

# Stressing Over PTSD: How to Recognize and Treat



Taylor Hendricks-Johnson, MD  
Child & Adolescent Psychiatrist – FSP & ECMH

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# Objectives



Review trauma and how it can present

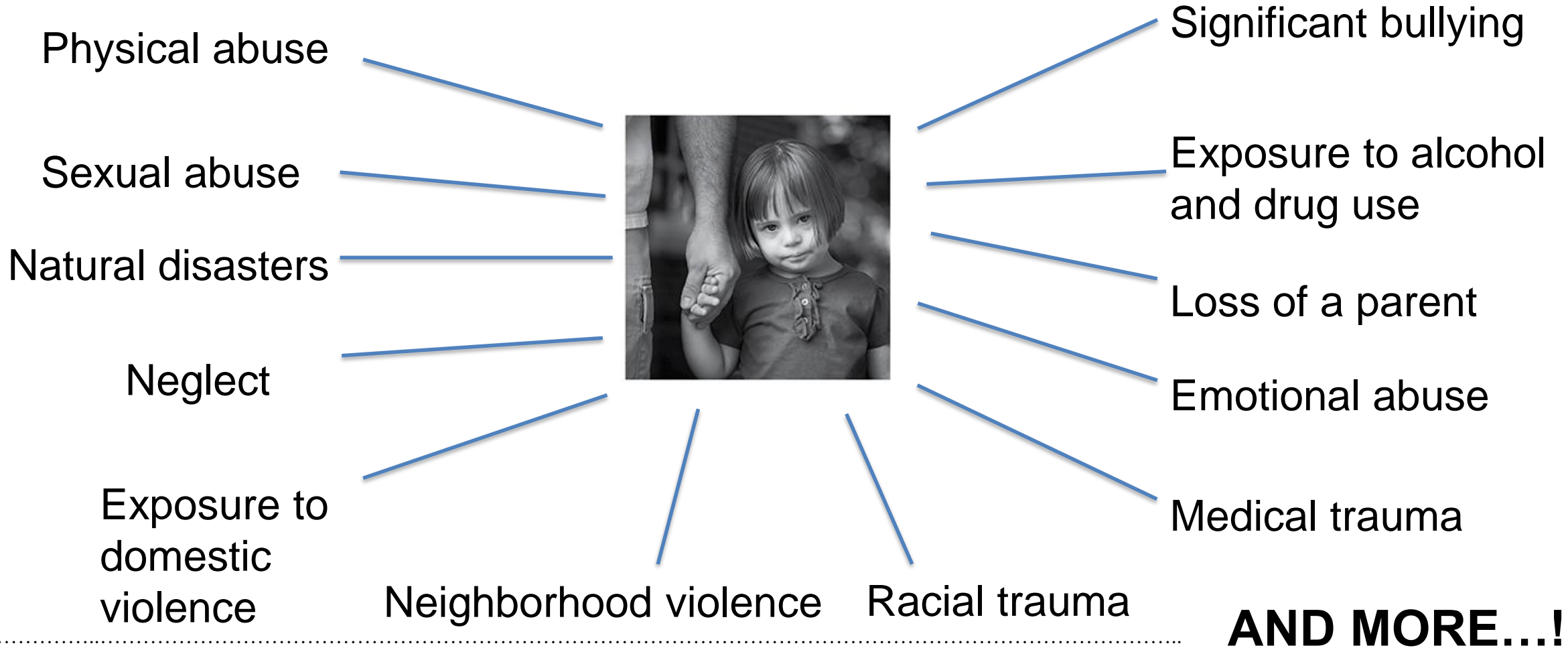


Explore common misconceptions of trauma and PTSD



Discuss appropriate treatment for children with trauma

# What is Trauma?



**NATIONWIDE CHILDREN'S®**  
*When your child needs a hospital, everything matters.*

# Chronic Toxic Stress



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Occasional and brief stress responses are healthy and normal

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Defined as strong, frequent, or prolonged activation of the body's stress response systems

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Negatively affects functioning, general health, mental health, and cognitive functioning

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# Adverse Childhood Events (ACE)



- Potentially traumatic events that occur between the ages of 0-17
  - Family member incarcerated
  - Loss of a parent through divorce or death
  - Exposure to alcohol and drug use
  - Family with mental health problems
  - Poverty

# CDC-Kaiser ACE Study

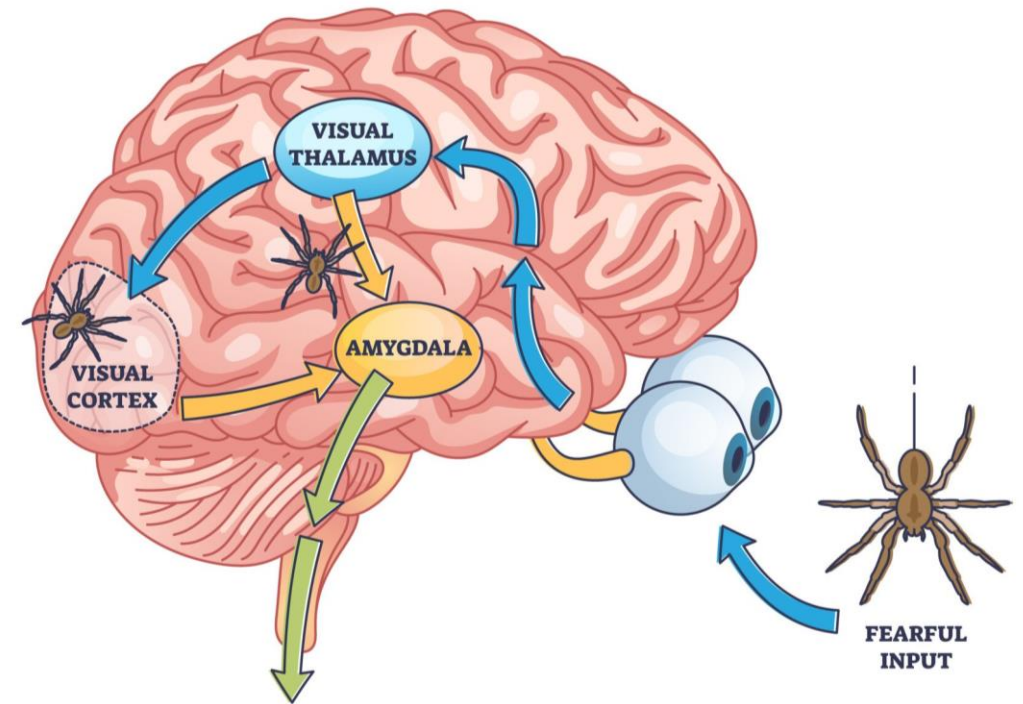
- One of the largest investigations of childhood abuse, neglect, and household challenges and their impact on later-life health and well-being
- Questionnaire asks about :
  - emotional, physical, sexual abuse
  - Neglect
  - Parental separation/divorce
  - Domestic violence
  - Substance abuse, legal issues, and mental illness in the home
- 2/3 participants reported at least 1 ACE
- >20% report 3+ ACEs

# Trauma as a Risk Factor

- More significant mental health problems
  - Medical problems (*Felitti, VJ et al., 1998*)
    - Cancer
    - Heart disease
    - Respiratory disease
    - Diabetes
  - Trauma history should be a part of everyone's medical history
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# How Does Trauma Affect the Brain?

- Amygdala recognizes threat and orchestrates a whole body response
  - Sympathetic nervous system (SNS) activation “fight or flight”
  - Activation of the hypothalamic-pituitary-adrenal (HPA) axis





# Sympathetic Nervous System in Trauma

- Fight or flight
  - Increased HR, BP, breathing rate
  - Blood pushed to muscles, heart, and vital organs
  - Increased alertness, sharper senses
  - Release of glucose for energy

Traumatic event



Activation of the HPA system



Hypothalamus



CRH

Anterior Pituitary

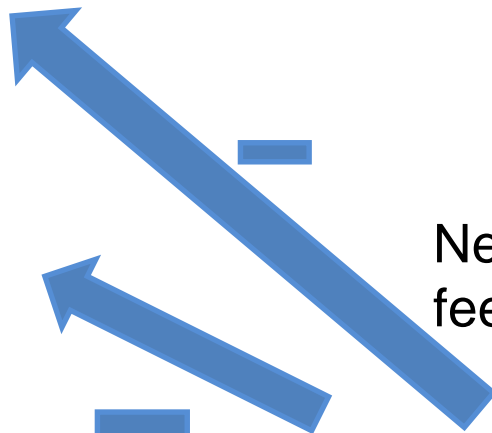


ACTH

Adrenal Cortex



Cortisol



Negative  
feedback

## Normal Stress Response



Body calms via  
parasympathetic nervous  
system and returns to  
baseline



# Trauma Stress Response

Traumatic event



Activation of the HPA system



Hypothalamus



CRH

Anterior Pituitary

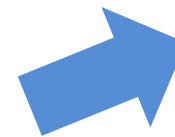


ACTH

Adrenal Cortex



Cortisol



Amygdala

Atrophy, decreased volume,  
Memory impairment



Hippocampus



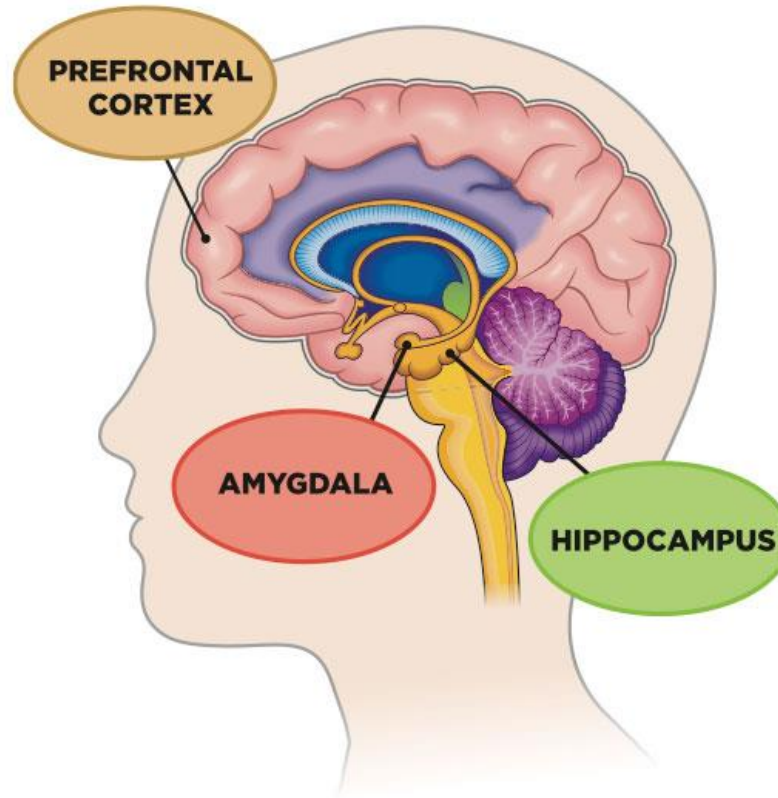
Increased volume  
Conditioned fear



# Trauma stress response

- Overactivation of SNS and HPA axis
  - Constant automatic response of alertness; anywhere from vigilance to terror
- Hyperarousal
  - Adrenergic
  - Hypervigilance, aggression, exaggerated responses
  - More often males and witness to violence

# Trauma Neurobiology



# Trauma Symptoms

- Chronic over-activation of the SNS and HPA axis lead to the symptoms experienced in trauma

Hyperarousal

Hypervigilance

Exaggerated  
responses

Outbursts /  
aggression

Difficulty  
sleeping

Impulsivity

Restlessness

Irritability,  
anxiety

Intrusive  
memories

Poor focus

Poor memory

Nightmares

# Diagnosing PTSD

- Exposure to traumatic event in 1 or more of the following ways:
  - 1. Directly experiencing
  - 2. Witnessing it occur to others
  - 3. Learning it occurred to close family/friends
  - 4. Repeated or extreme exposure to aversive details of traumatic events

# Diagnosing PTSD

- Presence of 1 or more intrusion symptoms
  - 1. Recurrent distressing memories of event
  - 2. Recurrent distressing dreams
  - 3. Dissociative reactions in which trauma feels it is recurring
  - 4. Psychological distress at exposure to cues that resemble the trauma
  - 5. Physiological reactions to cues that resemble the trauma



# Diagnosing PTSD

- Persistent avoidance of stimuli associated with the traumatic event, as evidenced by 1 or both:
  - 1. Avoidance of distressing memories, thoughts, or feelings associated with traumatic event
  - 2. Avoidance of external reminders associated with traumatic event

# Diagnosing PTSD

- 2 or more negative alterations in cognitions and mood:
  - 1. Inability to remember aspects of the event
  - 2. Persistent & exaggerated negative beliefs
  - 3. Persistent distorted cognitions related to traumatic events
  - 4. Persistent negative emotional state
  - 5. Diminished interest or participation in activities
  - 6. Feelings of detachment/estrangement from others
  - 7. Persistent inability to experience positive emotions

# Diagnosing PTSD

- 2 or more marked alterations in arousal and reactivity:
  - 1. irritable behavior and angry outbursts
  - 2. Reckless or self-destructive behavior
  - 3. Hypervigilance
  - 4. Exaggerated startle response
  - 5. Problems with concentration
  - 6. Sleep disturbance

# Diagnosing PTSD

- Duration >1 month
- Causes clinically significant distress or impairment in social, occupational, or other important areas of functioning
- Disturbance is not attributable to physiological effects of a substance or another medical condition

# Diagnosing PTSD in the Littles

- PTSD <6
  - 1 intrusion symptom
  - 1 avoidance OR negative alteration in cognition/mood symptom
  - 2 negative alteration in arousal/reactivity symptoms



# Dissociations

- Dissociation: a disruption of the integrated functions of consciousness, memory, identity, or awareness of body, self, or environment.
  - Impaired consciousness: decreased responsiveness to external stimuli
  - Impaired memory
  - Impaired awareness of the body, self, or environment

# Dissociations

- Where do they come from?
  - Sympathetic nervous system
    - Fight
    - Flight
    - **Freeze**
      - Dopamine and endogenous opioids secretion
      - Detachment, numbness
      - More often in females, young children, or those that are powerless

# Dissociations

- Differential:
  - Absence seizures
  - Daydreaming with ADHD
  - Trauma/PTSD
  - Anxiety



# Patient Case

- 6 yo boy comes to an appointment with his grandma, who is his current guardian, due to concerns for behavior
    - Hyperactive & engages in impulsive reckless behaviors
    - Problems focusing at home and at school, with poor memory
    - Having outbursts at home that are worse on the weekends
    - Behavioral problems in school & doesn't like going to school
    - Frequently irritable
    - Having difficulties with friendships at school
    - Difficulty sleeping
- 3 Alterations in arousal/reactivity**
- Intrusion, avoidance**
- 3 Negative alterations in cognition/mood**
- Intrusion / alteration in arousal/reactivity**

# Overlapping Symptoms

PTSD &  
ADHD

PTSD &  
ODD

PTSD &  
Anxiety



**NATIONWIDE CHILDREN'S**  
*When your child needs a hospital, everything matters.*

# ADHD vs. PTSD

- Large overlap of symptoms
  - Difficulty concentrating and learning in school
  - Being easily distracted
  - Zoning out
  - Restless
  - Irritability, quick to anger
  - Reckless, aggressive behavior
  - Poor memory
  - Impulsivity



# ODD vs PTSD

- Overlap of symptoms:
  - Irritability
  - Loses temper easily
  - Aggressive outbursts
  - Difficulty in relationships with adults



# Anxiety vs PTSD

- Large overlap of symptoms
  - Panic-like symptoms at times
  - Restlessness
  - Difficulty concentrating
  - Sleep disturbances
  - Irritability
  - Avoidance of situations



# How Do We Differentiate These?

- History taking!
  - Timeline of events vs symptoms
- Response to treatment can sometimes help guide us

# Why Does it Matter?



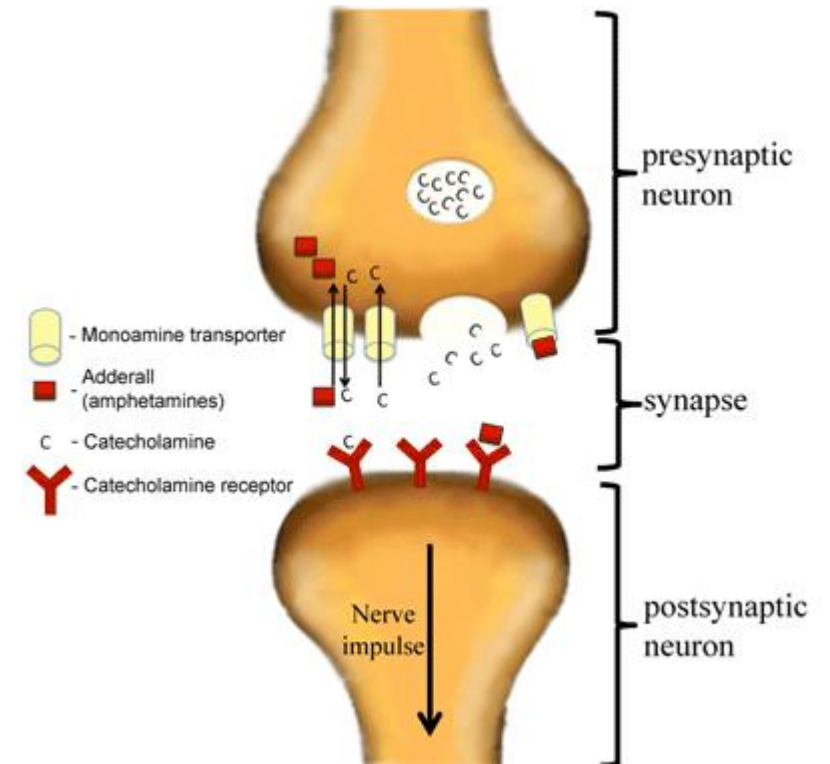
CHANGES YOUR ASSESSMENT  
AND DIAGNOSIS OF THE  
PATIENT



CHANGES THE  
TREATMENT

# Stimulants and Trauma

- Stimulants: increase availability of catecholamine neurotransmitters
- PTSD is associated with alterations in catecholamine secretion
- Stress increases the responsiveness of the locus coeruleus → increases noradrenergic activity in the amygdala





# Medications

SSRIs

Guanfacine

Clonidine

# SSRIs



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Evidence suggests PTSD symptom reduction in adults

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Research does not support benefit for children with PTSD

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None are FDA approved to treat PTSD

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Helps treat co-occurring anxiety or depressive disorders

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Can be helpful for dissociations

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# Guanfacine

- Selective alpha2A-adrenoreceptor agonist
- Reduces sympathetic nerve impulses → decrease sympathetic outflow → decrease in vasomotor tone and HR
- Reduces norepinephrine release, weakening the amygdala
  - →decreased hypervigilance
  - →decreased insomnia
  - →decreased startle
  - →decreased re-experiencing symptoms
- Preferentially binds postsynaptic alpha2A receptors in prefrontal cortex
  - Improves firing of prefrontal cortex neurons
  - →Improving working memory
  - →Improved behavioral inhibition

# Clonidine

- Alpha2-Adrenergic agonist
- Reduces sympathetic outflow from the CNS
  - → decreased peripheral resistance, HR, BP
- Post-synaptic alpha2 agonist stimulation regulates subcortical activity in the prefrontal cortex
  - Decreased hyperactivity
  - Decreased impulsiveness
  - Decreased distractibility

# Melatonin

- Used very frequently for sleep
- Watch out for risk of increased nightmares

# What To Do?

- 6 yo boy comes to an appointment with his grandma, who is his current guardian, due to concerns for behavior
  - Hyperactive & engages in impulsive reckless behaviors
  - Problems focusing at home and at school, with poor memory
  - Having outbursts at home that are worse on the weekends
  - Behavioral problems in school & doesn't like going to school
  - Frequently irritable
  - Having difficulties with friendships at school
  - Difficulty sleeping

# But I Got Vanderbilts!

- So you get Vanderbilt forms from parents and teachers and they are elevated...
  - There is such a large overlap in symptoms between ADHD and PTSD, that this is not always reliable for providing a diagnosis of ADHD in children with a significant trauma history

# Therapy Treatment



## Early Childhood Mental Health

- Child Parent Psychotherapy (CPP)
- Parent Child Interaction Therapy (PCIT)

## Family Support Program

- Trauma Focused CBT (TF-CBT)
- TF-CBT combined with Dialectical Behavioral Therapy (DBT)
- Various other trauma therapy modalities



# Making a Referral

Order Search

REFERRAL TO BEHAVIORAL HEALTH

Browse Preference List Facility List Database

**Panels** (No results found) Search panels by user

**Outpatient Medications** (No results found)

**Outpatient Procedures** ⤴

Px Code	Name	Type	Class	Frequency	Pref List	Phase of Care
REF8A	REFERRAL TO BEHAVIORAL HEALTH/PSYCHIATRY/PSYCHOLOGY	Outpat Ref			REFERRALS	
REF8A	REFERRAL TO BEHAVIORAL HEALTH/PSYCHIATRY/PSYCHOLOGY	Outpat Ref			BH MEDS AND...	

**Facility Medications** (No results found)

**Facility Procedures** (No results found)

# Making a Referral

Referral to Behavioral Health / Psychiatry / Psychology

Class:

Internal Ref

External Referral

Priority:

Routine

Routine

STAT

Dept Specialty:

Behavioral I

Referral Reason:

Specialty St

Interpreter needed?

Yes

No

Preferred Dept/Program

Briefly describe the present concerns and reason for referral.

6 yo male with a history of neglect and physical abuse, referring for trauma treatment

Attending of Record:

Comments:

Rationale for Referral and Possible Barriers

Phase of Care:

Item Select

Search:

Title

AUTISM/CASD

CENTRAL INTAKE

CHILD AND ADOLESCENT PARTIAL HOSPITALIZATION PROGRAM (C&A PHP)

CHILD DEVELOPMENT CENTER

COMMUNITY - CSP

COMMUNITY - FSP

COMMUNITY - HOME BASED

COMMUNITY - SCHOOL BASED BEXLEY

COMMUNITY - SCHOOL BASED CANAL WINCHESTER

COMMUNITY - SCHOOL BASED COLUMBUS CITY

COMMUNITY - SCHOOL BASED REYNOLDSBURG

CPL

CRISIS - YCSU

CRITICAL ASSESSMENT AND TREATMENT (OUTPATIENT CRISIS)

EATING DISORDERS

ECMH

HEALTHY ALTERNATIVES ICT

HEALTHY ALTERNATIVES OP

IPC PSYCHOLOGY

IY (INCREDIBLE YEARS)

MOOD AND ANXIETY THERAPY

NEUROPSYCHOLOGY

39 items loaded.

Accept

Cancel

# Making a Referral

Referral to Behavioral Health / Psychiatry / Psychology

Accept

Class:

Internal Ref

External Referral

Priority:

Routine

Routine

STAT

Dept Specialty:

Behavioral

Referral Reason:

Specialty St

Interpreter needed?

Yes

No

Preferred Dept/Program

Briefly describe the present concerns and reason for referral.

15 yo female with a history of sexual abuse, referring for trauma treatment

Attending of Record:

Comments:

abc

Insert SmartText

Rationale for Referral and Possible Barriers

Phase of Care:

Item Select

Search:

Title

CENTRAL INTAKE

CHILD AND ADOLESCENT PARTIAL HOSPITALIZATION PROGRAM (C&A PHP)

CHILD DEVELOPMENT CENTER

COMMUNITY - CSP

COMMUNITY - FSP

COMMUNITY - HOME BASED

COMMUNITY - SCHOOL BASED BEXLEY

COMMUNITY - SCHOOL BASED CANAL WINCHESTER

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CPL

CRISIS - YCSU

CRITICAL ASSESSMENT AND TREATMENT (OUTPATIENT CRISIS)

EATING DISORDERS

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HEALTHY ALTERNATIVES ICT

HEALTHY ALTERNATIVES OP

IPC PSYCHOLOGY

IY (INCREDIBLE YEARS)

MOOD AND ANXIETY THERAPY

NEUROPSYCHOLOGY

39 items loaded.

Accept

Cancel

# PTSD – Common Misconceptions

- Children can't get PTSD
  - *Young children can get PTSD, even under the age of 5!*
- Child was too young to remember the trauma, so he can't have PTSD
  - *A child can have PTSD, even without conscious memory of the trauma*
- Child hasn't been physically or sexually abused, so they don't have a history of trauma
  - *There are many more types of trauma that exist in kids*

# Summary



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Trauma consists of many different types of adverse experiences that a child can experience ranging from poverty to sexual abuse

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The way trauma affects the brain leads to a lot of non-specific symptoms that can be easily misdiagnosed

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Having a history of trauma strongly impacts treatment, so it should be assessed in children with symptoms

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**Questions?**

# References:

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# References:

- Photos used in presentation:
  - [What Is The Amygdala: Function & Brain Location \(simplypsychology.org\)](http://simplypsychology.org)
  - [The Mechanics of Stress Response | Strong Medicine \(dragondoor.com\)](http://dragondoor.com)
  - [Diagnosing ADD/ADHD in Teens - Pacific Teen Treatment](http://parentinghealthybabies.com)
  - [oppositional defiant disorder \(parentinghealthybabies.com\)](http://parentinghealthybabies.com)
  - [Anxiety in children - Harvard Health](http://harvardhealth.org)
  - [Does Adderall Actually Make You Smarter? | SiOWfa16: Science in Our World: Certainty and Controversy \(psu.edu\)](http://psu.edu)