The development of Paediatric and Child Health approaches to Trauma Treatment and Resilience

A novel and successful way to train paediatricians to recognize and respond to trauma

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Introductions

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Learning Objectives

1. Describe the important role of pediatric providers in the identification and care of children who have experienced trauma.
2. Recognize the unique aspects of trauma informed care training for the pediatric setting, adapted from trauma-informed mental health care, evidence-based parenting education, and attachment and resilience science.
3. Identify ECHO as an important case-based expert mentored learning modality about complex topics for pediatricians and other health professionals.
Early adversity has lasting impacts

- Problems with cognition:
  - Language delay, poor concentration, poor problem solving, academic failure

- Behavior problems:
  - Aggression, dissociation, poor impulse control, sexual acting out, substance misuse

- Mental health diagnoses:
  - Depression and Anxiety, PTSD and ASD, Dissociation, Suicidality and self harm, ODD, Conduct disorder, Bipolar disorder, Schizophrenia, Borderline personality

- Problems with relationships:
  - Attachment problems, difficulty with peers, difficulty understanding social interactions, problems in romantic relationships, intergenerational challenges

- Problems with emotions:
  - Difficulty controlling emotions, difficulty identifying emotions, shame and guilt, excessive worry, hopelessness, lack of efficacy

- Functional problems:
  - Sleep problems, toileting issues, eating disorders

- Physical health diagnoses:
  - Endocrine dysfunction, Inflammatory disorders, Cardiovascular disease, Asthma, GI disorders, Poor pregnancy outcome

Conditions associated with relational trauma

Trauma Informed Care: Too Abstract?
Understanding starts with the stress response

- Oxytocin: Increased social salience
  - Social context: Safe/positive
    - Can better identify safe and unsafe social context
  - Social context: Unsafe/negative


Quickly recognizing friend or foe: A mistake can be deadly

Oxytocin Promotes Focusing Your Attention Cont'd

Social context: safe/positive
- Can better identify safe and unsafe social context
- Prosocial thoughts and action facilitate support from others
- Adaptive stress responses


Social context: unsafe/negative
- Anti-social or defensive thoughts and actions to protect self
- Distress responses

What Happens When Response is Negative?

Social context: safe/positive
- Can better identify safe and unsafe social context
- Prosocial thoughts and action facilitate support from others
- Adaptive stress responses


Social context: unsafe/negative
- Anti-social or defensive thoughts and actions to protect self
- Distress responses
Without affiliate support...

Unable to use affiliate—there are impacts on brain and body in children

Toxic stress results when there is absence of protective relationships with you
Its not about summing the suffering, but building the buffering

Role of pediatricians

- Pediatricians are often the first or only professionals families will connect with to address trauma – 1/3 of mental health issues in children are addressed by medical provider only
- Physicians may STILL not be aware of the topic. 2020 study of physicians in Michigan 81% reported they had never heard of the ACE questionnaire
- Trauma is not a topic that is covered well in pediatric training programs

Trial and error

- Had to find "pediatric" space – not a direct application of mental health models
- Occurred with a series of "AH-HA" moments
AH-HA's: #1 – its what we already do

• Cannot layer over pediatrics – must take what we already do as pediatricians and show that trauma already is the underpinning
  • Don’t add to workload, reduce it
  • “Trauma-informed” can’t be a new add on
  • We attend to attachment without even realizing it – that’s critical
  
  “BUT I ALREADY DO ALL THAT!!”

AH-HA's: #2 – It makes more sense to us in a resilience context (toxic stress, not trauma)

• Pediatrics (and pediatricians) is a specialty which is
  • Developmentally centered
  • Resilience and guidance centered
  • Educator focused
  • Focused on relationship between child and caregiver

AH-HA #3: Most of pediatric “trauma” is preclinical in a MH sense

• Pediatrics niche is a wide space, most care for kids in the preclinical stages of trauma exposures
  • PTSD trauma is O.T.
  • We live in the space between ACEs and PTSD
  • Brain changes present to pediatrics as developmental concerns before behavioral health issues – so what are we looking for?
AH-HA #4: Physicians work from patterns – fitting symptoms into working models (need one)

* What are they looking for?

AH-HA #5: Medical training is PRACTICAL – and we do it by see one, do one, teach one

And thus:
ECHO format: Lecture and case discussion

PATTeR Levels 1 and 2:

Curriculum Topics for PATTeR Levels 1 and 2:

1. Introduction to PATTeR
2. Assessment and Diagnosis
3. Developing a Treatment Plan
4. Implementation and Monitoring
5. Evaluating Outcomes and Feasibility
6. Collaboration and Community Engagement
7. Continuous Quality Improvement
8. Patient-Centered Care
9. Evidence-Based Practice
10. Program Evaluation

Curriculum Topics for PATTeR Level 1:

- Trauma Response & How It Impacts You (Burnout, secondary traumatic stress, review of Level 1)
- Epigenetics 202
- Understanding Attachments: A Deeper Dive
- Parental ACEs (SDOH)
- Parenting Through the Ages and Stages
- Trauma Spectrum
- How Trauma Presents Across the Age Span
- Cultural Considerations
- Helping Caregivers to Regulate
- The Care Process Model (Embedding Trauma in Your Clinical Decision Tool)
- Evidence Based Treatments for Childhood Trauma
- Medication Use: When Everything Already Ventured isn't Enough (WEAVE)
Level 1: Overview, recognition and tools

Understanding starts with the stress response

Resilience: Masten definition

Resilience is a dynamic process of positive adaptation to or in spite of significant adversities that occurs in RELATIONSHIPS and with normal activities.
Principles: Weaving THREADS

- Resiliency skills the THREADS of childhood:
  - Thinking and learning brain
  - Hope
  - Regulation or self control
  - Efficacy
  - Attachment
  - Developmental skill mastery
  - Social connectedness

Another way to think about trauma is that it acts against all the factors that correlate with resilience

- Resiliency skills the THREADS of childhood:
  - Thinking and learning brain—shuts down
  - Hope—to deal with present danger, looking ahead shuts down
  - Regulation or self control—shuts down—need impulses to deal with threat
  - Efficacy—lost—reacting to situation, not controlling it
  - Attachment—acting alone, not available in toxic stress
  - Developmental skill mastery—learning shut down
  - Social connectedness—alone with threat

In other words - without affiliate support....
Unable to use affiliate—there are impacts on brain and body in children

Brain and autonomic Nervous System
Development

Immune and endocrine system

Cardiovascular system

Gastrointestinal and metabolic system

What patterns physicians are looking for

• FRAVED (and at the end of your rope)
  • Fits, Frets and Fear
  • Regulation difficulty
  • Attachment disturbances
  • Yelling and pouting
  • Educational delays
  • Defeated, Dissociated

Just like with orthopedic care

• SPLINT
  • External injury may be the cause
  • Problem solution:
    • what is needed to get everyone able to calm down right now
    • might need to look at routines or short-term change
    • Language for child about the problem
    • Investigate further
    • do you need to act now, tie with child welfare
    • Medical to respond
    • Therapy—referral for treatment
There are things to do at home just like with simple sprains. Regulation starts with PASTA (not RICE):

- Positive parenting
- Affect modulation
- Self-soothing, relaxation
- Triangle training
- Attachment/parenting skills (including routines and reassurance)
- Rest
- Ice
- Compression
- Elevate

Level 2 — Increasing understanding

Level 2 — topics highlight impact on development and attachment

- Attachment/relationship focus
  - Attachment/relationship focus
- Developmental focus
  - Developmental focus
- Treatment focus
  - Treatment focus
- Secondary trauma impacts
  - Secondary trauma impacts
- Parental ACE's
  - Parental ACE's
- Parenting skills
  - Parenting skills
- Culture impacts
  - Culture impacts
- Developmental focus
  - Developmental focus
- Epigenetics
  - Epigenetics
- Trauma hierarchy
  - Trauma hierarchy
- How trauma presents across age span — developmental trajectory
  - How trauma presents across age span — developmental trajectory
- Promoting regulation — in kids and adults
  - Promoting regulation — in kids and adults
- Treatment focus
  - Treatment focus
- Care process model and suicide
  - Care process model and suicide
- Evidence based treatment
  - Evidence based treatment
- Medication use and deprescribing
  - Medication use and deprescribing
Greater emphasis on attachment and regulation

Resilience the result of 6 factors, but there is an order to these...

**THREADS**
- Hope
- Social connectedness
- Efficacy
- Thinking and learning brain
- Developmental skill mastery
- Regulation or self control
- Attachment

**ATTACHMENT**

**REGULATION**

**EFFICACY**

**HOPE**

**SOCIAL CONNECTEDNESS**
SKILL BUILDING

ATTACHMENT
- Safety and security
- Emotional container
- Predictable compassionate Availability
- Keeping Mind in mind

Constant process of “meaning making”
- Child comes to understand themselves and the world
- Navigates through interactions with caregiver
- Child reflected by caregiver
- World interpreted by caregiver
- ABC’s

A- Attunement
Attunement is being ‘in tune’ with a child’s emotional state, being ‘in it’ with them, and a child feeling that they are understood in that moment.
B- Biobehavioral synchrony

- Coordination of biological and behavioral signals between social partners during periods of social contact
- Mechanism by which a parent's mature brain externally regulates the infant's immature brain and draws it to social life

C- Co-Regulation:
Regulation is stepwise process

- Caregiver regulation
- Dyadic co-regulation
- Self-regulation

Regulation is stepwise

- Caregiver regulation
- Dyadic co-regulation
- Self-regulation
- Trauma's neurocognitive impacts - change anatomy and function

- Development impacted two ways
  - Prioritization of certain developmental tasks and skills - skills of survival
  - Interference with other developmental tasks - those most dependent on availability of a safe attachment system and context

- Type and severity matter

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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<tbody>
<tr>
<td></td>
<td>Functional Difficulties</td>
<td></td>
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<tr>
<td></td>
<td>Sleep, Tantrums, Toileting, Eating</td>
<td>PTSD symptoms</td>
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<tr>
<td></td>
<td>Arousal, Avoidance, Re-experiencing, Fear</td>
<td>Affect Dysregulation - Violent, reckless, or self-destructive, Dissociation - Attention issues, Negative self-concept - persistent beliefs as diminished, defeated, worthless, shame, guilt, Interpersonal disturbances</td>
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</tbody>
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- We can't fit a child's emotions into a container if it's already filled
Important to discriminate from overlapping conditions: anxiety, depression, ADHD

- Anxiety
- Trauma Diagnoses
- ADHD
- Depression

Treat: Evidence base for medication

Deprescribing considerations: CRISPY
- C: Medications part of cascade
- R: Redundant medication, ineffective, symptoms resolved
- I: Medications with no valid indication
- S: Side effects of medication greater than benefit
- P: Medications that are preventative
- Y: Yucky - Medications with unacceptable treatment burden
Our approach: the ECHO (Extension for Community Healthcare Outcomes) format.

Medical vs. Mental Health: What Planet are we on?

ECHO as the bridge
Composition of ECHO Faculty for PATTeR
- Pediatric Perspective
- Mental and Behavioral Health Perspective

Case-based learning

THREADS and FRAYED
**The Numbers**

Level 1, Cohorts 1-9, All Leads and Team Members who attended at least one class (N=447)

- Physicians: 8%
- Pediatricians: 45%
- NP/RN/PAs: 13%
- MH Professionals: 13%
- Other (inc. missing): 21%

**PROVIDER TYPE**

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**Participation by state**

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Participant reflection on the Level I Content and Learning

Impact on Patient Care/Sharing the content with others
- Our degree of compassion toward parents, families, and patients' care in relation to physical effects. I believe we can improve our care and communication for the patients. The course was a great introduction to toxic stress, and I believe we can improve with more knowledge.

Impact on Learning
- The program really helped me see the next steps in pediatric trauma. I was familiar with ACEs and toxic stress, having learned about them as far back as my undergraduate years. This was the first time I have seen these concepts applied to patient care in direct, tangible ways. Moving forward, my care will be enhanced with more knowledge.

Impact on Executive Function
- As a faculty member, I have more tools to teach residents and students about childhood trauma. I hope to facilitate more conferences about the topic and how to apply it in practical ways.

Baseline and Change in Proficiency
- Level 1 PATTER course, Cohorts 2–9 – Pediatricians
- Level 2 PATTER course, Cohorts 1–5 – Pediatricians

Participant reflection on the Level I Content and Learning

Impact on Patient Care/Sharing the content with others
- Participant reflection on the Level I Content and Learning

Impact on Learning
- Participant reflection on the Level I Content and Learning

Impact on Executive Function
- Participant reflection on the Level I Content and Learning

Baseline and Change in Proficiency
- Participant reflection on the Level I Content and Learning

Impact on Patient Care/Sharing the content with others
- Participant reflection on the Level I Content and Learning

Impact on Learning
- Participant reflection on the Level I Content and Learning

Impact on Executive Function
- Participant reflection on the Level I Content and Learning
Participant reflection on the Level2 Content and Learning

- Our multidisciplinary group (pediatrician, psychiatrist, nursing, social work, and parenting specialist) all participated. We now have a shared framework for caring for our patients, many of whom have experienced trauma.” (L2C3)

- My initial Trauma & Resilience training provided hope for me in my practice as I was feeling discouraged with the stress & trauma my families face on a regular basis. Part 2 has allowed me to share more of these concepts with my amazing colleagues and to bring approaches to helping our families with practical and hopeful suggestions.

- This course was so helpful in making the science of toxic stress and resilience usable in clinical practice. This course not only gave me facts and frameworks, but also helped to shape a new way of seeing clinical work that is fundamentally relationally based. That’s why I think this course will not only help me with patients with traumatic stress exposure, but will help me to be a better pediatrician for all my families.

Contact Information

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