A PARTNER IN NCTSN The National Child Traumatic Stress Network

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Trauma or Not Trauma? Teasing out traumatic stress from ADHD, Depression and Anxiety

Brooks Keeshin, MD, FAAP
University of Utah

A PARTNER IN NCTSN The National Child Traumatic Stress Network

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Disclosures/Funding

- **None**

Learning Objectives

Identify common symptoms of traumatic stress and potential areas for syndromic overlap between traumatic stress and common childhood mental health conditions such as ADHD, depression and anxiety

Become familiar with pediatric assessment and treatment approaches for traumatic stress, both as an independent condition as well as in the context of other mental health concerns

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Even the Experts are Confused as to Which Term is Best

- Developmental Trauma Disorder?
- Allostatic Load?
- Complex Trauma?
- Chronic Stress?
- Post Traumatic Stress Disorder?
- Toxic Stress?
- ACES?
- Child Traumatic Stress?
- Complex PTSD?
- Acute vs. Chronic Trauma?

CANarratives.org

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Trauma Definitions

Trauma: Significant event or experience that causes or threatens harm to one's emotional and/or physical well-being

Traumatic stress: Intense fear and stress in response to a potentially traumatic experience, including disturbed sleep, difficulty paying attention and concentrating, anger and irritability, withdrawal, repeated and intrusive thoughts, and/or extreme distress when confronted by reminders of the trauma

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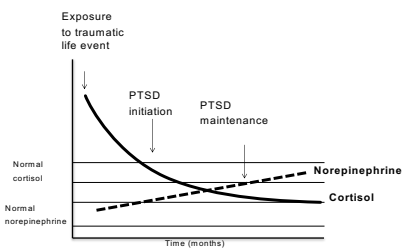
Divergence of cortisol and norepinephrine responsible for PTSD maintenance



Pervanidou. *J Neuroendocrinology.* 2008

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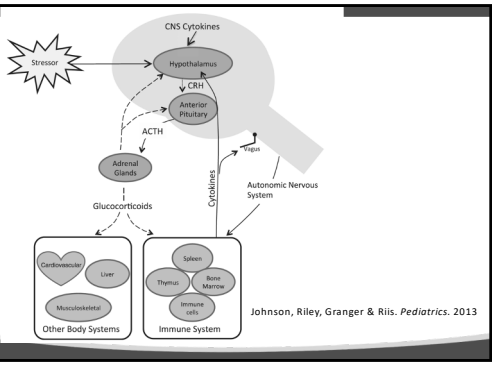

Johnson, Riley, Granger & Riis. *Pediatrics*. 2013

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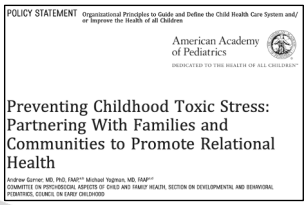
Primary Prevention, Secondary and Tertiary Response to Trauma



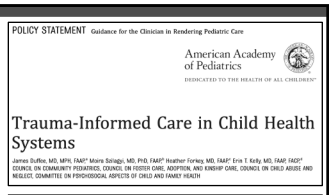
POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Preventing Childhood Toxic Stress: Partnering With Families and Communities to Promote Relational Health

Andrew Garner, MD, PhD, FAAP,[a,b] Michael Yogman, MD, FAAP,[c,d] COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH, SECTION ON DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS, COUNCIL ON EARLY CHILDHOOD



POLICY STATEMENT Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics

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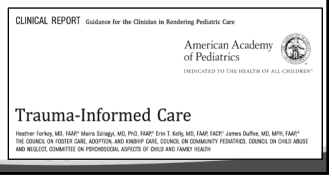
Trauma-Informed Care in Child Health Systems

James Duffee, MD, MPH, FAAP,[a] Moira Szilagyi, MD, PhD, FAAP,[b] Heather Forkey, MD, FAAP,[c] Erin T. Kelly, MD, FAAP, FACP,[d] COUNCIL ON COMMUNITY PEDIATRICS, COUNCIL ON FOSTER CARE, ADOPTION, AND KINSHIP CARE, COUNCIL ON CHILD ABUSE AND NEGLECT, COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH



CLINICAL REPORT Guidance for the Clinician in Rendering Pediatric Care

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Trauma-Informed Care

Heather Forkey, MD, FAAP,[a] Moira Szilagyi, MD, PhD, FAAP,[b] Erin T. Kelly, MD, FAAP, FACP,[c] James Duffee, MD, MPH, FAAP,[d] THE COUNCIL ON FOSTER CARE, ADOPTION, AND KINSHIP CARE, COUNCIL ON COMMUNITY PEDIATRICS, COUNCIL ON CHILD ABUSE AND NEGLECT, COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH

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CLINICAL REPORT Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics

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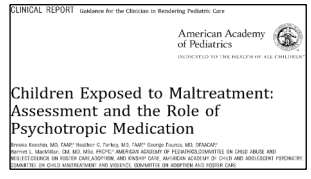
Clinical Considerations Related to the Behavioral Manifestations of Child Maltreatment

Robert D. Sege, MD, PhD, FAAP,[a,b] Lisa Amaya-Jackson, MD, MPH, FAACAP,[c] AMERICAN ACADEMY OF PEDIATRICS Committee on Child Abuse and Neglect, Council on Foster Care, Adoption, and Kinship Care; AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY Committee on Child Maltreatment and Violence; NATIONAL CENTER FOR CHILD TRAUMATIC STRESS

Pediatrics, February 2020

Tertiary Response grounded in mental health



CLINICAL REPORT Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics

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Children Exposed to Maltreatment: Assessment and the Role of Psychotropic Medication

Brooke Kisiel, MD, FAAP,[a] Heather C. Forkey, M.D, FAAP,[b] George Fouras, MD, DFAACAP,[c] Merrick L. MacMillan, Qld, MD, MSci, FRCPC,[d] AMERICAN ACADEMY OF PEDIATRICS/COMMITTEE ON CHILD ABUSE AND NEGLECT/COUNCIL ON FOSTER CARE/ADOPTION, AND KINSHIP CARE, AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY COMMITTEE ON CHILD MALTREATMENT AND VIOLENCE, COMMITTEE ON ADOPTION AND FOSTER CARE

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How Do We Know About Trauma Symptoms?

- Observe/ask about symptoms
  - What do you look for?
  - What do you ask about?
- Standardized screens:
  - UCLA PTSD Reaction Index
  - Child PTSD Symptom Scale
  - Trauma Symptom Checklist for Children
  - Trauma Symptom Checklist for Young Children
- Diagnostic and Statistical Manual of Mental Disorders (DSM-5) Criteria for PTSD
  - Threatened death, serious injury or sexual violence
  - Intrusive
  - Avoidance
  - Negative Cognition/Mood
  - Hyperarousal
  - +/- Dissociation

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Challenges in Identifying Traumatic Stress

- Families may not volunteer trauma history unless asked directly
- PTSD is rarely the identified chief complaint
- Families don't connect traumatic history and current symptoms
- When in a known, comfortable setting, children with PTSD may appear calm

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SSNR or SSRI?

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Risks of "all of the above approach"

Pathologize lived experience and understandable reactions

Take focus away from practical and evidence-based approaches to treat challenges

Side effects of treatment can result in impairment or other health concerns

Lack of response can lead to more complicated and higher risk treatments

Development of an inaccurate identity

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Choosing the Right Bucket

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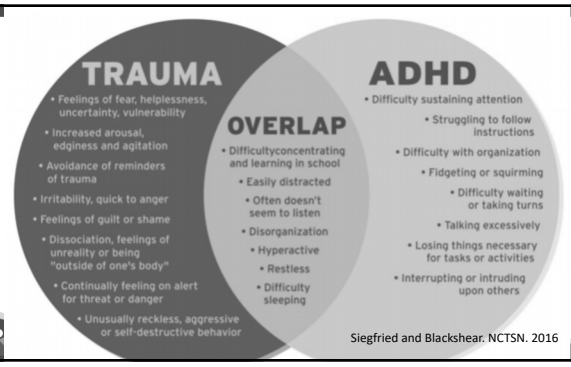
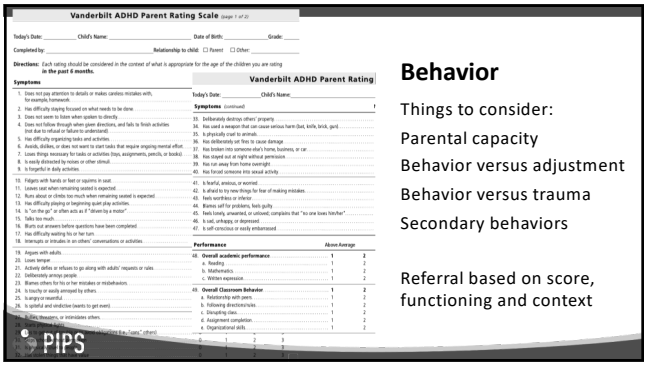


Siegfried and Blackshear. NCTSN. 2016

Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents

Mark L. Wolraich, MD, FAAP[a] Joseph F. Hagan, Jr, MD, FAAP[b,c] Carla Allan, PhD,[d,e] Eugenia Chan, MD, MPH, FAAP[f,g]

Trauma experiences, posttraumatic stress disorder, and toxic stress are additional comorbidities and risk factors of concern.


Vanderbilt ADHD Parent Rating Scale (page 1 of 2)

Today's Date: _____ Child's Name: _____ Date of Birth: _____ Grade: _____

Completed by: _____ Relationship to child: ☐ Parent ☐ Other: _____

Directions: Each rating should be considered in the context of what is appropriate for the age of the children you are rating **in the past 6 months.**

Symptoms
1. Does not pay attention to details or makes careless mistakes with, for example, homework
2. Has difficulty staying focused on what needs to be done
3. Does not seem to listen when spoken to directly
4. Does not follow through when given directions, and fails to finish activities (not due to refusal or failure to understand)
5. Has difficulty organizing tasks and activities
6. Avoids, dislikes, or does not want to start tasks that require ongoing mental effort
7. Loses things necessary for tasks or activities (toys, assignments, pencils, or books)
8. Is easily distracted by noises or other stimuli
9. Is forgetful in daily activities
10. Fidgets with hands or feet or squirms in seat
11. Leaves seat when remaining seated is expected
12. Runs about or climbs too much when remaining seated is expected
13. Has difficulty playing or beginning quiet play activities
14. Is "on the go" or often acts as if "driven by a motor"
15. Talks too much
16. Blurts out answers before questions have been completed
17. Has difficulty waiting his or her turn
18. Interrupts or intrudes in on others' conversations or activities
19. Argues with adults
20. Loses temper
21. Actively defies or refuses to go along with adults' requests or rules
22. Deliberately annoys people
23. Blames others for his or her mistakes or misbehaviors
24. Is touchy or easily annoyed by others
25. Is angry or resentful
26. Is spiteful and vindictive (wants to get even)
27. Bullies, threatens, or intimidates others
28. Starts fights

Vanderbilt ADHD Parent Rating

Today's Date: _____ Child's Name: _____

Symptoms (continued)	1
33. Deliberately destroys others' property	
34. Has used a weapon that can cause serious harm (bat, knife, brick, gun)	
35. Is physically cruel to animals	
36. Has deliberately set fires to cause damage	
37. Has broken into someone else's home, business, or car	
38. Has stayed out at night without permission	
39. Has run away from home overnight	
40. Has forced someone into sexual activity	
41. Is fearful, anxious, or worried	
42. Is afraid to try new things for fear of making mistakes	
43. Feels worthless or inferior	
44. Blames self for problems, feels guilty	
45. Feels lonely, unwanted, or unloved; complains that "no one loves him/her"	
46. Is sad, unhappy, or depressed	
47. Is self-conscious or easily embarrassed	

Performance	Above Average	
48. Overall academic performance	1	2
a. Reading	1	2
b. Mathematics	1	2
c. Written expression	1	2
49. Overall Classroom Behavior	1	2
a. Relationship with peers	1	2
b. Following directions/rules	1	2
c. Disrupting class	1	2
d. Assignment completion	1	2
e. Organizational skills	1	2

0	1	2	3
Never	Occasionally	Often	Very Often

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Behavior

Things to consider:

Parental capacity

Behavior versus adjustment

Behavior versus trauma

Secondary behaviors

Referral based on score, functioning and context

Relative Effectiveness for Behavior Problems in Young Children – Stimulant/Behavior Tx

ADHD	PTSD
Stimulant+ Behavior Therapy+	Stimulant- Behavior Therapy+ (Stopping the trauma+)

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Pediatric Traumatic Stress and Depression

PTSD symptom cluster		Overlapping trauma and depressive symptoms
Negative cognition/mood		Negative belief towards self, self-blame, negative emotional state, loss of interest, detachment
Hyperarousal & Increased reactivity		Irritable and angry, reckless and self-destructive behavior, poor concentration, sleep disturbances

Keeshin, et al. *Pediatrics.* 2020

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Traumatic Stress and Anxiety

Panic Attacks may not indicate panic disorder if attacks are triggered by trauma reminders, better explained as intrusive and hyperarousal symptoms of PTSD	Separation challenges may be similar to **separation anxiety**, but could be trauma specific depending on context of traumatic experience(s) and association with trauma reminders	**Generalized and social anxiety** are often independent of trauma-specific context and reminders, however, still important to consider symptoms in context of traumatic experiences

Keeshin, et al. *Pediatrics.* 2020

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Risk Factors

Recommendation 2: Patients with depression risk factors (eg, a history of previous depressive episodes, a family history, other psychiatric disorders, substance use, trauma, psychosocial adversity, frequent somatic complaints, previous high-scoring screens without a depression diagnosis, etc) should be identified (grade of evidence: 2; strength of recommendation: very strong) and systematically monitored over time for the development of a depressive disorder by using a formal depression instrument or tool (targeted screening) (grade of evidence: 2; strength of recommendation: very strong).

idelines for Ad
Primary Care
actice Prepara
sessment, and

Co-Morbidity

aid in the assessment. Given the high rates of comorbidities, clinicians should assess for the existence of comorbid conditions that may affect the diagnosis and treatment of the depressive disorder.[2,22,142,143] These comorbidities may include 1 or more of the following conditions: substance use, anxiety disorder, attention-deficit/hyperactivity disorder, bipolar disorder, physical abuse, and trauma. Instruments that assess for a range of common comorbid mental health conditions should be considered as well during this assessment phase if they were not used in the initial screening protocol. Clinicians should also

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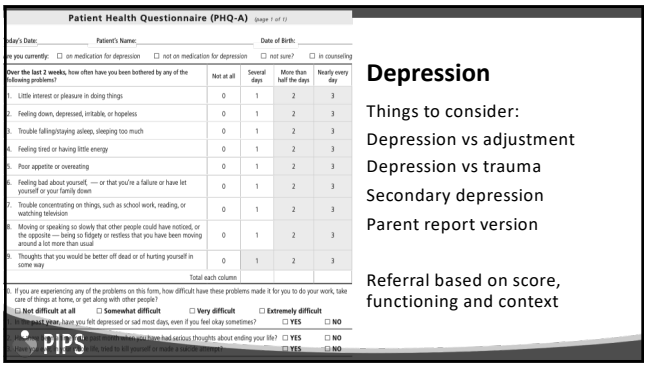
Patient Health Questionnaire (PHQ-A) (page 1 of 1)

oday's Date:_____ Patient's Name:_____ Date of Birth: _____

re you currently: ☐ on medication for depression ☐ not on medication for depression ☐ not sure? ☐ in counseling

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, irritable, or hopeless	0	1	2	3
3. Trouble falling/staying asleep, sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you're a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as school work, reading, or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed, or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
Total each column				

0. If you are experiencing any of the problems on this form, 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

10. In the past year, have you felt depressed or sad most days, even if you feel okay sometimes? ☐ YES ☐ NO

11. Have there been one or more months in your life when you have had serious thoughts about ending your life? ☐ YES ☐ NO

12. Have you ever, in your whole life, tried to kill yourself or made a suicide attempt? ☐ YES ☐ NO

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Depression

Things to consider:

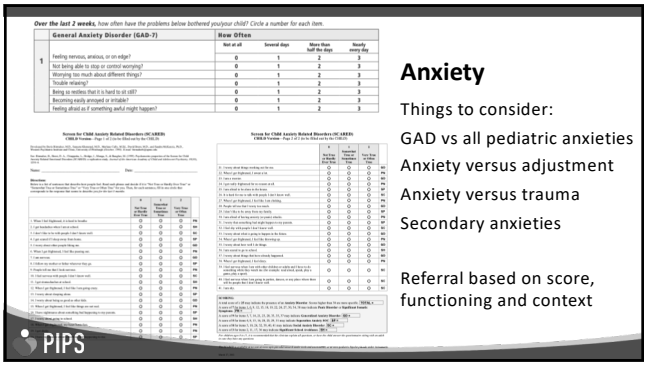
Depression vs adjustment

Depression vs trauma

Secondary depression

Parent report version

Referral based on score, functioning and context


Over the last 2 weeks, how often have the problems below bothered you/your child? Circle a number for each item.

	General Anxiety Disorder (GAD-7)	How Often			
		Not at all	Several days	More than half the days	Nearly every day
1	Feeling nervous, anxious, or on edge?	0	1	2	3
	Not being able to stop or control worrying?	0	1	2	3
	Worrying too much about different things?	0	1	2	3
	Trouble relaxing?	0	1	2	3
	Being so restless that it is hard to sit still?	0	1	2	3
	Becoming easily annoyed or irritable?	0	1	2	3
	Feeling afraid as if something awful might happen?	0	1	2	3

Screen for Child Anxiety Related Disorders (SCARED)
CHILD Version – Page 1 of 2 (to be filled out by the CHILD)

Screen for Child Anxiety Related Disorders (SCARED)
CHILD Version – Page 2 of 2 (to be filled out by the CHILD)

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Anxiety

Things to consider:

GAD vs all pediatric anxieties

Anxiety versus adjustment

Anxiety versus trauma

Secondary anxieties

Referral based on score, functioning and context

Relative Effectiveness - Psychotherapy vs SSRI for Depression and/or Anxiety

Anxiety/Depression	PTSD
SSRI + Therapy +	SSRI –/Therapy – TFCBT + (Stopping the trauma+)

Cohen, 2007; Robb, 2010; Morina, 2016

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Treatments for Traumatized Youth

AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY

"Trauma-focused psychotherapies should be considered **first-line** treatments for children and adolescents with PTSD."

Cohen, et al. *J. Am. Acad. Child Adolesc.Psychiatry.* 2010; 49(4): 414 – 430.

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Trauma-Focused Cognitive Behavioral Therapy

Prepare and Cope	**P**sychoeducation and parenting skills
	Relaxation
	Affective expression & modulation
	Cognitive coping
Exposure and Process	**T**rauma narrative processing
	In vivo mastery of trauma
Safety and Stability	**C**onjoint parent-child sessions
	Enhancing safety and future development

Cohen, et al. 2006

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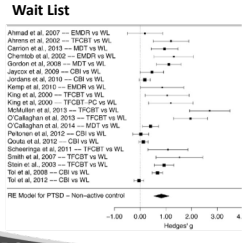
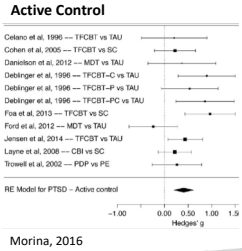
PTSD Psychotherapy Treatment Effect Sizes

Wait List



Active Control



Morina, 2016

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Comprehensive list of medications with proven effectiveness for pediatric PTSD or Bereavement

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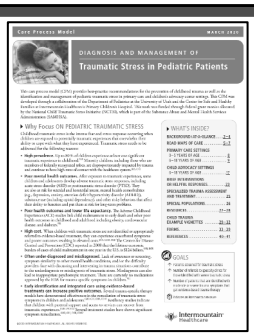
How to Identify & Respond to Traumatic Stress

A Care Process Model (CPM) for Pediatric Traumatic Stress

https://intermountainhealthcare.org/ckr-ext/Dcmnt?ncid=529796906


Care Process Model

DIAGNOSIS AND MANAGEMENT OF

Traumatic Stress in Pediatric Patients

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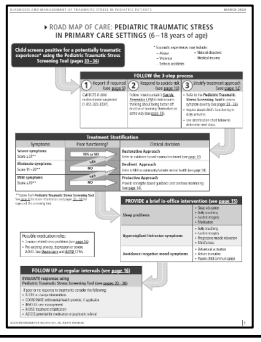
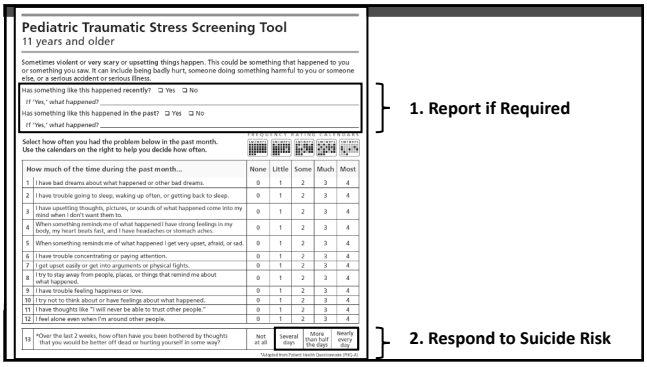

▸ ROAD MAP OF CARE: PEDIATRIC TRAUMATIC STRESS IN PRIMARY CARE SETTINGS (6–18 years of age)

CPM Roadmap of Care

Provider meets with youth and caregiver:
1. **Report if required**
2. **Respond to suicide risk**
3. **Stratify treatment response**

Follow-up



Pediatric Traumatic Stress Screening Tool
11 years and older

Sometimes violent or very scary or upsetting things happen. This could be something that happened to you or something you saw. It can include being badly hurt, someone doing something harmful to you or someone else, or a serious accident or serious illness.

Has something like this happened recently? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Has something like this happened in the past? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Select how often you had the problem below in the past month.
Use the calendars on the right to help you decide how often.

FREQUENCY RATING CALENDARS

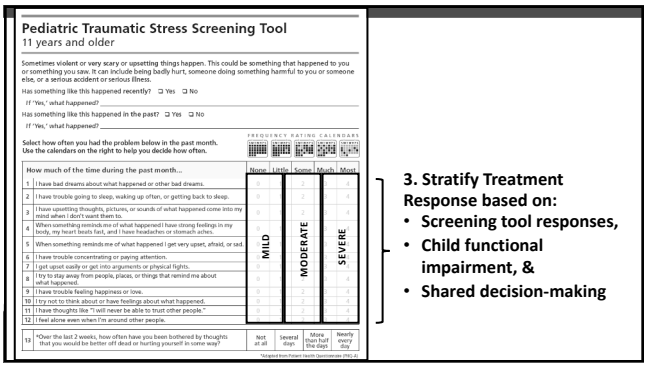
	How much of the time during the past month…	None	Little	Some	Much	Most
1	I have bad dreams about what happened or other bad dreams.	0	1	2	3	4
2	I have trouble going to sleep, waking up often, or getting back to sleep.	0	1	2	3	4
3	I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I don't want them to.	0	1	2	3	4
4	When something reminds me of what happened I have strong feelings in my body, my heart beats fast, and I have headaches or stomach aches.	0	1	2	3	4
5	When something reminds me of what happened I get very upset, afraid, or sad.	0	1	2	3	4
6	I have trouble concentrating or paying attention.	0	1	2	3	4
7	I get upset easily or get into arguments or physical fights.	0	1	2	3	4
8	I try to stay away from people, places, or things that remind me about what happened.	0	1	2	3	4
9	I have trouble feeling happiness or love.	0	1	2	3	4
10	I try not to think about or have feelings about what happened.	0	1	2	3	4
11	I have thoughts like "I will never be able to trust other people."	0	1	2	3	4
12	I feel alone even when I'm around other people.	0	1	2	3	4

		Not at all	Several days	More than half the days	Nearly every day
13	*Over the last 2 weeks, how often have you been bothered by thoughts that you would be better off dead or hurting yourself in some way?				

*Adapted from Patient Health Questionnaire (PHQ-4)

1. Report if Required

2. Respond to Suicide Risk



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3	I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I don't want them to.	0		2		4
4	When something reminds me of what happened I have strong feelings in my body, my heart beats fast, and I have headaches or stomach aches.	0		2		4
5	When something reminds me of what happened I get very upset, afraid, or sad.	0		2		4
6	I have trouble concentrating or paying attention.	0		2		4
7	I get upset easily or get into arguments or physical fights.	0		2		4
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9	I have trouble feeling happiness or love.	0		2		4
10	I try not to think about or have feelings about what happened.	0		2		4
11	I have thoughts like "I will never be able to trust other people."	0		2		4
12	I feel alone even when I'm around other people.	0		2		4

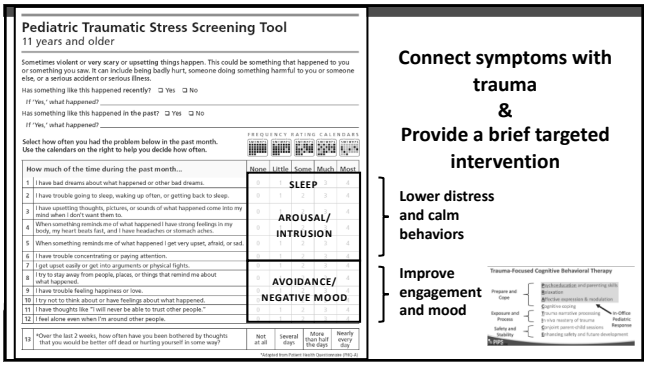
MILD | MODERATE | SEVERE

		Not at all	Several days	More than half the days	Nearly every day
13	*Over the last 2 weeks, how often have you been bothered by thoughts that you would be better off dead or hurting yourself in some way?				

*Adapted from Patient Health Questionnaire (PHQ-4)

3. Stratify Treatment Response based on:

- **Screening tool responses,**
- **Child functional impairment, &**
- **Shared decision-making**



Pediatric Traumatic Stress Screening Tool
11 years and older

Sometimes violent or very scary or upsetting things happen. This could be something that happened to you or something you saw. It can include being badly hurt, someone doing something harmful to you or someone else, or a serious accident or serious illness.

Has something like this happened recently? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Has something like this happened in the past? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Select how often you had the problem below in the past month.
Use the calendars on the right to help you decide how often.

FREQUENCY RATING CALENDARS

	How much of the time during the past month…	None	Little	Some	Much	Most
1	I have bad dreams about what happened or other bad dreams.	0				
2	I have trouble going to sleep, waking up often, or getting back to sleep.	0				
3	I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I don't want them to.	0				
4	When something reminds me of what happened I have strong feelings in my body, my heart beats fast, and I have headaches or stomach aches.	0				
5	When something reminds me of what happened I get very upset, afraid, or sad.	0				
6	I have trouble concentrating or paying attention.	0				
7	I get upset easily or get into arguments or physical fights.	0				
8	I try to stay away from people, places, or things that remind me about what happened.	0				
9	I have trouble feeling happiness or love.	0				
10	I try not to think about or have feelings about what happened.	0				
11	I have thoughts like "I will never be able to trust other people."	0				
12	I feel alone even when I'm around other people.	0				

SLEEP | AROUSAL/ INTRUSION | AVOIDANCE/ NEGATIVE MOOD

		Not at all	Several days	More than half the days	Nearly every day
13	*Over the last 2 weeks, how often have you been bothered by thoughts that you would be better off dead or hurting yourself in some way?				

*Adapted from Patient Health Questionnaire (PHQ-4)

Connect symptoms with trauma
&
Provide a brief targeted intervention

Lower distress and calm behaviors

Improve engagement and mood

Let's Talk About Sleep

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How Do We Know About Trauma Symptoms?

- Observe/ask about symptoms
  - What do you look for?
  - What do you ask about?
- Standardized screens:
  - UCLA PTSD Reaction Index
  - Child PTSD Symptom Scale
  - Trauma Symptom Checklist for Children
  - Trauma Symptom Checklist for Young Children

- Diagnostic and Statistical Manual of Mental Disorders (DSM-5) Criteria for PTSD
  - Threatened death, serious injury or sexual violence
  - Intrusive
  - Avoidance
  - Negative Cognition/Mood
  - Hyperarousal
  - +/- Dissociation

Sleep Symptoms

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Sleep and Trauma

High prevalence of sleep challenges among trauma exposed children

Traumatic stress and other mental health conditions explain some of connection between trauma and poor sleep

All types of potentially traumatic events can impact sleep

Some traumas may have increased impact

Sleep may be an appropriate treatment target for trauma exposed children with traumatic stress and wide range of other challenges

Noll, et al., 2006; Lehmann, et al., 2021; Wamser-Nanney, et al., 2018; Hambrick, et al., 2018

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Pediatric Traumatic Stress Screening Tool
11 years and older

Sometimes violent or very scary or upsetting things happen. This could be something that happened to you or something you saw. It can include being badly hurt, someone doing something harmful to you or someone else, or a serious accident or serious illness.

Has something like this happened recently? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Has something like this happened in the past? ❑ Yes ❑ No

If 'Yes,' what happened? _____

Select how often you had the problem below in the past month. Use the calendars on the right to help you decide how often.

FREQUENCY RATING CALENDARS

	How much of the time during the past month...	None	Little	Some	Much	Most
1	I have bad dreams about what happened or other bad dreams.	0	1	2	3	4
2	I have trouble going to sleep, waking up often, or getting back to sleep.	0	1	2	3	4
3	I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I don't want them to.	0	1	2	3	4
4	When something reminds me of what happened I have strong feelings in my body, my heart beats fast, and I have headaches or stomach aches.	0	1	2	3	4
5	When something reminds me of what happened I get very upset, afraid, or sad.	0	1	2	3	4
6	I have trouble concentrating or paying attention.	0	1	2	3	4
7	I get upset easily or get into arguments or physical fights.	0	1	2	3	4
8	I try to stay away from people, places, or things that remind me about what happened.	0	1	2	3	4
9	I have trouble feeling happiness or love.	0	1	2	3	4
10	I try not to think about or have feelings about what happened.	0	1	2	3	4
11	I have thoughts like "I will never be able to trust other people."	0	1	2	3	4
12	I feel alone even when I'm around other people.	0	1	2	3	4

		Not at all	Several days	More than half the days	Nearly every day
13	*Over the last 2 weeks, how often have you been bothered by thoughts that you would be better off dead or hurting yourself in some way?				

*Adapted from Patient Health Questionnaire (PHQ-A)

Two main types of sleep difficulties in trauma:

1. Parasomnias
2. Sleeping difficulties

https://intermountainhealthcare.org/ckr-ext/Dcmnt?ncid=529796906

Sleep Interventions for Traumatized Children

- Parent proximity/support
  - Negotiation
- Coping skills
- Sleep routine
- Hygiene
- Trauma therapy referral
- Temporary use of medications
  - Melatonin
  - Prazosin (in PTSD) or Clonidine

Keeshin, Berkowitz & Pynoos. *Pediat Ann.* 2019; Keeshin, et al. 2017

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Potential Sleep Red Flags

- Benzodiazepine use
  - No efficacy
- Second generation antipsychotic use for PTSD
  - High risk of obesity
  - No efficacy
  - Exacerbation of dissociation
- Lack of referral for psychotherapy
  - Trauma or Behavioral

Keeshin, Berkowitz & Pynoos. *Pediat Ann.* 2019

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Trauma Informed Pharmacology

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Pharmacologic Principles for Trauma Reactions

- No psychotropic medications with strong evidence in the treatment of PTSD in youth. SSRIs have negative RCTs
- Untreated traumatic stress symptoms and chronic insomnia can exacerbate emotional and behavioral dysregulation
  - Improving sleep is almost always the logical first step
  - Consider multi-pronged approach to sleep

Keeshin, et al. *Clinics*. 2021

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Pharmacologic Principles for Trauma Reactions

- Trauma can **mimic** other disorders
  - Diagnostic clarity is critical – standardized measures
  - Multiple informants are often helpful
- **Ecophenotypic variation** or syndromic overlap
  - Looks like lots of different things
  - Biologically distinct even if phenotypically similar

Keeshin, et al. *Clinics*. 2021

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Pharmacologic Principles for Trauma Reactions

- Trauma and adversity are associated with non-mental health **poor outcomes**
  - Increased risk of obesity, diabetes and cardiovascular disease
- Involved in **multiple systems**
  - Frequent transitions, disjointed and interrupted care
  - Is my regimen able to be reasonably followed?

Keeshin, et al. *Clinics*. 2021

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Pharmacologic Principles for Trauma Reactions

- **SGAs are a challenge** in trauma – quick initial response, but difficult to stop
  - Outside of inpatient setting (acute safety), minimal evidence to support off use of these medications for trauma
  - High risk population for SGA associated side effects
- In persistent/functionally impairing symptoms with **complex polypharmacy**…
  - Stop or switch rather than add
  - Systematic approach to de-prescribing

Keeshin, et al. *Clinics*. 2021

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Pharmacologic Principles for Trauma Reactions

- Tackle symptom goals, then **wait**
  - Allow for symptom/functional improvement to occur (aided by EBP) before starting next medicine
- Traumatized youth need **more contact**, not less
  - Team monitors closely (psychiatrist is only part of the team)
  - Prazosin protocol for sleep – f/u in 2 weeks, not 4-8
  - Bad things have happened, which need follow up, and prevention for more bad things happening in the future

Keeshin, et al. *Clinics*. 2021

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Addressing Co-Morbidities

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ADHD vs Trauma

1. If on a stimulant, does sleep improve if stimulant is stopped?
2. If yes, aim for weeks with improved sleep and reassess behavior/focus symptoms AND initiate trauma therapy – all with close monitoring before considering restarting a stimulant.
3. If no, move forward with addressing sleep with trauma specific behavioral/pharmacologic interventions until sleep is improved, AND initiate trauma therapy – all with close monitoring before considering restarting a stimulant.

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Anxiety/Depression vs Trauma

If already on an SSRI, did sleep/symptoms improve when medication was started?

1. If yes, is this a partial response, consider if time and/or higher dose may fully resolve anxiety/depression symptoms.
2. If no, and minimal/no response to SSRI, consider discontinuation of SSRI and initiation of sleep focused treatment AND get the child into trauma therapy – all with close monitoring before considering restarting an SSRI.

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Anxiety/Depression vs Trauma

If not on an SSRI:

1. If positive traumatic stress symptoms, get the child into trauma therapy – all while targeting sleep and with close monitoring before considering starting an SSRI.
2. If no significant traumatic stress symptoms and/or longstanding anxiety/depression that predates trauma, consider initiation of SSRI AND get the child into trauma therapy – all with close monitoring.

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Traumatic Stress Clinical Decision Tree

Children with known trauma exposure and current trauma symptoms

- Recent trauma ⇨
  - Brief Intervention and follow
    - CFSTI
- Behaviors > Trauma ⇨
  - Address behaviors first
    - Younger children - PCIT
    - Adolescents – DBT
    - Multi-system involved youth - TST
- Trauma > Behavior ⇨
  - Exposure based trauma treatment
    - TF-CBT

Keeshin, et al. *Clinics*. 2021

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Trauma Informed Medication Decision Tree

Children with current trauma symptoms

- ~~Benzos~~ Sleep Problems ⇨
  - Melatonin/Prazosin
- Anxiety and Depression Symptoms ⇨
  - Address sleep first
    - Consider SSRI for clearly independent anxiety/depression
- ~~Significant Polypharm~~ ADHD and or increased reactivity symptoms ⇨
  - EBT first
    - Re-evaluate
    - Consider Alpha 2 Agonists*

~~SGAs~~

~~Multiple Anti-HTN*~~

Keeshin, et al. *Pediatrics*. 2020

Keeshin, et al. *Clinics*. 2021

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So where is the future of trauma informed care for children?

- Systematically detecting *both* trauma exposure and symptoms
- Incorporating trauma, associated adversities and related responses within (not separate from) assessments and diagnoses
- Increasing use of standardized protocols and registries for children receiving treatment across the pediatric mental health continuum
- Adopting strength based/protective/promotive approaches

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Thank You

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