsychotics– D2 antagonists = the **standard treatment** for delirium-related behaviors!
- Alpha-2 agonists (dexmedetomidine, clonidine, guanfacine)
- AEDs (VPA)
- Cholinesterase inhibitors
- Benzodiazepines (ONLY if alcohol/BZD withdrawal)
- Melatonin?? Ramelteon??

Beware QTc Prolongation...

- ▣ Know that it is rare.
- ▣ Recommendations:
 - ▣ Pre-treatment determination of QTc
 - ▣ Avoid other meds (where possible) that may prolong QTc
 - ▣ Monitor K, Mg
 - ▣ Monitor QTc during treatment
 - ▣ Stop antipsychotic if:
 - ▣ QTc > 500 msec
 - ▣ Baseline QTc increases by more than 60 msec



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Primary Care Behavioral Health Symposium 2026

Psychiatric Assessment and Emergency Evaluation in Pediatric Populations

Ryan Livingston, MD & Katherine Penny, MA

Friday, February 27th | 1:00 PM – 2:00 PM



Psychiatric Assessment and Emergency Evaluation in Pediatric Populations

Ryan Livingston, MD

Kate Penny, LCMHC

2/27/2026



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1

Some Background Data

According to CDC data from 2022-23 for children ages 3-17:

- 11% of children had current, diagnosed anxiety (9% of males and 12% of females)

- 8% of children ages 3-17 had current, diagnosed behavior disorder (10% of males and 5% of females)

- 4% of children ages 3-17 had current, diagnosed depression (3% of males and 6% of females)



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2

Some Background Data

Out of every 100,000 ED visits for children/adolescents ages 12-17(as of the end of October 2025):

- 7.4% were due to any mental health reason
- 2.2% were related to anxiety
- 2.6% were related to depression



3

Emergency Psychiatric Assessment

Reasons for children and adolescents to present to an ED:

- Self-injury or threat of self-injury (suicidal or non-suicidal)**
- Psychosis
- Behavioral concerns
- Internalizing disorders (depression, anxiety, OCD)
- Substance abuse
- Eating disorder
- Traumatization (abuse, accident, medical/surgical interventions)



4

Emergency Psychiatric Assessment

Things to consider when a child is referred for an emergency psychiatric assessment:

- Who referred the child?
- Why did they refer the child?
- Why did they refer the child NOW?
- Is there a referral letter? What is the key concern expressed in the letter?
- Do the parent/guardian and child understand the context/reasons for the referral?
- Are there any reports – school, social agencies, previous evaluation/assessment?
- Are there any other medical records available?



5

Emergency Psychiatric Assessment

Determining who to speak with and when:

- Prepubertal children: Consider speaking with the parent/guardian initially before speaking with the child
- Adolescents: Consider speaking with the adolescent initially before speaking with the parent/guardian

For all patients, consider speaking with anyone else who might offer important information that could help in the clinical decision-making



6

Emergency Psychiatric Assessment

Gather a focused history, including:

- Recent stressors
- Psychiatric ROS (depression, anxiety, psychosis, etc)
- History of prior suicide attempts/SIB
- Access to firearms/weapons
- Current/prior mental health treatment



7

Screening for Suicide

ALWAYS ASK!!!

- There is no evidence that asking a young person about suicide increases the subsequent risk of a suicide attempt.
- Utilize screening tools, such as:
 - Columbia-Suicide Severity Rating Scale (CSSR-S); different versions (lifetime vs since last assessment), used in various ages
 - Ask Suicide-Screening Questions (ASQ)



8

Advocate teammates in the Midwest outpatient behavioral health clinics piloted using the ASQ. This went well and will be piloted at LCH in the near future.

ASQ Suicide Risk Screening Tool
NIMH TOOLKIT
Ask Suicide-Screening Questions

Ask the patient:

- In the past few weeks, have you wished you were dead? Yes No
- In the past few weeks, have you felt that you or your family would be better off if you were dead? Yes No
- In the past week, have you been having thoughts about killing yourself? Yes No
- Have you ever tried to kill yourself? Yes No
If yes, how?

When?

If the patient answers Yes to any of the above, ask the following acuity question:
5. Are you having thoughts of killing yourself right now? Yes No
If yes, please describe:

Next steps:

- Patient answers "No" to all questions (through a screening is complete (not necessary to ask question 5)). No intervention is necessary. (Note: Clinical judgment can always override a negative screen.)
- If patient answers "Yes" to any of questions 1 through 4, or "Yes" to question 5, they are considered a positive screen. Ask question 5 to assess acuity.
 - "Yes" to question 5 = suicide possible (highest assessment risk identified)
 - Patient requires a STAT safety/halt mental health evaluation.
 - Patient cannot leave until reassessed for safety.
 - Keep patient in sight. Remove all dangerous objects from room. Alert physician or clinician responsible for patient's care.
 - "No" to question 5 = **non-suicide positive screen** (general risk identified)
 - Patient requires a brief suicide safety assessment to determine if a full mental health evaluation is needed. If patient or provider/patient indicates the brief assessment, this should be treated as an "urgent medical admission" (UMAD) discharge.
 - Alert physician or clinician responsible for patient's care.

Provide resources to all patients:

- 24/7 National Suicide Prevention Lifeline, 988
- 24/7 Crisis Text Line: Text "HOPE" to 741741

ASQ Suicide Risk Screening Tool | NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH)



9

Some Background Data

Per 2023 data from the CDC for high school students:

-20.4% seriously considered suicide in the past year (27.1% of females/14.1% of males); 18.2% in NC

-16.4% reported making a suicide plan in the past year (21.1% of females/11.8% of males); 15.9% in NC

-9.5% reported attempting suicide in the past year (12.6% of females, 6.4% of males); 9.5% in NC



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Risk Factors for Suicide

- Prior suicide attempts
- Non-suicidal self-injury (NSSI)
- Mental health disorders (depression with strongest association)
- Family history of suicide
- Substance use
- Physical, intellectual, learning disabilities
- Adverse childhood experiences (ACEs)
- Recent losses/stressors
- Bullying
- Identity struggles



11

Warning Signs

- _____
- Physical changes in appearance or hygiene
- _____
- Increase in alcohol or drug use
- _____
- Sudden drop in grades
- _____
- Social withdrawal
- _____
- Talking about suicide or preoccupation with death
- _____
- Risky or reckless behavior
- _____
- Self-harm
- _____
- Feelings of hopelessness
- _____
- Researching suicide methods/acquiring weapons
- _____
- Giving away belongings



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Suicide Attempts/SIB

If a child reveals a suicide attempt or self-injury, ask additional questions to clarify:

- the context for the self-injury
- the degree of planning/intent involved
- the patient's expectations for what would happen



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Suicide Attempts/SIB

Overdose:

- How long were you thinking of taking the pills before you actually took them?
- Were there any acute stressors right before you took them?
- Where were you when you took them? Who else was there? What time of day?
- What pills did you take? How many of each? Were there other pills you could have taken?
- Over what time period did you take the pills?
- Did you tell anyone?
- What were you hoping would happen?
- Any physical symptoms? Did you seek care?



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I'm Concerned...Now What?

Once information is collected from the patient and family, along with any additional collateral, a disposition must be made.

If there are concerns for the patient's immediate safety, consider:

- Inpatient treatment
- Brief observation admission
- Referral to a crisis facility



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I'm Concerned...Now What?

If the child is deemed safe to return home, safety planning should be completed:

Stanley-Brown Safety Plan:

- Warning signs
- Coping mechanisms
- People/professionals who can help in a crisis
- Making the environment safer
- Lethal means restriction counseling, including gun safety



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Firearm Injuries in U.S. Youth

-In 2021, 4752 children and teens (0-19) died by firearm injuries

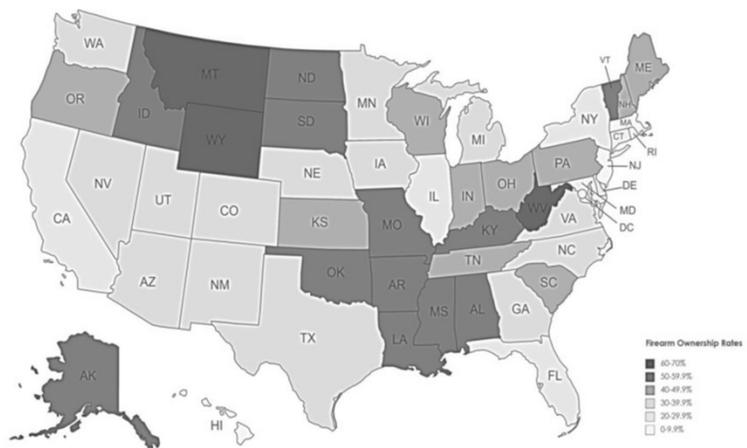
-From 2018 to 2021, there was a 41.5% increase in pediatric firearm death rate

-Nearly 50% of children hospitalized after a firearm injury sustain a long-term disability



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4.6 million children in the US live in a household with at least one loaded, unlocked gun



18

Counseling Improved Secure Storage

Evidence shows that brief physician counseling combined with distribution of a cable gun lock is effective in increasing safe storage of home firearms.

- The majority of parents agree that pediatricians should ask about guns in the home and advise secure storage

- 71% of gun owners agree



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Counseling Improved Secure Storage

A 2020 study assessed the impact of a firearm safety counseling workshop on pediatric resident knowledge, self-efficacy, and self-reported practice patterns

- In a pre-post analysis they found participants were 5x more likely to counsel their patients on firearms (6 months post compared to pre)

- Reported greater comfort in asking about firearms



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How to Discuss Firearm Safety

"Let's talk about how to keep your child safe this fall. Can you tell me what you all are doing with regards to sports and safety? Does Ben have a bike helmet he uses? If there are firearms in the home, can you tell me how they are stored?"

"Annie is getting older into her teenage years which comes with lots of fun, but some new challenges. Let's talk about ways to keep her safe during this phase. Has she started taking Driver's Ed? How is driving going? What steps are you taking to prevent her access to firearms?"

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Safety Planning

Other things to consider/discuss:

- Supervision at home by an adult
- Open door policy
- The "helicopter parent"
- Social media/electronics usage
- How to address going back to school

22

Protective Factors

Questions you may ask to elicit protective factors for a child or adolescent:

- Do you feel connected to/supported by your family?
- Do you have a supportive friend group?
- Are you religious or spiritual?
- What are you good at?
- What are you proud of?
- What are you looking forward to?
- What are your future plans?



23

Outpatient follow-up

One of the biggest challenges when recommending a child return home is ensuring appropriate follow-up care is secured.

- Follow-up with current provider(s) as quickly as possible
- Referral to agencies that can see patients quickly after discharge
- PHP/IOP referrals
- If not able to establish care quickly with a mental health professional, ensure follow-up with PCP



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Challenges in the ED Setting

- Lack of dedicated space
- Lack of appropriately trained staff
- Decreased inpatient bed capacity
- Increased ED utilization for mental health conditions
- Longer wait time for inpatient beds, leading to youth "boarding" in EDs for extended periods of time



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Prehospital Recommendations

- Develop an ED transfer protocol (EMS)
- Develop telehealth emergency psychiatric services to identify and divert lower-acuity patients
- Provide resources for prehospital personnel in acute management of pediatric psychiatric emergencies
- Advocate for crisis response teams, mobile crisis teams



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Behavioral Health Integration

Currently in 27 Peds clinics in the Southeast

-Expansion in Greater Charlotte to finish in March 2026, adding an additional 10 Peds clinics

-Already in all primary care locations in Greater Charlotte, Floyd, and Navicent, with Wake Forest completion set for March 2026



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Behavioral Health Integration

Symptom improvement for all of 2024:

-Depression (% of patients with a 50% improvement of their PHQ-9 scores): 51.4%

-Anxiety (% of patients with a 50% improvement of their GAD-7 scores): 54.9%

-Remission of depression (2 PHQ-9's <5 for two consecutive months): 39.4%

-Elimination of SI: 67.7%

-1,322 pediatric visits were completed by our BHI team at the end of November 2025



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References

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Primary Care Behavioral Health Symposium 2026

Initial Diagnosis and Treatment of Pediatric Depression and Anxiety in the Primary Care Setting

Laura Yahr Nelson, MD

Friday, February 27th | 2:00 PM – 3:00 PM



Initial Diagnosis and Treatment of Pediatric Depression and Anxiety in the Primary Care Setting

Laura Yahr Nelson, MD
02/27/2026



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**“It is easier to build
strong children than
repair broken men.”**

-Frederick Douglass



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Objectives

Review indications for mental health screening in primary care

Provide a framework for initial assessment of depression and anxiety in children and adolescents in the primary care setting

Discuss basics of initial treatment interventions along with indications for referral to either specialty treatment or higher levels of care

Examine barriers to initiating treatment for children and adolescents in primary care settings



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Epidemiology

Depression

36% depressive symptoms, 8% point prevalence of Major depressive disorder, 19% lifetime prevalence (12-17 y/o)

Anxiety

Separation anxiety disorder – 4-5% point prevalence (9-12 y/o)

Social anxiety disorder – 2.3% point prevalence (4-17 y/o)

All anxiety disorders 22% lifetime prevalence (8-12 y/o); 40% lifetime prevalence (13-18 y/o)

Suicide is third leading cause of death in the US (10-19 y/o)

2,637 children and adolescents in 2023



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Youth Risk Behavior Survey

Bi-annual survey by CDC

<https://yrbs-explorer.services.cdc.gov/#/>

Nationally representative data for high-school students

Middle-schoolers also surveyed on smaller scale

Topics – mental health, sexual health, substance use, community safety, other health behaviors



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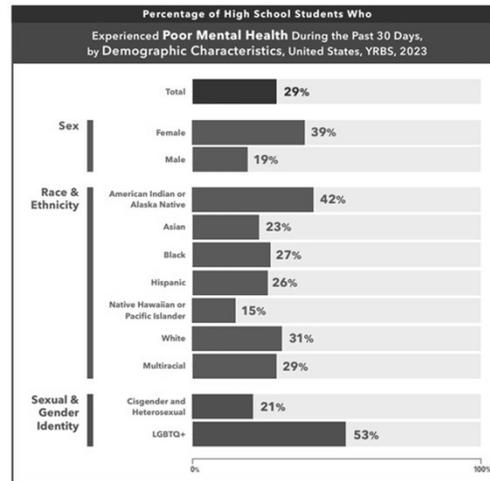
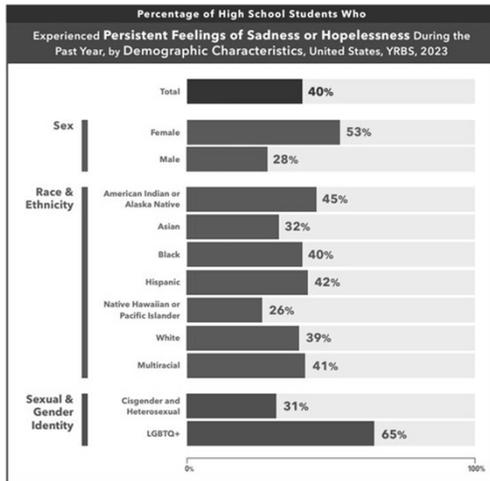
Epidemiology - YRBS

The Percentage of High School Students Who:*	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	2023 Total	Trend (All Years Available)	2-Year Change (2021-2023)
Experienced persistent feelings of sadness or hopelessness	30	30	31	37	42	40	⬇️	⬆️
Experienced poor mental health ¹	–	–	–	–	29	29	–	⬆️
Seriously considered attempting suicide	17	18	17	19	22	20	⬇️	⬆️
Made a suicide plan	14	15	14	16	18	16	⬇️	⬆️
Attempted suicide	8	9	7	9	10	9	⬇️	⬆️
Were injured in a suicide attempt that had to be treated by a doctor or nurse	3	3	2	3	3	2	⬆️	⬆️



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Youth Risk Behavior Survey



Common conditions

Separation anxiety disorder
 Major depressive disorder
 Generalized anxiety disorder
 Social anxiety disorder

Trauma and stressor-related disorders
 Obsessive-compulsive disorders (“Mixed obsessional thoughts and acts”)

Separation anxiety disorder

A. **Developmentally inappropriate and excessive fear or anxiety concerning separation from those to whom the individual is attached**, evidenced by at least **three** of the following:

1. Recurrent excessive distress when anticipating or experiencing separation from home or from major attachment figures.
2. Persistent and excessive worry about losing major attachment figures or about possible harm to them, such as illness, injury, disasters, or death.
3. Persistent and excessive worry about experiencing an untoward event (e.g., getting lost, being kidnapped, having an accident, becoming ill) that causes separation from a major attachment figure.
4. Persistent reluctance or refusal to go out, away from home, to school, to work, or elsewhere because of fear of separation.
5. Persistent and excessive fear of or reluctance about being alone or without major attachment figures at home or in other settings.
6. Persistent reluctance or refusal to sleep away from home or to go to sleep without being near a major attachment figure.
7. Repeated nightmares involving the theme of separation.
8. Repeated complaints of **physical symptoms** (e.g., headaches, stomachaches, nausea, vomiting) when separation from major attachment figures occurs or is anticipated.

B. The fear, anxiety, or avoidance is and typically 6 months or more in adults. **persistent, lasting at least 4 weeks in children and adolescents**

C. The disturbance causes clinically significant distress or impairment in social, academic, occupational, or other important areas of functioning.

D. The disturbance is not better explained by another mental disorder, such as refusing to leave home because of excessive resistance to change in autism spectrum disorder; delusions or hallucinations concerning separation in psychotic disorders; refusal to go outside without a trusted companion in agoraphobia; worries about ill health or other harm befalling significant others in generalized anxiety disorder; or concerns about having an illness in illness anxiety disorder.



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Separation anxiety disorder

A. Developmentally inappropriate and excessive fear/ anxiety re separation (3+ symptoms)

1. Distress when anticipating or experiencing separation from home/ attachment figures
2. Excessive worry about losing major attachment figures (illness/ injury/ disaster/ death)
3. Excessive worry about experiencing an untoward event causing separation (lost/ kidnapped/ ill)
4. Reluctance/ refusal to go out/ away from home, to school/ etc
5. Excessive fear of being alone/ w/o attachment figures at home or in other settings.
6. Reluctance/ refusal to sleep away from home/ go to sleep w/o attachment figure
7. Nightmares about separation.
8. Repeated complaints of physical symptoms (e.g., headaches, stomachaches, nausea, vomiting) when separation from major attachment figures occurs or is anticipated.

B. 6 months or more in adults, 4 weeks in children and adolescents



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Major depressive disorder

A. **Five (or more)** of the following symptoms have been present during the same **2-week period** and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (Note: In children and adolescents, can be irritable mood.)
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. (Note: In children, consider failure to make expected weight gain.)
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The episode is not attributable to the physiological effects of a substance or another medical condition.



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Major depressive disorder

A. **Five (or more)** of the following symptoms, **2-week period**; **SIGECAPSS**

1. Sadness OR
2. [Decreased] Interest/ pleasure
3. [Excessive] Guilt
4. Energy [decrease or more rarely increase]
5. [Impaired] Concentration
6. Appetite [increase or decrease]
7. Psychomotor [agitation or retardation]
8. Sleep changes
9. Suicidal ideation

B. Symptoms cause clinically significant distress/ impairment

C. Not substance or medically-induced



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Generalized anxiety disorder

A. **Excessive anxiety and worry** (apprehensive expectation), occurring more days than not **for at least 6 months**, about a number of events or activities (such as work or school performance).

B. The individual finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months): Note: **Only one item is required in children.**

1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

D. **The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.**

E. **The disturbance is not attributable to the physiological effects of a substance** (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).

F. **The disturbance is not better explained by another mental disorder** (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).



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Generalized anxiety disorder

A. Excessive anxiety and worry, for at least 6 months

B. The individual finds it difficult to control the worry.

C. At least 3 of the following (Only one item is required in children.)

1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

D. The anxiety, worry, or physical symptoms cause clinically significant distress/impairment

E. Not substance/ medical condition induced

F. The disturbance is not better explained by another mental disorder



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Social anxiety disorder

A. **Marked fear or anxiety about one or more social situations** in which the individual is exposed to possible scrutiny by others. Examples include social interactions (e.g., having a conversation, meeting unfamiliar people), being observed (e.g., eating or drinking), and performing in front of others (e.g., giving a speech). Note: **In children, the anxiety must occur in peer settings and not just during interactions with adults.**

B. The individual fears that he or she will act in a way or show anxiety symptoms that will be negatively evaluated (i.e., will be humiliating or embarrassing; will lead to rejection or offend others).

C. The social situations almost always provoke fear or anxiety. Note: **In children, the fear or anxiety may be expressed by crying, tantrums, freezing, clinging, shrinking, or failing to speak in social situations.**

D. The social situations are avoided or endured with intense fear or anxiety.

E. The fear or anxiety is out of proportion to the actual threat posed by the social situation and to the sociocultural context.

F. The fear, anxiety, or avoidance is persistent, **typically lasting for 6 months or more.**

G. The fear, anxiety, or avoidance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

H. The fear, anxiety, or avoidance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.

I. The fear, anxiety, or avoidance is not better explained by the symptoms of another mental disorder, such as panic disorder, body dysmorphic disorder, or autism spectrum disorder.

J. If another medical condition (e.g., Parkinson's disease, obesity, disfigurement from burns or injury) is present, the fear, anxiety, or avoidance is clearly unrelated or is excessive.



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Social anxiety disorder

A. Marked fear or anxiety about social situations in which the individual is exposed to possible scrutiny by others (ex social interactions, being observed eating/ drinking, performing) In children, the anxiety must include peers, not just adults

B. Fears that he or she will act in a way that will be negatively evaluated

C. Social situations almost always provoke fear or anxiety. (in kids – manifest as crying, tantrums, freezing, clinging, shrinking, or failing to speak)

D. Social situations are avoided or endured with intense fear or anxiety.

E. Fear/ anxiety is out of proportion to the actual threat/ sociocultural context.

F. 6 months or more.

G. The fear, anxiety, or avoidance causes clinically significant distress/ impairment

H. Not attributable to the physiological effects of a substance / medical condition.

I. Not better explained by another mental disorder

J. If another medical condition (e.g., obesity, disfigurement) is present, the fear/ anxiety/ avoidance is unrelated/ excessive.



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Screening recommendations

American Academy of Pediatrics- Guidelines for Adolescent Depression in Primary Care (GLAD-PC)

Annual depression screen ages 12-17

United States Preventative Services Task Force (USPSTF)

Annual depression screen ages 12+

Insufficient evidence for universal screening in children ages 11 and under

Recommend universal screening for anxiety in ages 8+

Insufficient evidence regarding universal screening for anxiety in ages 7 and under

Depression screen (PHQ-9) is a Peds Ambulatory Quality Composite measure across the Enterprise



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Screening tools - Depression

PHQ-9 – Patient health questionnaire-9

9 questions encompassing SIGECAPSS (sadness, interest, guilt, energy, concentration, appetite, psychomotor, sleep, suicide); mild (5-9), moderate (10-14), moderately severe (15-19), and severe (20-27)

*PHQ-A – PHQ-9 + 4 additional questions

Persistent sadness even if sometimes okay, functional impairment rating, any serious suicidal thoughts in last month, any prior suicide attempt

CES-D – Center for epidemiologic studies depression scale

20 questions – higher score is worse, Brighter Futures has recommended a cutoff of scores 15 or greater as suggestive for depression



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Screening tools - Anxiety

SCARED – Screen for child anxiety related disorders

Parent and child versions

41 questions - Subscaled results for Generalized anxiety disorder, Panic disorder (“or Significant physical symptoms”), Separation anxiety disorder, Social anxiety disorder, and a subset of questions on school avoidance

Does not include Obsessive-compulsive and related disorder, Trauma and stressor-related disorders

GAD-7 – Generalized anxiety disorder

7 questions; mild (5-9), moderate (10-14), severe (15-21)



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What to do with a positive screen

Involving parents

Limits of confidentiality

Confirm diagnosis

Targeted questioning

Collateral information

Validity of results

Functional impairment

Differential diagnosis

ADHD, autism, sleep disturbance, substance use, obsessive-compulsive disorder, trauma, eating disorders

Review comorbidities



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Safety assessment

Self harm

- Method
- Purpose
- Frequency

Substance use

- Method
- Purpose
- Frequency

Suicidal ideation

- Frequency
- Intensity
- Plan
- Intent
- Preparation
- Prior attempts

Levels of Care

Outpatient

Therapy - Cognitive-behavioral therapy, Exposure and response prevention, Dialectical behavioral therapy, Social skills groups

Medication management

Walk-in clinic

Acute crisis, supportive therapy

In-home

Chronic, family involvement needed

Intensive outpatient (IOP)

3 hrs/ day, 5 days/ wk, 1-2 months
Ex. Self-harming, anxious, mildly depressed, need better skills

Partial hospital (PHP)

6 hrs/ day, 5 days/ wk, 2-6 wks
Ex. Suicidal thoughts but no imminent plan/ intent, missing significant amounts of school

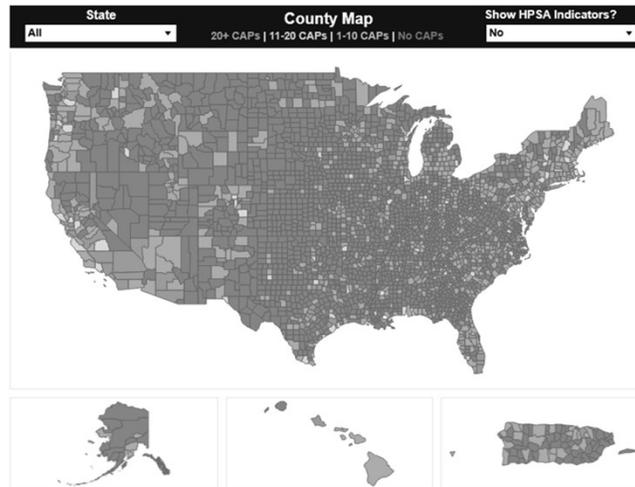
Inpatient

Most restrictive, 4-8 days
Ex. Suicidal or homicidal w/ plan/ intent, other imminent safety risks

Residential

Longer-term, months
Ex. Recurrent inpatient, chronic risk

Child/ adolescent psychiatrists



Initial treatment interventions

Basic healthy behaviors

- Sleep, exercise
- Social engagement (Trevor Project)
- Abstinence from substances

Safety planning

- Suicide prevention text/phoneline – 988
- Environment
- Stanley Brown Safety Plan

Therapy skills

- Apps (Happify, Calm, Headspace, Healthy Minds, Insight Timer, VA CBT-I app)
- Books (“Mastery of Your...” Series)

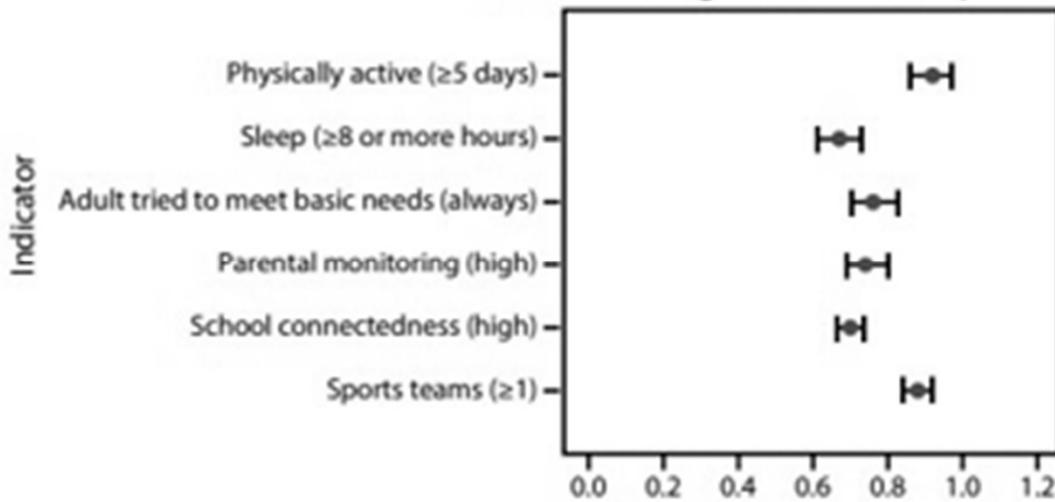
Medications

Protective factors - YBRS

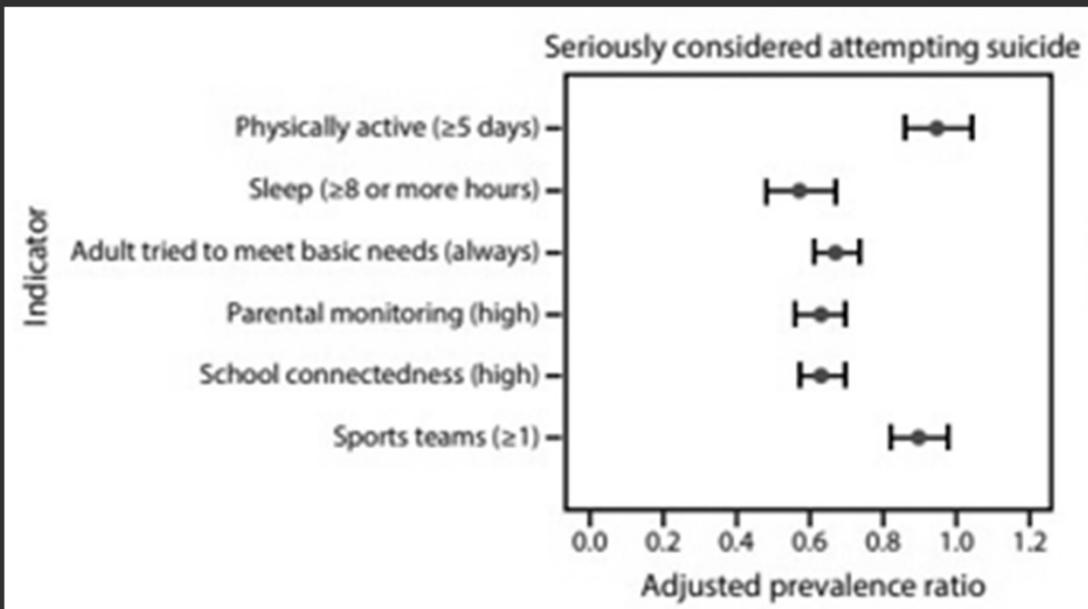
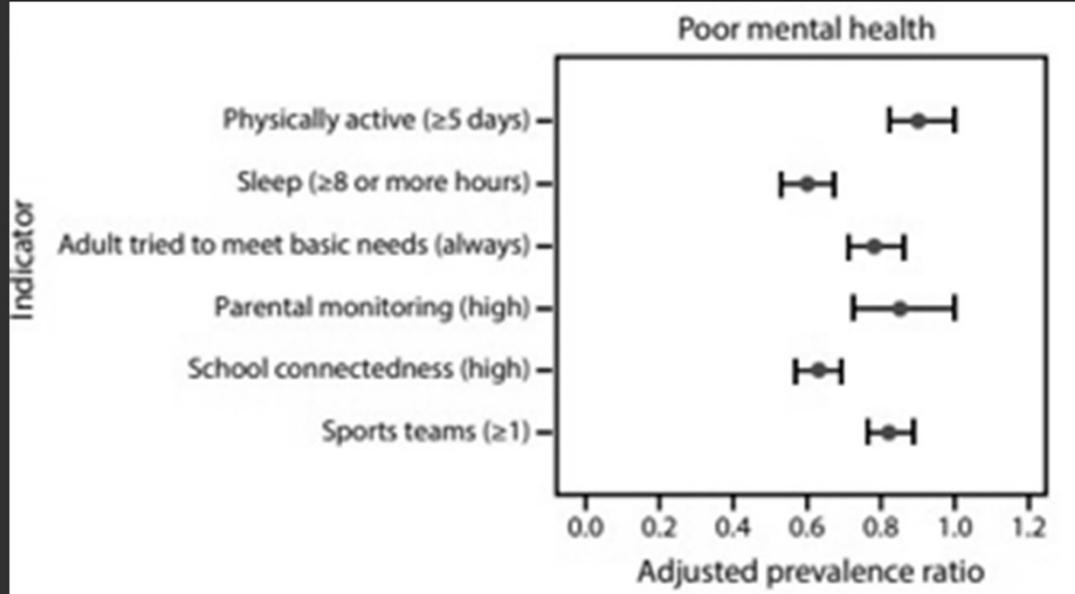
- Physically active (5+ days/wk)
- Sleep (8+ hrs)
- Adult tried to meet basic needs
- Parental monitoring (high)
- School connectedness (high)
- Sports teams (1+)

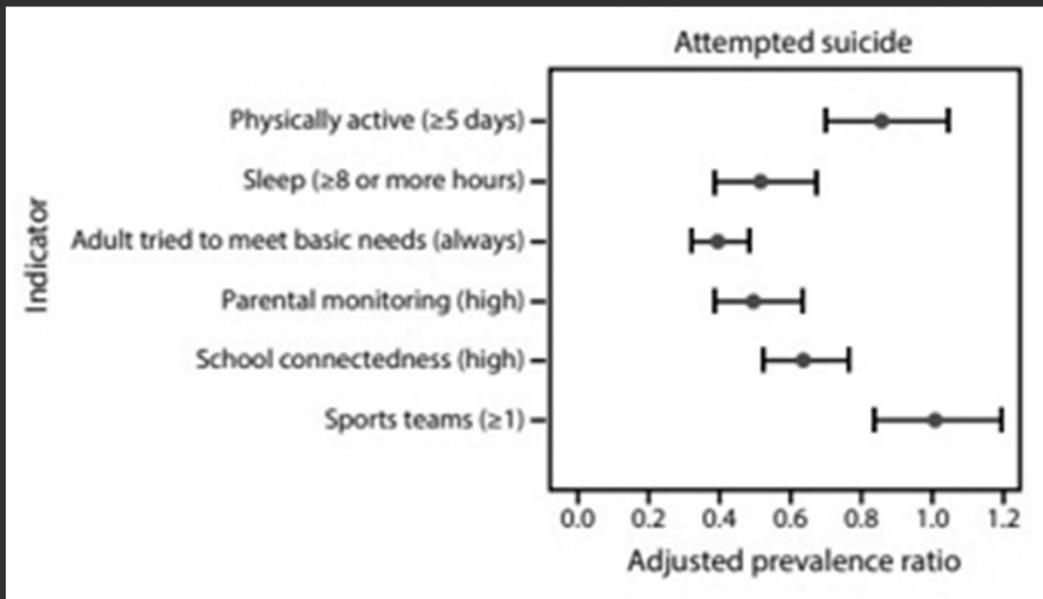
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Persistent feelings of sadness or hopelessness



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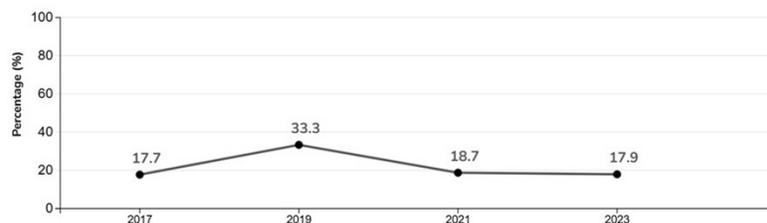




Youth Risk Behavior Survey

The Percentage of High School Students Who:*	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	2023 Total	Trend (All Years Available)	2-Year Change (2021-2023)
Currently drank alcohol	35	33	30	29	23	22	Shield	Downward diamond
Currently used marijuana	23	22	20	22	16	17	Shield	Downward diamond
Ever used select illicit drugs	16	13	13	13	13	10	Shield	Shield
Ever misused prescription opioids†	-	-	14	14	12	12	Shield	Downward diamond
Currently misused prescription opioids†	-	-	-	7	6	4	Shield	Shield

Youth Risk Behavior Survey



* On at least 1 day during the 30 days before the survey.



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ADVOCATE HEALTH

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FDA approved medications

Sertraline

Obsessive-compulsive disorder (OCD) ages 6-17

Fluoxetine

OCD ages 7-17; Major depressive disorder ages 8-18, Depression in bipolar I disorder ages 10-17 (with olanzapine)

Escitalopram

Major depressive disorder ages 12-17, Generalized anxiety disorder ages 7+

Duloxetine

Generalized anxiety disorder ages 7-17 (and fibromyalgia ages 13-17)



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ADVOCATE HEALTH

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Medication efficacy

Response rates 47% to 69% vs 33% to 57% for placebo

Treatment of Adolescent Depression Study (TADS) - CBT + fluoxetine or fluoxetine > placebo or therapy, more rapid response

Child/ adolescent anxiety multimodal study (CAMS) – Combined treatment superior to therapy or medications alone

Medication side effects

Headaches

Nausea/ diarrhea

Activation (poor sleep, irritability, increased energy)

Weight gain/ loss

Discontinuation syndrome (fatigue, muscle aches, restlessness, "brain zaps")

Serotonin syndrome (autonomic instability, GI symptoms, myoclonus)

Suicidal ideation

"Drugs like this one have raised the chance of suicidal thoughts or actions in children and young adults. The risk may be greater in people who have had these thoughts or actions in the past. All people who take this drug need to be watched closely. Call the doctor right away if signs like depression, nervousness, restlessness, grouching, panic attacks, or changes in mood or actions are new or worse. Call the doctor right away if any thoughts or actions of suicide occur."

FDA Black Box Warning

Fluoxetine introduced 1988

Studies supported increased risk of suicidal thoughts (not actions or completed attempts)

FDA issued Black Box warning October 2004

Initial studies cited decreased prescribing, increased suicides

Longer term analysis does not substantiate this

Risk/ Benefit discussion

Medication nuts and bolts

SSRIs

Sertraline – more GI effects (diarrhea), flexible dosing (12.5-200 mg)

Fluoxetine – most likely for activation, only one with longer half-life (10-80 mg)

Escitalopram – less activation, more fatigue and headaches (2.5?-20 mg)

*Liquid formulations exist

SNRIs

Duloxetine is only approved medication, in clinical practice, less activating than venlafaxine, more risk of weight gain

Other medication options

Antidepressant/ antianxiety – No FDA approval

Mirtazapine – if poor sleep/ lots of weight loss/ GI symptoms

Bupropion – if low energy, poor focus, family history of positive response

Buspirone – anxiety, not tolerating SSRIs

Other SNRIs

Hydroxyzine – prn for anxiety

Propranolol – performance anxiety

Atypical antipsychotics – aripiprazole/ risperidone FDA approved for irritability associated with autism

Metabolic and muscle side effects

Follow-up plan after positive depression screen

Completion of at least one of the following measures on the same day as visit of a positive depression screen will meet compliance with the Ambulatory Quality Metric data extraction

Depression medication

EPIC Smart Phrase: “.PHQPlan”, “.PHQPlanScore”

Service to orders (Behavioral Health, Behavioral Health Integration (BHI), Adolescent Psych)

Smart Form: Depression F/U



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Breaking down barriers

Lack of education

Lack of time

Boundaries

Fear of liability

Did you work for best interest of your patient in a manner that is within treatment standards for your specialty?



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Conclusions

Universal screening for depression and anxiety is recommended in primary care settings (depression ages 12+, anxiety ages 8+)

With a positive screen, confirm diagnosis

Assess for safety/ review safety plan

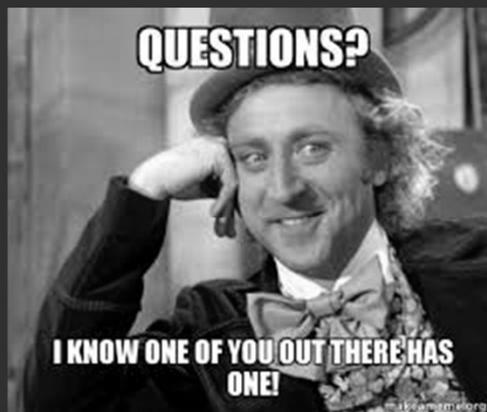
Refer for imminent safety concerns, consider interim levels of care or initiating treatment in your office

Basic healthy behaviors go a long way

Medications may be a reasonable intervention you can provide

Sertraline, fluoxetine, escitalopram +/- duloxetine

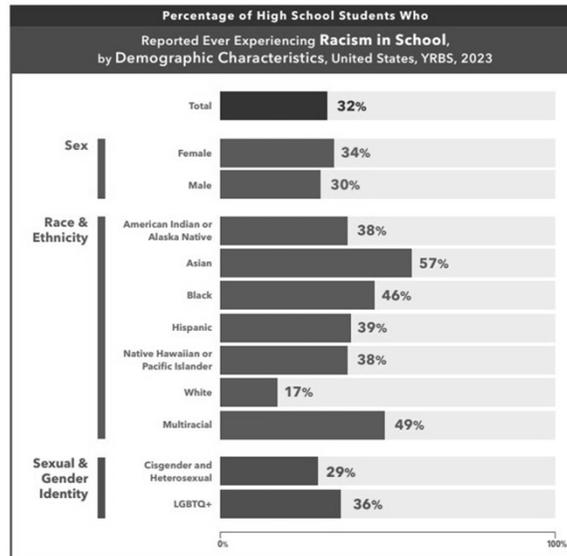
Review black box warning in your risk/ benefit discussion



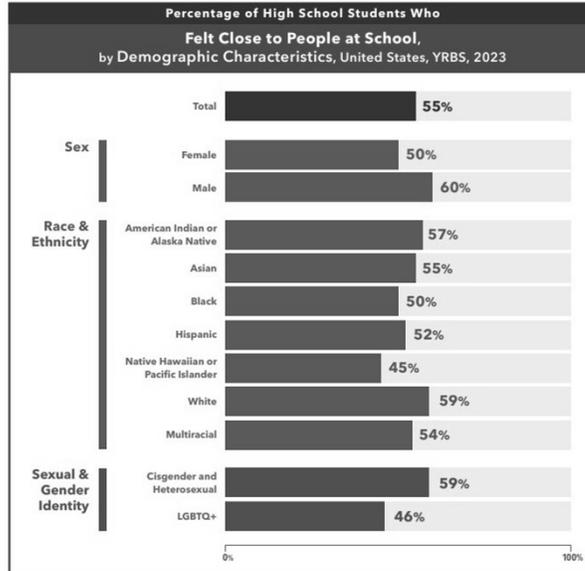
Supplemental YRBS Data

The Percentage of High School Students Who:*	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	2023 Total	Trend (All Years Available)	2-Year Change (2021-2023)
Were threatened or injured with a weapon at school	7	6	6	7	7	9	⬇️	⬇️
Did not go to school because of safety concerns	7	6	7	9	9	13	⬇️	⬇️
Were electronically bullied	15	16	15	16	16	16	⬆️	⬆️
Were bullied at school	20	20	19	20	15	19	⬆️	⬆️
Were ever forced to have sex	7	7	7	7	8	9	⬇️	⬆️
Experienced sexual violence by anyone†	-	-	10	11	11	11	⬇️	⬆️

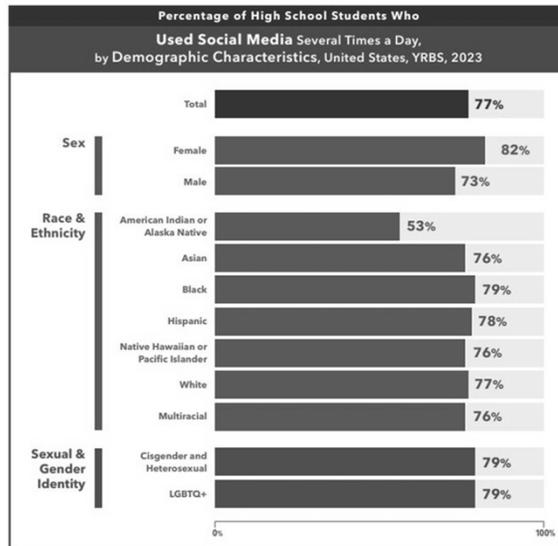
Supplemental YRBS Data



Supplemental YRBS Data



Supplemental YRBS Data



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Primary Care Behavioral Health Symposium 2026

ADHD in Adults: Clinical Presentation and Treatment

Rabiya Hasan, MD

Friday, February 27th | 3:15 PM – 4:15 PM



ADHD IN ADULTS

Clinical Presentation and Treatment

Rabiya K. Hasan MD

February 26th 2026



Wake Forest University
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1

Topics

- ADHD prevalence
- Course of ADHD over lifespan
- ADHD evaluation
- ADHD treatment



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2

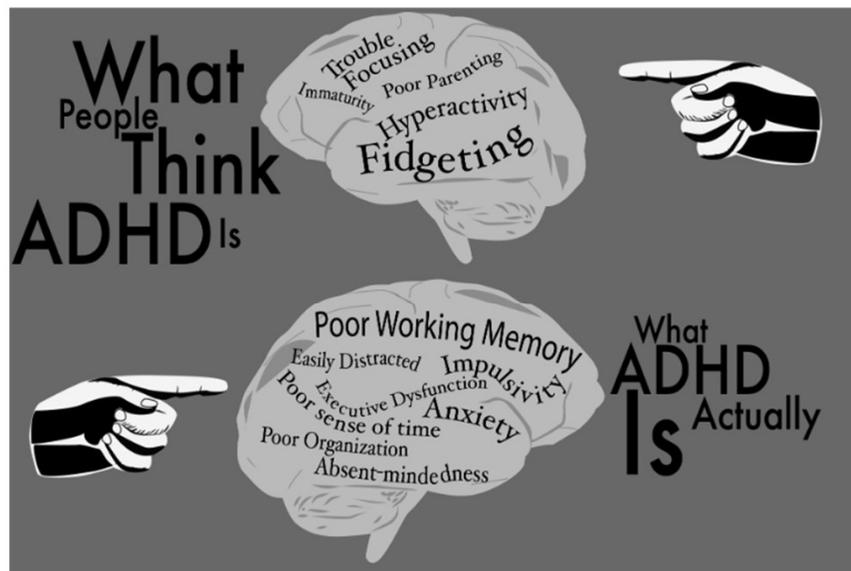
Prevalence and Course

- 8 to 15 year olds 9%
- 18 to 44 year olds 5%

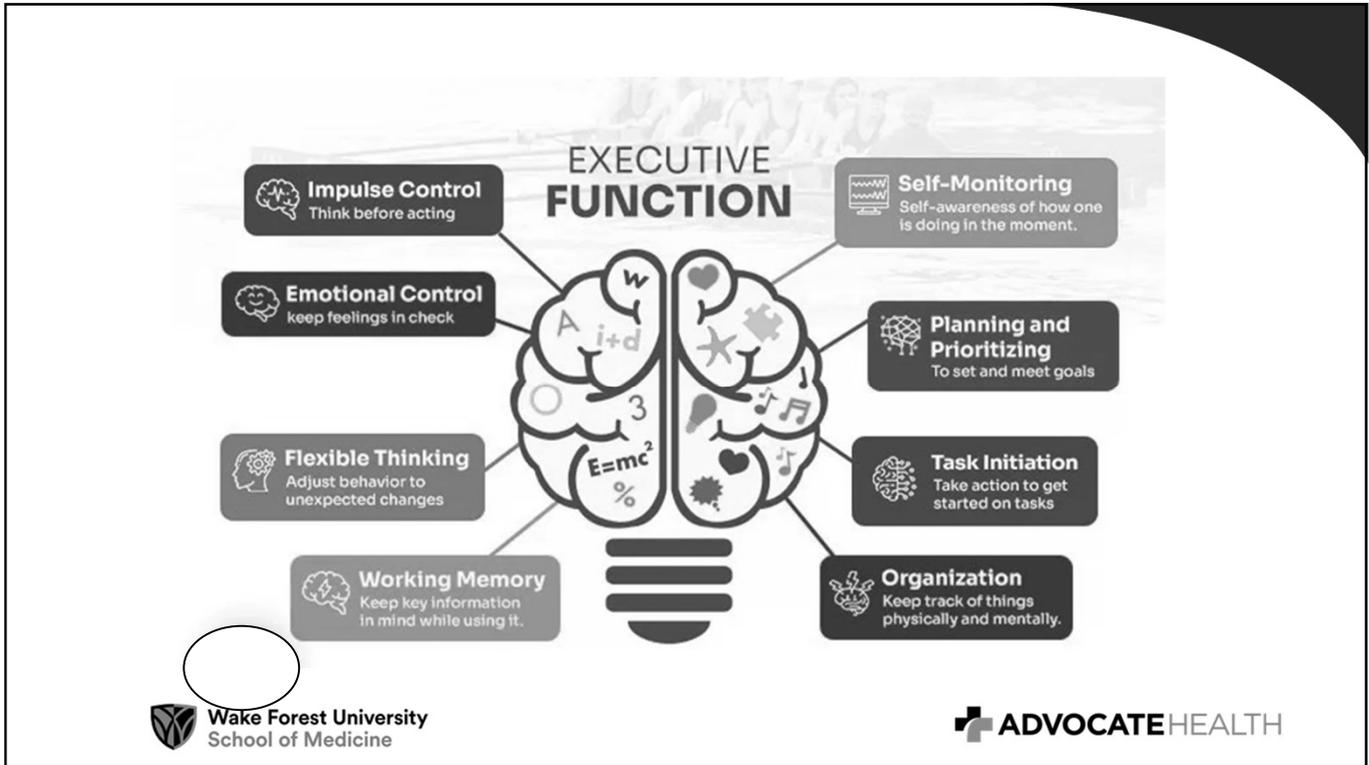
- Childhood to Adolescence 75%
- Childhood to Adult 50%



3



4



5

ADHD DSM-5 Diagnosis Criteria

A. **For ≥ 6 months, a persistent pattern of inattention and/or hyperactivity-impulsivity exists as described by (1) and/or (2)***
* Symptoms are inconsistent with developmental level and have negatively impacted social, academic, and/or occupational functioning

B. Several symptoms present **before age 12 years** and occur in 2 or more settings

C. Symptoms are not solely a manifestation of another psychiatric disorder, SUD, or medical condition

*next slide

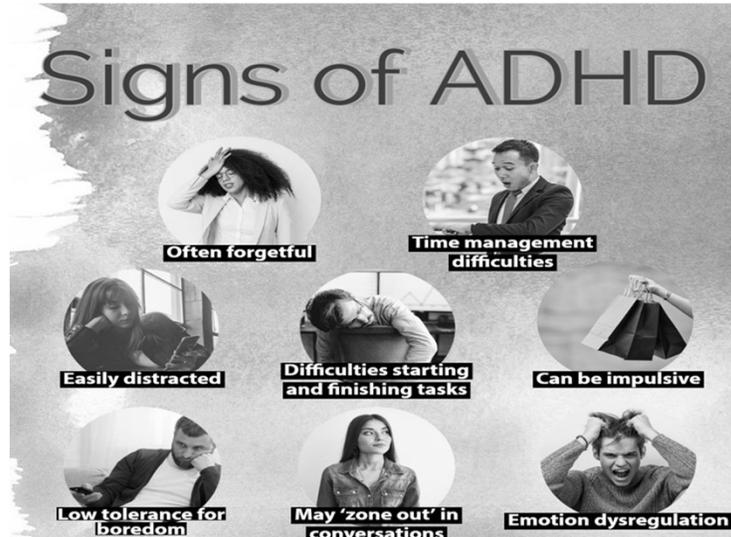
DSM-5 Diagnosis: ADHD

1. Inattention: ≥ 6 symptoms (≥ 5 if 17 y/o or older)	2. Hyperactivity and Impulsivity: > 6 symptoms (≥ 5 if 17 y/o or older)
<ul style="list-style-type: none"> a. Frequently forgets daily activities b. Easily distracted by external stimuli c. Unable to listen when spoken to directly d. Loses items necessary for tasks or activities e. Trouble organizing schoolwork and other activities f. Difficulty maintaining attention in work or play activities g. Unable to follow instructions and fails to finish schoolwork and other tasks h. Fails to focus on details or makes careless mistakes in schoolwork or other activities 	<ul style="list-style-type: none"> a. Talks excessively b. Difficulty waiting turn c. Impulsively blurts out answers d. Runs or climbs in unacceptable situations e. Inability to remain seated when necessary f. Fidgets with hands or feet or squirms in seat g. Unable to play or engage in quiet, leisure activities h. Often "on the go" or acts as if "driven by a motor" i. Interrupts activities or conversations of others or intrudes or takes over for others

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6

Common Symptoms in Adults



7

Hyperactive/Impulsivity in Adults?

- Hyperactivity/Impulsivity (seen as lack of inhibition in adults)
- Restlessness decreases with age

8

Inattention

- Interferes with sustained attention
- Distractibility
- Difficulty re-engaging after disruptions
- Forgetful

Untreated ADHD

- Limited educational success
- Family conflict
- Relationship problems
- Legal problems
- Substance use
- Accidental injuries
- Driving issues
- Job difficulties
- Worse health
- Impaired parenting
- Occupational and Financial Problems

Causes

- Genetics
- Perinatal Complications
- Prematurity/low birthweight



11

Co-Morbidities

- Behavioral Disorders
- Neurodevelopmental Disorders
- Mood Disorders
- Anxiety Disorders
- Tic Disorders
- Learning Disabilities
- Substance Use Disorders



12

Diagnosis

- Developmentally Inappropriate Symptoms
- Childhood onset (age 12, 16 is better)
- Cross setting occurrence of symptoms
- Impairment in functioning
- Corroboration of self-report by others
- Exclude other disorders
- No subtypes (just presentations)



13

Diagnosis

- Review DSM 5 symptoms in current life and in childhood/adolescence
- Are symptoms abnormal for age/developmental stage?
- Previous diagnosis and treatment outcome?
- Do the symptoms occur in different settings?
- Degree of impairment
- Corroborate self-report through collateral information
- Rule out malingering



14

Adult ADHD Self-Report Scale

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist

Patient Name: _____ Today's Date: January 31, 2022

Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an 'X' in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give the completed checklist to your healthcare professional to discuss during today's appointment.

	Never	Rarely	Sometimes	Often	Very Often
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. How often do you have problems remembering appointments or obligations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Part A					
7. How often do you make careless mistakes when you have to work on a boring or difficult project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. How often do you misplace or have difficulty finding things at home or at work?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. How often are you distracted by activity or noise around you?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. How often do you lose your seat in meetings or other situations in which you are expected to remain seated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. How often do you feel restless or fidgety?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. How often do you have difficulty remaining and relaxing when you have time to yourself?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. How often do you find yourself talking too much when you are in social situations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish their statements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. How often do you have difficulty waiting your turn in situations when turn taking is required?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. How often do you interrupt others when they are busy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Part B					

Adapted from the original scale by the World Health Organization, Lenard Adler, Ronald C. Kessler, Thomas Spencer, et al. This is for clinical and non-commercial use only.



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Psychological Testing

- Self-rating
- Observer rating
- Performance Based Test
- IQ testing
- Testing for Executive Functioning Skills



16

Treatment

- Provide Education
- Medications
- Therapy
- Behavioral Modification
- Accommodations



17

Medication Treatment

- FDA Approved
 - Stimulants (amphetamine, methylphenidate)
 - Noradrenergic (Atomoxetine, Viloxazine)
- Off-Label
 - Bupropion
 - Guanfacine XR, Clonidine XR (approved from 6 to 17)



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Methylphenidate Stimulants

Generic Name	Brand Name	Dosages	Release	Tmax (hours)	Duration (hours)	Maximum Recommended Daily Dose	Clinical Points	Therapeutic Interchange (if non-formulary)
Methylphenidate IR (immediate-release)	Ritalin [®]	5mg, 10mg, 20mg	N/A	1.9	3 to 5	60 mg	<ul style="list-style-type: none"> Given BID to TID preferably before meals 	
Methylphenidate ER (extended-release)	Ritalin LA [®]	10mg, 20mg, 30mg, 40mg	50% IR: 50% ER	1 st peak: 2 2 nd peak: 6.6	7 to 9	60 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce 	10 mg = Ritalin 5 mg BID 20 mg = Ritalin 10 mg BID 30 mg = Ritalin 15 mg BID 40 mg = Ritalin 20 mg BID
	Ritalin-SR [®] Metadate ER [®]	20mg	Slow release	4.7	2 to 8 (highly variable)	60 mg	<ul style="list-style-type: none"> Must be swallowed whole 	
	Aptensio XR [®]	10mg, 15mg, 20mg, 30mg, 40mg, 50mg, 60mg	40% IR: 60% ER	1 st peak: 2 2 nd peak: 8	12	60 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce 	
	Metadate CD [®]	10mg, 20mg, 30mg, 40mg, 50mg, 60mg	30% IR: 70% ER	1 st peak: 1.5 2 nd peak: 4.5	7 to 9	60 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce 	
	Concerta [®]	18mg, 27mg, 36mg, 54mg	22% IR: 78% ER	1 st peak: 1 2 nd peak: 6 to 10	10 to 12	6-12 years of age: 2 mg/kg or 54 mg ≥ 13 years old: 72 mg	<ul style="list-style-type: none"> Must be swallowed whole 	
	Daytrana [®]	10mg, 15mg, 20mg, 30mg	N/A	8 to 10	10 to 12	30 mg	<ul style="list-style-type: none"> Worn daily for 9 hours (apply for 2 hours before desired effect) Remove at least 3 hrs. before bedtime 	10 mg = Metadate CD 10 mg capsule 15 or 20 mg = Metadate CD 20 mg capsule 30 mg = Metadate CD 30 mg capsule
	Quilivant XR [®]	5mg/mL	20% IR: 80% ER	2 to 4	12	60 mg	<ul style="list-style-type: none"> Reconstituted suspension good for up to 4 months at room temp 	No Interchange
Quillichew ER [®]	20mg, 30mg, 40mg	30% IR: 70% ER	5 to 6	8	60 mg	<ul style="list-style-type: none"> Chewable tablet 		

"Gray"=Currently Non-Formulary at Atrium Health Inpatient Facilities
Chart created by:
Kristen Nagy, PharmD, BCPS, BCPP, CPP
References upon request



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Methylphenidate Stimulants Cont.

Methylphenidate ER (extended-release)	Cotempla XR-ODT [®]	8.6mg, 17.3mg, 25.9mg	25% IR: 75% ER	4.6 to 5.3	12	51.8 mg	<ul style="list-style-type: none"> Orally disintegrating tablet 	8.6 mg = Metadate 10 mg capsule 17.3 mg = Concerta 18 mg 25.9 mg = Concerta 27 mg
	Jornay PM [®]	20mg, 40mg, 60mg, 80mg, 100mg	5% released in 1 st 10 hours; then 95% released thereafter	14	24	100 mg	<ul style="list-style-type: none"> Should be taken at 2000 (8pm) May be sprinkled over applesauce Recommended not to substitute on a mg-per-mg basis with other MTH products 	20 mg = Metadate CD 20 mg 40 mg = Concerta 36 mg 60 mg = Concerta 54 mg 80 or 100 mg = Concerta 72 mg
	Adhansia XR [®]	25mg, 35mg, 45mg, 55mg, 70mg, 85mg	20% IR: 80% ER	1 st peak: 1.5 (1 to 2.5) 2 nd peak: 12 (8.5 to 16)	16	Peds: 70 mg Adult: 85 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce or yogurt Recommended not to substitute on a mg-per-mg basis with other MTH products 	25 mg = Concerta 27 mg 35 mg = Concerta 36 mg 45 mg = Concerta 45 mg 55 mg = Concerta 54 mg 70 or 85 mg = Concerta 72 mg
	Relexxi [®]	72mg	IR drug overcoat and osmotic system	1 st peak: 1 2 nd peak: 6 to 10	12	72 mg	<ul style="list-style-type: none"> Only approved for 13 yrs and older Must be swallowed whole 	Concerta 72 mg
Dexmethylphenidate IR (immediate-release)	Focalin [®]	2.5mg, 5mg, 10mg	N/A	1 to 1.5	4 to 5	20 mg	<ul style="list-style-type: none"> Given BID at least 4 hours apart 	
Dexmethylphenidate ER (extended-release)	Focalin XR [®]	5mg, 10mg, 15mg, 20mg, 25mg, 30mg, 35mg, 40mg	50% IR: 50% ER	1 st peak: 1.5 2 nd peak: 6.5	9 to 12	Peds: 30 mg Adult: 40 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce 	
Serdexmethylphenidate and Dexmethylphenidate	Azstarys [®]	26.1/5.2mg, 39.2/7.8mg, 52.3/10.4mg	30% Dexmethylphenidate 70% Serdexmethylphenidate	2 (empty stomach) 4 to 4.5 (with food)	12	52.3/10.4mg	<ul style="list-style-type: none"> Approved for age 6 and older May be sprinkled over applesauce or add to water 	No Interchange



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Amphetamine Stimulants

Generic Name	Brand Name	Dosages	Release	Tmax (hours)	Duration (hours)	Maximum Recommended Daily Dose	Clinical Points	Therapeutic Interchange (if non-formulary)
Mixed amphetamine salts	Adderall®	5mg, 7.5mg, 10mg, 12.5mg, 15mg, 20mg, 30mg	N/A	3	5 to 8	40 mg	<ul style="list-style-type: none"> Usually given QD or BID Can split max dose TID d-amph/l-amph 3:1 ratio 	
	Adderall XR®	5mg, 10mg, 15mg, 20mg, 25mg, 30mg	50% IR: 50% ER	7	10 to 12	30 mg	<ul style="list-style-type: none"> May be sprinkled over applesauce d-amph/l-amph 3:1 ratio 	
	Mydayis®	12.5mg, 25mg, 37.5mg, 50mg	Triple bead Delivery 1 part IR: 2 parts ER	7 to 10	16	13-17 years old: 25 mg Adults: 50 mg	<ul style="list-style-type: none"> Only approved for ages 13 and older d-amph/l-amph 3:1 ratio 	No Interchange
Amphetamine ER (extended-release)	Adzenys XR-ODT®	3.1mg, 6.3mg, 9.4mg, 12.5mg, 15.7mg, 18.8mg	N/A	5 to 7	10 to 14	6-12 years old: 18.8 mg 213 years old: 12.5 mg	<ul style="list-style-type: none"> Orally disintegrating tablet d-amph/l-amph 3:1 ratio 	3.1 mg = Adderall XR 5 mg 6.3 mg = Adderall XR 10 mg 9.4 mg = Adderall XR 15 mg 12.5 mg = Adderall XR 20 mg 15.7 mg = Adderall XR 25 mg 18.8 mg = Adderall XR 30 mg
	Adzenys ER®	1.25mg/mL					<ul style="list-style-type: none"> ER suspension Do not mix with food or liquids 	No Interchange
Dextroamphetamine	Dexedrine Spansule®	5mg, 10mg, 15mg	50% IR: 50% ER	8	6 to 10	40 mg	<ul style="list-style-type: none"> Given QD 	
	Dextrostat®	5mg, 10mg				40 mg	<ul style="list-style-type: none"> Given BID to TID 	
	Zenzedi®	2.5mg, 5mg, 7.5mg, 10mg, 15mg, 20mg, 30mg	N/A	3	4 to 6	40 mg	<ul style="list-style-type: none"> Can be given up to twice a day 	1:1 to Dextrostat
	ProCentra®	1mg/mL				40 mg	<ul style="list-style-type: none"> Given BID to TID 	No Interchange



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Amphetamine Stimulants Cont.

Racemic amphetamine sulfate	Evekeo®	5mg, 10mg	N/A	4	4 to 6	40 mg	<ul style="list-style-type: none"> Usually given QD or BID Can split max dose TID d-amph/l-amph 1:1 ratio 	1:1 to Dextrostat
	Evekeo ODT®	5mg, 10mg, 15mg, 20mg	N/A	4	4 to 6	40 mg		1:1 to Dextrostat
	Dyanavel XR®	2.5mg/mL	N/A	4	10 to 12	20 mg	<ul style="list-style-type: none"> d-amph/l-amph 1:1 ratio Recommended not to substitute on a mg-per-mg basis with other AMP products 	No Interchange
Lisdexamfetamine	Vyvanse®	10mg, 20mg, 30mg, 40mg, 50mg, 60mg, 70mg	N/A	~1 (lisdexamfetamine) 3.5 (dextroamphetamine)	10 to 12	70 mg	<ul style="list-style-type: none"> May dissolve contents in glass of water 	
		10mg, 20mg, 30mg, 40mg, 50mg, 60mg	N/A	~1 (lisdexamfetamine) 3.5 (dextroamphetamine)	10 to 12	70 mg	<ul style="list-style-type: none"> Chewable tablets 	1:1 to Vyvanse capsules

"Gray" = Currently Non-Formulary at Atrium Health Inpatient Facilities
 Chart created by Kristen Nagy, PharmD, BCPS, BCPP, CPP
 References upon request



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Stimulant Shortages

- Most notable since October 2022
- Increase demand & number of prescriptions since COVID-19
- Production reductions
- Quotas:
 - DEA
 - Distributors
 - Pharmacies

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Non-Stimulants

Generic Name	Brand Name	Dosages	Release	Tmax (hours)	Duration (h)	Maximum Daily Dose	Clinical Points
Atomoxetine	Strattera®	10mg, 18mg, 25mg, 40mg, 60mg, 80mg, 100mg	N/A	1 to 2	24	100 mg	<ul style="list-style-type: none"> ○ Capsules must not be opened ○ Dose adjustments may be required if administered concomitantly with CYP2D6 inhibitors/inducers ○ Do not administer within 2 weeks of MOAI therapy ○ Contraindications: Hypersensitivity, narrow angle glaucoma, pheochromocytoma, severe cardiac or vascular disorders
Guanfacine ER	Intuniv®	1mg, 2mg, 3mg, 4mg	N/A	5	24	4 mg (with stimulants) 7 mg (when used alone)	<ul style="list-style-type: none"> ○ Dose adjustments may be required if administered concomitantly with CYP3A4 inhibitors/inducers ○ Must be tapered off to avoid rebound hypertension ○ Do not interchange IR and ER products ○ Must be swallowed whole ○ Contraindications: hypersensitivity
Clonidine ER	Kapvay®	0.1mg	N/A	7 to 8	24	0.4 mg	<ul style="list-style-type: none"> ○ Must be tapered off to avoid rebound hypertension ○ Do not interchange IR and ER products or with clonidine patch ○ Must be swallowed whole ○ Contraindications: hypersensitivity
	Onyda XR™	0.1mg/mL	N/A	7 to 8	24	0.4 mg	<ul style="list-style-type: none"> ○ Discard after 60 days of first opening the bottle ○ Do not interchange other clonidine products on a milligram-per-milligram basis
Viloxazine	Qelbree®	100mg, 150mg, 200mg	N/A	5	24	400 mg	<ul style="list-style-type: none"> ○ Age 6 to 17 yrs ○ May be opened and sprinkled on applesauce

Gray = Currently Non-Formulary at Atrium Health Inpatient Facilities
Chart created by Kristen Nagy, PharmD, BCPS, BCCP, CPP
References upon request

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Viloxazine XR for ADHD

- Noradrenergic reuptake inhibitor
- Approved in children, adolescents, and adults (6 & above)
- Can interact with: Duloxetine, Ramelteon, Tasimelteon, Tizanidine, and Theophylline
- Dosing
 - Children (100 to 400 mg)
 - Adults (200 to 600 mg)
- Side effects
 - Somnolence, decreased appetite, and headache



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Atomoxetine

- FDA approval across the lifespan
- Less responsivity in stimulant non-responders
- Can be used as adjunctive therapy in stimulant non-responders
- Comorbid ADHD plus
 - Anxiety, tics, and substance use disorders



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Guanfacine XR in adults

- Phase 3 study placebo-controlled study in 201 adults
- Dosing range 2 to 6 mg daily
- Improvement in attention and hyperactivity/impulsivity



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ADHD and Work Disability

JAMA Network Open.



Original Investigation | Psychiatry

Attention-Deficit/Hyperactivity Disorder Medications and Work Disability and Mental Health Outcomes

Heidi Tapale, PhD; Jakob Bergström, MSc; Katarin Gärnes, PhD; Antti Tanskanen, PhD; Lisa Eskelinen, MD, PhD; Elinor Mittendorfer-Rutz, PhD; Magnus Högerson, PhD

Abstract

IMPORTANCE Individuals with attention deficit/hyperactivity disorder (ADHD) often have comorbid psychiatric conditions. Relatively little is known about how specific ADHD medications are associated with overall treatment outcomes among these patients.

OBJECTIVE To investigate the association of the use of specific ADHD medications with hospitalization outcomes and work disability among adolescents and adults with ADHD.

DESIGN, SETTING, AND PARTICIPANTS This nationwide register-based cohort study identified individuals (aged 16–65 years) with ADHD from Swedish nationwide registers of inpatient health care, specialized outpatient health care, sickness absence, and disability pension during the years 2006 to 2021. Data analysis was performed from November 2022 to August 2023.

EXPOSURE Use of specific ADHD medications.

MAIN OUTCOMES AND MEASURES The main outcome measure was psychiatric hospitalization, and secondary outcomes were suicide attempt and/or death by suicide, nonpsychiatric hospitalization, and work disability (ie, sickness absence or disability pension). The risk of outcomes between use in nonuse periods of ADHD medications was compared in a within-individual design, where a person acts as their own control, and was analyzed with stratified Cox models.

RESULTS A total of 221 714 persons with ADHD were included in the study cohort (mean [SD] age, 25.0 [11.2] years; 120 968 male individuals [54.6%]). Methylphenidate was the most commonly used ADHD medication (51 837 individuals [68.5%]), followed by lisdexamphetamine (28 106 individuals [33.2%]) during the follow-up (mean [SD], 7.0 [4.7] years). The following medications were associated with a decreased risk of psychiatric hospitalization: amphetamine (adjusted hazard ratio [aHR], 0.74; 95% CI, 0.61–0.90), lisdexamphetamine (aHR, 0.80; 95% CI, 0.70–0.92), ADHD drug polytherapy (aHR, 0.85; 95% CI, 0.82–0.88), dexamphetamine (aHR, 0.88; 95% CI, 0.83–0.94), and methylphenidate (aHR, 0.93; 95% CI, 0.92–0.95). No associations were found for modafinil, atomoxetine, clonidine, and guanfacine. Decreased risk of suicidal behavior was associated with the use of dexamphetamine (aHR, 0.69; 95% CI, 0.53–0.89), lisdexamphetamine (aHR, 0.76; 95% CI, 0.68–0.84), and methylphenidate (aHR, 0.92; 95% CI, 0.86–0.98). None of the medications was associated with increased risk of nonpsychiatric hospitalization, instead, use of amphetamine, lisdexamphetamine, polytherapy, dexamphetamine, methylphenidate, and atomoxetine were associated with decreased risk of nonpsychiatric hospitalization. The results regarding work disability were significant only for the use of atomoxetine (aHR, 0.89; 95% CI, 0.82–0.97), especially among adolescents and young adults aged 16 to 29 years, (aHR, 0.82; 95% CI, 0.73–0.92).

Key Points

Question Are specific attention-deficit/hyperactivity disorder (ADHD) medications associated with the risk of hospitalization outcomes and work disability among adolescents and adults with ADHD?

Findings In this Swedish nationwide cohort study of 221 714 individuals with ADHD, lisdexamphetamine and other amphetamine derivatives were associated with decreased risk of psychiatric hospitalization, nonpsychiatric hospitalization, and suicide attempts and/or death by suicide.

Meaning These findings suggest that the use of ADHD medication is associated with less mental health morbidity in adolescents and adults with ADHD.

Supplemental content

Author affiliations and article information are listed at the end of this article.

JAMA Network Open. 2024;7(3):e242859. doi:10.1001/jamanetworkopen.2024.2859

March 20, 2024



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ADHD and Cardiovascular Risk

JAMA Psychiatry | Original Investigation

Attention-Deficit/Hyperactivity Disorder Medications and Long-Term Risk of Cardiovascular Diseases

Le Zhang, PhD; Lin Li, PhD; Pontus Andell, MD, PhD; Miguel Garcia-Arribas, PhD; Patrick D. Quinn, PhD; Brian M. D'Onofrio, PhD; Isabell Brikkell, PhD; Ralf Kuja-Halkola, PhD; Paul Lichtenstein, PhD; Kristina Johnell, PhD; Henrik Larsson, PhD; Zheng Chang, PhD

IMPORTANCE Use of attention-deficit/hyperactivity disorder (ADHD) medications has increased substantially over the past decades. However, the potential risk of cardiovascular disease (CVD) associated with long-term ADHD medication use remains unclear.

OBJECTIVE To assess the association between long-term use of ADHD medication and the risk of CVD.

DESIGN, SETTING, AND PARTICIPANTS This case-control study included individuals in Sweden aged 6 to 64 years who received an incident diagnosis of ADHD or ADHD medication dispensation between January 1, 2007, and December 31, 2020. Data on ADHD and CVD diagnoses and ADHD medication dispensation were obtained from the Swedish National Inpatient Register and the Swedish Prescribed Drug Register, respectively. Cases included individuals with ADHD and an incident CVD diagnosis (ischemic heart diseases, cerebrovascular diseases, hypertension, heart failure, arrhythmias, thromboembolic disease, arterial disease, and other forms of heart disease). Incidence density sampling was used to match cases with up to 5 controls without CVD based on age, sex, and calendar time. Cases and controls had the same duration of follow-up.

EXPOSURE Cumulative duration of ADHD medication use up to 14 years.

MAIN OUTCOMES AND MEASURES The primary outcome was incident CVD. The association between CVD and cumulative duration of ADHD medication use was measured using adjusted odds ratios (AORs) with 95% CIs.

RESULTS Of 278 027 individuals with ADHD aged 6 to 64 years, 10 388 with CVD were identified (median [IQR] age, 34.6 [20.0-45.7] years; 6154 males [59.2%]) and matched with 51 672 control participants without CVD (median [IQR] age, 34.6 [19.8-45.6] years; 30 601 males [59.2%]). Median (IQR) follow-up time in both groups was 4.1 (1.9-6.8) years. Longer cumulative duration of ADHD medication use was associated with an increased risk of CVD compared with nonuse (0 to ≤ 1 year: AOR, 0.99 [95% CI, 0.93-1.06]; 1 to ≤ 2 years: AOR, 1.09 [95% CI, 1.01-1.18]; 2 to ≤ 3 years: AOR, 1.15 [95% CI, 1.05-1.25]; 3 to ≤ 5 years: AOR, 1.27 [95% CI, 1.17-1.39]; and > 5 years: AOR, 1.23 [95% CI, 1.12-1.36]). Longer cumulative ADHD medication use was associated with an increased risk of hypertension (eg, 3 to ≤ 5 years: AOR, 1.72 [95% CI, 1.51-1.97] and > 5 years: AOR, 1.80 [95% CI, 1.55-2.08]) and arterial disease (eg, 3 to ≤ 5 years: AOR, 1.65 [95% CI, 1.11-2.45] and > 5 years: AOR, 1.49 [95% CI, 0.96-2.32]). Across the 14-year follow-up, each 1-year increase of ADHD medication use was associated with a 4% increased risk of CVD (AOR, 1.04 [95% CI, 1.03-1.05]), with a larger increase in risk in the first 3 years of cumulative use (AOR, 1.08 [95% CI, 1.04-1.11]) and stable risk over the remaining follow-up. Similar patterns were observed in children and youth (aged < 25 years) and adults (aged ≥ 25 years).

CONCLUSIONS AND RELEVANCE This case-control study found that long-term exposure to ADHD medications was associated with an increased risk of CVDs, especially hypertension and arterial disease. These findings highlight the importance of carefully weighing potential benefits and risks when making treatment decisions about long-term ADHD medication use. Clinicians should regularly and consistently monitor cardiovascular signs and symptoms throughout the course of treatment.

JAMA Psychiatry. 2024;81(2):178-187. doi:10.1001/jamapsychiatry.2023.4294
Published online November 22, 2023.



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ADHD and Pregnancy

JAMA Psychiatry | Original Investigation

Prescription Stimulant Use During Pregnancy and Risk of Neurodevelopmental Disorders in Children

Elizabeth A. Suarez, MPH, PhD; Brian T. Bateman, MD, MS; Sonia Hernandez-Diaz, MD, DrPH; Loreen Straub, MD, MS; Christopher J. McDougle, MD; Katherine L. Wisner, MD, MS; Kathryn J. Gray, MD, PhD; Page B. Pennell, MD; Barry Lester, PhD; Yanmin Zhu, MS, PhD; Helen Mogun, MS; Krista F. Huybrechts, MS, PhD

IMPORTANCE Use of medications for attention-deficit/hyperactivity disorder (ADHD) during pregnancy is increasing in the US. Whether exposure to these medications in utero impacts the risk of neurodevelopmental disorders in children is uncertain.

OBJECTIVE To evaluate the association of childhood neurodevelopmental disorders with in utero exposure to stimulant medications for ADHD.

DESIGN, SETTING, AND PARTICIPANTS This cohort study included health care utilization data from publicly insured (Medicaid data from 2000 to 2018) and commercially insured (MarketScan Commercial Claims Database data from 2003 to 2020) pregnant individuals aged 12 to 55 years in the US with enrollment from 3 months prior to pregnancy through 1 month after delivery, linked to children. Children were monitored from birth until outcome diagnosis, disenrollment, death, or end of the study (December 2018 for Medicaid and December 2020 for MarketScan).

EXPOSURES Dispensing of amphetamine/dextroamphetamine or methylphenidate in the second half of pregnancy.

MAIN OUTCOMES AND MEASURES Autism spectrum disorder, ADHD, and a composite of any neurodevelopmental disorder were defined using validated algorithms. Hazard ratios were estimated comparing amphetamine/dextroamphetamine and methylphenidate to no exposure.

RESULTS The publicly insured cohort included 2 496 771 stimulant-unexposed, 4693 amphetamine/dextroamphetamine-exposed, and 786 methylphenidate-exposed pregnancies with a mean (SD) age of 25.2 (6.0) years. The commercially insured cohort included 1 773 501 stimulant-unexposed, 2372 amphetamine/dextroamphetamine-exposed, and 337 methylphenidate-exposed pregnancies with a mean (SD) age of 31.6 (4.6) years. In unadjusted analyses, amphetamine/dextroamphetamine and methylphenidate exposure were associated with a 2- to 3-fold increased risk of the neurodevelopmental outcomes considered. After adjustment for measured confounders, amphetamine/dextroamphetamine exposure was not associated with any outcome (autism spectrum disorder: hazard ratio [HR], 0.80; 95% CI, 0.56-1.14; ADHD: HR, 1.07; 95% CI, 0.89-1.28; any neurodevelopmental disorder: HR, 0.91; 95% CI, 0.81-1.28). Methylphenidate exposure was associated with an increased risk of ADHD (HR, 1.43; 95% CI, 1.12-1.82) but not other outcomes after adjustment (autism spectrum disorder: HR, 1.06; 95% CI, 0.62-1.81; any neurodevelopmental disorder: HR, 1.15; 95% CI, 0.97-1.36). The association between methylphenidate and ADHD did not persist in sensitivity analyses with stricter control for confounding by maternal ADHD.

CONCLUSIONS AND RELEVANCE The findings in this study suggest that amphetamine/dextroamphetamine and methylphenidate exposure in utero are not likely to meaningfully increase the risk of childhood neurodevelopmental disorders.

JAMA Psychiatry. 2024;81(5):477-488. doi:10.1001/jamapsychiatry.2023.5073
Published online January 24, 2024.



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Other Considerations

Dementia

Adult Attention-Deficit/Hyperactivity Disorder and the Risk of Dementia
 Stephen Z. Levine, PhD; Anat Rotstein, PhD; Arad Kodesh, MD; Sven Sandin, PhD; Brian K. Lee, PhD; Galit Weinstein, PhD; Michal Schnaider Beerli, PhD; Abraham Reichenberg, PhD, *JAMA Network Open*, 2023

Presence of Adult ADHD associated with increased risk of dementia

Pregnancy

Use as PRN/low dose



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ADHD Evaluation

- Vital signs (BP, HR)
- Medical History
 - Any history of cardiac disease (congenital/acquire)
 - Unexplained syncopal episodes/chest pain
 - History of seizure disorder?
 - Family history of sudden death under the age of 30?
 - Potential medication interactions?



32

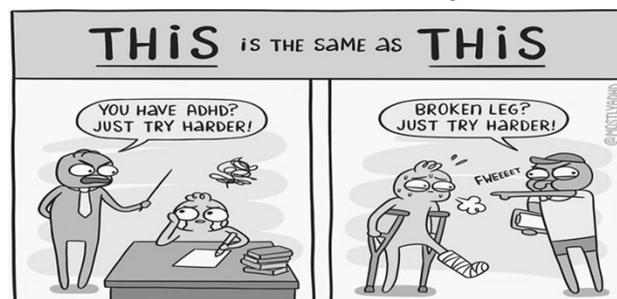
Overview of Treatment Options

- Exercise
- Psychological
- Medication
- Neurofeedback ?
- Digital

33

Conclusions

- ADHD is a lifespan disorder of self-regulation, especially executive function and poor inhibition
- Consider potential issues with not treating ADHD
- Psychosocial interventions are helpful



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Primary Care Behavioral Health Symposium 2026

Autism Assessment and Treatment Considerations for Primary Care

Naomi Leslie, MD

Friday, February 27th | 4:15 PM – 5:15 PM



Autism

Assessment and Treatment Considerations for Primary Care

Naomi Leslie, MD

February 27, 2025



Wake Forest University
School of Medicine



1

Learning Objectives

1. Review epidemiology, etiological factors, and diagnostic criteria for Autism Spectrum Disorder (ASD)
2. Learn about assessment methods for ASD and standards affecting treatment access
3. Review FDA-approved psychopharmacology interventions for behavioral symptoms in patients with ASD



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2

Prevalence of ASD Increasing

2018 Prevalence = 1:44

Sex breakdown

4:1 M to F

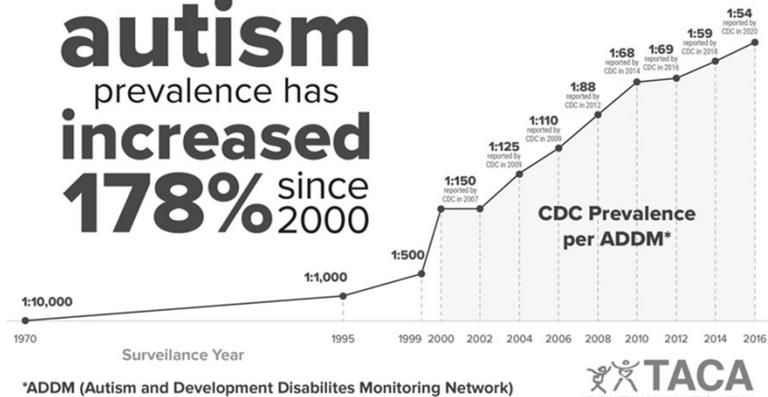
1:27 boys, 1:114 girls

Intellectual disability

35% IQ \leq 70

23% IQ in 70-85 range

autism
prevalence has
increased
178% since
2000



3

Etiology – Multifactorial

Risk Factors

- 200+ candidate susceptibility genes
- Advanced maternal & paternal age
- VPA exposure in utero
- Severe prenatal infections
- Particulate matter in environment
- Epigenetic changes



4

Evidence AGAINST Vaccine Etiology

JAMA 2015 -- Retrospective cohort study of kids who also had older sibling enrolled in same health plan

Total n = 95,727

Group 1: Higher genetic risk – ASD + Older sib w/ASD

@ 2yo 1 MMR dose RR 0.76 (p = 0.25)

@5yo 2 MMR doses RR 0.56 (p = 0.07)

Group 2: Lower genetic risk – ASD w/o older sibling w/ ASD

@ 2yo 1 MMR dose RR 0.91

@5yo 2 MMR doses RR 1.09 (p = 0.65, non-significant)

Conclusion: MMR receipt NOT associated with increased risk of ASD at any age



Jain et al. JAMA 2015;
313(15): 1534-1540.

Evidence Against Acetaminophen Exposure

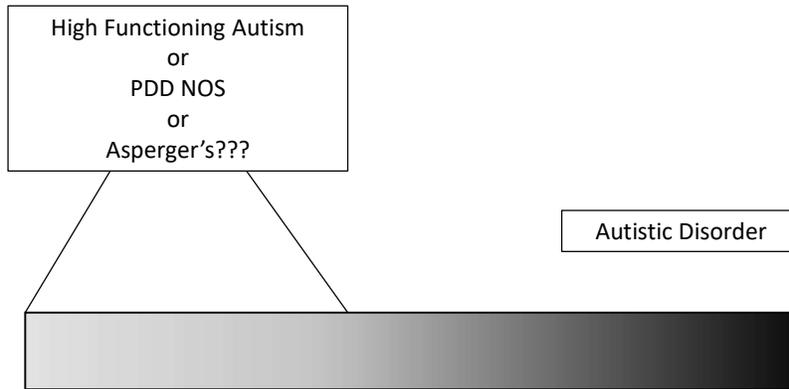
Large Swedish study → nationwide cohort, with sibling control analysis, n = 2,480,797 born 1995-2019

Estimated ~7.5% exposed to acetaminophen

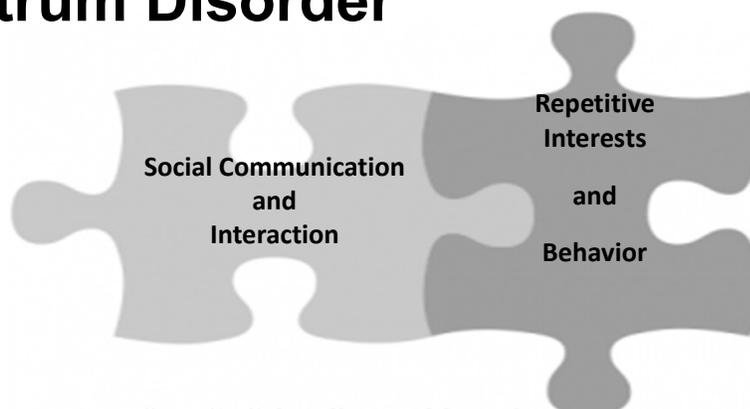
Sibling control analysis:

- HR 0.98 (CI 0.93-1.04) for association between any use and ASD
- No evidence of dose-response (low, med, or high mean daily use of acetaminophen) had HRs of 0.85, 0.96, 0.88 for ASD

Problem with Prior Diagnostic Language



DSM-5 Criteria Domains for Autism Spectrum Disorder



Specify if *intellectual impairment* present
Specify if *language impairment* present
Specify if associated with known *medical, genetic, or environmental factor*

ASD Domain 1: Deficits in Social Communication and Interaction

Social-emotional reciprocity

Back and forth conversation
 Reduced sharing of interests, emotions
 Failure to initiate or respond to social interactions

Nonverbal behaviors

Limited eye contact
 Deficits in use of gestures or other body language
 Lack of understanding or use of facial expressions

Developing, Maintaining, Understanding Relationships

Can't adjust behavior to social context
 No sharing imaginative play or making friends
 Lack of interest in peers



9

ASD Domain 2: Repetitive Interests, Behaviors, Activities

Stereotyped activity

Motor: Spinning, rocking, flapping, finger waving; lining up toys
 Speech: scripts, echolalia

Inflexibility with routines

Highly restricted, fixated interests that are abnormal in intensity or focus

Clocks, wheels, water

Hyper- or hypo-reactivity to sensory input

Adverse response to sounds, textures
 Excessive smelling/touching of objects
 Visual fascination with lights, movement (spinning)



10

Sensory Sensitivity is Frequent, But Nonspecific

Frequent = 1:20 kids

Sensory Processing Disorder (SPD) NOT included in DSM-5

Not exclusive to ASD

Often found in kids with ADHD, Anxiety Disorders, PTSD

Tx = Occupational Therapy



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Social / Pragmatic Communication Disorder

Persistent deficits in social use of verbal and nonverbal communication, manifested by **ALL** of the following:

- Deficits in communication for social purposes – greeting, sharing information – appropriate for social context
- Impaired ability to change communication to match context or needs of listener
- Difficulty following rules of conversation / storytelling
(taking turns, rephrasing if misunderstood, use of verbal/nonverbal signals to regulate interaction)
- Difficulty understanding inferential, non-literal, or ambiguous meanings of language



12

ASSESSMENT

- Screening in Primary Care
- Comprehensive Assessments
- Developmental Pediatrics, TEACCH, Private Clinics
 - Interview and history-taking
 - Standardized Assessment Tools
 - Parent/caregiver questionnaires
 - ADOS = Autism Diagnostic Observation Schedule



13

Trend and Controversy: Self-Diagnosis

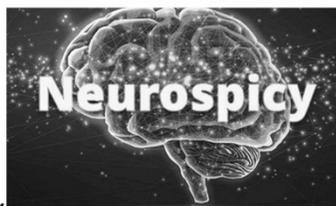


WHAT IS MASKING?

@21andsensory

- HIDING YOUR FEELINGS AND MOOD
- IMITATING FACIAL EXPRESSIONS
- TRYING NOT TO GO NON-VERBAL
- BOTTLING UP ANXIETY, THOUGHTS AND STIMS
- TRYING TO FOCUS ON CONVERSATIONS BUT ZONING OUT
- TRYING TO ACT 'NORMAL'

THIS CAN LEAD TO AUTISTIC BURNOUT+ SENSORY HANGOVER



ADHD	DID & OSDD	BIPOLAR
ASPD	NPD	AUTISM
BPD	CPTSD	EPILEPSY
DYSLEXIA	HSP	GAD
DYSPRAXIA	SENSORY PROCESSING	OC
PTSD	DYSCALCULIA	ABI/TBI
DYSGRAPHIA	FASD	TIC DISORDERS
		SCHIZOPHRENIA
		MISOPHONIA
		HPD
		DOWN SYNDROME
		SYNESTHESIA

*NON-EXHAUSTIVE LIST www.livedexperienceeducator.com @livedexperienceeducator



14

Need for “Formal” Diagnosis

Different states have different regulations re: insurance coverage for ASD-specific treatment (ABA, etc.) and how diagnosis is made

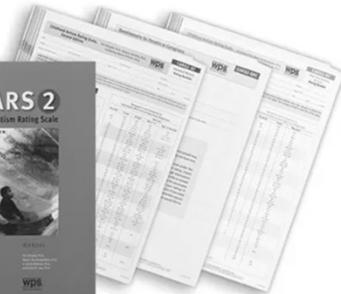
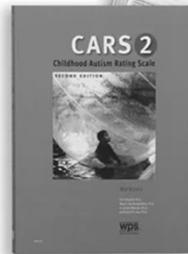
NC requires ADOS for diagnosis allowing ABA treatment



ADOS



Other Proprietary Assessments



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Core ASD Symptom Treatment

Applied Behavioral Analysis → Moderate Evidence

- Discrete Trial Training
- Verbal Behavioral Intervention
- Pivotal Response Training
- Early Start Denver Model

TEACCH → Low Evidence

Developmental Interventions → Low Evidence

- Floor Time

18

What is ABA?

“**Behavioral**” refers to behavioral psychology intervention → *training a person to do a behavior or series of behaviors based on the situation*

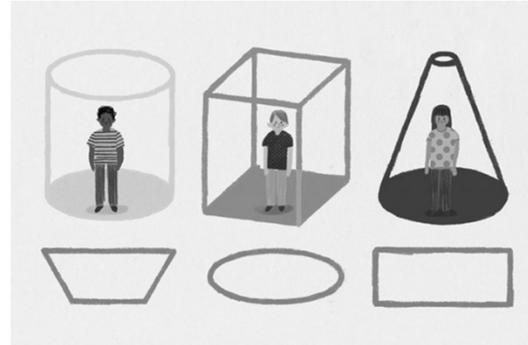
ANNALS OF MEDICINE

THE ARGUMENT OVER A LONG-STANDING AUTISM INTERVENTION

Applied Behavior Analysis therapy has a troubling history, and even many supporters say it was used too widely in the past. But has criticism of the practice gone too far?

By Jessica Winter

February 12, 2024



Wake Forest University
School of Medicine



ADVOCATE HEALTH

19

ABA Meta Analysis

Meta-Analysis of 22 studies

- Long-term, comprehensive ABA (30-40 hr/wk) = med to large positive effects
- Most superior for → **language**-related outcomes
- Also for intellectual functioning, acquisition of daily living skills, social functioning



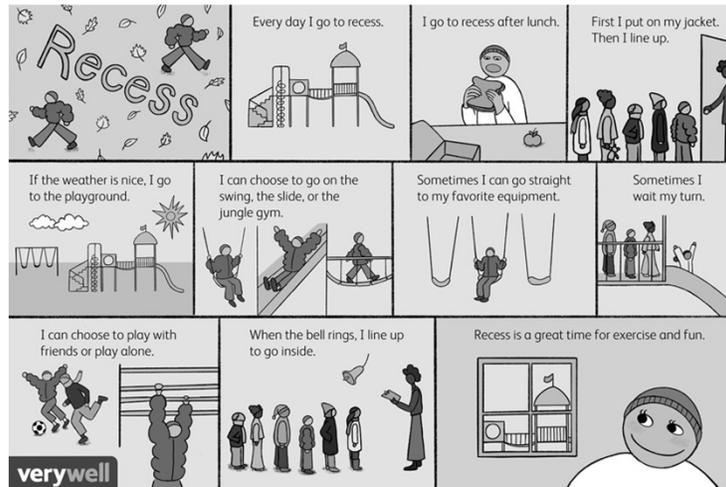
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ADVOCATE HEALTH

20

Speech and Language Pathologist Intervention



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ADVOCATE HEALTH

21

Targets for Medication in ASD

Obsessive-compulsive symptoms

Generalized Anxiety

Depression

ADHD

Irritability / Aggression

Insomnia / Sleep Disturbance



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ADVOCATE HEALTH

22

FDA Approved for Irritability and Aggression

Risperidone approved 2006

2 large, randomized PCTs →

RUPP Autism Network: n = 101
Canadian: n = 79

Meta-Analysis 2016:
NNT = 2

Aripiprazole 2009

2 multisite, industry-sponsored, RDBPCTs

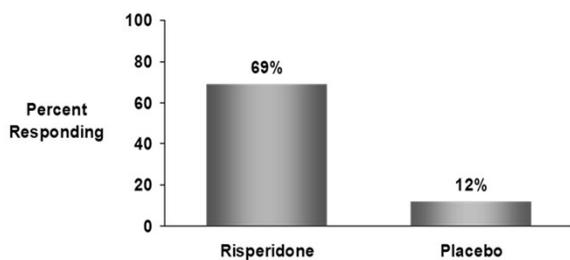
Marcus et al. n = 218
Owen et al. n = 98

Meta-Analysis 2016:
NNT = 3



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Risperidone Summary



Response criteria: $\geq 25\%$ improvement in the ABC-I score **and** a rating of "much improved" or "very much improved" on the CGI-I

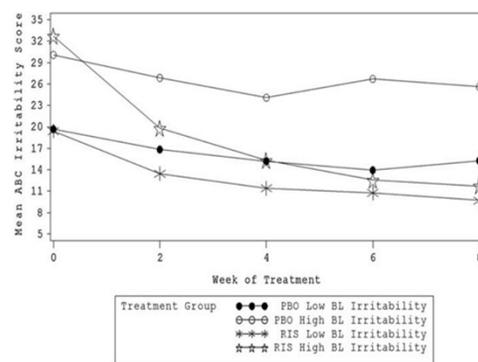


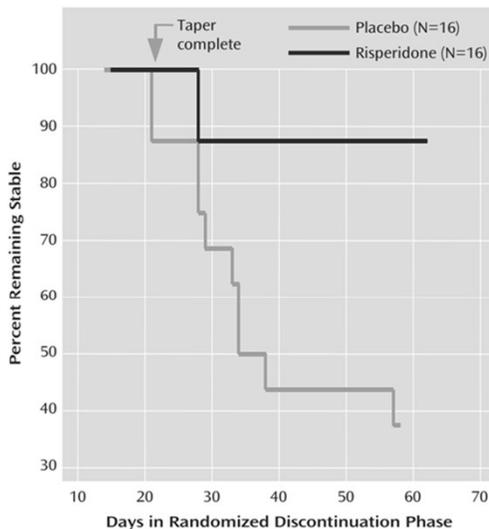
FIG. 1. Baseline ABC Irritability subscale score as a moderator of response to risperidone. ABC= Aberrant Behavior Checklist, PBO= placebo, RIS= risperidone, BL=baseline. Lines represent mean ABC Irritability Subscale score at each week by treatment and moderator subgroups.



24

Research Units on
Pediatric
Psychopharmacology
Autism Network. Am J
Psychiatry. 2005
Jul;162(7):1361-9.

FIGURE 2. Survival Analysis for Children With Autism Who Responded to Risperidone and Were Then Randomly Assigned to Placebo or Continued Risperidone for 8 Weeks^a



^a For the placebo group, the risperidone dose was decreased by 25% per week. Relapse was defined as a 25% increase in the score on the Aberrant Behavior Checklist irritability subscale and a CGI improvement rating of much worse or very much worse, compared to the prediscontinuation baseline, for at least 2 consecutive weeks. The difference between groups was significant (test for equality of survival distributions for treatment, log rank=6.89, df=1, p=0.009).



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Aripiprazole Summary

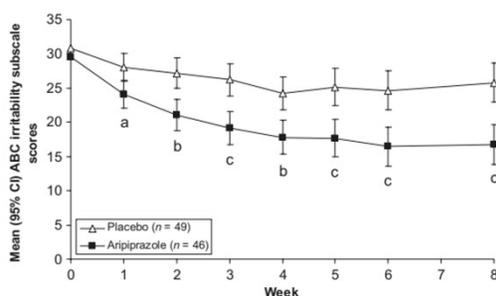


FIGURE 2 Mean ABC irritability subscale score according to week (LOCF; efficacy sample). ^a $P < .05$. ^b $P < .005$, and ^c $P < .001$ versus placebo.

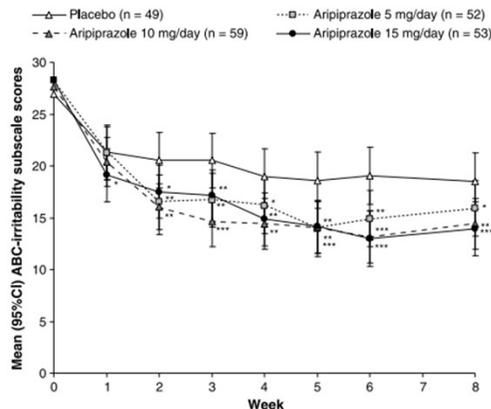


Fig. 2 Mean (95% CI) ABC-Irritability subscale score by week (LOCF; efficacy sample). Treatment difference (95% CI) (aripiprazole-placebo): aripiprazole 5 mg/day, -4.0 (-7.7, -0.4); aripiprazole 10 mg/day, -4.8 (-8.4, -1.3); aripiprazole 15 mg/day, -6.0 (-9.6, -2.3). ABC = Aberrant Behavior Checklist; LOCF = last observation carried forward; CI = confidence interval. * $p < .05$; ** $p < .01$; *** $p \leq .001$ versus placebo.

52% response Aripip vs 14.3% PLC
Owen et al. Pediatrics. 2009
Dec;124(6):1533-40.



Marcus et al. JAACAP 2009.

26

BMI

Risp >>Aripip???

Long-term naturalistic study of 142 patients says no difference

Wink LK et al. J Child Adolesc Psychopharmacol. 2014 Mar;24(2):78-82.

TABLE 3.

TREATMENT RESULTS: GROUP COMPARISONS

	<i>Risperidone</i>	<i>Aripiprazole</i>	<i>Two tailed t test</i>
Treatment duration	2.37±2.55 years	1.47±1.21 years	<i>p</i> =0.01
Final dose	2.23±1.30 mg/day	11.85±7.23 mg/day	NA
Final CGI-I ^a	3.2±1.2	2.9±1.2	<i>p</i> =0.32
BMI change per year of treatment	2.36±3.80	2.05±5.02	<i>p</i> =0.68
BMI Z-score change per year of treatment	0.53±1.21	0.56±2.21	<i>p</i> =0.91

^aClinical Global Impressions – Improvement (CGI-I) scale ranges from 1 to 7 with 1=very much improved and 7=very much worse.

BMI, body mass index.

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ADHD

Only permitted as comorbid diagnosis since DSM-5 (2013)

Prevalence rates vary 24-83%

Methylphenidates have data, Amphetamines do not

Cochrane Review 2017 (studies conducted through 11/2016)

4 studies, n = 113, 83% male, ages 5-13yo, all in USA

High dose MPH (0.43-0.6mg/kg/dose)

Improves parent and teacher ratings of hyperactivity

Improves teacher ratings of inattention, but not parent ratings

No data on impulsivity

28

Insomnia

Melatonin

- 13 controlled studies of melatonin for sleep disturbance in children with neurodevelopmental disorders (n = 424)
 - Parallel groups and crossover designs
 - Dose 1-10 mg
 - Melatonin > placebo in all 13 studies
 - Adverse events = mild and similar to placebo
- Controlled studies with mixed results for diphenhydramine
 - Not recommended for routine use
 - No controlled studies for use of: benzos, mirtazapine, trazodone, clonidine

Resources

- Atrium Health Developmental and Behavioral Pediatrics
- AutismSpeaks.org
- autismsociety-nc.org
- TEACCH Centers (Greensboro and Charlotte)
- Family Support Network
- North Carolina Council for Exceptional Children:
<http://community.cec.sped.org/nc/home>

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