



Pediatric Town Hall 4/13/22

Management of Anxiety and Depression in Children and Adolescents

The Joint Heart Program, a collaboration of Kentucky Children's Hospital and Cincinnati Children's, is jointly ranked by *U.S. News and World Report*.





Agenda:-

Discuss current state of mental health in kids and adolescents & review screening tools:

Dr. Mandakini Sadhir, Chief, Division of Adolescent Medicine

Introduce non-pharmacologic interventions to integrate into primary care:

Dr. Meghan Marsac, Pediatric Psychologist, Division of Pediatric Palliative Care

Introduce pharmacologic interventions to integrate into primary care:

Dr. Amy Meadows, Director, Division of Child and Adolescent Psychiatry





Current state of mental health in children and adolescents & review screening tools

Dr. Mandakini Sadhir, MD FAAP
Chief and Medical Director
Division of Adolescent Medicine
Department of Pediatrics
Kentucky Children's Hospital

Mental health during COVID

Acute on chronic public health crisis

Children and adolescent susceptible to worsening mental health due to

- Increase in social isolation/sheltering in place
- Remote schooling
- Family related stressors due to unemployment, unstable housing, family sickness or loss (>140000 Children in US reported to be orphan between April 2020- June 2021)
- Lack of access to healthcare services

CDC- Adolescent Behaviors and Experience Survey

- Approx. 1 in 3 high school students experience poor mental health most of the time or always during COVID
- Forty four percent experience persistent feelings of sadness or hopelessness
- Prevalence of poor mental health was higher in female, LGBTQ students
- 19.9% had seriously considered attempting suicide and 9% had attempted suicide
- More than half students experience emotional abuse, >10% reported physical abuse LGB more likely to report physical abuse
- Nearly a third of black students reported not enough food in their home

ER visits for Mental health

FIGURE 1. Weekly number of emergency department visits* for overall mental health conditions† among children and adolescents aged 0–17 years, by sex — National Syndromic Surveillance Program, United States, 2019–2022

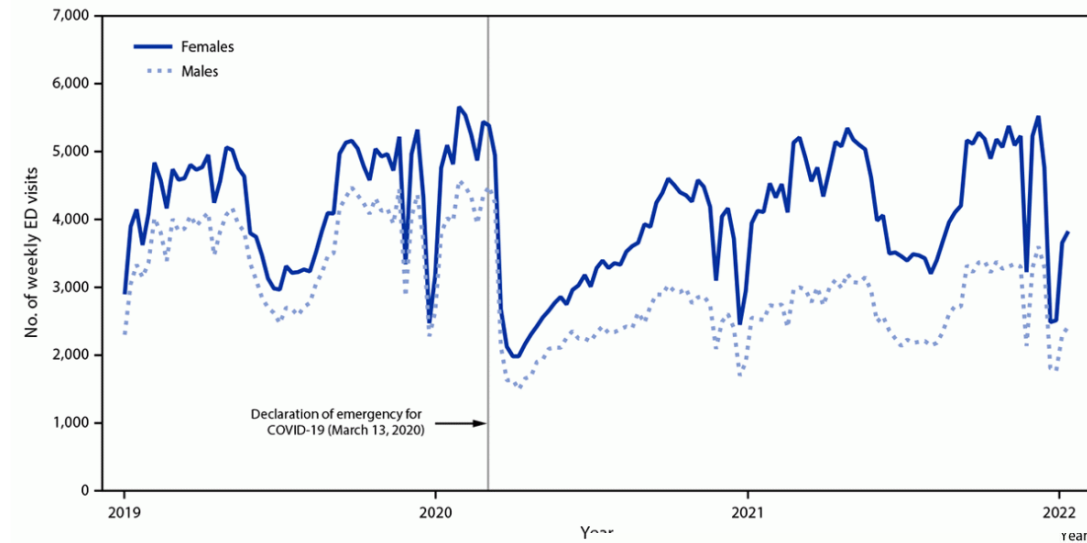
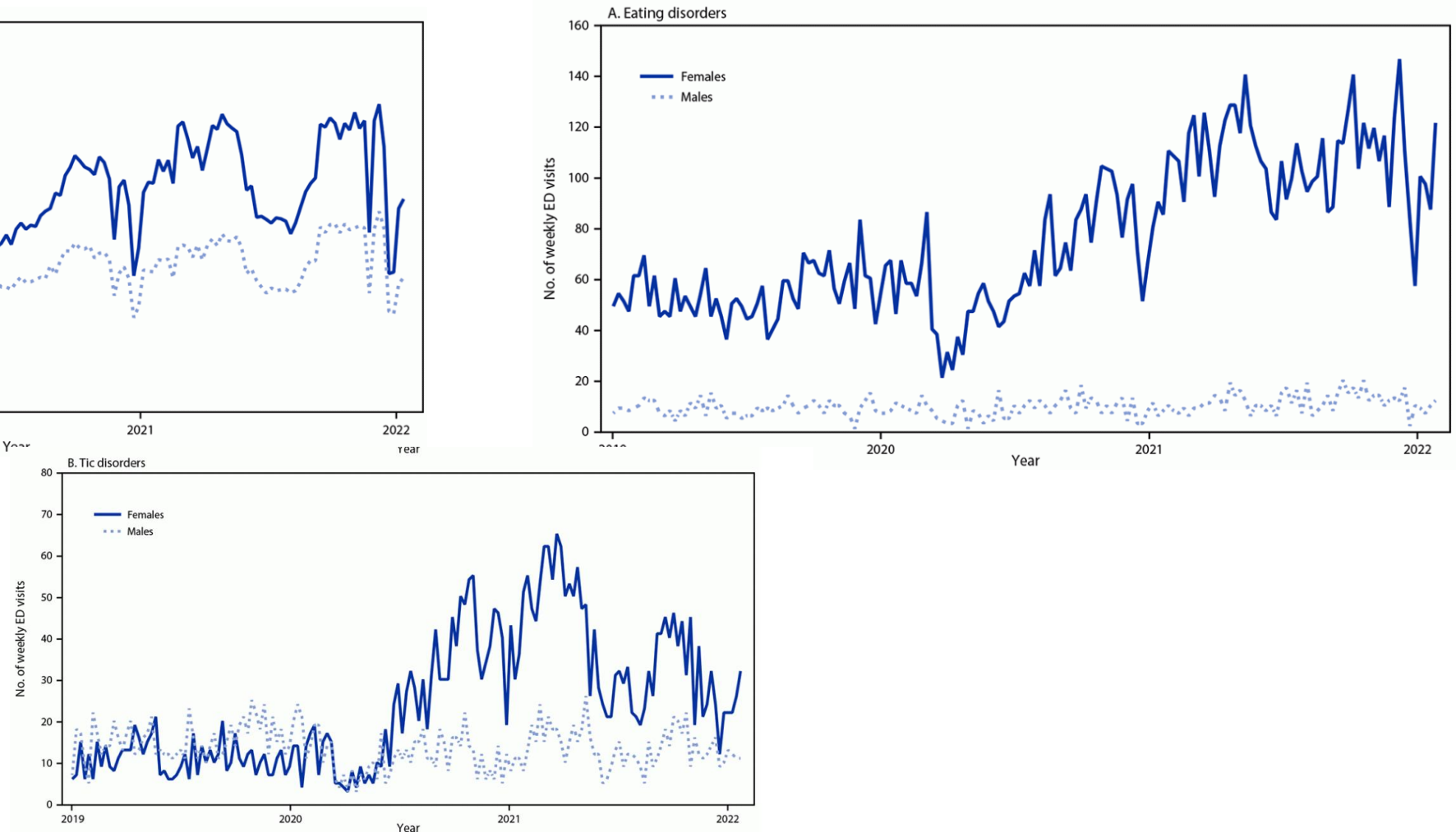


FIGURE 2. Weekly number of emergency department visits* associated with eating disorders† (A) and tic disorders (B)† among adolescents aged 12–17 years, by sex—National Syndromic Surveillance Program, United States, 2019–2022



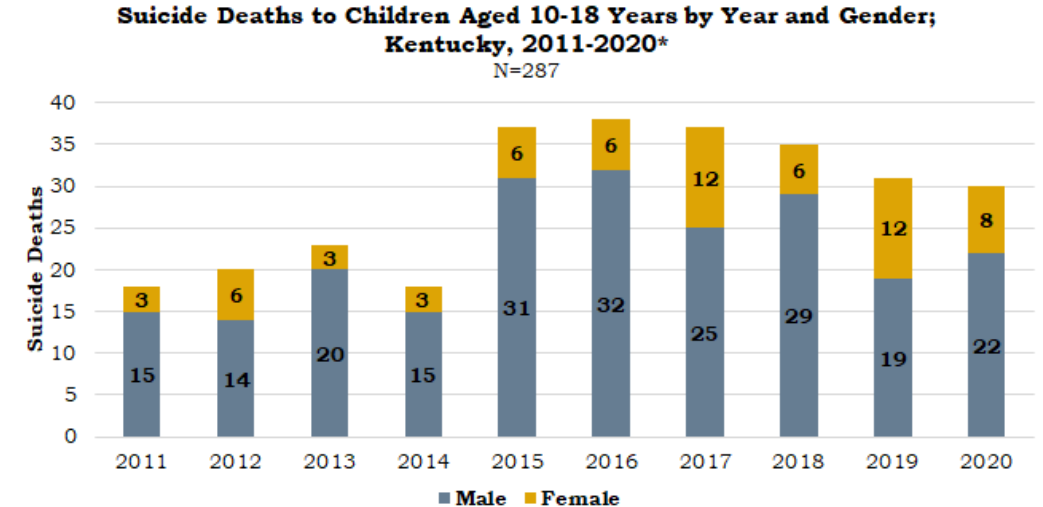
Depression and Anxiety prevalence

Pre- Pandemic vs During Pandemic

Generalized anxiety 11.6% vs 20.5%
Depression symptoms – 12.9% vs 25.2%

Suicidality...

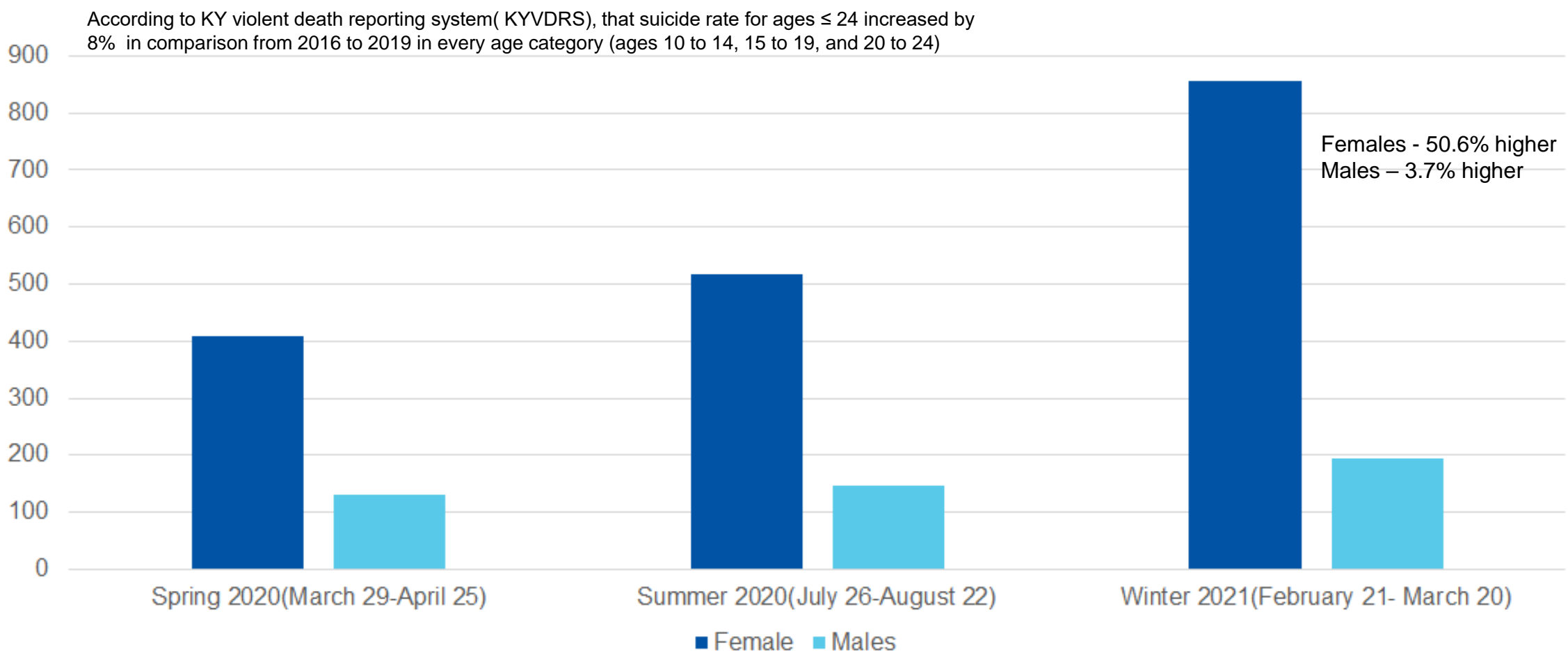
- Suicide is second cause of death among 10-24 years (it became 2nd most common for 10-14 years in 2016)
- Fastest growing rates among 10-14 years
- Significant racial disparity. Suicide rates among black youth 13 and younger is twice that for white youth
- In KY, while ED visits for self-harm decreased for ages<24 years, there was 8% increase in inpatient hospitalization.



Data Source: Kentucky Office of Vital Statistics, Death Certificate Data, Years 2011-2020
*All data are preliminary and subject to change. Data points are not limited to KY residents and also include out-of-state residents who died within KY.

Mean weekly counts of emergency department visits for suspected suicide attempts among persons aged 12–17 years

National Syndromic Surveillance Program — United States, March 29, 2020–March 20, 2021



Contact with primary healthcare provider prior to suicide for ages <25 years

- 71% (66%-75%) had contact in **last 1 year**
 - 66% had contact in **last 3 months**
 - 33% had contact in **last 1 month**
 - **30% one week prior to suicide**

Social Media use during Pandemic

The Common Sense Census: Media Use by Tweens and Teens, 2021

Use of screen media is up 17% for tweens and teens since the start of the pandemic.



Media use grew faster in the last two years than it did in the four years prior to the pandemic.

Overall, boys use more screen media than girls.

Black and Hispanic/Latino children use screens more than White children.

And children in higher-income households use screens for entertainment less than children in middle- and lower-income households.

Total entertainment screen use per day (average)



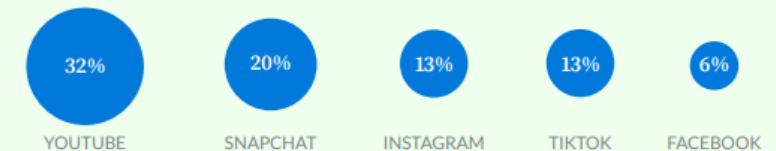
Average daily entertainment screen use, 2021

■ Tweens ■ Teens

When forced to choose, more teens prefer YouTube over other popular platforms.*



If you had to pick one site you didn't want to live without, which would it be?**



* Among the 79% of 13- to 18-year-olds who use social media and online videos at least once a week.

** Top 5 responses

Challenges of Internet use

- Cyberbullying
 - Odds of suicidal ideation was 3.1 times greater in teens who experienced cyberbullying as compared to traditional face-face bullying
 - Cyber victims and cyberbully victims were significantly more likely to report depression and social anxiety
- Sexting
 - Associated with higher likelihood of being sexually active and engaging in high-risk behaviors including unprotected sex, substance use
- Problematic internet use/Internet addiction
 - Growing concern, prevalence varies worldwide
 - Using validated screening tool for pediatrics, prevalence estimated to be 9-11%
 - Ongoing studies are underway to evaluate impact of COVID

Screening

- Suicidality
 - CSSRS –Columbia Suicide Severity Rating scale
<https://suicidepreventionlifeline.org/wp-content/uploads/2016/09/Suicide-Risk-Assessment-C-SSRS-Lifeline-Version-2014.pdf>
 - ASQ (Ask Suicide- Screening questions) <https://www.nimh.nih.gov/research/research-conducted-at-nimh/asq-toolkit-materials>
- Depression
 - [PHQ 9 Modified for Teens](#) 11-17 years
 - [Beck Depression Inventory](#)- ≥13, 21 self-report items
 - [Child Depression Inventory](#) 7-17 years old, Child, parent and teacher version
 - [CESD](#) ≥6, 20 self-report items
- Anxiety
 - GAD 7 – 1-17 years
 - SCARED (child and parent version) ≥8

Addressing Mental Health Concerns in Pediatrics: A Practical Resource Toolkit for Clinicians, 2nd edition

American Academy of Pediatrics

PRACTICE TOOLS

Mental Health



Mental Health Tools for Pediatrics

The aim of this compilation is to help you determine what tools might be most appropriate for each stage of screening, evaluating, and treating pediatric mental health needs.

The following table is a compilation of tools that are potentially useful at each stage of a clinical process through which mental health content can be integrated into pediatric care. This process is depicted by "Mental Health Algorithm With Detailed Steps," also included in this toolkit. Several points about the table bear noting.

- The sequence of tools within each section does not reflect the recommendation or preference of the American Academy of Pediatrics or the editors for one tool over another.
- In a number of instances, there are options for using a tool at more than one place in the process. In these instances, a full description accompanies the first mention. Subsequent mentions of the tool include only the tool abbreviation and any reference numbers. In addition to facilitating access to further reading, this setup assists users in locating the tool's full description where it appears in the table.
- Included in the table, under the heading of "Parent and Family General Screening," are several tools that screen for social determinants of health. For more social determinants of health tools, see the Screening Technical Assistance & Resource Center at <https://screeningtime.org/star-center/#/screening-tools>.



Introduce non-pharmacologic interventions to integrate into primary care

Dr. Meghan Marsac, Pediatric Psychologist, Division of
Pediatric Palliative Care

Goals of Brief Therapeutic Interventions

Emerging symptoms of mild to moderate severity

- Improve the patient's functioning
- Reduce distress in the patient and parents
- Potentially prevent a later disorder

Identified as needing mental health

- Overcome access barriers
- Manage symptoms / distress while awaiting for higher level of care
- Monitor well-being while awaiting higher levels of care

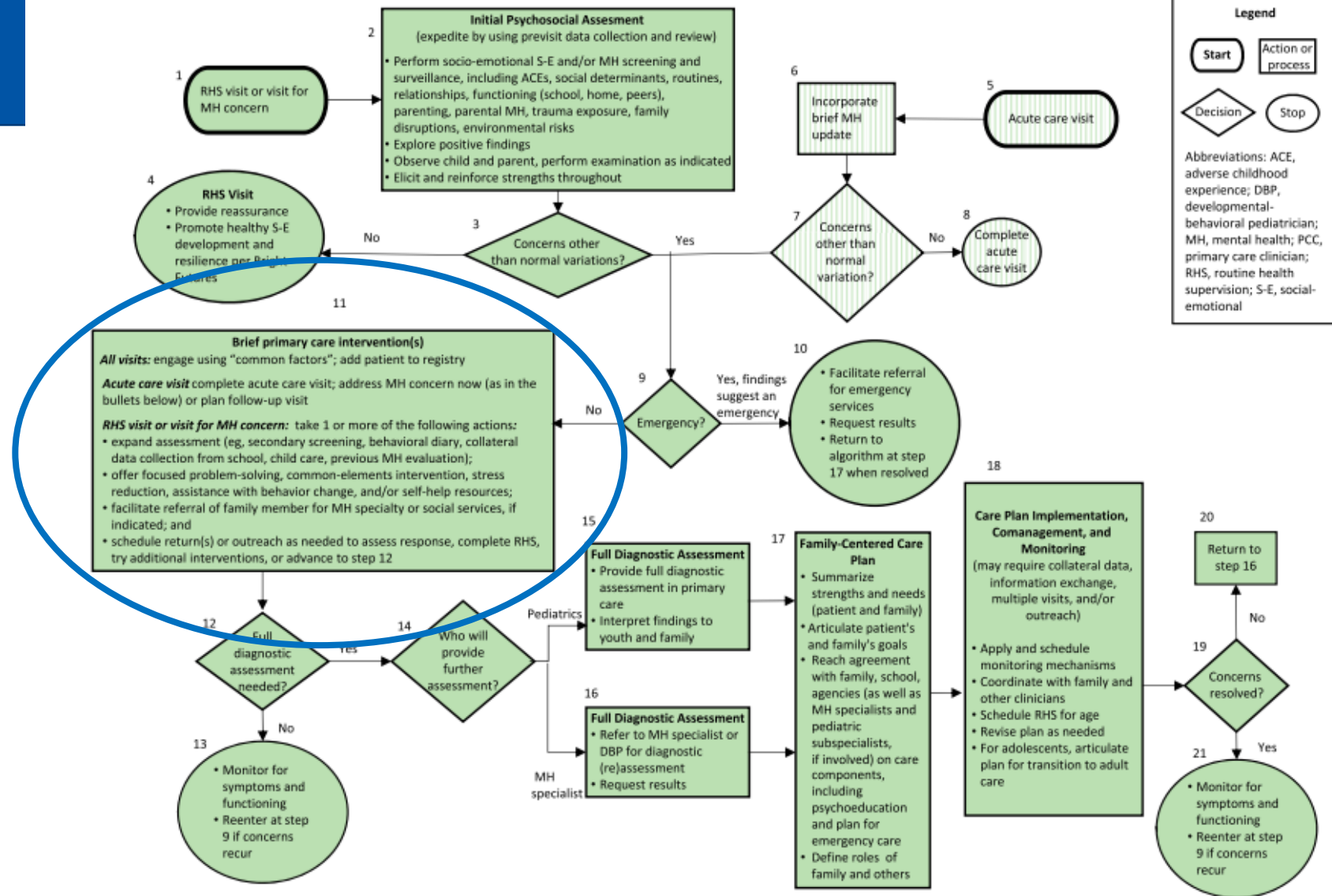


FIGURE 1

Mental health (MH) care in pediatric practice. ACE, adverse childhood experience; RHS, routine health supervision; S-E, social-emotional.

Goals of Brief Therapeutic Interventions

Brief primary care intervention(s)

All visits: engage using “common factors”; add patient to registry

Acute care visit complete acute care visit; address MH concern now (as in the bullets below) or plan follow-up visit

RHS visit or visit for MH concern: take 1 or more of the following actions:

- expand assessment (eg, secondary screening, behavioral diary, collateral data collection from school, child care, previous MH evaluation);
- offer focused problem-solving, common-elements intervention, stress reduction, assistance with behavior change, and/or self-help resources;
- facilitate referral of family member for MH specialty or social services, if indicated; and
- schedule return(s) or outreach as needed to assess response, complete RHS, try additional interventions, or advance to step 12

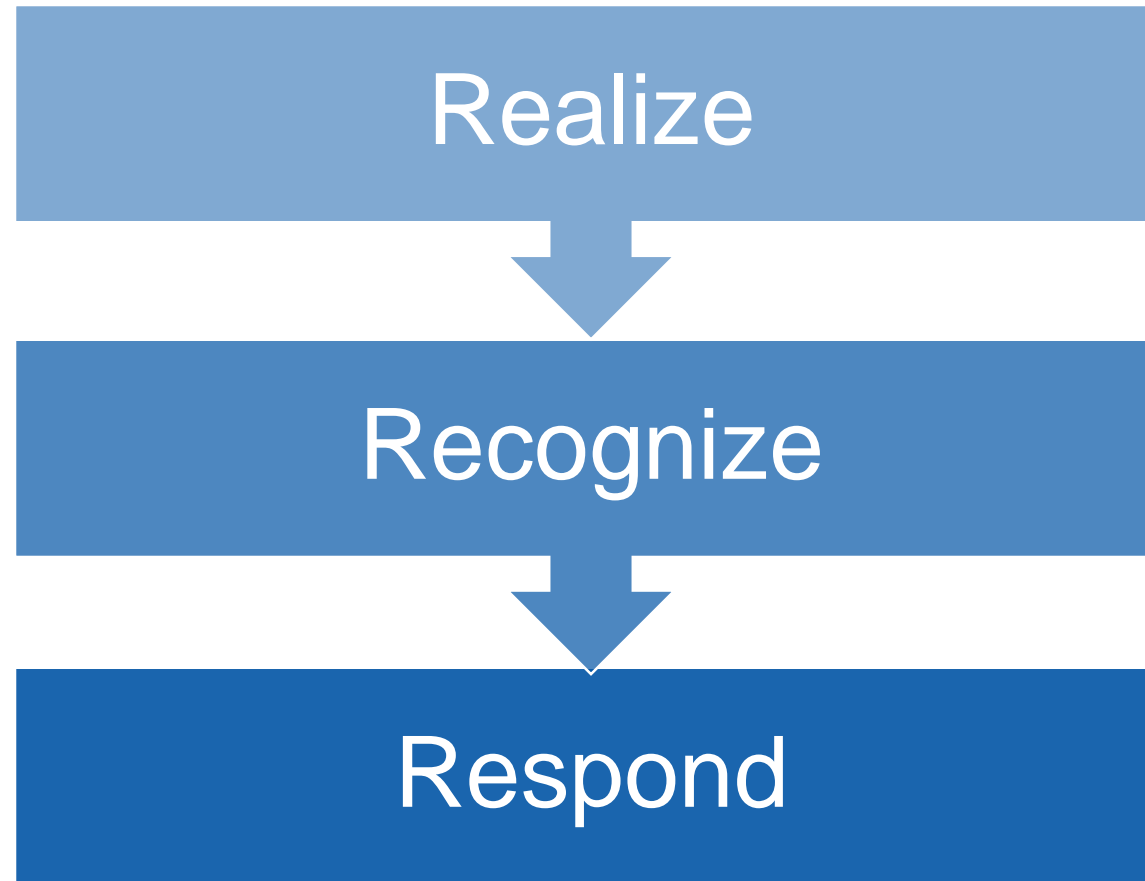
Quick Strategies: Common Factors Approach

- H = Hope
- E = Empathy
- L² = Language, Loyalty
- P³ = Permission, Partnership, Plan



Quick Strategies: Trauma-Informed Care

SAMHSA definition of Trauma-Informed Care



Quick Strategies: Psychoeducation

- What is anxiety / depression?
- What are the symptoms?
- When to get more help?
- Anticipatory guidance:
 - What to expect
 - Normative anxiety / depression
 - How to support child / basic coping



Quick Strategies: Psychoeducation Resources

American Academy of Child & Adolescent Psychiatry

- <https://www.aacap.org/>

American Academy of Pediatrics

- <https://www.aap.org/en/patient-care/mental-health-initiatives/mental-health-resources-for-families/>

National Alliance of Mental Illness (NAMI)

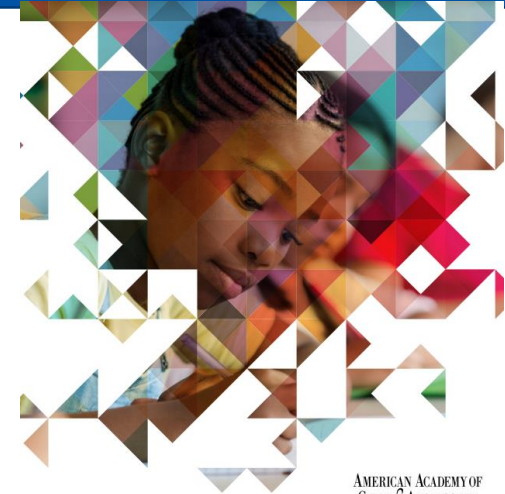
- <https://nami.org/Home>

Eastern Kentucky University

- <https://counselingcenter.eku.edu/101-ways-cope-stress>

National Suicide Hotline

- <https://suicidepreventionlifeline.org/>
- 800-273-8255 (ENGLISH) / 888-628-9454 (SPANISH)



**Anxiety Disorders:
Parents' Medication Guide**

A FAMILY GUIDE

*What Families Need to Know
about Adolescent Depression*



nami
National Alliance on Mental Illness

**AMERICAN ACADEMY OF
CHILD & ADOLESCENT
PSYCHIATRY**
WWW.AACAP.ORG

**AMERICAN
ACADEMY OF
PEDIATRICS**

FAMILY HANDOUTS

**Managing Depression or Sadness:
Tips for Families**

What is depression?

Depression is another word for feeling sad over a period of time. Feeling sad is normal. It does not result from lack of coping ability or strength. Certain events in a child's life understandably make them feel sad, such as if a close friend moves away or a pet dies. But when a child's feelings of sadness get in the way of normal activities such as sleeping, eating, going to school, and playing with friends, it's time to take action.

Children experience depression differently than adults. Your child may not be able to tell you they are feeling sad, and they may not even feel sad at all. Instead, you may notice your child seems irritable, frustrated, restless, discouraged, or tired. These are some other common signs of depression in children.

- Either having trouble sleeping or sleeping too much
- Crying a lot
- Not wanting to eat or eating too much
- Losing interest in things they used to care about
- Cutting themselves off from family and friends

How can I help my child at home?

These tips are helpful for all children, but they can be especially helpful for children with depression. Parenting is a busy job, so use your judgment about which tips make the most sense for your family.

Connect with your child

- **Set aside one-on-one time every day.** Even just 10 minutes can make a big difference. Try cooking dinner together, playing a board game, or taking a walk or a bike ride together.
- **Find out what's worrying your child,** because stress can make depression worse. For example, if your child seems unhappy when they get home from school, you might ask, "Did anything happen today at school that you'd like to talk about?"

Ask about your child's friends and social activities. Inquire about online relationships, as well as in-person relationships.

- **Praise your child** and make them feel good about themselves. For example, "You did a great job on that homework assignment!" or "Thank you for helping me with the dishes. I'm so lucky to have your help."
- **Learn new skills together to help with worries (anxiety),** such as deep breathing or thinking in a more positive way. Websites such as Inner Explorer (www.innerexplorer.org) may be helpful.

Encourage your child to have fun and be social

- **Set aside time for activities** your child enjoys, such as watching a baseball game or going on a bike ride.
- **Help your child plan time with friends and family.** Children who feel depressed may cut themselves off from the people they care about, which can make depression worse.
- **Limit "social" screen time.** Communicating by text or social media isn't a substitute for spending time with friends or family in person, and it can actually make your child feel more out of touch. Monitor and limit how much time your child spends on texting or on social media until they are feeling better. If your child is separated from friends by distance or other circumstances, such as COVID-19 (coronavirus disease 2019) restrictions, demonstrate and support live virtual conversations to the extent possible (for example, telephone, Zoom).

Build healthy habits

- **Get active!** Encourage your child to be active for at least an hour every day. This activity can include playing outside, joining a sports team or an activity at the YMCA, biking or walking to school, or dancing at home to favorite music. Physical activity is good for mental health.
- **Do the things you have enjoyed in the past.** Enjoying yourself is an important part of self-care.

Quick Strategies: Psychoeducation Resources : There's an APP for that



MindShift CBT - Anxiety Relief 12+

Manage anxiety & be mindful
Anxiety Canada Association
Designed for iPad

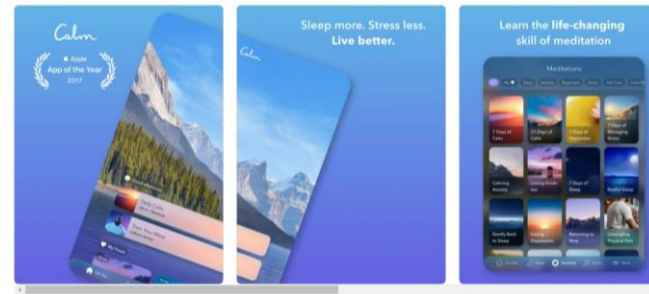
★★★★★ 4.3 • 262 Ratings

Free



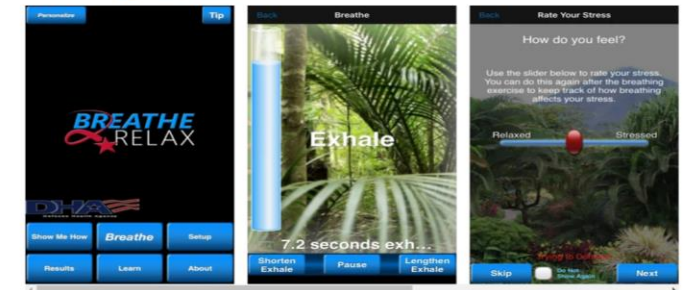
Calm 4+
Sleep & Meditation App, Relax
Calm.com
Designed for iPad
#5 in Health & Fitness
★★★★★ 4.8 • 1,450 Ratings
Free - Offers In-App Purchases

Screenshots iPad iPhone Apple TV Apple Watch



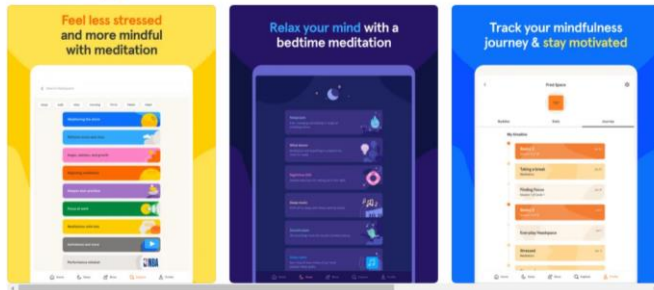
Breathe2Relax 4+
National Center for Telehealth & Technology
Designed for iPad
★★★★★ 4.3 • 252 Ratings
Free

Screenshots iPad iPhone Apple Watch



Headspace: Mindful Meditation 4+
Relaxation for Sleep & Stress
Headspace Inc.
Designed for iPad
#25 in Health & Fitness
★★★★★ 4.9 • 871,581 Ratings
Free - Offers In-App Purchases

Screenshots iPad iPhone Apple Watch iMessage



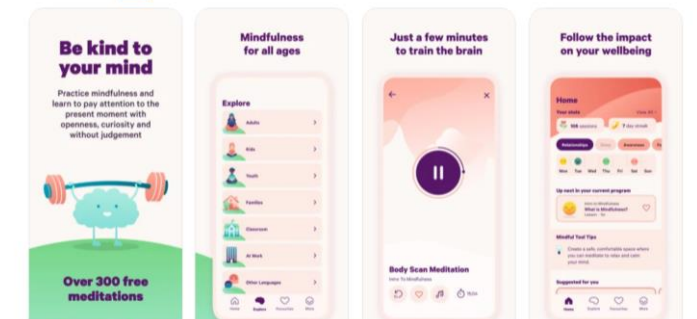
Insight Timer - Meditation App 12+
Meditation for Sleep & Anxiety
Insight Network Inc
Designed for iPad
#73 in Health & Fitness
★★★★★ 4.9 • 203,36 Ratings
Free - Offers In-App Purchases

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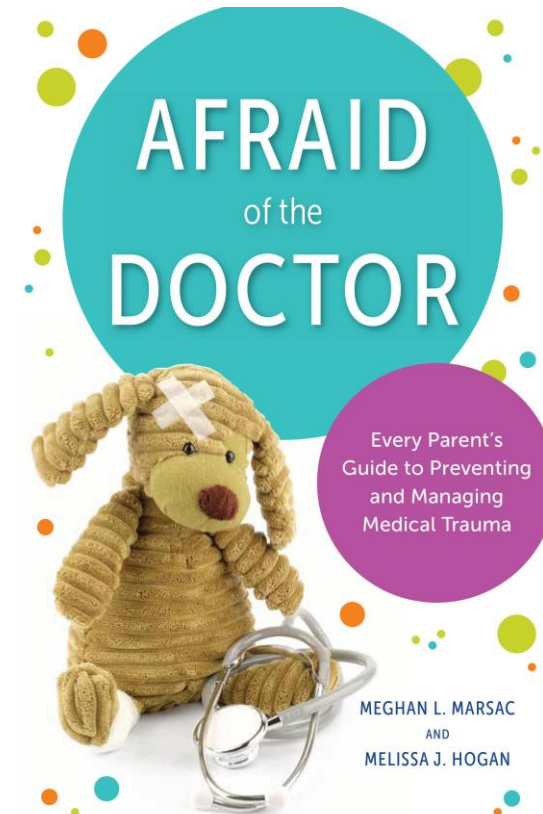
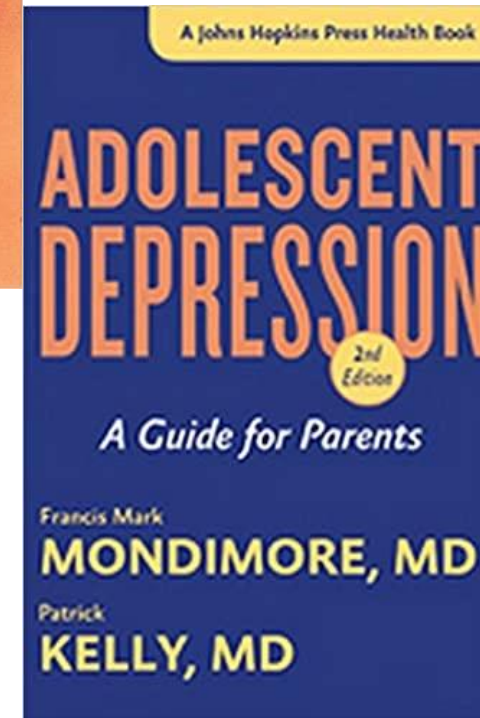
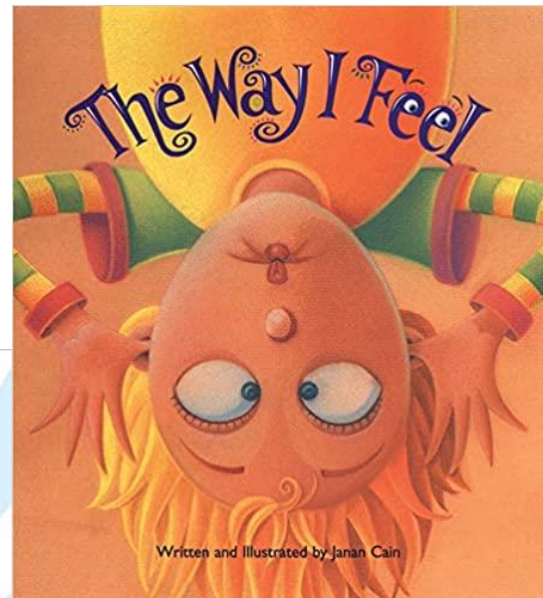
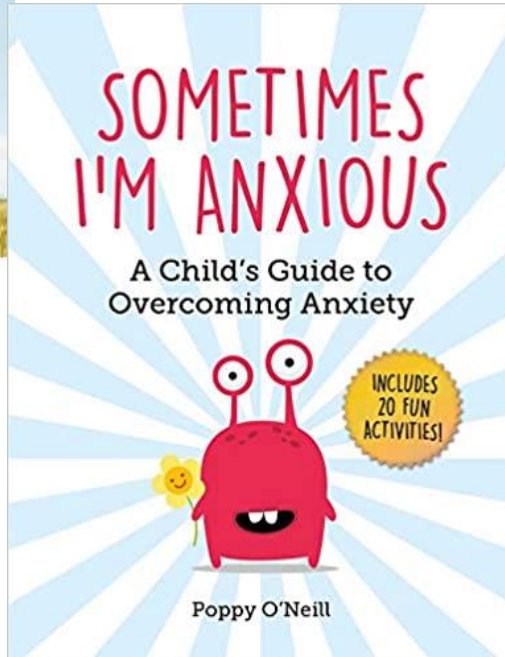
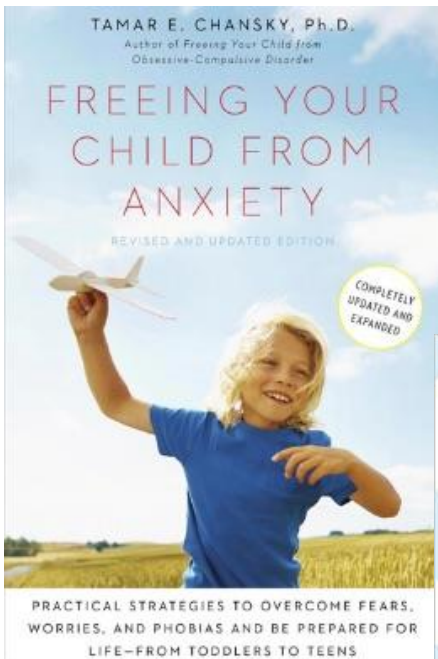


Smiling Mind 4+
Meditation for all ages
Smiling Mind
★★★★★ 4.9 • 437 Ratings
Free

Screenshots iPhone iPad



Books



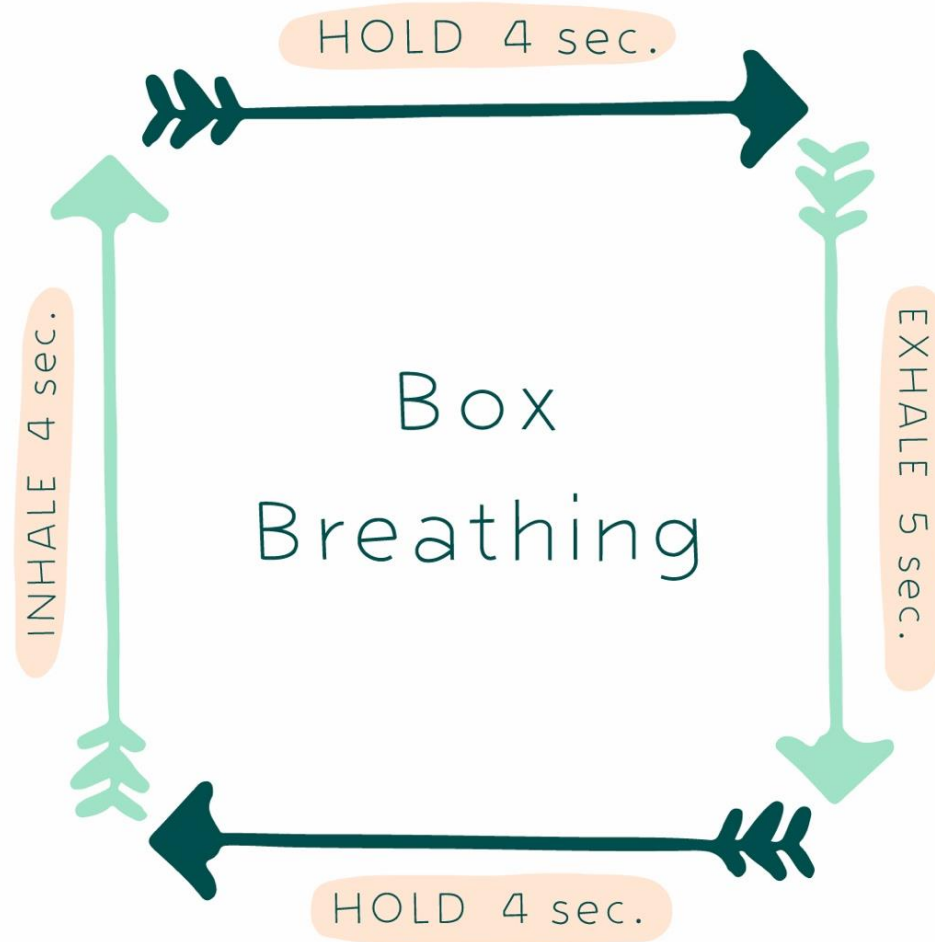
Disclosure: Dr. Meghan Marsac is co-author of *Afraid of the Doctor* and receives royalties from sales.

Quick Strategies: Identify and Encourage **Social Support**

- Who do you go to for help?
- Who is in your corner? Who can you count on?
- Who do you enjoy being around?
- How to you talk to your friends (e.g., text, snapchat, etc)?
- Try to identify at least 1 adult – parent, grandparent, friend's parent, teacher



Quick Strategies: **Diaphragmatic Breathing** / **Belly Breathing** / **Box Breathing**



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Quick Strategies: Distraction

Best as a short-term solution

Some ideas:

- Blow bubbles
- Blow a pinwheel
- Watch video
- Listen to music

Pitfalls:

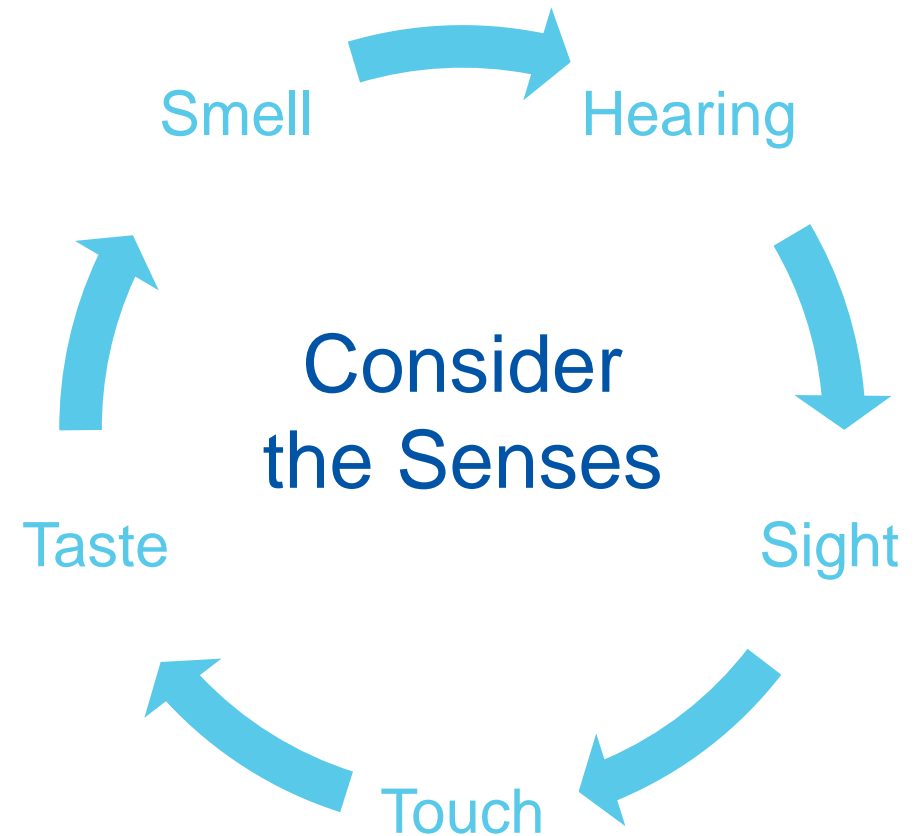
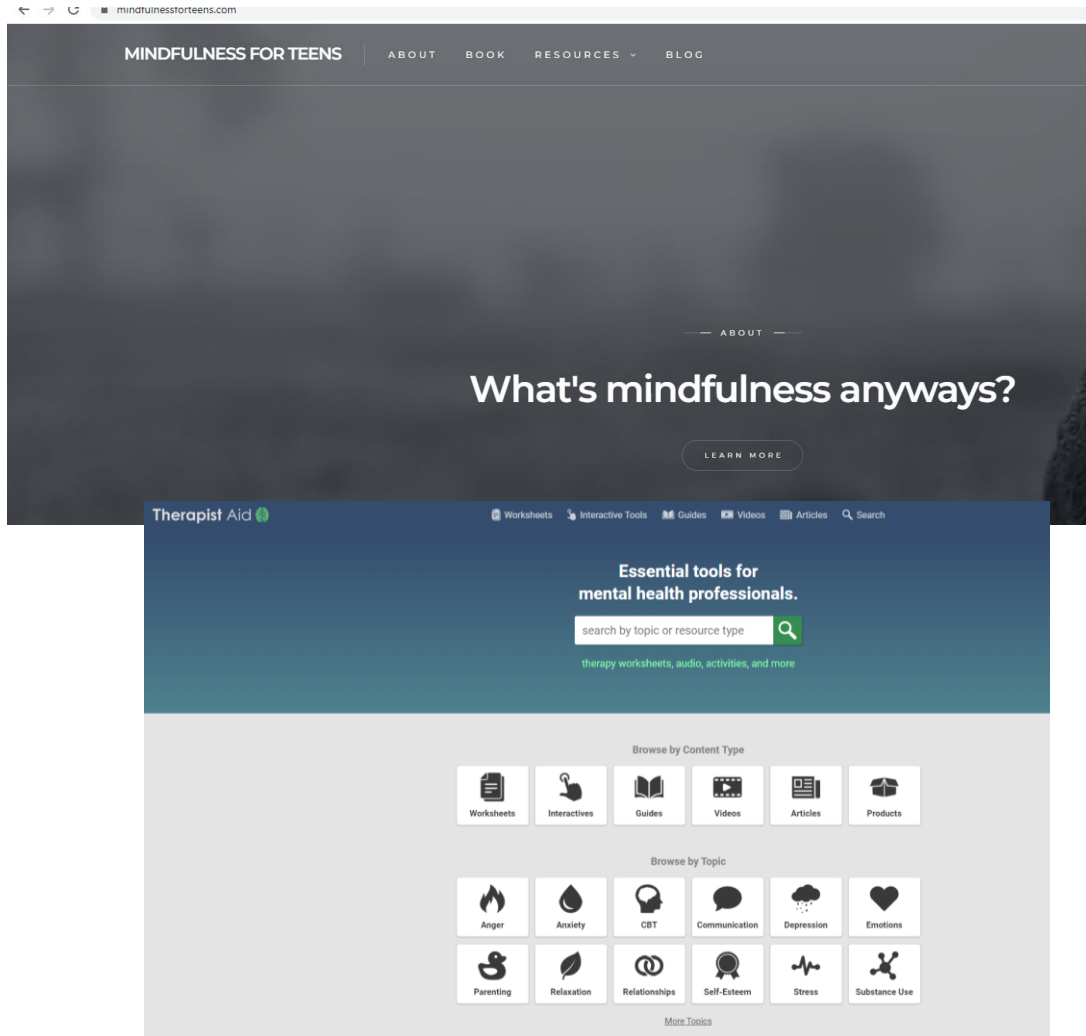
- Overstimulation
- Tending toward avoidance

Squirrel!

- Doug from the movie *UP*



Quick Strategies: Mindfulness



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Introduce pharmacologic interventions to integrate into primary care:

Dr. Amy Meadows, Director, Division of Child and Adolescent Psychiatry



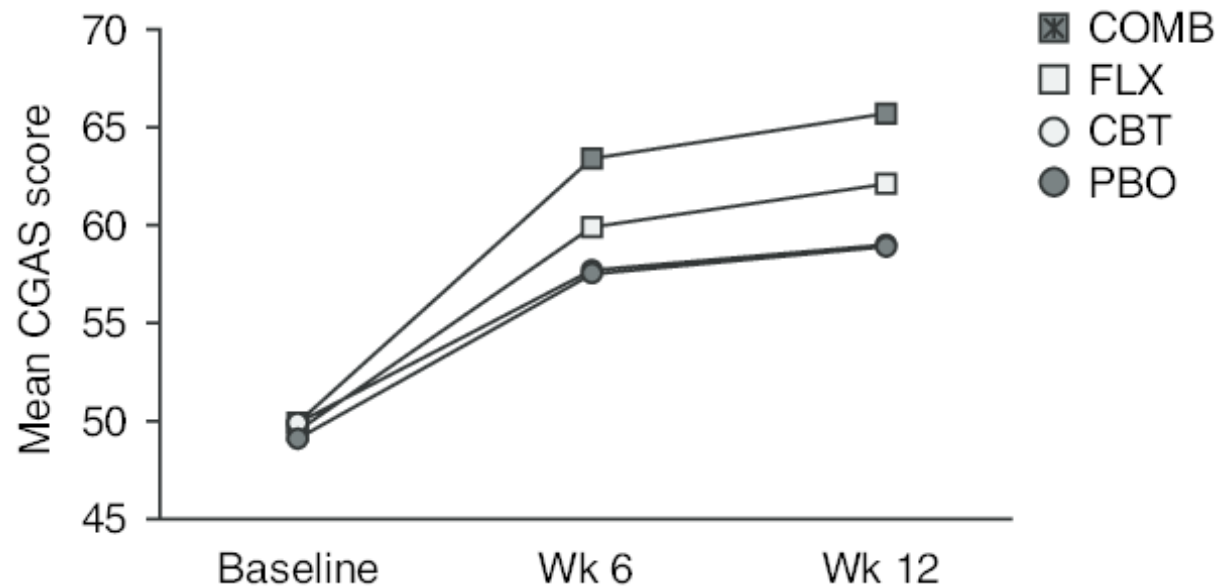
First-Line Treatments for Depression



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- Medication
 - SSRIs
- Psychotherapy
 - Cognitive Behavioral Therapy
 - Interpersonal Psychotherapy
 - Family Therapy
- Address Comorbidities
 - Insomnia
 - Anxiety

Treatment for Adolescents with Depression Study (TADS)

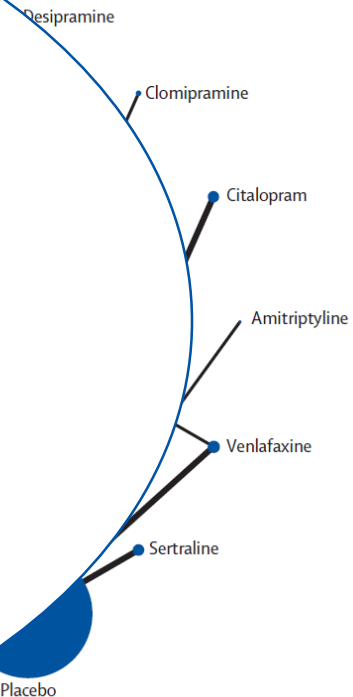


- N=439 MDD Adolescents, 12wk, doses 10-40mg.
- Combination (Fluoxetine + CBT) most effective
- Clinical Global Improvement: Combo (71%) > Fluoxetine (61%) > CBT (43%) > Placebo (35%).
- Suicidal Ideation in 29%

Meta-analysis 2016...

- Found AGAIN that tricyclics are ineffective for adolescent depression.
- Fluoxetine is effective for adolescent depression.
- Other SSRIs are “ineffective” in this analysis

Summary: **Fluoxetine is effective** for adolescent depression.



Medications for Depression

- Most evidence for fluoxetine (Prozac)
- Starting dose range from 2.5 mg (young, pre-pubertal children) to 10mg (most adolescents)
- Dose increases Q2 weeks to 20-80mg/day
- Most common side effect is GI (nausea, stomach upset, diarrhea)
- Small risk of agitation, secondary mania
- Increases risk of suicidal ideation (from 2% to 4%) during initiation

First-Line Treatments for Anxiety

Medication

- SSRI

Psychotherapy

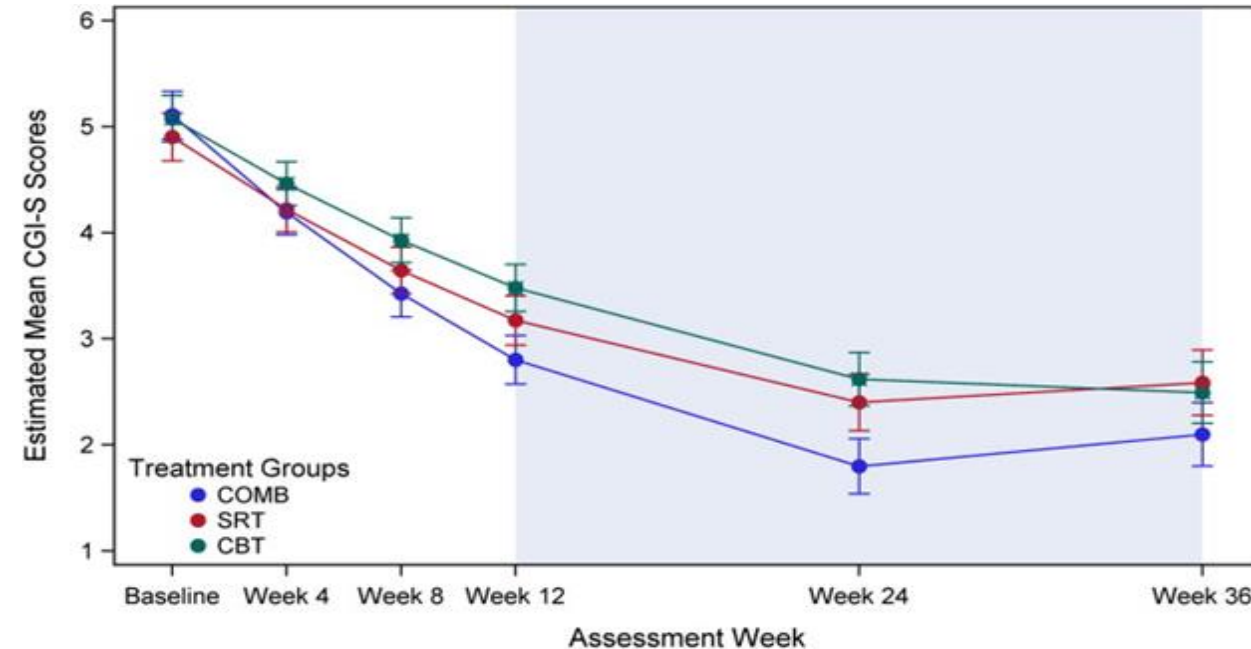
- Cognitive Behavioral Therapy (i.e., Coping Cat)
- Behavioral Therapy/Exposure
- Family Therapy

Address Comorbidities

- Obsessive-Compulsive Disorder
- Eating Disorders
- Post-Traumatic Stress Disorder



Child and Adolescent Anxiety Multimodal Study (CAMS)



- N=488 (7y-17y) Anxiety
- CBT (14 sessions) or Sertraline
- **Combination (SSRI + CBT) most effective**
- Clinical Global Improvement: Combination 81% > CBT 60% > SSRI 55% > Placebo 24%

Medications for Anxiety

- Most evidence for sertraline (Zoloft)
- Starting Dose 10mg (liquid) to 12.5/25mg (tablet)
- Dose increase Q2weeks to goal 100-250mg
- Same general side effect profile as fluoxetine

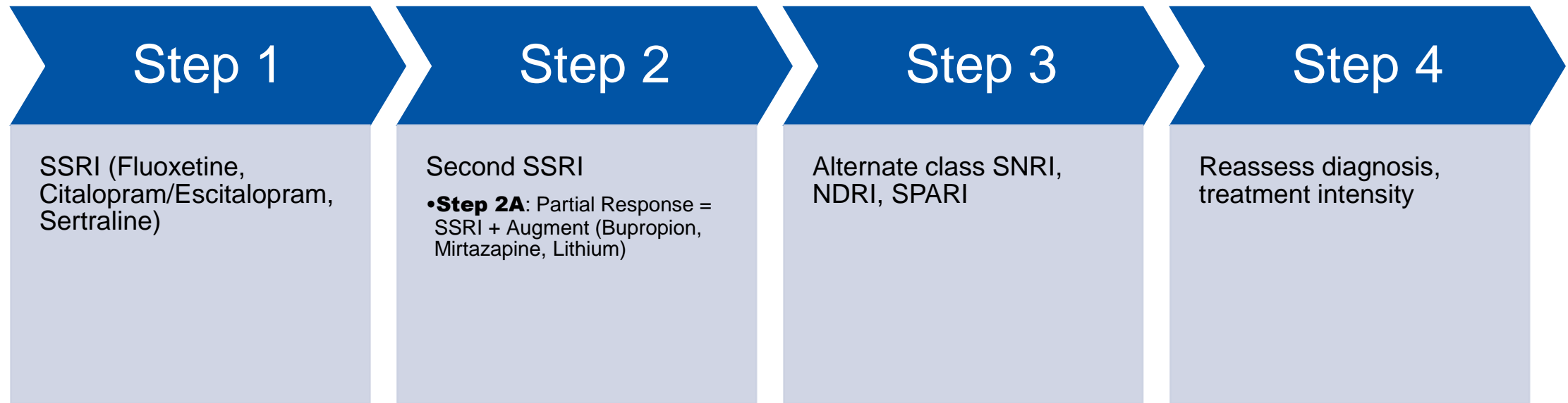


Medications for Anxiety and Depression

- SSRIs are first-line for both anxiety (generalized anxiety disorder, social phobia, separation anxiety disorder, OCD) AND depression
- Fluoxetine, Sertraline, Citalopram/Escitalopram
- Consider:
 - Family history
 - Half-life (fluoxetine has a 2 week half-life)
 - Side effects



Stepwise Approach to Medication



- *Keys: Start low, go slow*
- *Titrate medications to effect or tolerability*
- *A trial of medications is an “adequate” dose for 8-12 weeks*

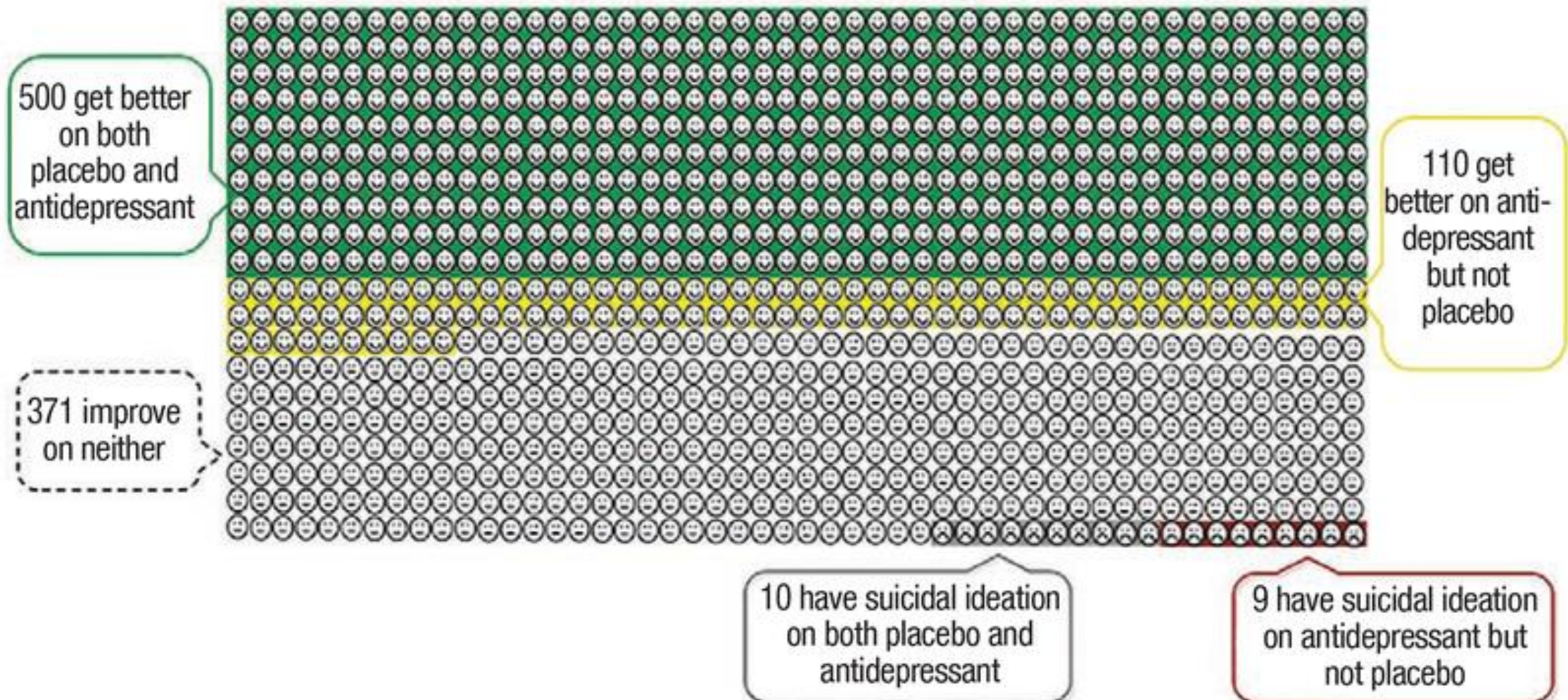
Black Box Warning

FDA Black Box warning regarding increased suicidality in kids and young adults

- Meta-analysis has shown that the NNT for MDD = 10, OCD = 6, Anxiety = 3
- Number needed to harm (NNH) = 143

FDA recommends weekly face-to-face evaluations for first month of treatment, then every other week for a month, then monthly, then as clinically indicated. NICE guidelines recommend q1-2 weeks for at least 4 weeks.

Cates plot of antidepressant effects of MDD



What can we say about SSRI and suicide risk?

- SSRI treatment overall significantly decreases suicidal ideation and suicide attempts in youth
- Post-mortem studies have not demonstrated a link between SSRI and suicide
- Overall, 14% increase in suicide rate after black box warning decreased SSRI prescribing in US
- Population studies show an inverse correlation between antidepressant use and youth suicide (more SSRI, less suicide)

When to stop medications?

- Continue SSRI for 6-12 months after achieving remission
- BUT should be individualized to the situation with a risk/benefit and shared decision making



Safety Planning



Elements of a Safety Plan

1

**Coping techniques
for potential future
suicidal thoughts**

2

**Environmental
safety and means
restriction**

3

**Identify support
people**

4

Provide resources

- **Suicide Hotline 1-800-273-TALK**
- **New Vista 1-800-928-8000**

Environmental Safety

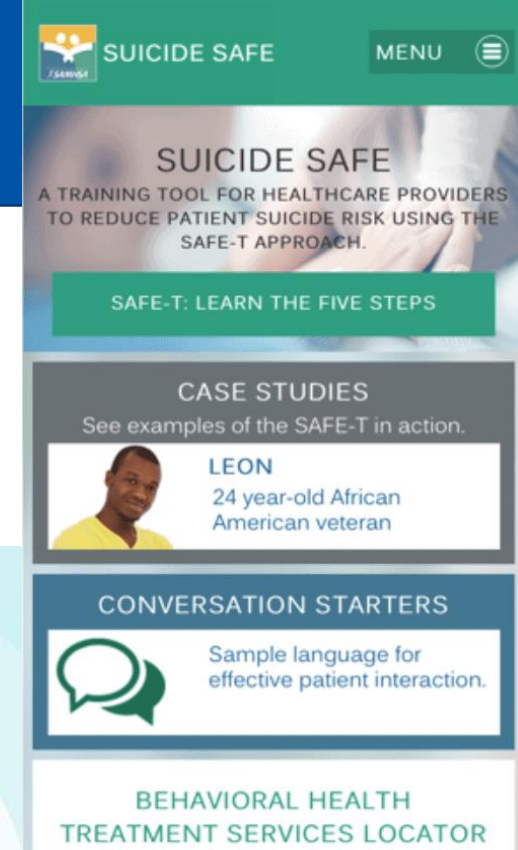
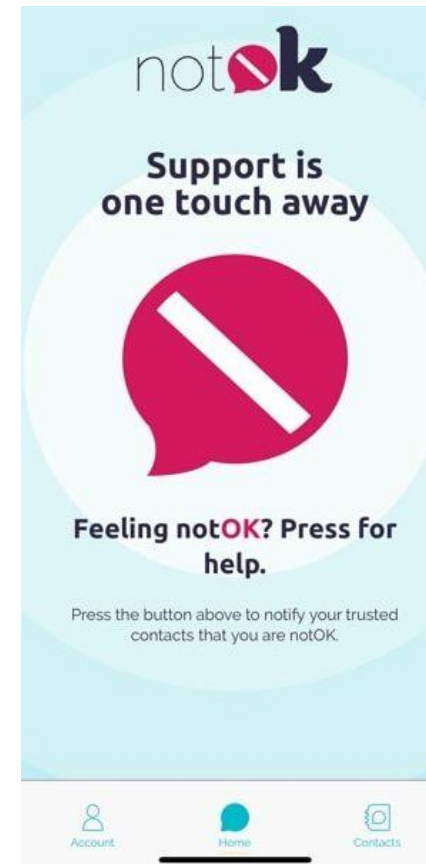
- **Means restriction:** Safe storage or removal of firearms, medications (including OTC), sharps, etc.



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Suicide Safety Apps

- Suicide Safe (for HCPs)
 - <https://store.samhsa.gov/product/suicide-safe>
- Suicide Safety Plan
 - <https://www.suicidesafetyplan.app/>
- NotOK
 - <https://www.NotOK.app>
- BeyondNow



a theme
e it up? Choose a
more personal
erience.

When to refer depression or anxiety?

- Refer to a psychiatrist or a higher level of care with:
 - Psychosis
 - Coexisting substance abuse
 - Multiple medication trials
 - Severe functional impairment
 - Acute suicidal thoughts, plan, or intent



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Resources at UK (and Beyond)

UK Psychiatry : 859-323-6021

UK Adolescent Medicine:859-323-5643

•Integrated mental health support available for 10 and older adolescent established for primary care, reproductive health, LGBTQIA, eating disorder, nutritional management, high risk behaviors

UK Inpatient Adolescent Behavioral Health Unit Intake: 859-323-9523

UK MDs: 800-888-5533 or 859-257-5522

UK ERs: Kentucky Children's Hospital/Chandler and Good Samaritan

New Vista – includes mobile crisis services: 1-800-928-8000