Management of Pediatric Anxiety and Depression in Primary Care

Family Medicine Resident School

February 17, 2021

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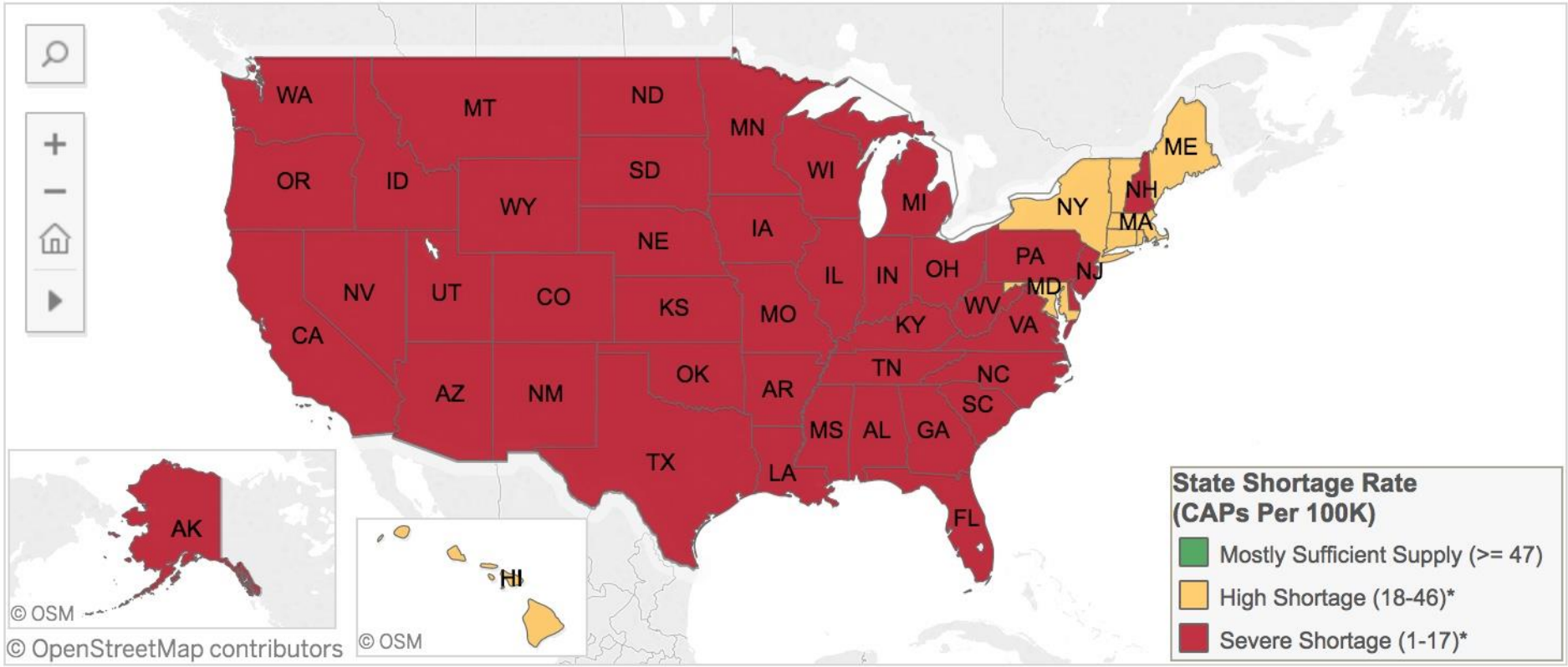
Thanks to Elizabeth Brannan, MD for select slides

Practicing Child and Adolescent Psychiatrists by State 2015

Rate per 100,000 children age 0-17



Disclosures

- We will be discussing off-label use of multiple medications (SSRIs, SNRIs, alpha agonists, antipsychotics, N-acetylcysteine, metformin)

Learning Objectives

- Recognize the range and developmental progression of pediatric anxiety disorders and depression
- Describe screening tools that can be used in primary care setting
- Recognize mental health crises and identify initial management steps
- Describe indications, risks, and benefits of pharmacotherapy

Agenda

- **Overview of the basics**
  - The developmental progression of anxiety disorders and depression
  - Screening
  - Referrals
  - Crises

- **Sample case presentations**
  - Clinical scenarios to help you assess your knowledge/practice, with evidence-based guidelines and clinical pearls

- **If time allows:**
  - How to talk about the Black Box Warning
  - Use of augmenting agents and management of related adverse effects

ANXIETY

DSM-5 Anxiety Disorders

- Separation Anxiety Disorder
- Selective Mutism
  - A variant of social phobia?

} Typical onset before age 12 yo

- Specific Phobia
- Social Anxiety Disorder (Social Phobia)

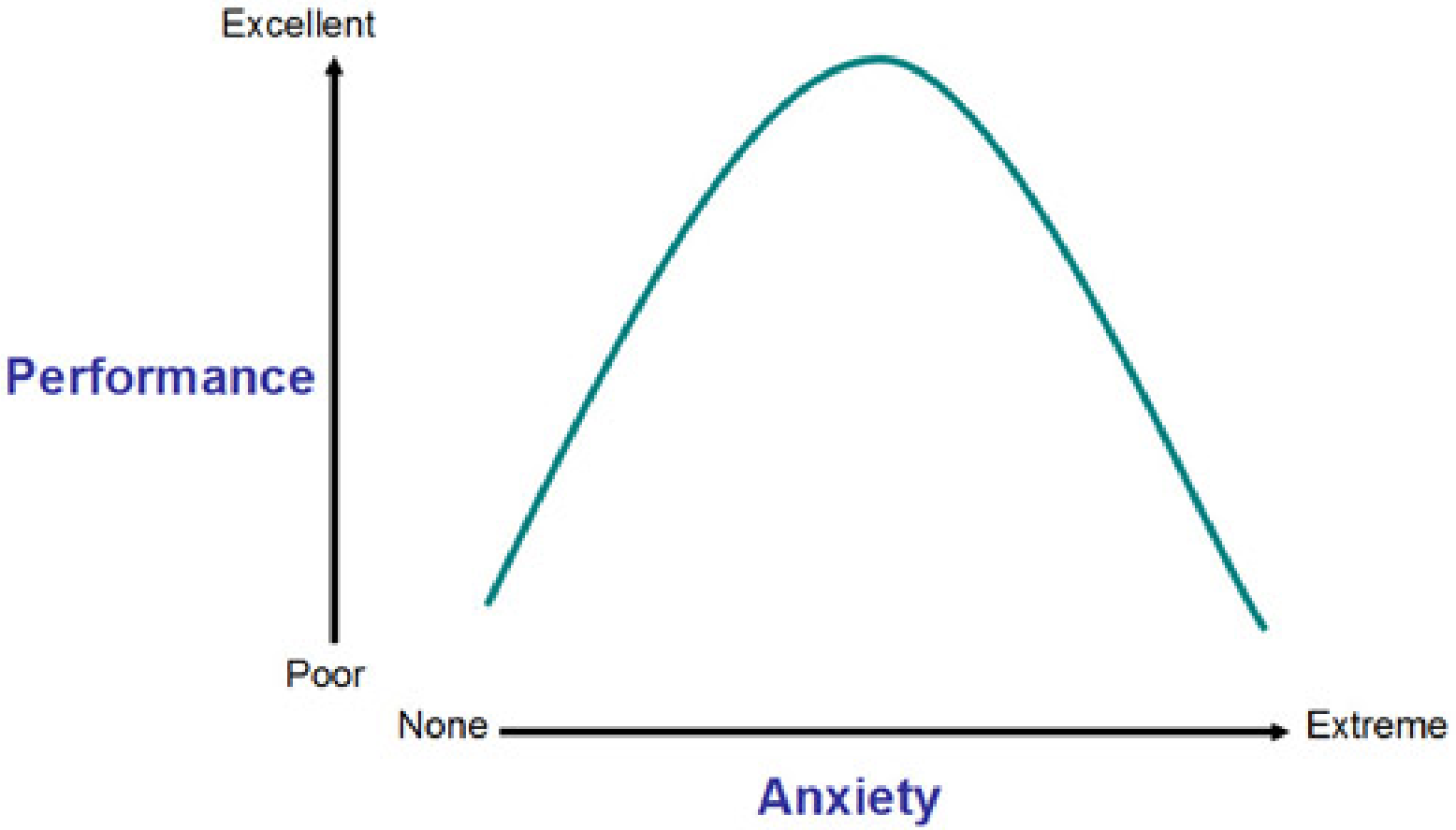
Late childhood & adolescence

- Panic Disorder
- Agoraphobia

} Late adolescence & early adulthood

- Generalized Anxiety Disorder

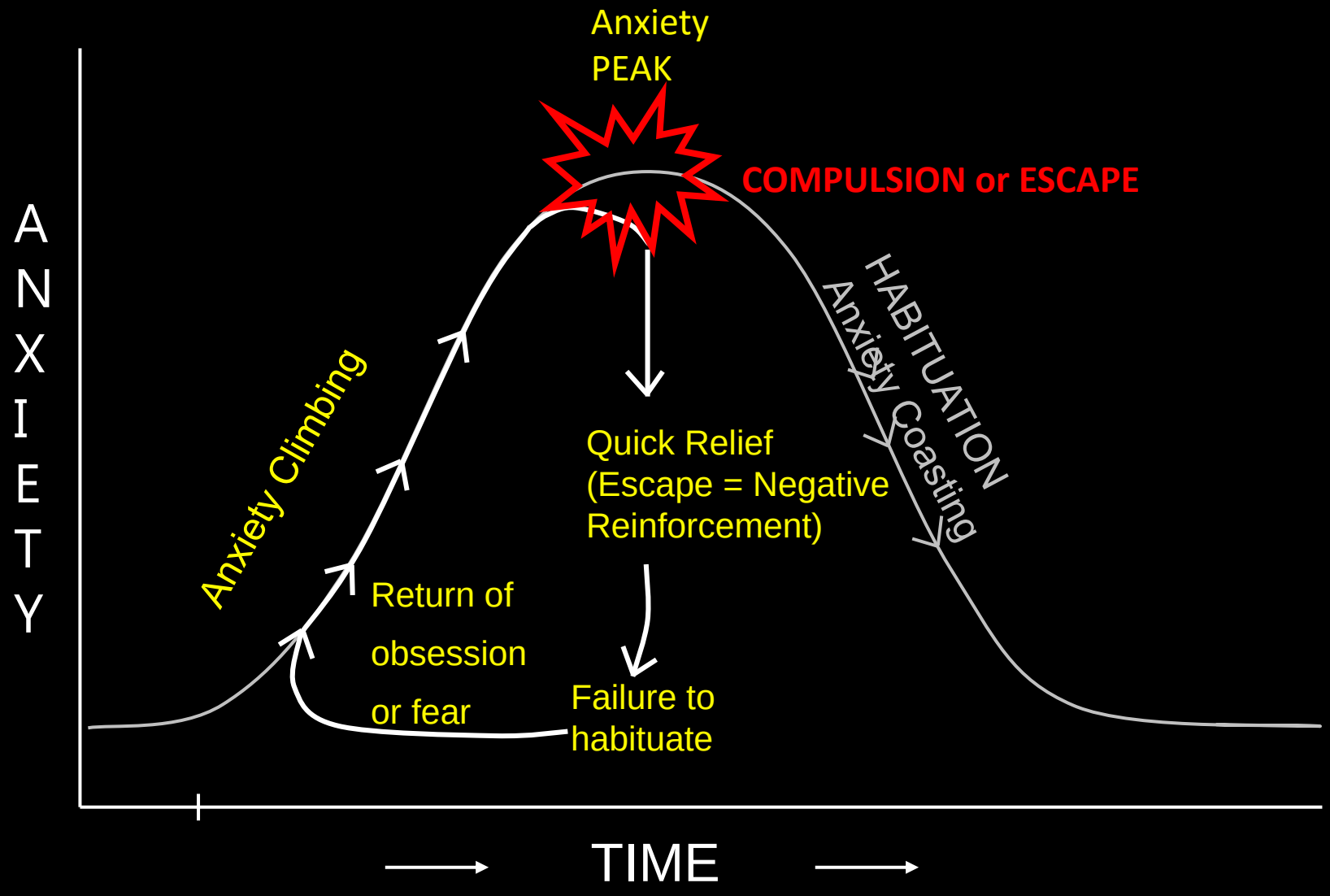
Relationship between Anxiety & Performance



Important diagnostic features

- Anxiety is out of proportion to actual threat posed
- Associated with **avoidant** behaviors
- Cause clinically significant distress
- Social Anxiety d/o- fear focused on possible scrutiny by others vs Agoraphobia- fear focused on situations where escape might be difficult
- Associated with **psychosomatic symptoms** (panic d/o and GAD)

The Anxiety Cycle



DSM-5 Obsessive-Compulsive and Related Disorders

- Obsessive-Compulsive Disorder (OCD)
- Body Dysmorphic Disorder (BDD)
- Hoarding Disorder
- Trichotillomania (Hair-Pulling Disorder)
- Excoriation (Skin-Picking) Disorder

1/3 of adults with OCD report onset in childhood or early adolescence, and most by age 18 yo

Prevalence of OCD in children is 1-3%

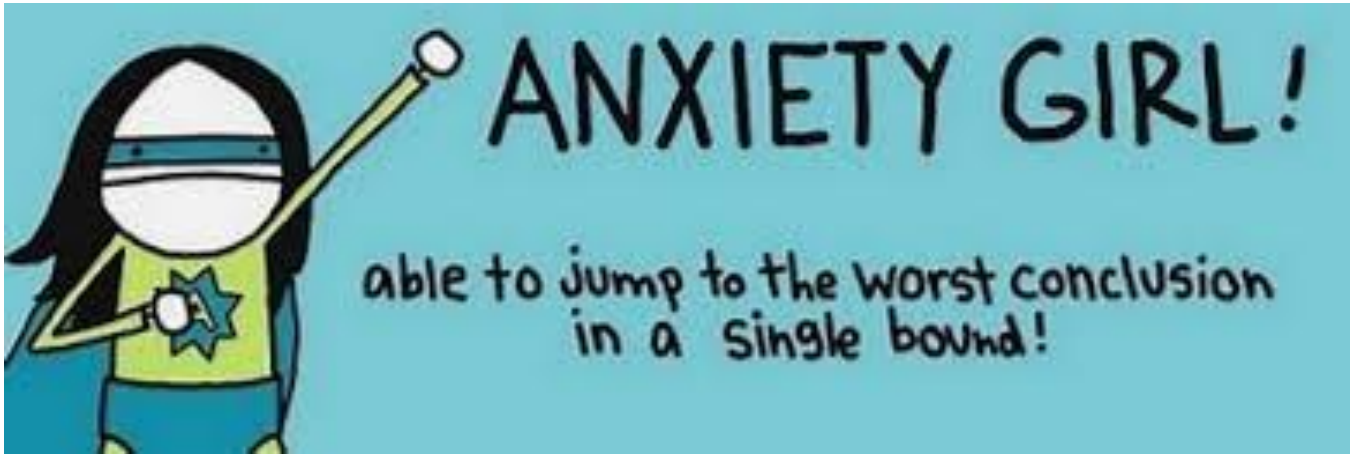
Scales

	Description	Age range	Parent form?	Cost
SCARED	41 q's, ~10 min Panic d/o, GAD, Soc anx, Separation anx, school avoidance	8-18yo	yes	FREE
GAD-7	Developed for primary care-adults	Not validated in kids	no	FREE
Spence	45 qs, ~10 min Sep anx, soc phob, OCD, panic, physical inj, GAD	Age 8-15 Scored by age and gender, **separate preschool scale**	yes	FREE

Cognitive behavioral therapy (CBT)

CBT for **anxiety** is the most empirically validated treatment and can involve:

- 1) Coping model
  - Specific strategies are used to intentionally reduce physiological arousal in order to promote healthier ways of living
- 2) Exposure model
  - Repeated confrontation of a feared stimulus in order to produce habituation


ANXIETY GIRL!
able to jump to the worst conclusion
in a single bound!

Coping Model

- Coping model typically utilizes:
  - Relaxation strategies (deep breathing, progressive muscle relaxation)
  - Cognitive restructuring: recognizing and altering “thinking errors” that occur related to anxiety (e.g., catastrophic thinking, black and white thinking, etc.)
  - Problem solving strategies
  - Overall goal is to use coping strategies to reduce anxiety, thereby improving functioning in the presence of anxiety triggers

Exposure Model

- Exposure involves repeatedly confronting a feared stimulus
  - The intensity of anxiety produced declines substantially over time = **habituation**
  - Exposure with Response Prevention (ERP) is a specific type of exposure therapy used in the treatment of OCD
    - Exposure to feared stimuli while refraining from ritualizing

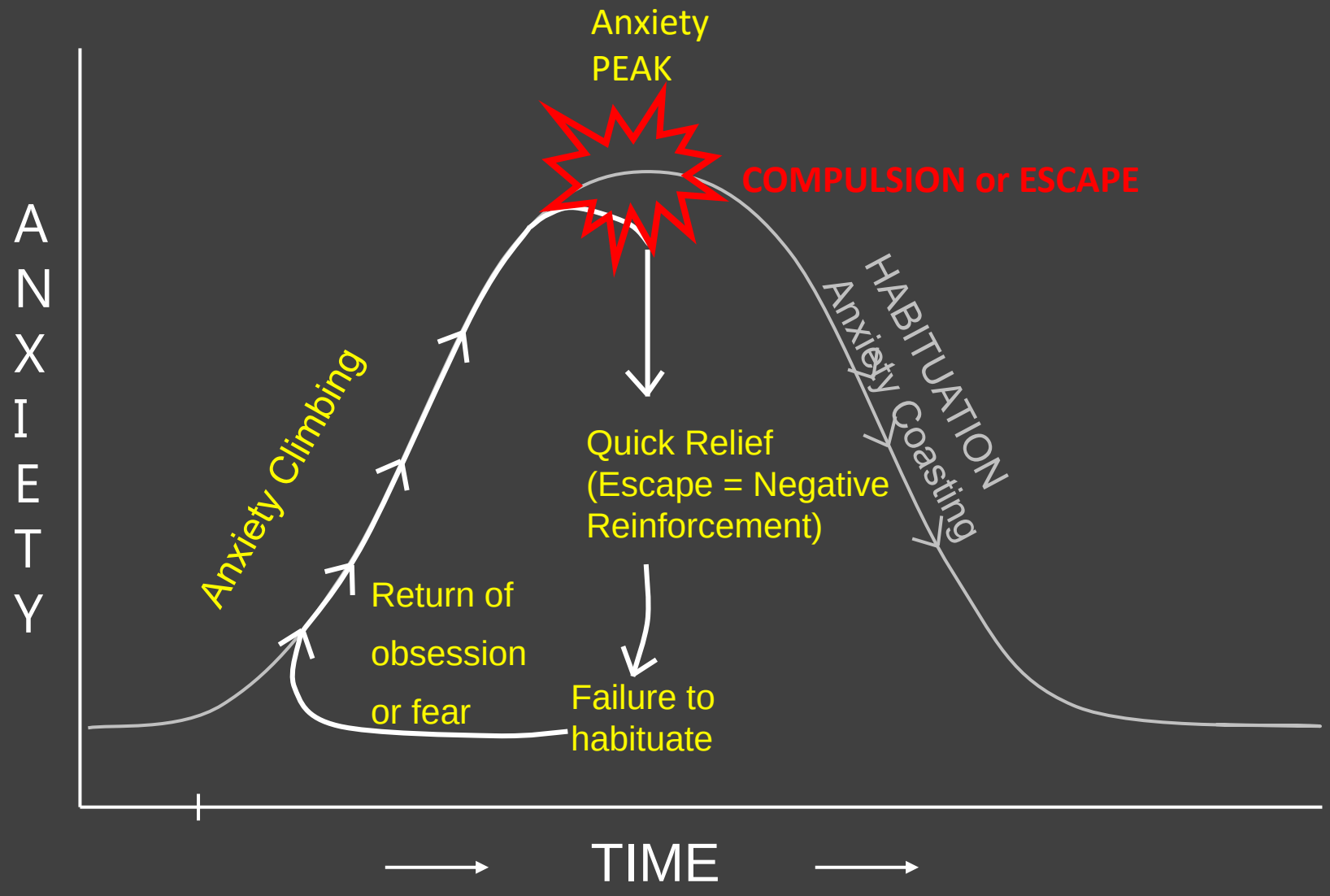
Exposure is the active ingredient (or limiting reagent)

- **Exposure therapy** is the most common treatment ingredient across all treatment protocols for anxiety

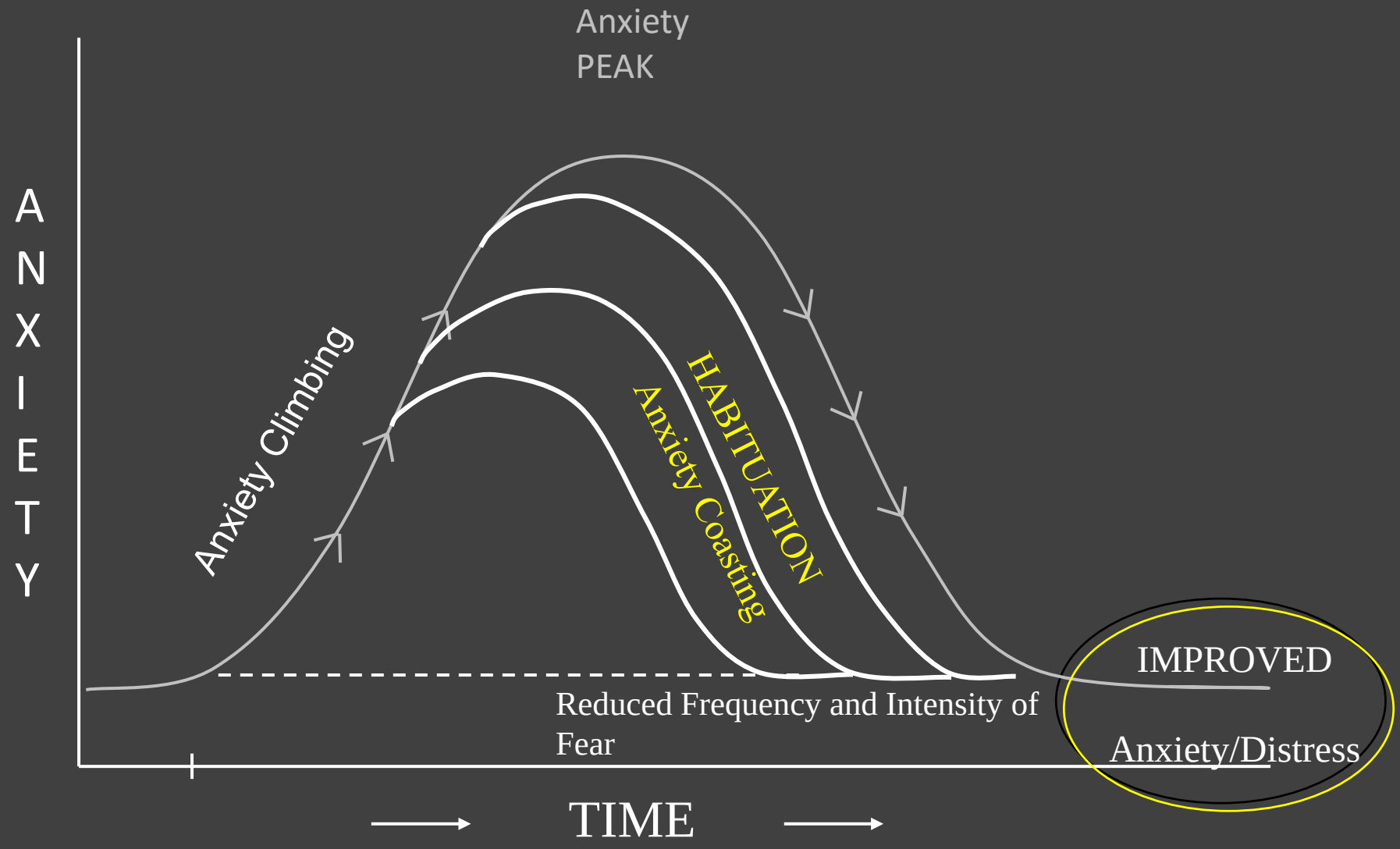
- Research shows that youth improve most in CBT after exposure is introduced

- More exposures during treatment strongly predicts better outcome

The Anxiety Cycle



Breaking the Anxiety Cycle



Examples of Exposures

- Touching objects in a trash can (OCD)
- Holding a spider (Specific Phobia)
- Parent hires a baby sitter (Separation Anxiety)
- Having a conversation with a stranger (Social Anxiety Disorder)
- Breathing through a straw = interoceptive exposure (Panic Disorder)
- Going to the grocery store alone (Agoraphobia)
- Imagining family dying in a car crash (Generalized Anxiety Disorder)

How do you sell it?

- Validate and educate:
  - Our instinct as parents is to protect our children from harm, but anxiety is not actually harmful or dangerous, even though it feels like it.
  - For a child predisposed to or already manifesting anxiety, our efforts to protect them from feeling distress or to relieve their distress when it occurs are ***errors of kindness***…
  - …because they actually reinforce the anxiety cycle and the child's understanding that
  - they need to do something or have someone else do something in order to feel better.

How do you sell it? (cont'd)

- Instead of protecting them from it or fixing it for them…
- our job becomes to **validate** their feelings, and **support** and **encourage** them as they **learn to tolerate** distress and work through difficult situations.
- This is how we reduce anxiety in the long term and build resilience and confidence.
- E.g. "I know this is really hard **AND** ***(not but!)*** I know you can do it and I'm right here supporting you in bossing back your anxiety"

Crisis Management

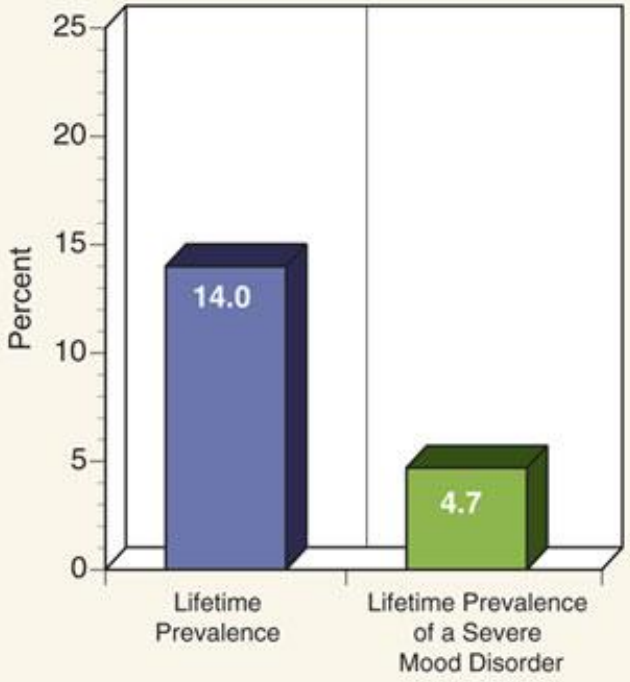
- Panic Attack
  - Rule out medical causes, more likely to be respiratory than cardiac in kids
  - Reduce triggers as able
  - Label, empathize and distract
  - Involve nursing/Child Life if available

DEPRESSION

Any Mood Disorder

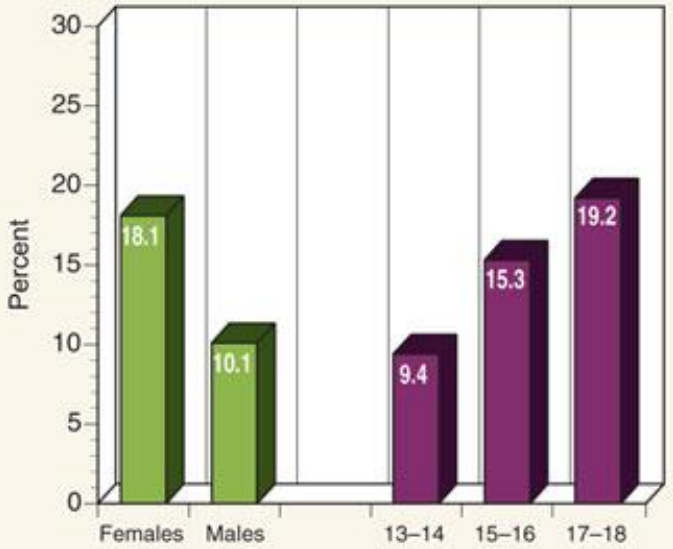
Lifetime Prevalence of 13 to 18 year olds

- **Lifetime Prevalence:** 14.0% of 13 to 18 year olds
- **Lifetime Prevalence of "Severe" Disorder:** 4.7% of 13 to 18 year olds have a "severe" mood disorder



Demographics (for lifetime prevalence)

- **Sex:** Statistically different
- **Age:** Statistically different



- **Race:** No statistically significant differences were found between non-Hispanic whites and other races

Merikangas KR, He J, Burstein M, Swanson SA, Avenevoli S, Cui L, Benjet C, Georgiades K, Swendsen J. Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Study-Adolescent Supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry.* 2010 Oct;49(10):980-989.

Recognizing Depression

Medscape® www.medscape.com

S	Sleep (insomnia or hypersomnia)
I	Interests (diminished interest or pleasure from activities)
G	Guilt (excessive or inappropriate guilt; feelings of worthlessness)
E	Energy (loss of energy or fatigue)
C	Concentration (diminished concentration or indecisiveness)
A	Appetite (decrease or increase in appetite; weight loss or gain)
P	Psychomotor retardation/agitation
S	Suicide (recurrent thoughts of death, suicidal ideation, or suicide attempt)

S **School - Decline in Performance**

Diagnosing Depression

Five or more of the following and must include either depressed mood or/and anhedonia:

1) Depressed mood most of the day, nearly every day
   - In children and adolescents, mood can be mostly irritable
2) Diminished pleasure in activities
3) Significant weight loss or decrease in appetite
4) Insomnia or hypersomnia
5) Psychomotor agitation or retardation
6) Fatigue or loss of energy
7) Feelings or worthlessness or guilt
8) Decreased concentration or indecisiveness
9) Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or specific plan for committing suicide

Childhood	Adolescence
1-2% prevalence	4-8% prevalence
Male:Female = 1:1	**Male:Female = 1:2**
Somatic complaints	Cognitive complaints
Externalizing behaviors	More behavior complains than adults, fewer than children
Fewer delusions, more hallucinations	More delusions
Fewer serious suicide attempts	More suicidal ideation and attempts
Fewer neurovegetative symptoms	**Sleep, appetite disturbances**
Low self-esteem, poor school performance	**Low self-esteem, poor school performance**

Sequelae

- Social, emotional, and cognitive development
- Attachment
- Risk for substance abuse
- Risk for poor academic functioning
- Suicide attempts and completion

Overview of Assessment

- Interview child/adolescent and parent(s) **separately** and together
  - Symptoms
  - Function
  - Psychosocial Stressors
  - Family History
  - Comorbidity – medical and psychiatric
- Provide written screening/severity tool
  - can also be useful later to track treatment, symptom resolution
- **Ask about safety!**

Recommendations for Screening

- **Screen for depression in adolescents 12-18 years old** (USPSTF)
- Identify and monitor patients with risk factors for depression (GLAD-PC, USPSTF, GAPS)
- **Diagnose depression based on DSM criteria** (GLAD-PC)
- Use standardized screening tools for assessment (GLAD-PC)
- Utilize direct interviews with patient and caregivers (GLAD-PC)

(GLAD-PC: Guidelines for Adolescent Depression in Primary Care; AAP) updated 2018

More Screening Recs…

- Assess for **function in different domains**, i.e. school, home (GLAD-PC)
- Assess for coexisting diagnoses (GLAD-PC)
- Discuss **confidentiality** (GLAD-PC)
- Ensure adequate systems are in place for diagnosis, treatment, and follow-up (USPSTF)
- **Screen for suicidality** and consider referring as appropriate (GLAD-PC)

Screener options

- **PHQ-9**
  - **R**eliable and validated ages 12+
  - 9 questions, scores 0-27
  - 5: Mild; 10: Moderate,
    15: Moderately Severe, 20: Severe
- **CDI**
  - Validated ages 7-17 yo
  - 10 q and 27 q versions
  - Proprietary

Patient Health Questionnaire for Adolescents (PHQ9-A)

	(0) Not at all	(1) Several days	(2) More than half the days	(3) Nearly every day
1. Feeling down, depressed, irritable, or hopeless?				
2. Little interest or pleasure in doing things?				
3. Trouble falling asleep, staying asleep, or sleeping too much?				
4. Poor appetite, weight loss, or overeating?				
5. Feeling tired, or having little energy?				
6. Feeling bad about yourself – or feeling that you are a failure, or that you have let yourself or your family down?				
7. Trouble concentrating on things like school work, reading, or watching TV?				
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you were moving around a lot more than usual?				
9. Thoughts that you would be better off dead, or of hurting yourself in some way?				

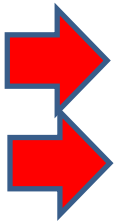
Patient Health Questionnaire for Adolescents (PHQ9-A)

In the **past year** have you felt depressed or sad most days, even if you felt okay sometimes?

☐Yes ☐No

If you are experiencing any of the problems on this form, how **difficult** have these problems 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



Has there been a time in the **past month** when you have had serious thoughts about ending your life?

☐Yes ☐No

Have you **EVER**, in your WHOLE LIFE, tried to kill yourself or made a suicide attempt?

☐Yes ☐No

Case #1

- 15 yo boy brought in by Mom (a nurse in your clinic) for headaches
- PMH migraines
- Soc Hx- parents divorced 2 years ago (described as toxic divorce); he is doing well in 10th grade but grades slowly slipping with online school due to COVID

- On confidential interview, endorses worsening depression, PHQ9 score 19
- Denies current SI, reports prior SI as recently as 1 month ago

Outpatient Referrals

Psychiatry:
Cimarron Clinic (includes 0-5 clinic)
- Ad Hoc in Powerchart

Therapy:
Programs for Children and Adolescents
- Intake Line 505-272-2190

Non- UNM options
DBT: Awake and Aware (505) 503-7946
Young Children: Small Steps (505) 933-4639

Databases:
Network of Care from NM BHSD
https://newmexico.networkofcare.org/mh/index.aspx
Psychology Today
https://www.psychologytoday.com/us

Suicide Screening Forms

- Ask Suicide-Screening Questions- ASQ from NIMH
  - Can be integrated into clinic/ED process
- Columbia Suicide Severity Rating Scale
  - First section serves as screening tool

asQ Suicide Risk Screening Tool

Ask Suicide-Screening Questions

Ask the patient:

1. **In the past few weeks, have you wished you were dead?** ❍ Yes ❍ No
2. **In the past few weeks, have you felt that you or your family would be better off if you were dead?** ❍ Yes ❍ No
3. **In the past week, have you been having thoughts about killing yourself?** ❍ Yes ❍ No
4. **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 ❍ N

Next steps:

- If patient answers "No" to all questions 1 through 4, 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 refuses to answer, they are considered a positive screen. Ask question #5 to assess acuity:**
  - ☐ **"Yes"** to question #5 = **acute positive screen** (imminent risk identified)
    - **Patient requires a STAT safety/full mental health evaluation.** Patient cannot leave until evaluated 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-acute positive screen** (potential risk identified)
    - **Patient requires a brief suicide safety assessment to determine if a full mental health evaluation is needed.** Patient cannot leave until evaluated for safety.
    - Alert physician or clinician responsible for patient's care.

Provide resources to all patients

- 24/7 National Suicide Prevention Lifeline 1-800-273-TALK (8255) En Español: 1-888-628-9454
- 24/7 Crisis Text Line: Text "HOME" to 741-741

Google "NIMH ASQ" or "ASQ Suicide"

5. Are you having thoughts of killing yourself right now? ❍ Yes ❍ No

Next steps:

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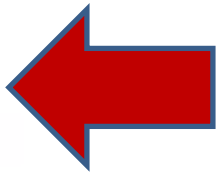

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Columbia-Suicide Severity Rating Scale

- Risk stratifies patients according to type of suicidality
  1 Wish to be dead
  2 Non-specific active suicidal thoughts
  3 Active SI with any method, no plan, no intent
  4 Active SI with some intent, without plan
  5 Active SI with specific plan and intent

COLUMBIA-SUICIDE SEVERITY RATING SCALE

*Screen with Triage Points for **Primary Care***

Ask questions that are in bold and underlined.	**Past month**	
Ask Questions 1 and 2	**YES**	**NO**
1) *Have you wished you were dead or wished you could go to sleep and not wake up?*		
2) *Have you had any actual thoughts of killing yourself?*		
If YES to 2, ask questions 3, 4, 5, and 6. If NO to 2, go directly to question 6.		
3) *Have you been thinking about how you might do this?* e.g. "*I thought about taking an overdose but I never made a specific plan as to when where or how I would actually do it....and I would never go through with it.*"		
4) *Have you had these thoughts and had some intention of acting on them?* as opposed to "*I have the thoughts but I definitely will not do anything about them.*"		
5) *Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?*		
6) *Have you ever done anything, started to do anything, or prepared to do anything to end your life?* Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc. **If YES, ask: *Was this within the past 3 months?***	**Lifetime** **Past 3 Months**	

Response Protocol to C-SSRS Screening

Item 1 Behavioral Health Referral
Item 2 Behavioral Health Referral
Item 3 Behavioral Health Consult (Psychiatric Nurse/Social Worker) and consider Patient Safety Precautions
Item 4 Behavioral Health Consultation and Patient Safety Precautions
Item 5 Behavioral Health Consultation and Patient Safety Precautions
Item 6 Behavioral Health Consult (Psychiatric Nurse/Social Worker) and consider Patient Safety Precautions
Item 6 3 months ago or less: Behavioral Health Consultation and Patient Safety Precautions

INTENSITY OF IDEATION		
The following features should be rated with respect to the most severe type of ideation (i.e., 1-5 from above, with 1 being the least severe and 5 being the most severe). Ask about time he/she was feeling the most suicidal. Lifetime - ***Most Severe Ideation:*** _____ (*Type # (1-5)*) _____ (*Description of Ideation*) Recent - ***Most Severe Ideation:*** _____ (*Type # (1-5)*) _____ (*Description of Ideation*)	Most Severe	Most Severe
Frequency ***How many times have you had these thoughts?*** (1) Less than once a week (2) Once a week (3) 2-5 times in week (4) Daily or almost daily (5) Many times each day	____	____
Duration ***When you have the thoughts how long do they last?*** (1) Fleeting - few seconds or minutes (2) Less than 1 hour/some of the time (3) 1-4 hours/a lot of time (4) 4-8 hours/most of day (5) More than 8 hours/persistent or continuous	____	____
Controllability ***Could/can you stop thinking about killing yourself or wanting to die if you want to?*** (1) Easily able to control thoughts (2) Can control thoughts with little difficulty (3) Can control thoughts with some difficulty (4) Can control thoughts with a lot of difficulty (5) Unable to control thoughts (0) Does not attempt to control thoughts	____	____
Deterrents ***Are there things - anyone or anything (e.g., family, religion, pain of death) - that stopped you from wanting to die or acting on thoughts of committing suicide?*** (1) Deterrents definitely stopped you from attempting suicide (2) Deterrents probably stopped you (3) Uncertain that deterrents stopped you (4) Deterrents most likely did not stop you (5) Deterrents definitely did not stop you (0) Does not apply	____	____
Reasons for Ideation ***What sort of reasons did you have for thinking about wanting to die or killing yourself? Was it to end the pain or stop the way you were feeling (in other words you couldn't go on living with this pain or how you were feeling) or was it to get attention, revenge or a reaction from others? Or both?*** (1) Completely to get attention, revenge or a reaction from others (2) Mostly to get attention, revenge or a reaction from others (3) Equally to get attention, revenge or a reaction from others and to end/stop the pain (4) Mostly to end or stop the pain (you couldn't go on living with the pain or how you were feeling) (5) Completely to end or stop the pain (you couldn't go on living with the pain or how you were feeling) (0) Does not apply	____	____

SUICIDAL BEHAVIOR *(Check all that apply, so long as these are separate events; must ask about all types)*	**Lifetime**	**Past 3 months**
Actual Attempt: A potentially self-injurious act committed with at least some wish to die, *as a result of act.* Behavior was in part thought of as method to kill oneself. Intent does not have to be 100%. If there is ***any*** intent/desire to die associated with the act, then it can be considered an actual suicide attempt. ***There does not have to be any injury or harm***, just the potential for injury or harm. If person pulls trigger while gun is in mouth but gun is broken so no injury results, this is considered an attempt. Inferring Intent: Even if an individual denies intent/wish to die, it may be inferred clinically from the behavior or circumstances. For example, a highly lethal act that is clearly not an accident so no other intent but suicide can be inferred (e.g., gunshot to head, jumping from window of a high floor/story). Also, if someone denies intent to die, but they thought that what they did could be lethal, intent may be inferred. ***Have you made a suicide attempt?*** ***Have you done anything to harm yourself?*** ***Have you done anything dangerous where you could have died?*** ***What did you do?*** ***Did you_____ as a way to end your life?*** ***Did you want to die (even a little) when you_____?*** ***Were you trying to end your life when you _____?*** ***Or Did you think it was possible you could have died from_____?*** ***Or did you do it purely for other reasons / without ANY intention of killing yourself (like to relieve stress, feel better, get sympathy, or get something else to happen)?*** *(*Self-Injurious Behavior without suicidal intent) If yes, describe:	**Yes** ☐ **No** ☐ Total # of Attempts _____	**Yes** ☐ **No** ☐ Total # of Attempts _____
Has subject engaged in Non-Suicidal Self-Injurious Behavior?	**Yes** ☐ **No** ☐	**Yes** ☐ **No** ☐
Interrupted Attempt: When the person is interrupted (by an outside circumstance) from starting the potentially self-injurious act *(if not for that, actual attempt would have occurred).* Overdose: Person has pills in hand but is stopped from ingesting. Once they ingest any pills, this becomes an attempt rather than an interrupted attempt. Shooting: Person has gun pointed toward self, gun is taken away by someone else, or is somehow prevented from pulling trigger. Once they pull the trigger, even if the gun fails to fire, it is an attempt. Jumping: Person is poised to jump, is grabbed and taken down from ledge. Hanging: Person has noose around neck but has not yet started to hang - is stopped from doing so. ***Has there been a time when you started to do something to end your life but someone or something stopped you before you actually did anything?*** If yes, describe:	**Yes** ☐ **No** ☐ Total # of interrupted _____	**Yes** ☐ **No** ☐ Total # of interrupted _____
Aborted or Self-Interrupted Attempt: When person begins to take steps toward making a suicide attempt, but stops themselves before they actually have engaged in any self-destructive behavior. Examples are similar to interrupted attempts, except that the individual stops him/herself, instead of being stopped by something else. ***Has there been a time when you started to do something to try to end your life but you stopped yourself before you actually did anything?*** If yes, describe:	**Yes** ☐ **No** ☐ Total # of aborted or self-interrupted	**Yes** ☐ **No** ☐ Total # of aborted or self-interrupted

Safety Planning

- Main goals- help patient identify triggers, warning signs, independent coping skills, people they can reach out to for help, and their reason for living
- Must have parent on board for means restriction
- Apps or paper forms available
  - Eg My3, Moodtools

Patient Safety Plan Template

Step 1: Warning signs (thoughts, images, mood, situation, behavior) that a crisis may be developing:

1. _____
2. _____
3. _____

Step 2: Internal coping strategies – Things I can do to take my mind off my problems without contacting another person (relaxation technique, physical activity):

1. _____
2. _____
3. _____

Step 3: People and social settings that provide distraction:

1. Name_____ Phone_____
2. Name_____ Phone_____
3. Place_____ 4. Place_____

Step 4: People whom I can ask for help:

1. Name_____ Phone_____
2. Name_____ Phone_____
3. Name_____ Phone_____

https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown_StanleySafetyPlanTemplate.pdf

Step 5: Professionals or agencies I can contact during a crisis:

1. Clinician Name_____ Phone_____
   Clinician Pager or Emergency Contact # _____
2. Clinician Name_____ Phone_____
   Clinician Pager or Emergency Contact # _____
3. Local Urgent Care Services_____
   Urgent Care Services Address_____
   Urgent Care Services Phone_____
4. Suicide Prevention Lifeline Phone: 1-800-273-TALK (8255)

Step 6: Making the environment safe:

1. _____
2. _____

The one thing that is most important to me and worth living for is:

_____

https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown_StanleySafetyPlanTemplate.pdf

Emergency Resources

- **NM Crisis and Access Line**

1-855-NMCRISIS (662-7474)

- **PES or Pediatric ER**

Case 2

- 12yo girl with hard transition to middle school
- Started calling parents asking to be picked up during lunch, now increasingly crying in the morning and asking not to go
- Parents are holding the limit with her going to school, but she is spending lunch and some classes in the guidance office

Case 2

- She tells parents she's scared to ask any questions or speak in class because she doesn't want to look stupid and her teachers are "mean"
- Lunch is hard because she doesn't want to talk to anyone other than her best friend because she doesn't want to say something wrong and embarrass herself

Case 2

- Earlier history of selective mutism in first several months of preschool, parents responded by unenrolling her and instead arranging 1:1 play dates
- Eventually resolved but remained shy and with only a couple of close friends throughout elementary school

Why treat with a medication?

- For moderate to severe OCD and anxiety disorders, research shows the **combination** of CBT plus SSRI is superior to either one alone
  - Consider functional impairment
- CBT is the **durable, gold-standard** treatment, but sometimes it's not enough or the patient is too impaired to participate
- SSRIs are a "tool" to reduce overall anxious distress and facilitate more effective engagement in and learning from psychotherapy

Risks of untreated anxiety versus risks of medication

- Left untreated, these disorders can be persistent, painful/distressing, and impairing to kids and families emotionally, academically, socially, financially, etc.
- Left untreated, these disorders increase the risk of developing other comorbid disorders (including other anxiety disorders, depression, substance abuse, and externalizing disorders) and of suicide
- **When you get into primary care practice after residency, many of your clinics will expect you to prescribe to kids**

Barriers to appropriately prescribing SSRIs to kids

- Time → to determine diagnosis, to discuss medications, to see in follow up, others?
- Discomfort/lack of knowledge → of how to diagnose, of treatment options, of how/when to initiate meds, of how/when to titrate/monitor/change agents, others?
- Clinic structure barriers
- Black box warning → your own discomfort with it, how to talk to parents/patients about it

FDA approval in children/adolescents for OCD/Anxiety and Depression

SSRIs:

- Fluoxetine (Prozac) – OCD, depression (8 yo+)
- Sertraline (Zoloft) – OCD
- Escitalopram (Lexapro)- depression in teens
- Fluvoxamine (Luvox) – OCD

SNRIs:

- Duloxetine (Cymbalta) – GAD

TCAs:

- Clomipramine (Anafranil) – OCD

IRL

- Three SSRIs are considered first line for treatment of pediatric depression, OCD and anxiety disorders
  - **Fluoxetine**
  - **Sertraline**
  - **Escitalopram**
- More benign adverse effect profiles than SNRIs and TCAs
- Indications in adults for many of the anxiety disorders so we extrapolate

Pearls

- Fluvoxamine (Luvox) has a short half life and you need BID dosing unless you use the CR formulation, it is also more sedating, and has worse discontinuation effects
- OCD and anxiety disorders tend to require higher SSRI dosing than depression, making citalopram (Celexa) undesirable because of black box warning about QTc at doses >40 mg
- Do NOT use paroxetine (Paxil) in pediatrics
  - Worse adverse effects, increased SI signal, discontinuation tricky and uncomfortable

Pearls

- Bupropion (Wellbutrin) often worsens anxiety
  - Sometimes can be useful addition to an SSRI for an anxious patient who is also neurovegetatively depressed and is not having full response to SSRI but watch for worsening anxiety
- Duloxetine (Cymbalta) or Venlafaxine (Effexor) can be tried if patient has failed 1-2 SSRI trials, especially if also depressed but at that point would refer to Child Psych anyway

Pearls

- Fluoxetine has longest half life (~72 hrs) so is preferable if you think there's a high risk of poor or intermittent adherence (think: adolescents or chaotic families) because blood levels won't fluctuate as much
- If a genetically-related family member has had positive or negative responses to one of the SSRIs over another, that is worth considering

Initiating and Titrating SSRIs

- All SSRIs can cause some "revving" up when first starting → start lower for anxious/somatic kids
- Start by dosing in morning because will impair sleep more often than help it; if getting tired, move to bedtime
- Can increase every 1-2 weeks depending on severity/acuity if indicated and tolerated
- Can take 4-8 weeks to see full benefit of dose, but often see some signal within 2 weeks
- Mood symptoms often improve prior to anxiety symptoms → indication patient could be a "responder"
- Anxiety disorders and OCD **typically require and respond to higher end dosing of SSRIs**, including "supra-therapeutic" dosing

SSRI Dosing

- **Fluoxetine**: start 5-10 mg, FDA max 60 mg
  - Increase in increments of 10-20 mg
  - Can go up to 80 mg
- **Sertraline**: start 12.5-25mg, FDA max 200 mg
  - Increase in increments of 12.5-25 mg
  - Can go up to 300 mg
- **Escitalopram**: start 2.5-5 mg, FDA max 20 mg
  - Increase in increments of 2.5-5 mg
  - Can go up to 30 mg

*General rule: Can increase in larger increments once you are at higher doses because the relative increase is less (10→20 is double, 40→60 is less)

Keep going, but know when to stop

- Many PCPs do not prescribe high enough doses to see full benefit, so patients are effectively "under-treated"
- An "adequate" trial is 12 weeks on a maximally tolerated dose, and **for anxiety and OCD, this often means the FDA maximum or even higher**
- However, if you are seeing no benefits after several weeks of a moderate-high dose and the patient is deteriorating/functionally impaired, switch agents

Adverse effects of SSRIs

- **GI side effects** are most common
  - Typically diarrhea, flatulence, and/or nausea or GERD type symptoms
  - Sertraline and fluoxetine seem more likely to cause them than escitalopram
  - Usually will resolve within 7-10 days; onset of symptoms with fluoxetine is delayed and lasts a little longer due to long half-life
  - Reason: Majority of our serotonin receptors are in our GI tract so we can't help but affect them

Adverse effects of SSRIs

- **Disinhibition**
  - Reducing anxiety can reduce anxious inhibition, and you can get too much of a good thing
  - Especially true for kids with underlying ADHD or other externalizing behaviors that were being clamped down by anxiety
- **Activation**
  - Insomnia, restless, distractible, silly, irritable, agitated
  - Can be transient so worth waiting for a few days if not too impairing; can recur with subsequent dose increases, so often end up needing to go slower or switch SSRIs
  - Escitalopram has lower risk of activation but can occur
  - This is not the same as “switching” to hypomania or mania, but watch for that, too

Black Box Warning

- What we tell families about the FDA Black Box Warning on SSRIs in children, adolescents, and young adults:
  - In the early 2000s, several studies were done that showed an **increase in suicidal thoughts** (some actions, **not completions**) from 2% to 4% in patients taking placebo vs SSRIs for depression
  - **After the warning was issued**, rates of SSRI prescriptions dropped, and **suicide rates increased significantly**
  - We know that the **risk of suicide with untreated severe depression, anxiety, OCD, and other disorders remains high** and we want to treat your child appropriately
  - **I have no concerns with prescribing this medication to your child**, and I will help mitigate this risk by providing **close follow up** while we are starting and titrating this medicine. If you or your child have any concern about him/her developing suicidal thoughts, call me and we will talk about it.

Turn to your neighbor…

- You are about to start fluoxetine on a 14 year old girl with debilitating anxiety. Practice what you would tell her and her parents.
  - S/Es
  - When will it work/duration
  - Black box warning

Resources for PCPs & Families

- AACAP Resource Centers– Google “AACAP resource center Anxiety” or “… OCD”
- Partnership Access Line websites:

https://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/

- Anxiety and Depression Association of America (ADAA), http://adaa.org

- Anxiety Disorders:
  - Freeing Your Child from Anxiety, Tamar Chansky, PhD
  - You and Your Anxious Child, Anne Marie Albano, PhD
  - What To Do When You Worry Too Much: A Kid’s Guide to Overcoming Anxiety, Dawn Huebner, PhD

Conclusions

- Anxiety and depression often follow a developmental course, so **look early and often for signs and symptoms**
- **Parental/familial attempts to help child avoid distress reinforce the anxiety/OCD cycle and are not helpful**
  - Instead, validate and support learning to tolerate the distress
- If symptoms of anxiety or depression are **mild, try therapy first- (CBT** with exposure component for anxiety)
- If symptoms are **moderate to severe**, or if CBT alone not working, **consider an SSRI**
- Optimize SSRI dose (up to FDA max or higher if tolerating) if patient is responding but still symptomatic
- If failed trial, cross-over to a different SSRI and consider referral to child psychiatry
- **Treat co-morbid disorders** if impairing/exacerbating

Bonus:
Cross-overs are tricky, but helpful

- Making a patient come entirely off one SSRI prior to starting another one risks functional deterioration and unnecessary suffering
- There is no one way to do a cross-over, but there are some general rules of thumb

Rules of thumb for cross-overs

- Dose equivalency is *roughly* as follows:

Fluoxetine (in mg/day)	Sertraline (in mg/day)	Escitalopram (in mg/day)
5-10	12.5-25	2.5
20	50	5
30	75	7.5
40	100	10
50	150	15
60	200	20
70	250	25
80	300	30

Rules of thumb (cont'd)

- Can change dose roughly every 3-5 days
- The beginning of the new agent, and the end of the old agent are the places to go in smaller increments because of adverse effects
  - Discontinuation effects coming off old agent as relative dose reduction is magnified
  - Serotonergic excess going on new agent as relative dose increase is magnified

Rules of thumb (cont'd)

- Tapering off fluoxetine is relatively smooth because of long half-life so can often go faster than with the other SSRIs
- Titrating up on fluoxetine takes longer because of long half-life so may need to slow taper of the old agent in the process

Rules of thumb (cont'd)

- Discuss signs/symptoms of serotonin excess for parents/kids to observe for during the cross-over
  - Serotonin syndrome: tremor, hyperreflexia, clonus (LE>UE, eyes), diaphoresis, fever, tachycardia, agitation/restlessness, insomnia, nausea/vomiting, diarrhea
- If discontinuation symptoms emerge, slow down the taper of the old agent
  - Discontinuation: headache, feeling in a fog, "tingling" or "zapping" feeling in head, nausea
- If serotonergic toxicity develops, slow down the titration of the new agent

Example cross-over

- Starting at sertraline 150 mg and crossing over to escitalopram

Days	Sertraline (mg/day)	Escitalopram (mg/day)
0	150	0
1-4	100	2.5
5-8	50	5
9-12	25	10
13-16	12.5	15
17-20	0	20 if want relative dose increase, or stay at 15 for equivalent dosing

Bonus: Metformin

- Atypical antipsychotics are used for a variety of psychiatric symptoms and disorders in pediatrics
  - Irritability in autism
  - Augmentation to SSRIs in severe OCD
  - Severe tics/Tourette disorder
  - Bipolar and psychotic disorders
- Significant metabolic adverse effects are common
  - Weight gain (appetite-dependent but also appetite-independent factors)
  - Increase triglycerides and lipids
  - Increased insulin resistance/blood glucose levels

Bonus: Metformin

- RCTs in adults support the use of metformin to help mitigate all of these adverse metabolic effects in patients on long-term antipsychotics
- Pediatric trials are only now being conducted and initial evidence is more modest but still positive (weight loss, reduced weight gain, reduced HgbA1c)
- Nausea and diarrhea are most common adverse effects
  - ER formulation can reduce GI adverse effects
- Maintenance dose ranges are from 500 mg BID to 850 mg BID based on age

Bonus: OCD in depth

Obsessive-Compulsive Disorder

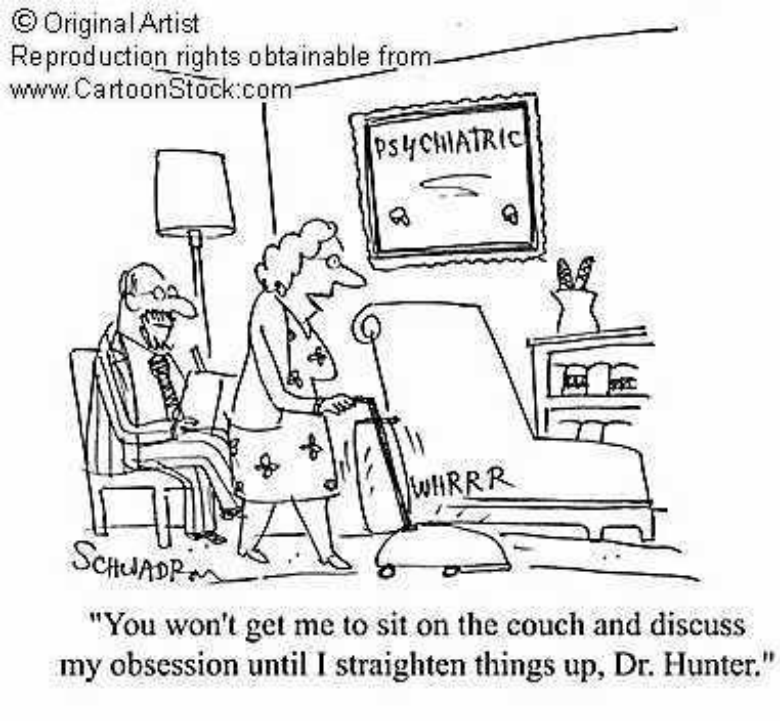
- Obsessive-Compulsive Disorder involves:
  - **Obsessions**: Unwanted and intrusive thoughts, images, or impulses that cause marked distress
  - **Compulsions**: Excessive, repetitive behaviors and/or mental acts that are performed in order to prevent or reduce anxiety/distress
    - Behaviors/acts are excessive and/or are not connected in realistic way with what they are designed to neutralize/prevent
  - Symptoms are *time consuming* (> 1 hour per day) and *distressing/interfering*

OCD

- Important points:
  - Obsessions are **unwanted**; they are not “fixed interests” or topics that the individual enjoys
  - **Insight varies** significantly from patient to patient
    - Can be poor/absent and in those cases patients can seem delusional

Common Types of Obsessions

- Contamination (e.g., dirt, illness, chemicals)
- Harm/Death (e.g., bringing harm to self or others, safety)
- Numbers (e.g., lucky numbers)
- Scrupulosity (e.g., right/wrong)
- Sexual
- Fear of losing something
- Need for balance or “just right”
- Feelings of “incompleteness”
- Unspecified “urges” to ritualize

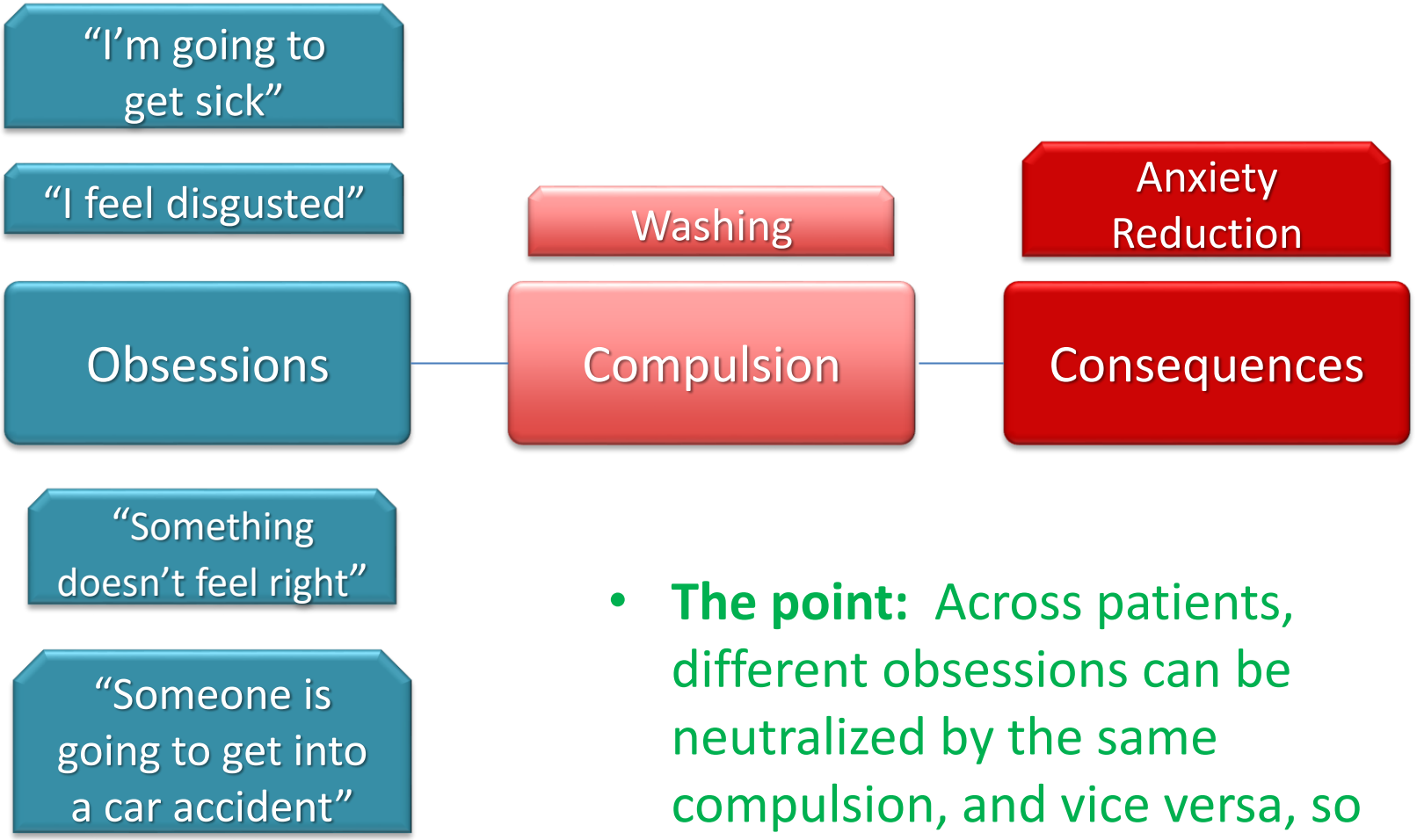


"You won't get me to sit on the couch and discuss my obsession until I straighten things up, Dr. Hunter."

Common Types of Compulsions

- Washing/Cleaning
- Checking
- Repeating (e.g., re-reading, re-writing)
- Counting
- Ordering/Arranging
- Reassurance-seeking
- Mental rituals (e.g., praying)
- Confessing/Need to tell
- Need to tap/touch

OCD



- **The point:** Across patients, different obsessions can be neutralized by the same compulsion, and vice versa, so you have to ask.

OCD vs. OCPD

- Obsessive-compulsive personality disorder (OCPD) describes:
  - a rigid and orderly personality style but does not include actual obsessions and compulsions
- OCPD is ego-syntonic rather than ego-dystonic as in OCD

Case 3

- 9 yo boy with a history of motor tics (primarily eye blinking) but not really distressing or impairing so never treated
- Parents bring him in for new kinds of tics and “sudden onset” over the past few weeks of distressing thoughts about harming his parents and infant sister
- He is horrified and ashamed to be having the thoughts
- He won’t tell anyone but his mother about the thoughts and is constantly confessing them to her to be sure she won’t let him do it
- He is scared to go in the kitchen where there are knives present, and he is starting to refuse to separate from his mother to go to school

Case 3

- You ask more about the new tics, and mom tells you he is now blinking his eyes in sets of 6, and he is also stepping forward and backward through doorways in sets of 6
- When asked directly, he reluctantly admits to having thoughts of harming himself but again reports feeling horrified by this and becomes tearful saying, “I don’t want to die”

OCD and Tic/Tourette Disorder

- OCD and tics/Tourette disorder are highly comorbid
- Tics can be “recruited” by OCD to become compulsions (e.g. the eye blinking in sets of 6)
- If they are overlapping, treating the OCD and tics concurrently can be more effective than only treating one or the other given the propensity for this “recruitment” and one triggering the other

OCD and Tic/Tourette Disorder

- Complex tics can look like compulsions, so it helps to discuss the underlying feeling/reason behind it
  - Tics: a premonitory urge or feeling that needs to be released/satisfied; can be outside of awareness
  - Compulsions: a need to neutralize anxiety/distress or keep an unwanted outcome from happening; purpose-driven

Treating tics: therapy

- Comprehensive behavioral intervention for tics (CBIT) is gold standard behavioral therapy
- Basics: consists of awareness training and use of a competing response
- Difficult for younger children to fully understand/execute CBIT principles
- If tics are not distressing/impairing, advise parents to be “tic neutral” because attention often reinforces them and many kids will outgrow

Treating tics: medications

- The alpha agonists guanfacine (Tenex, Intuniv) and clonidine are most commonly used and more benign than the antipsychotics
  - Guanfacine ER (Intuniv) allows once daily dosing
  - If pt also has ADHD, alpha agonists can treat both
- Antipsychotics can be helpful in certain cases of comorbidity
  - Haloperidol (Haldol) and the atypical antipsychotics risperidone (Risperdal) and aripiprazole (Abilify) all have evidence in adults for augmentation of SSRIs in OCD with poor insight
  - Risperidone and aripiprazole also have indications for irritability associated with autism spectrum disorder

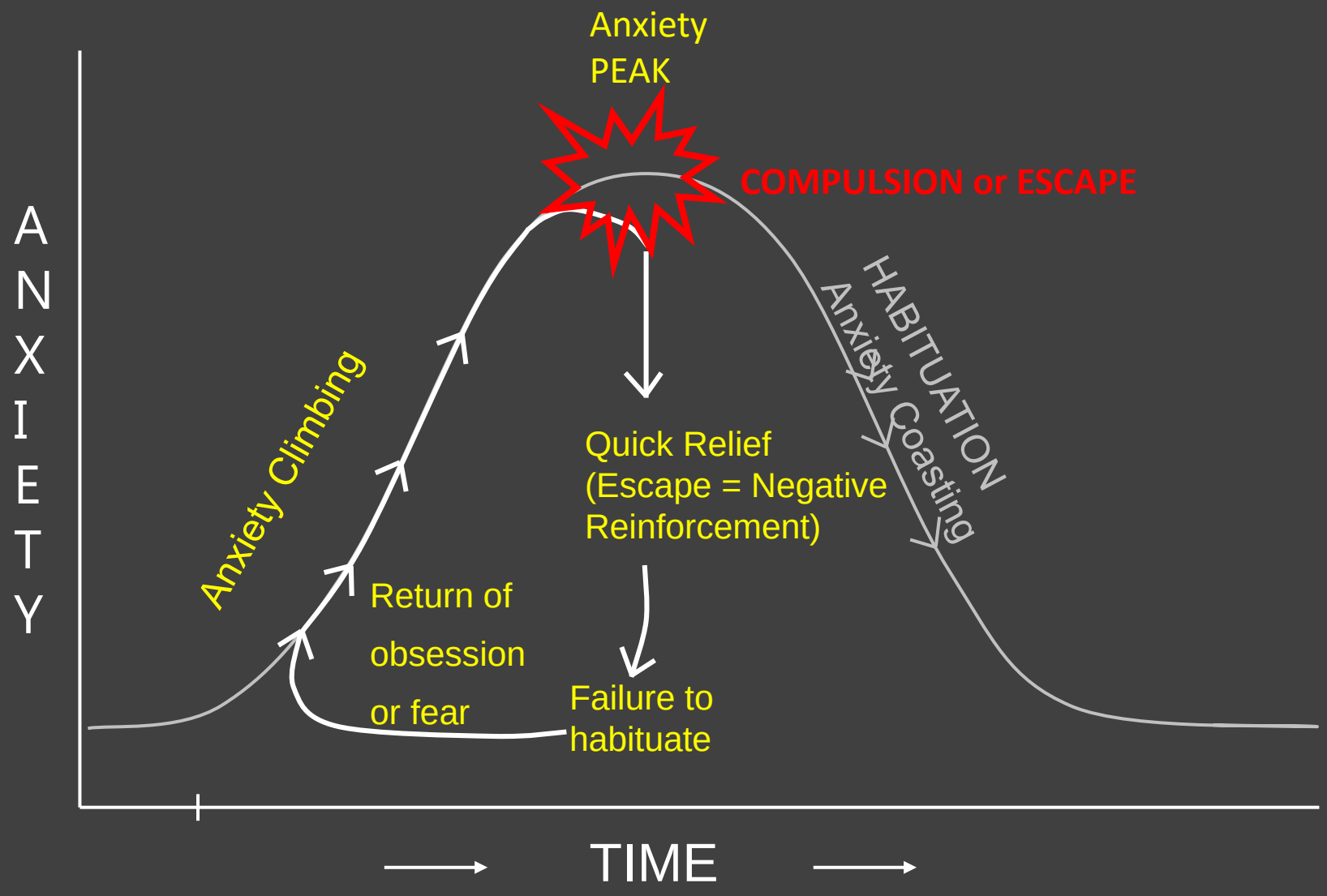
Could this be PANS/PANDAS?

- Pediatric autoimmune neuropsychiatric syndrome (PANS)/pediatric autoimmune neuropsychiatric disorder associated with Strep (PANDAS)
- “Sudden onset” OCD and/or tics plus separation fears are consistent with some of the cardinal features

But…

- PANS/PANDAS is exceedingly rare and patients usually have an encephalopathic or other neurologic signs
- Regular child onset OCD is often sudden, and tics wax and wane and tend to peak around ages 9-11 yo
- PLUS, **there is no proven efficacious treatment other than the standard treatment for OCD or tics**
- If they have strep or another infection, treat it as you normally would (a ***time-limited course of antibiotics***, NOT long term)
- ***Do not delay*** standard treatment of OCD and/or tics
- If there is something weird and they are not responding to standard treatment for OCD and/or tics, consider referring to PANS expert

The Anxiety Cycle (for Parents)



Hair pulling & skin picking

- Habit reversal therapy (HRT) is gold standard behavioral treatment
  - Basics: awareness training, stimulus control, competing response
- Promising “new” treatment: N-acetylcysteine
  - The same one used in acetaminophen overdose
  - Mechanism: glutamate modulation
  - RCTs in adults support the use of NAC as follows:
    - 600 mg BID x2 weeks then increase to 1200 mg BID
    - Doses as high as 3000 mg daily have been used
    - Minimal side effects, most often nausea, smells/tastes bad
    - **Note**: RCT in pediatric population failed to replicate the robust findings in the adult studies, so stay tuned
- SSRIs can be useful if there is a comorbid anxiety or depressive disorder exacerbating the pulling/picking, but multiple RCTs have shown they do NOT help the picking/pulling itself

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