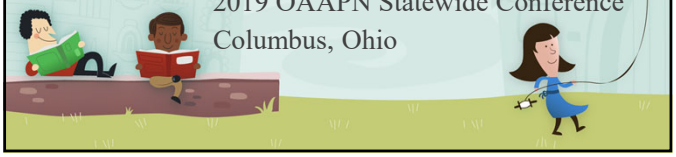
The "ABCs" of Pediatric Mental Health Care in Primary Care

2019 OAAPN Statewide Conference
Columbus, Ohio



Bluffton Pediatrics

Bluffton Pediatrics is an independently owned and operated pediatric primary care office

Presenter Information : Beth A. Bish APRN- CNP

Audience participation : Who are you and where do you work?

Kids get sad, but then they get over it. Right?

I just tell my kid…Suck it up Buttercup ! That's what my mom told me and I'm fine.

My teenager won't come out of his room. And when he does, we always seem to get into a fight.

My kid just needs to pay attention at school. If he would just pay attention and do what he is supposed to do, then we wouldn't be having issues.

Can I give my kid some Benadryl or something? He doesn't sleep at all ! Never, ever!

Why does pediatric mental health need to be addressed in primary care?

Isn't that something a psychologist or psychiatrist does?

Can't I just go ahead and refer the kid ?"

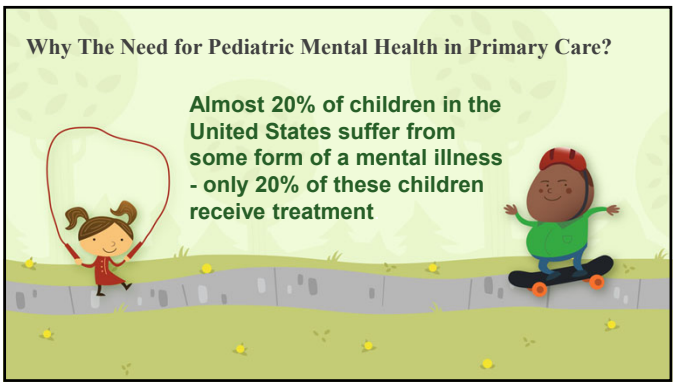
13% of youth ages 8-15
21% of youth ages 13-18.4 live with mental illness severe enough to cause significant impairment in their day-to-day lives.

Integration of mental health care into primary care provides access to care that kids may not otherwise receive.

It's time to change the tune…

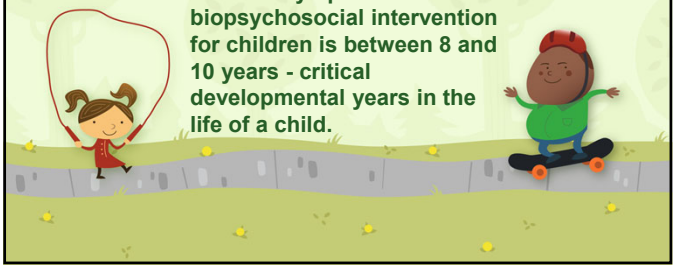
Why The Need for Pediatric Mental Health in Primary Care?

Almost 20% of children in the United States suffer from some form of a mental illness - only 20% of these children receive treatment



Why The Need for Pediatric Mental Health in Primary Care?

The average delay between onset of symptoms and biopsychosocial intervention for children is between 8 and 10 years - critical developmental years in the life of a child.



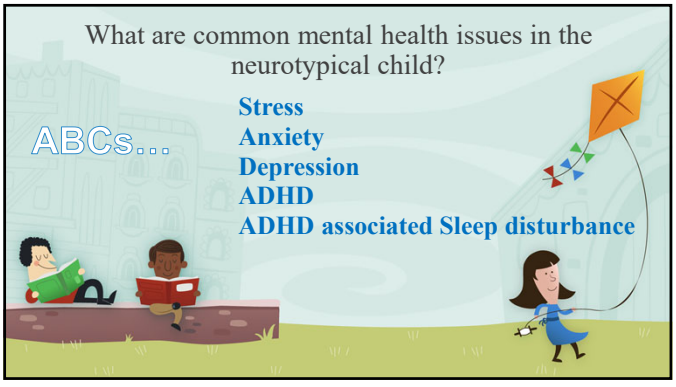
KySS Mental Health Fellowship: Child and Adolescent (Online)

https://nursing.osu.edu/offices-and-initiatives/office-continuing-education/kyss-mental-health-fellowship-child-and

What are common mental health issues in the neurotypical child?

ABCs…

Stress
Anxiety
Depression
ADHD
ADHD associated Sleep disturbance

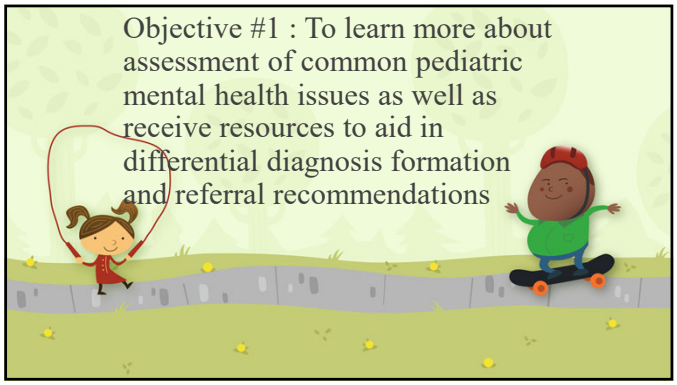


What mental health issues we are NOT discussing in the neurotypical child?

...XYZs

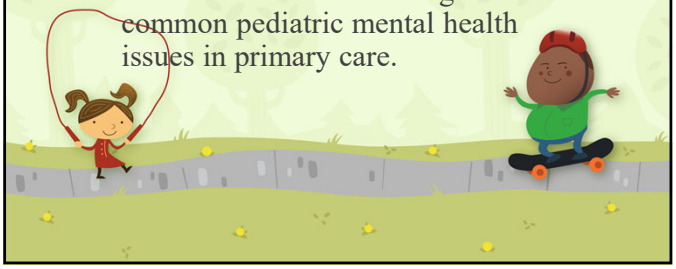
- Substance abuse
- Post traumatic stress disorder
- Gender dysphoria
- Bipolar depression
- Schizophrenia
- Oppositional defiant disorder
- Conduct disorder
- Eating disorders

Objective #1 : To learn more about assessment of common pediatric mental health issues as well as receive resources to aid in differential diagnosis formation and referral recommendations



Objective #2 : To learn more about evidence based, non-medication management of common pediatric mental health issues in primary care.

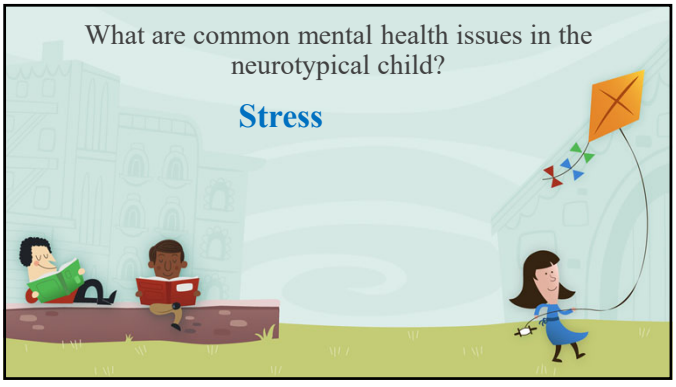
Objective #3 : To learn more about FDA approved and off label medications used to manage common pediatric mental health issues in primary care.



Objective #4 : To learn more about documentation, billing and coding of pediatric mental health services in primary care.

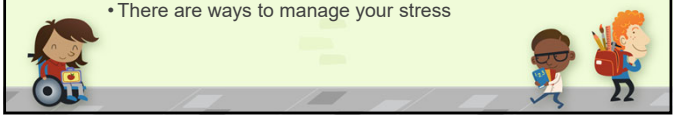
What are common mental health issues in the neurotypical child?

Stress



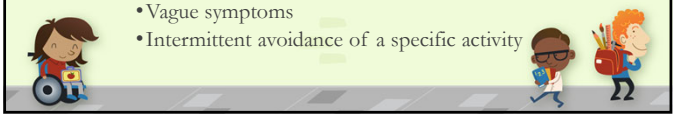
Defining Stress

- **Stress is how the brain and body respond to any demand.**
- Every type of demand or stressor—such as exercise, work, school, major life changes, or traumatic events—can be stressful.
  - Stress affects everyone
  - Not all stress is bad
  - Long term stress can harm your health
  - There are ways to manage your stress



How does stress present in children in primary care

- Headache
- Stomachache
- Decreased appetite
- Moody
- Nightmares
- Bedwetting
- Vague symptoms
- Intermittent avoidance of a specific activity



Stress

Differential Diagnosis

- Viral illness
- Strep throat
- Type I DM
- Functional abdominal pain
- Anxiety / Depression

Assessment tools

- Pediatric Symptom Checklist (PSC)
- History & Physical assessment

Stress

When to refer

- Teaching about Stress and Resiliency takes Time and Knowledge of the subject.

Who to refer to

- Mental health specialist
- Licensed Independent Social Worker - LISW
- Child advocacy and / or counseling group

Stress

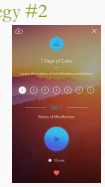
Management strategy #1

- Cognitive Behavioral Therapy – ages 7 years and older

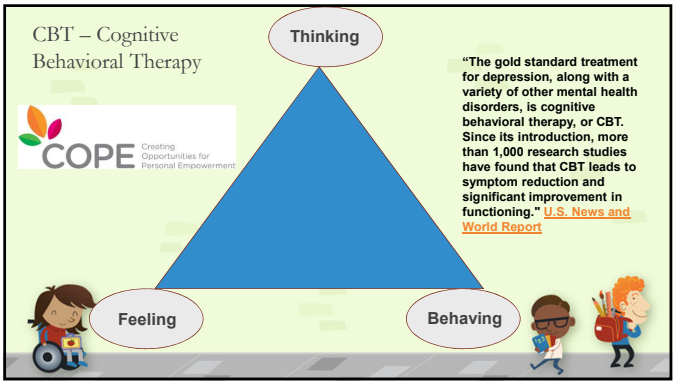
Management strategy #2

- Exercise
- Meditation

Calm APP



CBT – Cognitive Behavioral Therapy



COPE Creating Opportunities for Personal Empowerment

"The gold standard treatment for depression, along with a variety of other mental health disorders, is cognitive behavioral therapy, or CBT. Since its introduction, more than 1,000 research studies have found that CBT leads to symptom reduction and significant improvement in functioning." U.S. News and World Report

Stress

Management strategy #3

- Building resilience in parents and children
- Parents understanding growth and development principles
- Parents building social connections
- Concrete support in times of need
- Children's social and emotional competence

AAP – About Strengthening Families

Strategies without support

- Doing nothing

Stress
Billing and Coding

ICD – 10 coding

- F43.0 Acute Stress Reaction
- F43.8 Other reactions to severe stress
- F43.9 Reactive to severe stress, unspecified

E & M Codes

- 99204 New Patient (45 minutes)
- 99214 Established Patient (25 minutes)

CPT Codes

- 96110 – Developmental Screening - PSC

Documentation

" Today > 45 (25) minutes was spent in face to face encounter with patient and caregiver/parent with > 50% spent in counseling and coordination of care."

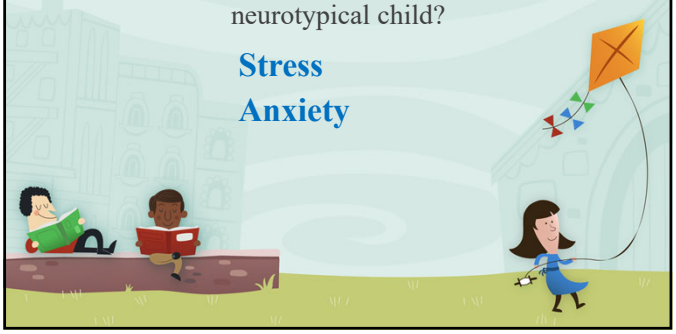
Stress Resources

- Pediatric Symptom Checklist https://www.massgeneral.org/psychiatry/services/treatmentprograms.aspx?id=2088
- Promoting resiliency in Parents and Children – https://www.aap.org/en-us/Documents/resilience_messaging-at-the-intersections.pdf
- COPE - https://www.cope2thrive.com/
- Information for caregivers - https://kidshealth.org/en/parents/stress.html

What are common mental health issues in the neurotypical child?

Stress

Anxiety



DSM-V Criteria for Anxiety Disorder (General)

Table 1. Diagnostic Criteria for Generalized Anxiety Disorder

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

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

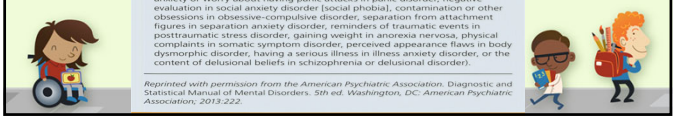
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months):
Note: Only one item is required in children.
1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

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

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

F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

Reprinted with permission from the American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Association; 2013:222.



Specific forms of anxiety we are NOT discussing in the neurotypical child?

- Acute stress disorder
- Anxiety due to a medical disorder
- Obsessive – Compulsive disorder
- Panic disorder
- Post traumatic stress disorder
- Phobias
- Selective mutism

Anxiety

Differential Diagnosis

- Hypoglycemia
- Hyperthyroidism
- Asthma
- Seizure disorder
- Depression

Assessment tools

- Generalized Anxiety Disorder 7-item (GAD-7) scale
- Screen for Child Anxiety Related Disorders (SCARED)
- History & Physical assessment
- Blood work – Fasting glucose, Free T4, TSH

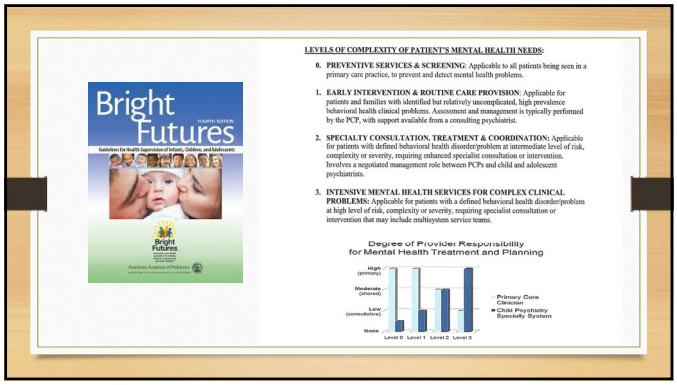
Anxiety

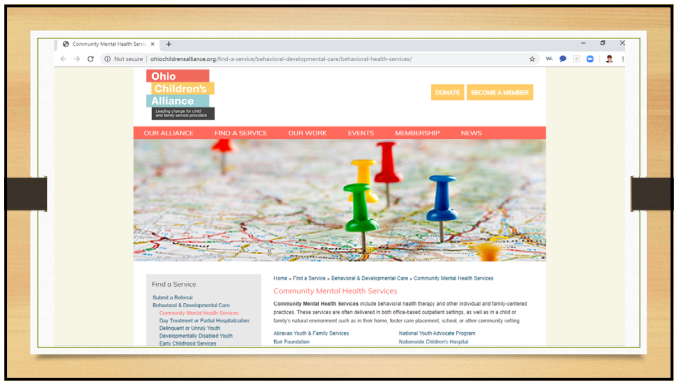
When to refer

- Level of complexity is at an intermediate level

Who to refer to

- Psychologist
- Clinical Mental Health Counselor
- Licensed Independent Social Worker
- Psychiatrist
- Psychiatric Mental Health Nurse Practitioner
- Psychiatric Clinical Nurse Specialist





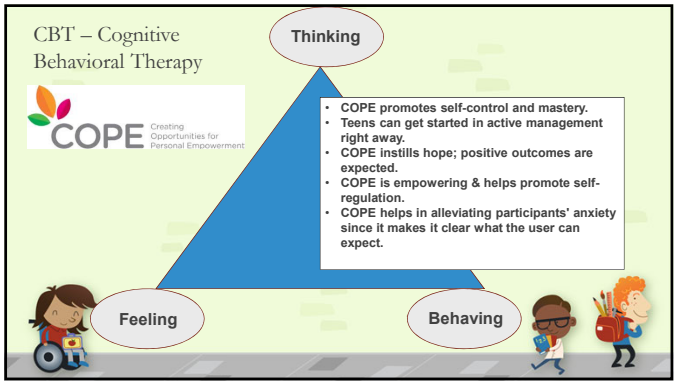
Anxiety

Management strategy #1

- Cognitive Behavioral Therapy – ages 7 years and older

Management strategy #2

- Psychoeducation
  - Normalize anxiety by addressing the source



Anxiety

Management strategy #3

- Somatic Skills Management
  - Diaphragmatic breathing
  - Progressive muscle relaxation

Other

- Chiropractic care
- Meditation

Anxiety

FDA approved medication #1

- SNRI
  - Duloxetine (Cymbalta)

FDA approved medication #2

- SSRI
  - None

Anxiety

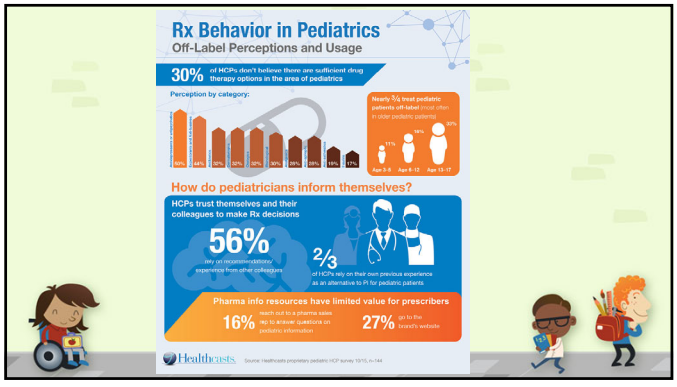
Off label medications

- Citalopram (Celexa)
- Escitalopram (Lexapro)
- Fluoxetine (Prozac)
- Fluvoxamine (Luvox)
- Sertraline (Zoloft)
- Paroxetine (Prozac)

Herbal remedies

- CBD oil
- kava & chamomile
- valerian, passion flower, & St. John's wort
- Lavender oil
- Vitamins – A, C & E as well as D

Choices	Medication	Brand name	FDA approved use	Age
#1	fluoxetine	Prozac	MDD; OCD	8 to 18 years
#2	sertraline	Zoloft	OCD	6 to 17 years
#3	escitalopram	Lexapro	MDD	12 to 17 years
#4	citalopram	Celexa	*NA	*NA
#5	fluvoxamine	Luvox	OCD	8 to 17 years
#6	paoxetine	Paxil	*NA	*NA



Medication	FDA approved use	Age	Side Effects	Dosage Form(s)	Dosing			Generic available
					Initial (mg)	Range (mg/day)	Schedule	
duloxetine	GAD	7 to 17 years old	Abdominal pain; vomiting; cough; orpharyngeal pain; weight loss	capsule	30 mg	30 to 60 mg	QD	Yes
Medication Guide and/or Vaccine Information Statement (VIS) https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/021427s049lbl.pdf#page=32								

Choices	Medication	Brand name	Age	Dosage Form(s)	Dosing			Generic available
					Dosing	Range (mg/day)	Schedule	
#1	fluoxetine	Prozac	> 8 years	solution; capsule; tablet	5-10 mg	5 to 40 mg	QD	Yes
#2	sertraline	Zoloft	> 6 years	concentrate; tablet	12.5 mg	25 to 200 mg	QD	Yes
#3	escitalopram	Lexapro	> 12 years	solution; tablet	5 mg	10 to 20 mg	QD	Yes
#4	citalopram	Celexa	> 7 years	solution; tablet	10 mg	20 to 40 mg	QD	Yes
#5	fluvoxamine	Luvox	> 8 years	capsule; tablet	25 mg	50 to 200 mg	QD; BID	Yes
#6	paroxetine	Paxil	>7 years	solution; *capsule;*tablet	25 mg	10 to 60 mg	QD	Yes*

Diagnosis and Management of Generalized Anxiety Disorder and Panic Disorder in Adults

AMY B. LOCKE, MD, FAAFP; NELL KIRST, MD; and CAMERON G. SHULTZ, PhD, MSW, University of Michigan Medical School, Ann Arbor, Michigan

Am Fam Physician. 2015 May 1;91(9):617-624.

Table 6. Botanicals and Supplements Sometimes Used to Treat Generalized Anxiety Disorder and Panic Disorder

Therapy	*Potential significant adverse effects**
Botanicals	
Kava (*Piper methysticum*)	Possible hepatotoxicity, sedation, interference with P450 substrates
Lavender oil (*Lavandula angustifolia*)	Minimal
Passionflower (*Passiflora incarnata*)	Dizziness, sedation, decreased blood pressure
St. John's wort (*Hypericum perforatum*)†	Similar to serotonin reuptake inhibitors, interference with P450 substrates
Valerian (*Valeriana officinalis*)	Headache, gastrointestinal upset
Supplements	
5-Hydroxytryptophan†	Gastrointestinal upset, possible eosinophilia-myalgia syndrome
Inositol	Nausea, headache
L-theanine	May lower blood pressure; may lower effect of stimulant medication
L-tryptophan†	Gastrointestinal upset, possible eosinophilia-myalgia syndrome
S-adenosyl-L-methionine†	Gastrointestinal upset, mania in patients with bipolar disorder
Vitamin B complex	Yellow urine

*—This list includes important adverse effects but is not exhaustive.
†—Can potentiate serotonin syndrome when used in combination with antidepressants.

CAMS Study Results

- Percent improved in anxiety:
  - CBT and sertraline 81%
  - CBT alone 60%
  - Sertraline alone 55%
  - Placebo 24%
- Adverse events uncommon; less in the CBT groups, but equal between sertraline and placebo
- Medication response may be quicker

Anxiety
Billing and Coding

ICD – 10 coding

- F41.1 Generalized anxiety

E & M Codes

- 99204 New Patient (45 minutes)
- 99214 Established Patient (25 minutes)

CPT Codes

- 96110 – Developmental Screening - GAD 7

Documentation

- ROS – GAD 7 scores
- Treatment plan – including education
- Return to care – 3 week

Anxiety
Resources

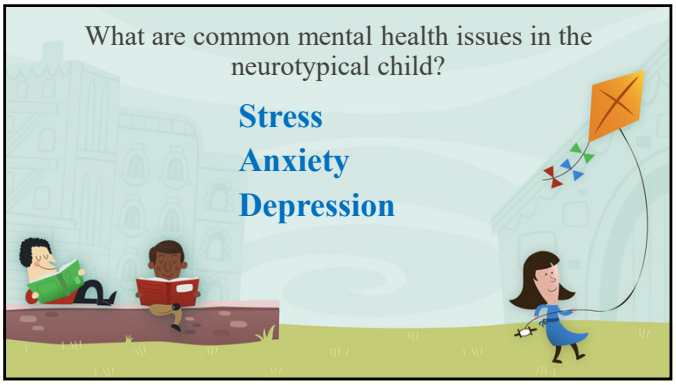
- GAD 7 with scoring - https://adaa.org/sites/default/files/GAD-7_Anxiety-updated_0.pdf
- SCARED Parent and Child forms – https://www.pediatricbipolar.pitt.edu/sites/default/files/SCAREDParentVersion_1.19.18_0.pdf https://www.pediatricbipolar.pitt.edu/sites/default/files/SCAREDChildVersion_1.19.18.pdf
- Ohio counseling resources http://www.ohiochildrensalliance.org/find-a-service/behavioral-developmental-care/behavioral-health-services/
- Child/Adolescent Anxiety Multimodal Study (CAMS) - https://www.ncbi.nlm.nih.gov/pubmed/20051130
- Antidepressant Medications: U.S. Food and Drug Administration-Approved Indications and Dosages for Use in Pediatric Patients - https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/Medicaid-Integrity-Education/Pharmacy-Education-Materials/Downloads/ad-pediatric-dosingchart11-14.pdf
- Information for caregivers - https://kidshealth.org/en/parents/anxiety-disorders.html?WT.ac=ctg#catfeelings

What are common mental health issues in the neurotypical child?

Stress

Anxiety

Depression



DSM-V Criteria for Major Depressive Disorder

DSM-V CRITERIA FOR MAJOR DEPRESSIVE DISORDER

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

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

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

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

D. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.

E. There has never been a manic episode or a hypomanic episode.

Depression

Differential Diagnosis

- Hypothyroidism
- Anemia
- EBV or chronic fatigue syndrome
- Type 1 Diabetes Mellitus
- Eating disorder
- Substance abuse

Assessment tools

- Patient Health Questionnaire (PHQ-9)
- Center for Epidemiological Studies Depression Scale for Children CES-DC)
- History & Physical assessment
- Blood work – TSH, Free T4, CBC, Vitamin D *, fasting glucose + Urinalysis in office

Depression

When to refer

- Immediate referral for active suicidal ideations

Who to refer to

Transport to Emergency Department

Suicide risk assessment – ALWAYS ask

Suicidal ideation	Have you had any thoughts about harming self?
Plan and means	If you were going to harm / kill yourself, how would you do it? Do you have access to …
Intent	If you were going to harm / kill yourself, when would you do it?

Warning signs – no hope for the future, change in behavior like giving away things they value; change in mood; thinking and talking about death; major life changes like the death of a loved one

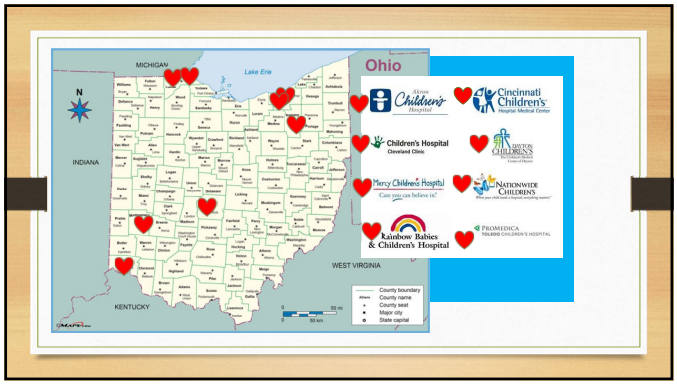
Depression

When to refer

- There is poor or incomplete response to 2 interventions or no improvement with psychosocial interventions within 2 months
- There is an increase in symptoms
- A recurrent episode within 1 year of previous episode
- The patient or family request referral

Who to refer to

- Psychologist
- Clinical Mental Health Counselor
- Licensed Independent Social Worker
- Psychiatrist
- Psychiatric Mental Health Nurse Practitioner
- Psychiatric Clinical Nurse Specialist



Depression

Management strategy #1

- Cognitive Behavioral Therapy – ages 7 years and older

Management strategy #2

- Interpersonal Therapy for Adolescents (IPT-A)

CBT – Cognitive Behavioral Therapy

Thinking

Feeling

Behaving

Seven – 30-minute sessions

Reimbursed as a Level 4 visit

Lowest reimbursement – Medicaid @ $64.81 x 7 sessions = $453.67 less $20 for the cost of workbook

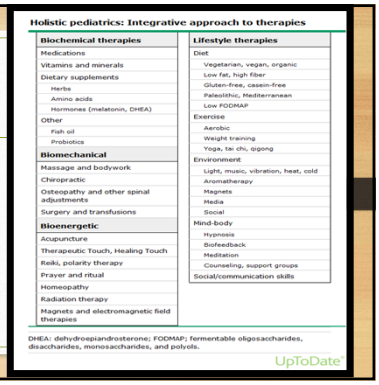
COPE Creating Opportunities for Personal Empowerment

"Today > 45 (25) minutes was spent in face to face encounter with patient and caregiver/parent with > 50% spent in counseling and coordination of care."

Depression

Management strategy #3

- Family-based interpersonal psychotherapy



Holistic pediatrics: Integrative approach to therapies

Biochemical therapies	Lifestyle therapies
Medications	Diet
Vitamins and minerals	Vegetarian, vegan, organic
Dietary supplements	Low fat, high fiber
Herbs	Gluten-free, casein-free
Amino acids	Paleolithic, Mediterranean
Hormones (melatonin, DHEA)	Low FODMAP
Other	Exercise
Fish oil	Aerobic
Probiotics	Weight training
Biomechanical	Yoga, tai chi, qigong
Massage and bodywork	Environment
Chiropractic	Light, music, vibration, heat, cold
Osteopathy and other spinal adjustments	Aromatherapy
Surgery and transfusions	Magnets
Bioenergetic	Media
Acupuncture	Social
Therapeutic Touch, Healing Touch	Mind-body
Reiki, polarity therapy	Hypnosis
Prayer and ritual	Biofeedback
Homeopathy	Meditation
Radiation therapy	Counseling, support groups
Magnets and electromagnetic field therapies	Social/communication skills

DHEA: dehydroepiandrosterone; FODMAP; fermentable oligosaccharides, disaccharides, monosaccharides, and polyols.

UpToDate

Depression

FDA approved medication #1

- Fluoxetine

FDA approved medication #2

- Escitalopram

Depression

Off label medications

- Citalopram (Celexa)
- Fluvoxamine (Luvox)
- Sertraline (Zoloft)
- Paroxetine (Prozac)

Herbal remedies

- St. John's Wort
- Omega 3 Fatty Acids
- Saffron
- SAM-e
- Folate
- Zinc

https://www.healthline.com/health/depression/herbs-supplements#see-your-doctor

Choices	Medication	Brand name	Age	Dosage Form(s)	Dosing			Generic available
					Dosing	Range (mg/day)	Schedule	
#1	fluoxetine	Prozac	> 8 years	solution; capsule; tablet	5-10 mg	5 to 40 mg	QD	Yes
#2	sertraline	Zoloft	> 6 years	concentrate; tablet	12.5 mg	25 to 200 mg	QD	Yes
#3	escitalopram	Lexapro	> 12 years	solution; tablet	5 mg	10 to 20 mg	QD	Yes
#4	citalopram	Celexa	> 7 years	solution; tablet	10 mg	20 to 40 mg	QD	Yes
#5	fluvoxamine	Luvox	> 8 years	capsule; tablet	25 mg	50 to 200 mg	QD; BID	Yes
#6	paroxetine	Paxil	>7 years	solution; *capsule;*tablet	25 mg	10 to 60 mg	QD	Yes*

A telephone survey of 401 patients treated with an SSRI for major depression found that 55 percent suffered at least one bothersome side effect during the first three months of treatment. The incidence of each bothersome side effect was:

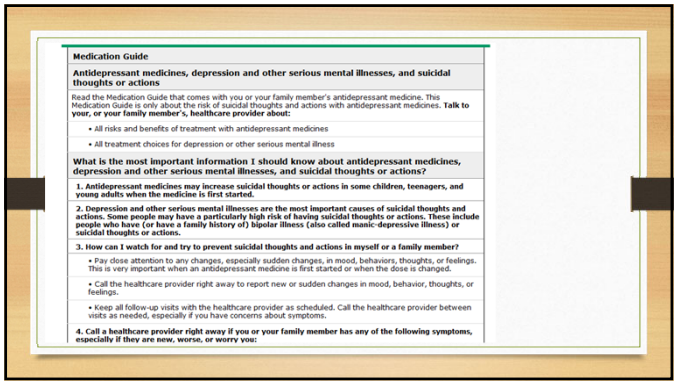
- Sexual dysfunction – 17 percent
- Drowsiness – 17 percent
- Weight gain – 12 percent
- Insomnia – 11 percent
- Anxiety – 11 percent
- Dizziness – 11 percent
- Headache – 10 percent
- Dry mouth – 7 percent
- Blurred vision – 6 percent
- Nausea – 6 percent
- Rash or itching – 6 percent
- Tremor – 5 percent
- Constipation – 5 percent
- Stomach upset – 3 percent

Hu XH, Bull SA, Hunkeler EM, et al. Incidence and duration of side effects and those rated as bothersome with selective serotonin reuptake inhibitor treatment for depression: patient report versus physician estimate. J Clin Psychiatry 2004; 65:959.

Warnings/Precautions

Major psychiatric warnings:

• Suicidal thinking/behavior: **[US Boxed Warning]: Antidepressants increase the risk of suicidal thinking and behavior in children, adolescents, and young adults (18 to 24 years of age) with major depressive disorder (MDD) and other psychiatric disorders;** consider risk prior to prescribing. Short-term studies did not show an increased risk in patients >24 years of age and showed a decreased risk in patients ≥65 years. Closely monitor all patients for clinical worsening, suicidality, or unusual changes in behavior, particularly during the initial 1 to 2 months of therapy or during periods of dosage adjustments (increases or decreases); the patient's family or caregiver should be instructed to closely observe the patient and communicate condition with health care provider. A medication guide concerning the use of antidepressants should be dispensed with each prescription.



Medication Guide

Antidepressant medicines, depression and other serious mental illnesses, and suicidal thoughts or actions

Read the Medication Guide that comes with you or your family member's antidepressant medicine. This Medication Guide is only about the risk of suicidal thoughts and actions with antidepressant medicines. **Talk to your, or your family member's, healthcare provider about:**

- All risks and benefits of treatment with antidepressant medicines
- All treatment choices for depression or other serious mental illness

What is the most important information I should know about antidepressant medicines, depression and other serious mental illnesses, and suicidal thoughts or actions?

1. Antidepressant medicines may increase suicidal thoughts or actions in some children, teenagers, and young adults when the medicine is first started.

2. Depression and other serious mental illnesses are the most important causes of suicidal thoughts and actions. Some people may have a particularly high risk of having suicidal thoughts or actions. These include people who have (or have a family history of) bipolar illness (also called manic-depressive illness) or suicidal thoughts or actions.

3. How can I watch for and try to prevent suicidal thoughts and actions in myself or a family member?

- Pay close attention to any changes, especially sudden changes, in mood, behaviors, thoughts, or feelings. This is very important when an antidepressant medicine is first started or when the dose is changed.
- Call the healthcare provider right away to report new or sudden changes in mood, behavior, thoughts, or feelings.
- Keep all follow-up visits with the healthcare provider as scheduled. Call the healthcare provider between visits as needed, especially if you have concerns about symptoms.

4. Call a healthcare provider right away if you or your family member has any of the following symptoms, especially if they are new, worse, or worry you:

Depression
Billing and Coding

ICD – 10 coding

- F32.0 major depressive disorder, mild, single episode
- F32.1 major depressive disorder, moderate, single episode
- F32.4 major depressive disorder, in partial remission

E & M Codes

- 99204 New Patient (45 minutes)
- 99214 Established Patient (25 minutes)

CPT Codes

- 96110 – Developmental Screening – PHQ 9

Documentation

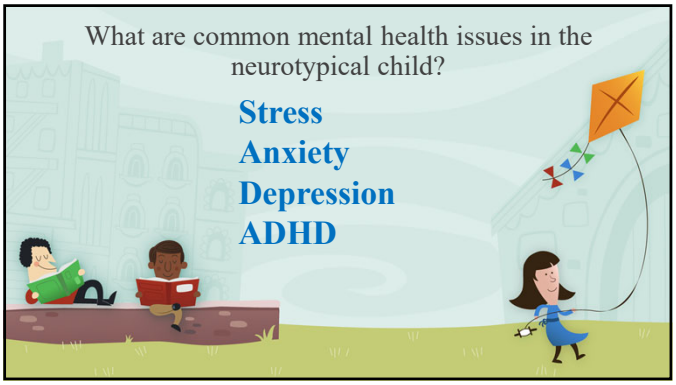
- ROS – PHQ 9 scores
- Treatment plan – including education
- Return to care – 3 week

Depression
Resources

- PHQ-9 with scoring - http://med.stanford.edu/fastlab/research/imapp/msrs/_jcr_content/main/accordion/accordion_content3/download_256324296/file.res/PHQ9%20id%20date%2008.03.pdf
- CES-DC with scoring - https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf
- FDA medication guides - https://www.fda.gov/drugs/drug-safety-and-availability/medication-guides
- Antidepressant use in Pediatric Patients from CMS - https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/Medicaid-Integrity-Education/Pharmacy-Education-Materials/Downloads/ad-pediatric-factsheet11-14.pdf
- Information for caregivers - https://kidshealth.org/en/parents/understandingdepression.html?ref=search#catthought

What are common mental health issues in the neurotypical child?

Stress
Anxiety
Depression
ADHD



DSM-5 Diagnostic Criteria for ADHD

Inattentive Type	Hyperactive/Impulsive Type
Symptoms and/or behaviors that have persisted ≥6 mo in ≥2 settings (e.g., school, home, church). Symptoms have negatively impacted academic, social, and/or occupational functioning. In patients aged <17 y, ≥6 symptoms are necessary; in those aged ≥17 y, ≥5 symptoms are necessary. A. Displays poor listening skills B. Loses and/or misplaces items needed to complete activities or tasks C. Sidetracked by external or unimportant stimuli D. Forgets daily activities E. Diminished attention span F. Lacks ability to complete schoolwork and other assignments or to follow instructions G. Avoids or is disinclined to begin homework or activities requiring concentration H. Fails to focus on details and/or makes thoughtless mistakes in schoolwork or assignments	Symptoms and/or behaviors that have persisted ≥6 mo in ≥2 settings (e.g., school, home, church). Symptoms have negatively impacted academic, social, and/or occupational functioning. In patients aged <17 y, ≥6 symptoms are necessary; in those aged ≥17 y, ≥5 symptoms are necessary. *Hyperactive Symptoms:* A. Squirms when seated or fidgets with feet/hands B. Marked restlessness that is difficult to control C. Appears to be driven by "a motor" or is often "on the go" D. Lacks ability to play and engage in leisure activities in a quiet manner E. Incapable of staying seated in class F. Overly talkative *Impulsive Symptoms:* A. Difficulty waiting turn B. Interrupts or intrudes into conversations and activities of others C. Impulsively blurts out answers before questions completed
Additional Requirements for Diagnosis	
Symptoms present prior to age 12 y Symptoms not better accounted for by a different psychiatric disorder (e.g., mood disorder, anxiety disorder) and do not occur exclusively during a psychotic disorder (e.g., schizophrenia) Symptoms not exclusively a manifestation of oppositional behavior	
Classification	
Combined type: Patient meets both inattentive and hyperactive/impulsive criteria for past 6 mo *Predominantly inattentive type*: Patient meets inattentive criterion, but not hyperactive/impulsive criterion, for past 6 mo *Predominantly hyperactive/impulsive type*: Patient meets hyperactive/impulsive criterion, but not inattentive criterion, for past 6 mo Symptoms may be classified as mild, moderate, or severe based on symptom severity	

ADHD: attention-deficit/hyperactivity disorder; DSM-5: Diagnostic and Statistical Manual of Mental Disorders, 5th edition.
Source: Reference 1.

DSM-V Criteria for Attention Deficit Hyperactivity Disorder

ADHD

Differential Diagnosis

- Poor vision or difficulty with hearing
- Learning disability
- Iron deficiency anemia
- Hypothyroidism or hyperthyroidism
- Malnutrition
- Sleep disorder
- Stressful home environment

Assessment tools

- Vanderbilt Assessment Scales – Initial Parent
- Vanderbilt Assessment Scales – Initial Teacher
- History & Physical assessment including vision & hearing, CBC with differential & TSH, Free T4, lead screen

ADHD

When to refer

- When the condition has not improved in 3 months or if other comorbid conditions exist like anxiety disorder or oppositional defiant disorder

Who to refer to

- Psychiatrist
- Psychiatric Mental Health Nurse Practitioner
- Psychiatric Clinical Nurse Specialist

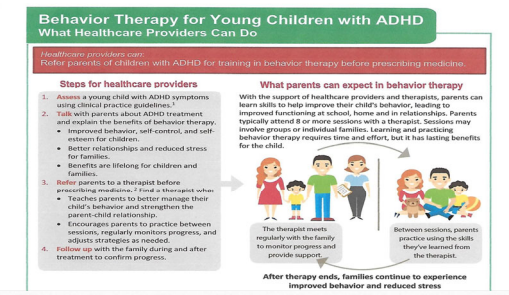
ADHD
Management Strategy #1

Management – 4 to 6 years

- Evidence-based behavioral Parent Trained Behavioral Management (PTBM) and/or behavioral classroom interventions as the first line of treatment, if available

Management – 6 to 12 years

- FDA–approved medications for ADHD
- Along with PTBM and/or behavioral classroom intervention (preferably both PTBM and behavioral classroom interventions).
- Educational interventions Individualized Education Program (IEP) or a rehabilitation plan (504 plan)



ADHD
Management Strategy #1

Management – 12 to 18 years

- For adolescents (12 to 18 years) with ADHD
  - FDA-approved medications for ADHD
  - Evidence-based training interventions and/or behavioral interventions as treatment of ADHD, if available.
  - Educational interventions - IEP or a rehabilitation plan (504 plan)

Strategies without support

- Do nothing
- CAM therapies - vision training, megavitamins, herbal and mineral supplements, neurofeedback/biofeedback, chelation, and applied kinesiology, among others.
- Most of these interventions have not been proven efficacious in high-quality randomized controlled trials.

ADHD

FDA approved medication #1

- Methylphenidate
  - Short acting
  - Long acting

FDA approved medications

- Dexmethylphenidate
- Amphetamines
- Non stimulants
  - Selective norepinephrine reuptake inhibitor
  - Alpha-2 adrenergic agonists

ADHD

Off label medications

- Short acting Alpha-2 adrenergic agonists
- bupropion

Other remedies

- Megavitamins
- Dietary supplements – herbal or mineral

Order of preference	Medication	Brand name	Age	Dosage Form(s)	Dosing		
					Initial (mg)	Range (mg/day)	Schedule
Adjunct agent +	**Non-stimulants**						
	atomoxetine	Strattera	6 to 17 years	tablet	0.5 mg/ kg/day	up to 1.4 mg/kg; 100 mg max	QD; BID
	clonidine ER	Kapvay	6 to 17 years	tablet	0.1 mg	0.1 to 0.4 mg	QD; BID
	guanfacine ER	Intuniv	6 to 17 years	tablet	1 mg	1 to 4 mg	QD; BID
	Amphetamine Derivative - Long Acting / Extended Release						
1st Line	amphetamine/ dextroamphetamine mixed salts	Adderall XR	> 12 years old	capsule - can be opened and sprinkled	5 mg	5 to 10 mg	QD
3rd Line	lisdexamfetamine	Vyvanse	> 6 years old		20 mg	20 to 70 mg	QD
	Methylphenidate Derivatives - Long Acting/ Extended release						
2nd Line	dexmethylphenidate ER	Focalin XR	> 6 years old	capsule - can be opened and sprinkled	5 mg	5 to 30 mg	QD
1st Line	methylphenidate ER	Ritalin LA; Metadate CD	> 6 years old	capsule - can be opened and sprinkled	10-20 mg	10 mg to 60 mg	QD
2nd Line	methylphenidate ER	Concerta	> 6 years old	tablet	18 mg	18 to 54 mg	QD

- Long-acting stimulant medications are generally preferred for school-age children.
- Start with a 1st line medication from the methylphenidate or dextroamphetamine-amphetamine class, depending on patient's age.
- Maximize dosing of one agent before moving to the next. If ineffective or side effects develop, switch classes, then move to second line medication if needed.
- Before considering a stimulant medication, obtain cardiac history, including sudden cardiac death in first degree relative under age 50, history of congenital heart defect, or conduction defect.
- Maximize dosing of long-acting stimulant before adding an immediate release formulation medication.

Patient-related Considerations for ADHD Drug Prescription

Patient-related Considerations	Recommendation
Appetite suppression	• Eat protein rich breakfast prior to administration • Schedule meals • Monitor height and weight
Difficulty swallowing	• Consider alternate medication form: – Capsule (refer to medication table to determine which can be opened and sprinkled) – Chewable tablet – Liquid
Insomnia	• If long duration of stimulant action, change to shorter duration stimulant • Encourage good sleep hygiene habits
Abdominal pain	• Take with meals
Headache	• Increase hydration • Schedule meals
Tachycardia and chest pain	• Consider dose reduction • Switch to a non-stimulant
Concern for abuse and/or diversion	• Consider a prodrug form of a stimulant or non-stimulant
Flat affect or mood lability	• Consider dose reduction • Switch to a non-stimulant

Clinical Documentation

Discussed use of stimulant medication - type, dosing, daily use, monitoring of good and adverse side effects. OAARS reviewed; no red flags were noted. I have discussed with parent elements of controlled substance education: 1) Use of dose & frequency as directed only; 2) proper storage of medication and to secure medication from unauthorized access; 3) discuss how to avoid diversion of medication by never giving it to others or selling which constitutes a serious violation of the law. Parents states understanding and agrees with responsibilities.

ADHD
Billing and Coding

ICD – 10 coding

- F 90.0 ADHD – predominately inattentive
- F 90.1 ADHD – predominately hyperactivity
- F 90.2 ADHD – combined type

E & M Codes

- 99204 New Patient (45 minutes)
- 99214 Established Patient (25 minutes)

CPT Codes

- 96110 – Developmental Screening – Vanderbilt

Documentation

HPI – details of Vanderbilt

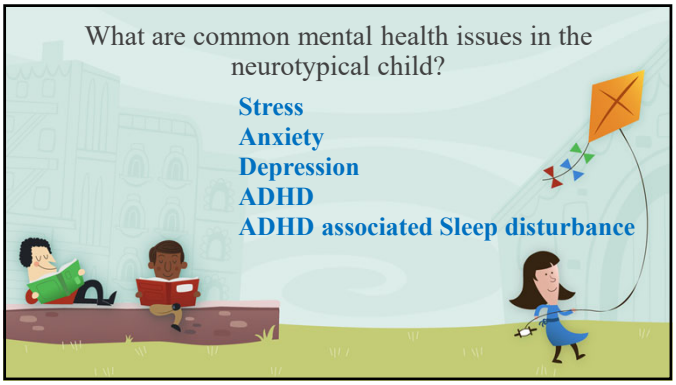
Return to care – 3 week follow up

ADHD Resources

- Vanderbilt Parent and Teacher, Initial and Follow up – https://www.nichq.org/sites/default/files/resource_file/NICHQ_Vanderbilt_Assessment_Scales.pdf
- AAP Clinical Practice Guidelines October 2019 – https://pediatrics.aappublications.org/content/144/4/e20192528
- Behavioral recommendations for Parents (ages 4-6 years) https://www.cdc.gov/ncbddd/adhd/documents/adhd-behavior-therapy-overview.pdf
- Nationwide Children's Prescribing Guidelines for Behavioral Health – https://www.nationwidechildrens.org/-/media/nch/for-medical-professionals/practice-tools-new/prescribing-guidelines-for-behavioral-health.ashx
- Information for caregivers - https://kidshealth.org/en/parents/adhd.html?ref=search

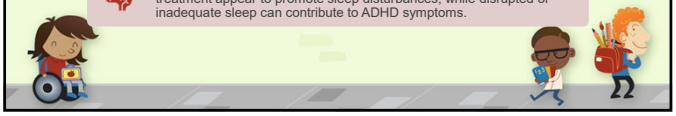
What are common mental health issues in the neurotypical child?

Stress
Anxiety
Depression
ADHD
ADHD associated Sleep disturbance



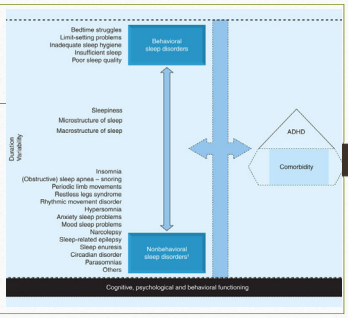
ADHD associated Sleep Disturbance

- Researchers have repeatedly found that sleep problems are common among people who have ADHD.
- Prevalence of sleep disturbances in individuals with ADHD is reported to be in the range 25–55 %
- The association is complex and is most likely bidirectional; ADHD and its treatment appear to promote sleep disturbances, while disrupted or inadequate sleep can contribute to ADHD symptoms.



ADHD associated Sleep disturbance

Spruyt, K., & Gozal, D. (2011). Sleep disturbances in children with attention-deficit/hyperactivity disorder. *Expert review of neurotherapeutics*, *11*(4), 565–577. doi:10.1586/ern.11.7



Recommended Amount of Sleep for Pediatric Populations*

Age	Recommended Sleep Hours per 24 Hour Period
Infants: 4 to 12 months	12 to 16 hours (including naps)
Toddlers: 1 to 2 years	11 to 14 hours (including naps)
Preschoolers: 3 to 5 years	10 to 13 hours (including naps)
Gradeschoolers: 6 to 12 years	9 to 12 hours
Teens: 13 to 18 years	8 to 10 hours

*The American Academy of Pediatrics (AAP) has issued a Statement of Endorsement supporting these guidelines from the American Academy of Sleep Medicine (AASM).
Source: Paruthi S, Brooks LJ, D'Ambrosio C, Hall W, Kotagal S, Lloyd RM, Malow B, Maski K, Nichols C, Quan SF, Rosen CL, Troester MM, Wise MS. Recommended Amount of Sleep for Pediatric Populations: A Statement of the American Academy of Sleep Medicine. J Clin Sleep Med. 2016 May 25. pii: jc-00158-16. PubMed PMID: 27250809.

ADHD associated Sleep disturbance

Differential Diagnosis

- Obstructive Sleep Apnea
- Periodic Limb Movement Disorder
- Restless Leg Syndrome
- Anxiety

Assessment tools

- Sleep Disturbance Scale for Children (SDSC)
- BEARS
- Basic questions – Do you …
- History & Physical assessment
- Blood work – Ferritin, Vitamin D

BEARS screening tool for assessment of sleep in children

	Preschool (2-5 years)	School-aged (6-12 years)	Adolescent (13-18 years)
Bedtime problems	Does your child have any problems going to bed? Falling asleep?	Does your child have any problems at bedtime? (P) Do you have any problems going to bed? (C)	Do you have any problems falling asleep at bedtime? (C)
Excessive daytime sleepiness	Does your child seem over tired or sleepy a lot during the day? Does she still take naps?	Does your child have difficulty waking in the morning, seem sleepy during the day or take naps? (P) Do you feel tired a lot? (C)	Do you feel sleepy a lot during the day? In school? While driving? (C)
Awakenings during the night	Does your child wake up a lot at night?	Does your child seem to wake up a lot at night? Any sleepwalking or nightmares? (P) Do you wake up a lot at night? Have trouble getting back to sleep? (C)	Do you wake up alot at night? Have trouble getting back to sleep? (C)
Regularity and duration of sleep	Does your child have a regular bedtime and wake time? What are they?	What time does your child go to bed and get up on school days? Weekends? Do you think he/she is getting enough sleep? (P)	What time do you usually go to bed on school nights? Weekends? How much sleep do you usually get? (C)
Sleep-disordered breathing	Does your child snore a lot or have difficulty breathing at night?	Does your child have loud or nightly snoring or any breathing difficulties at night? (P)	Does your teenager snore loudly or nightly? (P)

The BEARS instrument prompts screening questions in five major sleep domains, represented by the acronym **B**-**E**-**A**-**R**-**S**: **B**edtime problems, **E**xcessive daytime sleepiness, **A**wakenings during the night, **R**egularity and duration of sleep, and **S**leep-disordered breathing. The table above shows examples of trigger questions for each age group.

P: questions addressed to parent; C: questions addressed to child.

Reproduced with permission from Judith Owens, MD, MPH. Originally published in: Owens JA, Dalzell V. Use of the 'BEARS' sleep screening tool in a pediatric residents' continuity clinic: a pilot study. Sleep Med 2005; 6:63.

UpToDate®

ADHD associated Sleep disturbance

When to refer

- Suspected OSA due to tonsillar hypertrophy
- Restless leg or Periodic limb

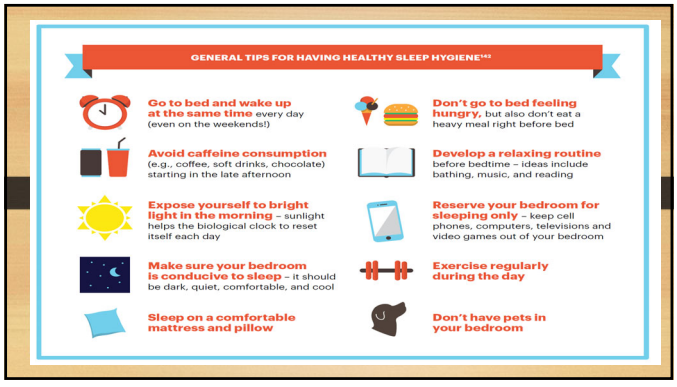
Who to refer to

- Sleep medicine specialist vs ENT
- Sleep medicine

ADHD associated Sleep disturbance

Management strategy #1

- Sleep hygiene teaching



ADHD associated Sleep disturbance

FDA approved medication

- There are no prescription drugs approved in the U.S. to treat childhood insomnia.

AASM American Academy of SLEEP MEDICINE™

ADHD associated Sleep disturbance

Off label medications

- Antihistamines
- Clonidine
- Guanfacine

Herbal remedies

- Melatonin
- Lavender

Medication	Brand name	Classification	Age	Dosage Form(s)	Dosing			Script needed
					Dosing	Range (mg/day)	Schedule	
melatonin	*	Hormone	> 6 months old	solution; chewable tablet, tablet, gummies	0.5 mg	1 to 5 mg	30-60 minutes before HS	No
diphendramine	Benadryl	Antihistamine	< 12 years	solution; capsule; tablet	12.5 mg	12.5 to 50 mg	HS	No
hydroxyzine	Vistaril	Antihistamine	< 6 years	solution; chewable tablet; capsule; tablet	12.5 mg	12.5 to 25 mg	HS	Yes
			> 6 years		25 mg			
clonidine	Catapress	Alpha-Adrenergic Agonist	< 45 kg	solution; tablet	0.05 mg	0.1 to 0.3 mg	30 minutes before HS	Yes
guanfacine	Intuniv;Tenex	Alpha2-Adrenergic Agonist	45 kg	solution; tablet	0.5 mg	0.5 to 3 mg	30 minutes before HS	Yes

USP Verified Dietary Supplements

http://www.usp.org/usp-verification-services/usp-verified-dietary-supplements

The United States Pharmacopeial Convention (USP) is a scientific nonprofit organization that sets standards for the identity, strength, quality, and purity of medicines, food ingredients, and dietary supplements manufactured, distributed and consumed worldwide. In the United States, the Food and Drug Administration (FDA) relies on standards the USP has developed. The USP Dietary Supplement Verification Program is a voluntary testing and auditing program that helps dietary supplement manufacturers ensure the production of quality products for consumers. Click "Verified Supplements" to see a list of brands and products within brands that USP verifies to meet its stringent criteria.

Melatonin Supplements

Nature Made

ADHD associated Sleep Disturbance Billing and Coding

ICD – 10 coding

- Z73.810 – Behavioral insomnia of childhood, sleep-onset association type
- G47.01 – Insomnia due to other medical condition

E & M Codes

- 99204 New Patient (45 minutes)
- 99214 Established Patient (25 minutes)

CPT Codes

- 96110 – Developmental Screening - BEARS

Documentation

" Today > 45 (25) minutes was spent in face to face encounter with patient and caregiver/parent with > 50% spent in **counseling** and coordination of care."

ADHD associated Sleep Disturbance Resources

- Sleep Disturbance Scale for Children (SDSC) – http://www.midss.org/content/sleep-disturbance-scale-children-sdsc
- UpToDate article on sleep in children & adolescents with ADHD - https://www.uptodate.com/contents/sleep-in-children-and-adolescents-with-attention-deficit-hyperactivity-disorder?search=BEARS%20screening%20tool%20for%20sleep&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2
- Sleep disturbances in children with attention-deficit/ hyperactivity disorder article - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3129712/pdf/nihms301698.pdf
- Melatonin Natural Health Products and Supplements: Presence of Serotonin and Significant Variability of Melatonin Content - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5263083/
- Information for caregivers - https://kidshealth.org/en/parents/sleep.html?WT.ac=ctg#catthought


Thank you