The Kids are Not Alright: Evaluation and Management of Anxiety and Depression in the Pediatric Primary Care Setting

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Disclosures

- No financial disclosures
- Time 11/16
Overview

• Anxiety and depression are common concerns
• There are huge unmet needs
• Shortage of child and adolescent psychiatrists and MH providers
• Increasingly managing anxiety and depression in pediatric primary care settings
• Developmental course-opportunities for identification and intervention
• Effective treatments are available
Mental Health Facts

CHILDREN & TEENS

Fact: 1 in 5 children ages 13-18 have, or will have a serious mental illness.¹

- 20% of youth ages 13-18 live with a mental health condition¹
- 11% of youth have a mood disorder¹
- 10% of youth have a behavior or conduct disorder¹
- 8% of youth have an anxiety disorder¹

¹ This document cites statistics provided by the National Institute of Mental Health. www.nimh.nih.gov

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Impact

50%  
50% of all lifetime cases of mental illness begin by age 14 and 75% by age 24.¹

10 yrs  
The average delay between onset of symptoms and intervention is 8-10 years.¹

50%  
Approximately 50% of students age 14 and older with a mental illness drop out of high school.¹

70%  
70% of youth in state and local juvenile justice systems have a mental illness.¹

¹ This document cites statistics provided by the National Institute of Mental Health. www.nimh.nih.gov

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National Alliance on Mental Illness  
www.nami.org
## 10 Leading Causes of Death by Age Group, United States - 2016

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<th>Rank</th>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-24</th>
<th>25-34</th>
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<td>Placenta Cord, Membranes 841</td>
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**Data Source:** National Vital Statistics System, National Center for Health Statistics, CDC. Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.
CDC: Suicide Rates for Teens Aged 15–19
Tip of the iceberg

Plemmons et al. *Pediatrics*. 2018; 141(6)
Tip of the iceberg: rates of SI or suicide attempt
AACAP: Severe shortage of CAPs
AACAP workforce interactive state maps

• **North Carolina**
  – Only counties with sufficient supply are Durham (Duke) and Orange (UNC)
  – Clusters around metropolitan areas, university medical centers, and state mental health facilities

• **South Carolina**
  – Only county with sufficient supply is Charleston (MUSC)
  – Cluster in counties surrounding Columbia
Role of PCP in children’s mental health

“Pediatric primary care clinicians have unique opportunities and a growing sense of responsibility to prevent and address mental health and substance abuse problems in the medical home.”

AAP Committee on Psychosocial Aspects of Child and Family Health and Task Force on Mental Health

“By 2020-2030, it is estimated that up to 40% of patient visits to pediatricians will involve long-term chronic disease management of physical and psychological/behavioral conditions.”

“In 2020 pediatricians will need to have a wider array of skills including more in-depth knowledge of, and comfort treating, behavioral, developmental, and mental health concerns. Medical education will need to include mental health interventions, which are now an established aspect of pediatric care.”

AAP Task Force on the Vision of Pediatrics 2020
Pediatrics. 2010; 126(5): 971 - 981
Anxiety: Epidemiology

• Anxiety is one of the most common mental health disorders in children and adolescents
  – Estimates vary (6 – 20%)
  – Difficult to estimate because subthreshold anxiety can also cause significant impairment
• Risk factors: Genetics, temperament, parental modeling, parent-child interaction, trauma, illness, stressors
• Symptoms vary by age, developmental stage, and environment
• Sometimes present with fears and worries and other times with somatic complaints, difficulties with school performance, or difficulties with social interaction
Anxiety: Epidemiology

- Often unrecognized and untreated
- Girls are more likely than boys to report anxiety
- Onset often in early childhood and can become chronic
- Most commonly co-occur with other anxiety disorders and children often develop new anxiety disorders over time even if others resolve
- Untreated childhood anxiety typically persists into adulthood
- Associated with an increased risk of depressive disorders, substance abuse, and physical health problems
Developmental fears and worries

• **Infants/Toddlers/Preschool**: loud noises, dark, separation from caregiver, strangers, imaginary beings or costumes, animals

• **School Age**: separation or being alone, harm to parents, school, social situations, natural events, injury, death

• **Adolescents**: performance anxiety, school avoidance, fear of not fitting in with peers, social anxiety, health
Components of anxiety

• **Physiological** (sweating, shaking, blushing, dizziness, nausea, muscle tension)
• **Behavioral** (avoiding, protesting, crying)
• **Cognitive** (negative thoughts, expectations, worries)
• **Emotional** (feelings of fear)
Common Symptoms

• Recurring fears and worries (what if…?)
• Excessive need for reassurance
• Excessive physical complaints (e.g., stomachache or headache)
• Trouble concentrating/paying attention
• Trouble sleeping
• Fear of separation
• Fear of social situations
• Fear of leaving home
• Avoiding/refusing to go to school
• Perfectionism
DSM-5 Anxiety Diagnoses

- Separation anxiety disorder
- Selective mutism
- Specific phobias
- Social anxiety disorder (social phobia)
- Panic disorder
- Generalized Anxiety Disorder (GAD)
- Other/unspecified anxiety disorder

- Obsessive compulsive and related disorders (OCD)
- Post Traumatic Stress Disorder (PTSD)
- Acute stress disorder
- Adjustment disorder with anxiety
Child Anxiety Pearls

- Normal anxiety follows a developmental pattern
- Disorder = developmentally inappropriate, persists > 1 month, distress, impairment
- Separation anxiety occurs early
- Social anxiety and panic occur later
- Single disorders are episodic
- High degree of co-morbidity
- Co-occurring disorders tend to be more chronic
Assessment of anxiety

• High degree of co-morbidity points to the importance of careful diagnostic assessment

• Multi-source, multi-method assessment; data across settings is essential

• Requires a sensitivity to biological, developmental, cognitive, cultural, and psychosocial variables and understanding of the potential impact of ACEs
Assessment

• History
  – Symptoms
  – Severity
  – Duration
  – Impact on functioning

• Diagnostic criteria

• Targeted screening with validated screening tool
  – Parent (SCARED)
  – Child (SCARED)
  – Adolescent (age 12+: GAD-7)

• Obtain collateral information as indicated
Evidence-based treatment of anxiety

- **Cognitive-behavioral therapy (CBT):** Focuses on changing how the child thinks about his or her fear, increasing exposure to feared object or activity, and relaxation strategies such as deep breathing, muscle relaxation, and positive self-talk (repeating positive or reassuring statements to oneself). With younger children, often focus on behaviors first.

- **Exposure-based therapy:** Focuses on increasing exposure to feared object or activity.

- **Medication:** No FDA approved medications for the treatment of anxiety disorders in children, except for OCD. SSRIs most commonly used.

- **Other:** Assertiveness training, hypnosis, biofeedback.
Role of pediatrician in management

• Anticipatory guidance when children present with normal fears and worries or stressors that place them at risk for anxiety
• Emphasize that anxiety disorders are treatable
• Provide education and review evidence-based treatment options with the child and family
• Studies have shown that cognitive behavioral therapies (CBT) and medication treatments are both effective in treating anxiety disorders in youth
• Include the child and family in the treatment plan. Parent involvement in treatment has been shown to improve outcomes in some children, particularly those with an anxious parent
When to refer

• Symptoms persist despite interventions
• High level of distress
• Interference with functioning
• Parental anxiety
Depression

• 1-2% of children and 5-8% of adolescents
• Rates low before puberty and rise from early teens, particularly in girls
• Male to female ratio is 1:1 during childhood and 1:2 during adolescence
• Appearing at a younger age of onset
• Co-exist with anxiety and disruptive behavior disorders
• Associated with significant impairment
• Risk of serious self-harm, suicide attempt, and death
• Effective treatments; most episodes remit within 1 year
• Can be a chronic, recurrent condition
• In recurrent depression, each subsequent episode can recur sooner and last longer
• Risk factors: FH depression and exposure to stressful life events most robust
• Stressors: Bereavement, separations and conflict, child maltreatment and neglect, and peer conflict and bullying

Rates of depression increasing?

- National Surveys on Drug Use and Health for 2005 to 2014
- Annual cross-sectional survey
- 172,495 adolescents aged 12 to 17 and 178,755 adults aged 18 to 25
- The 12-month prevalence of MDEs increased from 8.7% in 2005 to 11.3% in 2014 in adolescents and from 8.8% to 9.6% in young adults
- Increase in use of specialty MH, medications, hospitalizations in adolescents

Adolescent depression: EBT Milestones

- 1998-2007 NIMH funded studies, including TADS, SOFTAD, TORDIA, and TASA
- AAP BH workgroups
- 2007 GLAD-PC
- 2009 AAP Committee on Psychosocial Aspects of Child and Family Health and Task Force on Mental Health
- 2009 USPSTF endorsed universal depression screening in adolescents age 12-18 (updated 2016)
- 2014 CMS PQRS (went into effect in 2016)
- Many practices established protocols for routine depression screening in adolescents
- 2018 GLAD-PC
GLAD-PC 2018

• Preparation of PC practice for improved care of adolescents with depression
• Annual universal screening for youth ≥ age 12 at WCC
• Identification of depression in youth that are at high risk
• Systematic assessment using reliable scales, patient and caregiver interviews, and DSM-5 criteria
• Patient and family education
• Establishment of links in community
• Establishment of a safety plan

If mild depression

Active support and monitoring for 6 to 8 weeks (every 1 to 2 weeks) (see a)

If persistent

If improved

Manage in primary care
1. Initiate medication and/or therapy in primary care (see a) with evidence-based antidepressant and/or psychotherapy
2. Monitor for symptoms and adverse events (see a)
3. Consider on going mental health consultation

If partially improved

1. Consider
   - Adding medication if have not already; increasing to maximum dosage as tolerated if already on medication
   - Adding therapy if have not already
   - Consulting with mental health specialist
2. Provide further education, review safety plan (see a), and continue ongoing monitoring

If not improved

If not improved after 6 to 8 weeks
1. Reassess diagnosis
2. Consider:
   - Adding medication if it has not already been done; increasing to maximum dosage as tolerated if patient is already on medication; changing medication if patient is already on maximum dose of current medication
   - Adding therapy if it has not already been done
   - Consulting with mental health specialist
3. Provide further education, review safety plan (see a), and continue ongoing monitoring

If improved after 6-8 weeks
1. Continue medication for 1 year after full resolution of symptoms (based on adult literature) AACAP recommends monthly monitor for 6 months after full remission
2. Continue to monitor for 6 to 24 months with regular follow-up whether or not referred to mental health specialist
3. Maintain contact with mental health specialist if such treatment continues
Evidence-based psychosocial treatments

- Reviewed 42 RCTs from 2008-2014
- Evidence weaker for interventions with children than with adolescents
- Cognitive behavioral therapy (CBT)
  - Well established across large number of trials
  - Individual and group
- Interpersonal therapy (IPT)
  - Well established across small number of trials
  - Individual (group also probably efficacious)
- Other: Bibliotherapy, CBT, Family based interventions, Technology assisted CBT

Weersing et al. JCAAP. 2017; 46(1): 11-43
Psychopharmacology

• **SSRI (selective serotonin reuptake inhibitors)**
  – Fluoxetine (Prozac)
  – Sertraline (Zoloft)
  – Escitalopram (Lexapro)
  – Citalopram (Celexa)

• **SNRI (serotonin-norepinephrine reuptake inhibitors)**
  – Venlafaxine (Effexor)
  – Duloxetine (Cymbalta)
Black box warning

• Black box warning 2004
• Dip in prescriptions after warning, but have steadily increased again from 2005-2012 following statements that benefits outweighed risks and recommendation for close monitoring during initiation
Systematic review SSRI and NSRI use in children

• “The bottom line: Based on data available to us in 2015, the overall approach to use of SSRIs has not changed from 2008. The risk benefit balance for fluoxetine in child and youth depression is favorable, while it is less clear for most other SSRIs, except in older adolescents. Deliberate monitoring for efficacy and adverse effects, especially for “suicide-related” thoughts and behavioural adverse effects (e.g. activation events) is critically important. Current data does not support the use of SNRIs as primary treatment in youth depression.”

• “The bottom line: The risk benefit balance for at least three SSRIs is favorable in anxiety disorders, and it is likely favorable for other SSRIs in the short term. Appropriate monitoring of SSRI treatment is indicated. SNRIs should be considered as second or third line treatments given the limited available trial data to support their use.”

Medication treatment pearls

1. Do no harm (discuss benefits > risks)
2. Confirm diagnosis and severity (meds for moderate-severe)
3. Consider risks for AE (anxiety/panic, impulsivity, restlessness, agitation, history of mania/hypomania, potential drug interactions)
4. Assess SI at baseline and follow-up and document
5. Open discussion of treatment options
6. Starting medication: discuss possible AE and expected timeline
7. Start low and go slow
8. Close follow-up, particularly at initiation, change in dose
9. Take advantage of placebo effect

Future directions

• Integrated care
• Telephone psychiatry access
• iCBT/CBT apps
• Training of pediatric and BH workforce
• Research
  – Pragmatic clinical trials with fewer exclusion criteria
  – Sequential multiple assignment randomized trials (SMART) to build individualized treatment sequences
• Advocacy
**REASONS TO INTEGRATE MENTAL HEALTH SERVICES**

<table>
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<tr>
<th><strong>FOR PATIENTS</strong></th>
<th><strong>FOR PROVIDERS</strong></th>
<th><strong>FOR PRACTICES</strong></th>
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<tbody>
<tr>
<td>Easier access to care—quicker appointments, more convenient</td>
<td>Improves quality of practice—convenience, ease, less stress, more efficient, saves time.</td>
<td>Improved efficiency</td>
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<tr>
<td>Reduces stigma/more likely to initiate counseling.</td>
<td>Increases knowledge/confidence when prescribing medications.</td>
<td>Better meeting the needs of patients and families</td>
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<tr>
<td>Better treatment adherence</td>
<td>Improves satisfaction.</td>
<td>Attracts new patients.</td>
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<tr>
<td>Better follow-up</td>
<td>Better communication</td>
<td>Generates additional income.</td>
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<td>Potentially better outcomes</td>
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Integrated care evidence base

• Many more RCTs in adults than in children and adolescents
• Many more studies address depression than anxiety
• It is now well-established that collaborative care is associated with significant improvement in depression and anxiety outcomes compared with usual care

Archer et al. Cochrane Database of Systematic Reviews. 2012; no. 10
Meta-analysis IC vs UC

- 31 studies
- significant advantage for integrated care interventions relative to usual care on behavioral health outcomes
- strongest effects were seen for treatment interventions that targeted mental health problems (rather then prevention) and those that used collaborative care models

Asarnow et al. JAMA Pediatrics. 2015; 169(10): 929-37
IC vs UC

• Collaborative care was associated with increased treatment engagement and significantly improved outcomes for depression among adolescents compared to usual care
• No published RCTs addressed treatment of anxiety in a collaborative care model

Asarnow et al. JAMA Pediatrics. 2015; 169(10): 929-37
Building the bridge as we walk across it
AAP Toolkit
AAP STAR Center

https://screeningtime.org/star-center/
DUKE INTEGRATED PEDIATRIC MENTAL HEALTH: AN INITIATIVE SUPPORTED BY THE DUKE ENDOWMENT

Nationally, one in ten children suffers from an impairing emotional or behavioral disorder; however, less than one quarter of children with an impairing psychiatric disorder receive any mental health services, and even fewer receive effective services.
The objective of the Duke IPMH Initiative is to improve access to timely, appropriate, and high quality mental health care for children in Durham by:

1. **ASSESSING** current pediatric mental health care across health, mental health, and educational systems of care and identifying gaps in care by establishing and maintaining an effective and sustainable collaboration with community agencies, services, and systems of care.

2. **ENHANCING** pediatric mental health knowledge through professional development of emergency care providers to ensure effective management of pediatric patients who present for psychiatric care in the Duke Emergency Department (ED).

3. **IMPLEMENTING** strategies designed to address discontinuities of care and improve transition of care between systems for children in Durham. Specifically, the IPMH Initiative aims to establish and maintain an effective and sustainable collaboration with local schools, including the Durham Public Schools system, and develop targeted training for teachers and school-based staff.

In collaboration with community partners, our central goal is to enable the Durham community to become a national model for effective and collaborative pediatric mental health care within integrated educational and health systems.