# Evaluation and Management of Pediatric Anxiety in the Primary Care Clinic

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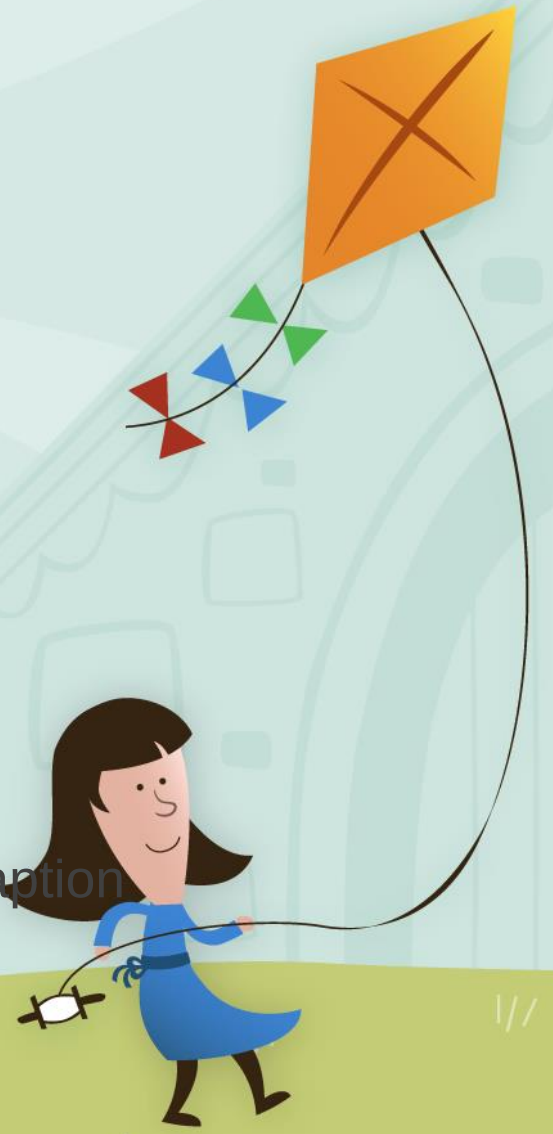
NO FINANCIAL DISCLOSURES

*WILL DISCUSS OFF LABEL USE OF MEDICATIONS

# DISCLOSURES (and my primary sources of anxiety)

# Objectives

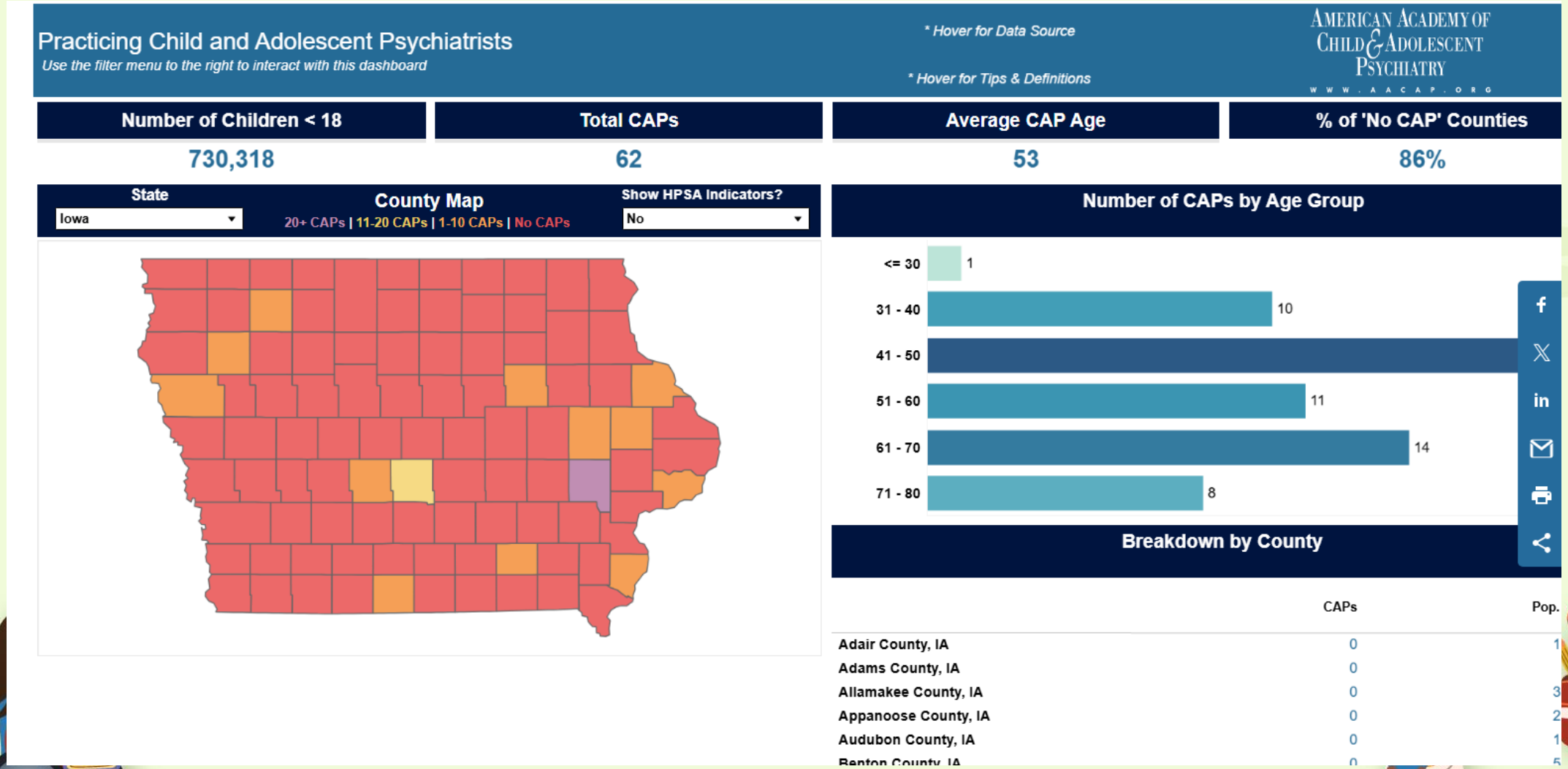
- Discuss common presentations of anxiety in the pediatric population
- Discuss screening tools for anxiety that can be used in primary care office
- Review pharmacologic treatment options for pediatric anxiety disorders



- Caption

# Why is this important to primary care providers?

- https://www.aacap.org/AACAP/Advocacy/Federal_and_State_Initiatives/Workforce_Maps/Home.aspx



# Psychiatry Access

- Total of 14 counties in Iowa that have ANY licensed psychiatrists
  - 7 counties have 1
  - 2 counties have 2
  - 1 county has 3
  - 1 county has 5
  - Johnson, Polk and Scott with >5

- Not expecting numbers to get better:
  - 3 Counties in NW Iowa – Average age of the psychiatrists is 68
  - Best case scenario is 4-5 CAP graduates per year, rare for all of them to stay in Iowa.


# Most kids will present to PCP first

Stomach aches, headaches, fatigue, insomnia, or chief complaint of anxiety

# Case 1

14 yo presents with complaint of fatigue – has not been sleeping well for about 2 weeks.

2 weeks ago had a fall out with a friend and has been excluded from friends and teased at school and on social media.

GAD 7 Completed with score of 14

No prior history of any mental health concerns; No family history of MH dx

Medically Healthy

What would you do?

# Case 2

16 yo presents due to school attendance issues, due to complaining he is “sick”.

Made varsity basketball team and is taking 2 AP classes this semester.

No prior diagnosed MH conditions, but parents describe him as a kid who always asked a lot of questions – needed to know what was going on, when/where/who (and still would often want to skip activities)

GAD 7 Score of 11

Medically Healthy

Mother and older sister both have diagnoses of anxiety disorders.

What do you do?

# Case 3

6 yo brought in by parents due to frustration over frequent tantrums.

Noted to have been cautious/shy as a toddler – slow to walk (wanted to hold on to things); slow to warm up to people (and upset when parents would leave)

Will lay on floor screaming when it's time to get ready for school (will do other tasks, such as cleaning up toys when asked); some stalling with bedtime (seemingly extra drinks of water, checks for monsters under the bed, etc)

Kindergarten teacher has sent home notes that while she is overall polite, she seems short tempered with her peers and is not making friends easily.

No prior mental health diagnoses; had chronic ear infections leading to tympanostomy tubes, otherwise healthy

Adopted at birth, minimal family history known

What is this and what do we do about it?

# Developmental factors

- Infants – developmentally normal stages of anxiety related to strangers
- Toddlers – normal fears of imaginary creatures and separation anxiety
- School Age – bad things happening, performance, health

- Some degree of anxiety is normal, biologic and protective process
- Becomes problematic when it causes impairment

# Background Information

- Prevalence rates of 6-20% of at least 1 anxiety disorder in childhood
  - Separation anxiety (~5 % lifetime prevalence)
  - Social phobia (~7% in general pop, lower in younger kids and rises in teens)
  - Generalized anxiety disorder (~3-5 % prevalence)
  - Specific Phobia (~5-15% depending on age; higher in teens)
  - Obsessive Compulsive Disorder (~2-4% prevalence)
  - Selective Mutism  (<1% prevalence)
  - Panic Disorder  (2-5% prevalence, although <1% before age 14)
  - Post Traumatic Stress Disorder (up to 15% of children who experience trauma)

# Basics of Evaluation

- Screening can include measures such as GAD 7 – general questions about impairment (treatment is more dependent on degree of impairment rather than number of symptoms)
- Screen for Child Anxiety Related Disorders (SCARED) – available online and has parent and child report forms (41 questions each) – screens for Panic, GAD, Separation Anxiety, School Avoidance and Social anxiety
    - https://www.aacap.org/App_Themes/AACAP/docs/member_resources/toolbox_for_clinical_practice_and_outcomes/symptoms/ScaredChild.pdf

-Multidimensional Anxiety Scale for Children (thorough but not free)

# GAD 7

## GAD-7

| Over the last 2 weeks, 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 |

Total Score ___ = Add Columns ___ + ___ + ___

If you checked off any problems, 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 |
|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ |

# SCARED

- 41 questions
  - Parent and child versions

| | 0<br>Not True or Hardly Ever True | 1<br>Somewhat True or Sometimes True | 2<br>Very True or Often True | |
|---|---|---|---|---|
| 1. When I feel frightened, it is hard to breathe | O | O | O | PN |
| 2. I get headaches when I am at school. | O | O | O | SH |
| 3. I don't like to be with people I don't know well. | O | O | O | SC |
| 4. I get scared if I sleep away from home. | O | O | O | SP |
| 5. I worry about other people liking me. | O | O | O | GD |
| 6. When I get frightened, I feel like passing out. | O | O | O | PN |
| 7. I am nervous. | O | O | O | GD |
| 8. I follow my mother or father wherever they go. | O | O | O | SP |
| 9. People tell me that I look nervous. | O | O | O | PN |
| 10. I feel nervous with people I don't know well. | O | O | O | SC |
| 11. I get stomachaches at school. | O | O | O | SH |
| 12. When I get frightened, I feel like I am going crazy. | O | O | O | PN |
| 13. I worry about sleeping alone. | O | O | O | SP |
| 14. I worry about being as good as other kids. | O | O | O | GD |
| 15. When I get frightened, I feel like things are not real. | O | O | O | PN |
| 16. I have nightmares about something bad happening to my parents. | O | O | O | SP |
| 17. I worry about going to school. | O | O | O | SH |
| 18. When I get frightened, my heart beats fast. | O | O | O | PN |
| 19. I get shaky. | O | O | O | PN |
| 20. I have nightmares about something bad happening to me. | O | O | O | SP |

# Further evaluation factors:

- Almost all anxiety disorders list a 6 month duration of symptoms in the DSM to meet criteria
  - Separation anxiety in children – only 4 weeks of impairing symptoms required
  - Panic Disorder – can be diagnosed after 1 month of psychological symptoms (in addition to the physiologic ones)
- Symptoms not better explained by a medical condition (asthma, heart condition, thyroid, etc should be on differential list)
- Not better explained by another mental health diagnosis or not caused by use/withdrawal of substances.

# Treatment

- First line treatment for all anxiety diagnoses (that are mild to moderate in terms of impairment) is **therapy**.

- Avoid reinforcing avoidance at all costs!
  - If school avoidant – primary treatment is going to school
  - For example in OCD – mainstay of treatment is exposure and response prevention
  - ***No Benzos***
    - AACAP speaks against this in practice parameters

- Then consideration of medication interventions.

# Medications


- SSRI are considered first line medications for youth ages 6-18 with anxiety disorders
- SNRI are considered as a secondary option for medications

# Pharmacologic Interventions

- FDA Indicated Treatments
  - **Fluoxetine (Prozac) –indicated for OCD in ages 7+ - recommended dose 10-60 mg**
  - **Sertraline (Zoloft) indicated for OCD in ages 6+  dose 25-200 in age 6-12 years and 50-200 mg in the 13-17 year group**
  - **Escitalopram - (no indication for anxiety, but has 12+ indication for depression)**
  - **Fluvoxamine (Luvox) – indicated for OCD in ages 8+ - dose 50-200 mg in age 8-12; 50-300 mg in ages 13-17**
  - **Clomipramine has indication for OCD in age 10+ - recommended dose 25-100 mg daily**
  - **Duloxetine – indicated for GAD in age 7+ - recommended dose 30-60 mg daily**

  - Non FDA but evidence based
  - Sertraline – RCT for Social phobia and GAD; open label for Panic
  - Fluoxetine – RCT for GAD and Social phobia; Open label for Panic
  - Venlafaxine-  has positive RCT for  Social phobia and GAD as young as age 6.

Mirtazapine – Open label studies for social anxiety and PTSD

Atomoxetine – double blind study for comorbid ADHD and Social anxiety

Buspar - single blind study for anxiety disorders (ages 6-14 yo) -

| Name | Starting Dose | Titration | FDA Tested Range | Reality (Clinical) Dosing |
|---|---|---|---|---|
| Citalopram (Celexa) | 10 mg daily (5 mg young or sensitive) | 10 mg x 1 week then 20 mg | n/a | 10-40 mg daily |
| Escitalopram (Lexapro) | 5 mg daily | 5 mg x 1 week then 10 mg daily | 10-20 mg daily | 10-20 mg daily |
| Fluoxetine (Prozac) | 10 mg daily (5 mg young or sensitive) | 10 mg x 1 week then 20 mg | 10-20 mg for MDD 20-60 mg for Anx | 10-80 mg daily |
| Fluvoxamine (Luvox) | 25 mg daily QHS | 25 mg x 1 week then 50 mg daily | 50-200 mg for kids 50-300 mg for adol (split dose BID beyond 50 mg) | 50-300 mg daily |
| Sertraline (Zoloft) | 25 mg daily (12.5 mg young or sensitive) | 25 mg x 1 week then 50 mg daily | 25-200 mg daily | 25-200 mg daily |
| Paroxetine | **10 mg daily** | | n/a | 10-60 mg daily |

| Name | Starting Dose | Titration | FDA Tested Range | Reality (Clinical) Dosing |
|---|---|---|---|---|
| Mirtazapine (Remeron) | 7.5-15 mg QHS | | n/a | 15-45 mg QHS |
| Venlafaxine (Effexor) | 37.5 mg daily | | n/a | 75-225 mg daily |
| Duloxetine (Cymbalta) | 30 mg daily | | 30-60 mg daily | Can go up to 120 mg daily |

| Name | Starting Dose | Titration | FDA Tested Range | Reality (Clinical) Dosing |
|---|---|---|---|---|
| Buspirone (Buspar) | 2.5-5 mg daily | | n/a | 20 mg (under 13yo)<br>60 mg (13+) |
| Atomoxetine (Strattera) | 0.5 mg/kg/day | (comborbid ADHD and anxiety) | n/a | 1.2-1.4 mg/kg/day |
| Hydroxyzine | 5-10 mg once PRN | (PRN for acute anxiety) | | Max 25 mg QID<br>(may lose efficacy if used routinely > 4months) |

RCTs and AACAP Practice Parameter do not support or find efficacy for use of Benzodiazepines for pediatric anxiety disorders.

# What Do We Do?

- Teen with acute symptoms in context of social stress with no past/family history?

- Teen with some chronic symptoms, acutely worse with stress, and positive family history?

- Young child with BROAD differential : anxiety, ADHD, ASD based on limited history??

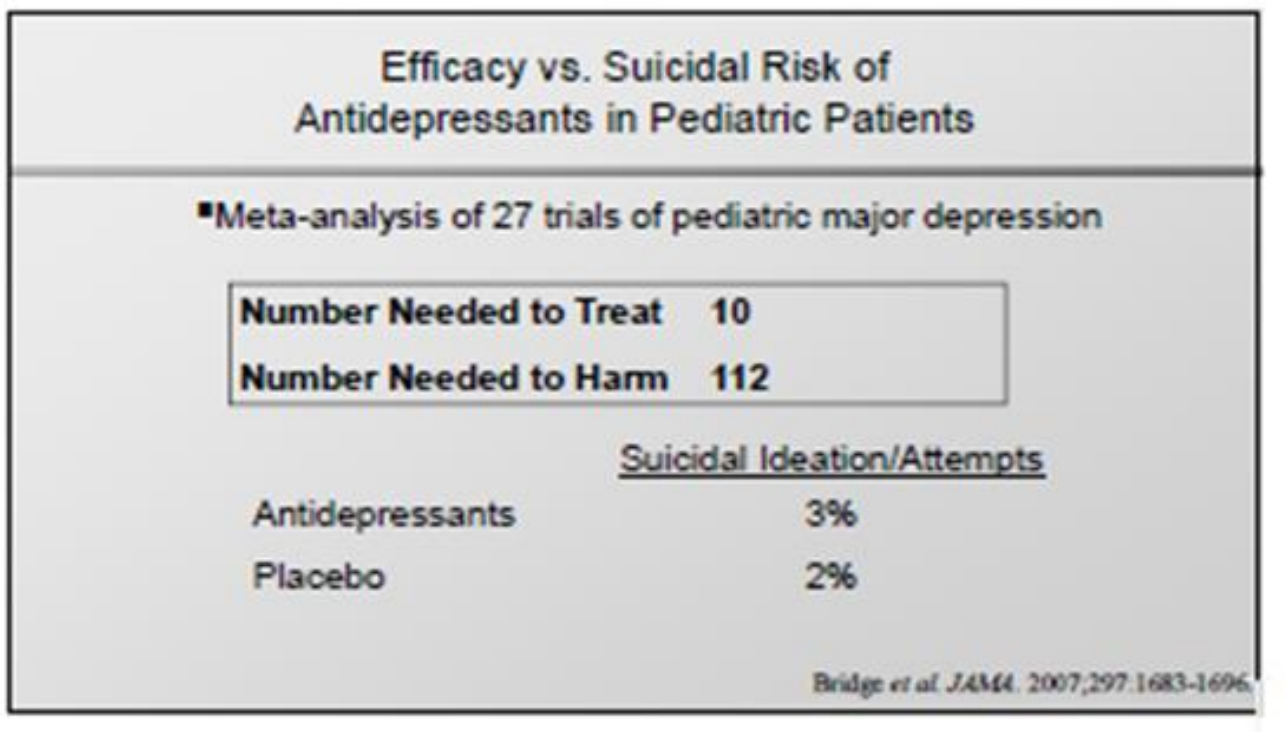
# What Do We Do?

- Teen with acute symptoms in context of social stress with no past/family history?
  - Therapy (+/- melatonin or hydroxyzine for sleep)

- Teen with some chronic symptoms, acutely worse with stress, and positive family history?
  - SSRI and/or therapy

- Young child with BROAD differential : anxiety, ADHD,  and/or ASD, based on limited history??
  - Ongoing evaluations (OT/Speech/Psych), likely would benefit from therapy; might add SSRI if limited improvement

# What about that pesky Black box warning?




BMJ article in 2014 discusses trend in decreased prescribing of antidepressants after BBW in 2008 and subsequent increase in suicide attempts and deaths from suicide.

# Medication Pointers

- Start low and go slow – initial dose then titrate after 1 week if tolerated; then if limited improvement after 4-6 weeks, dose can be further increased.
- Common side effects: GI (nausea, vomiting, diarrhea); headache; sleep changes, activation (restless or anxious feeling); sweating, dry mouth, sexual dysfunction
- Rare Side effects: Serotonin Syndrome, hypomania, or suicidal ideation
  - Slight increased risk of Suicidal ideation from ~2% to about 4% (in thoughts, no attempts or completions); in the mid 2000s when black box warning came out and prescriptions dropped – it was then that suicide rates went up.

# Key Studies

- AACAP has published practice parameters for Anxiety disorders (overview, PTSD, and OCD)
  - Practice Parameters (aacahttps://www.aacap.org/AACAP/Resources_for_Primary_Care/Practice_Parameters_and_Resource_Centers/Practice_Parameters.aspxp.org)
- CAMS (Child/Adolescent Anxiety Multimodal Study)
  - Multiple articles (study design, initial and follow up efficacy studies; Extended follow up study going by CAMELS – CAMS Extended Long Term study)
- POTS – Pediatric OCD Treatment study

# References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- Pediatric OCD Treatment Study (POTS) Team. Cognitive-behavior therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder: the Pediatric OCD Treatment Study (POTS) randomized controlled trial. JAMA. 2004 Oct 27;292(16):1969-76. doi: 10.1001/jama.292.16.1969. PMID: 15507582.


# Questions?

- Email: Amanda-Elliott@uiowa.edu
- Resources from AACAP:
- Facts for families:
  - https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/FFF-Guide-Table-of-Contents.aspx
- Practice Parameters:
  - https://www.aacap.org/aacap/Resources_for_Primary_Care/Practice_Parameters_and_Resource_Centers/Practice_Parameters.aspx
- UI Consult provides a toll-free (800-322-8442) referral and consultation service 24 hours a day.