

Deconstructing Trauma: trauma neuroscience for educators

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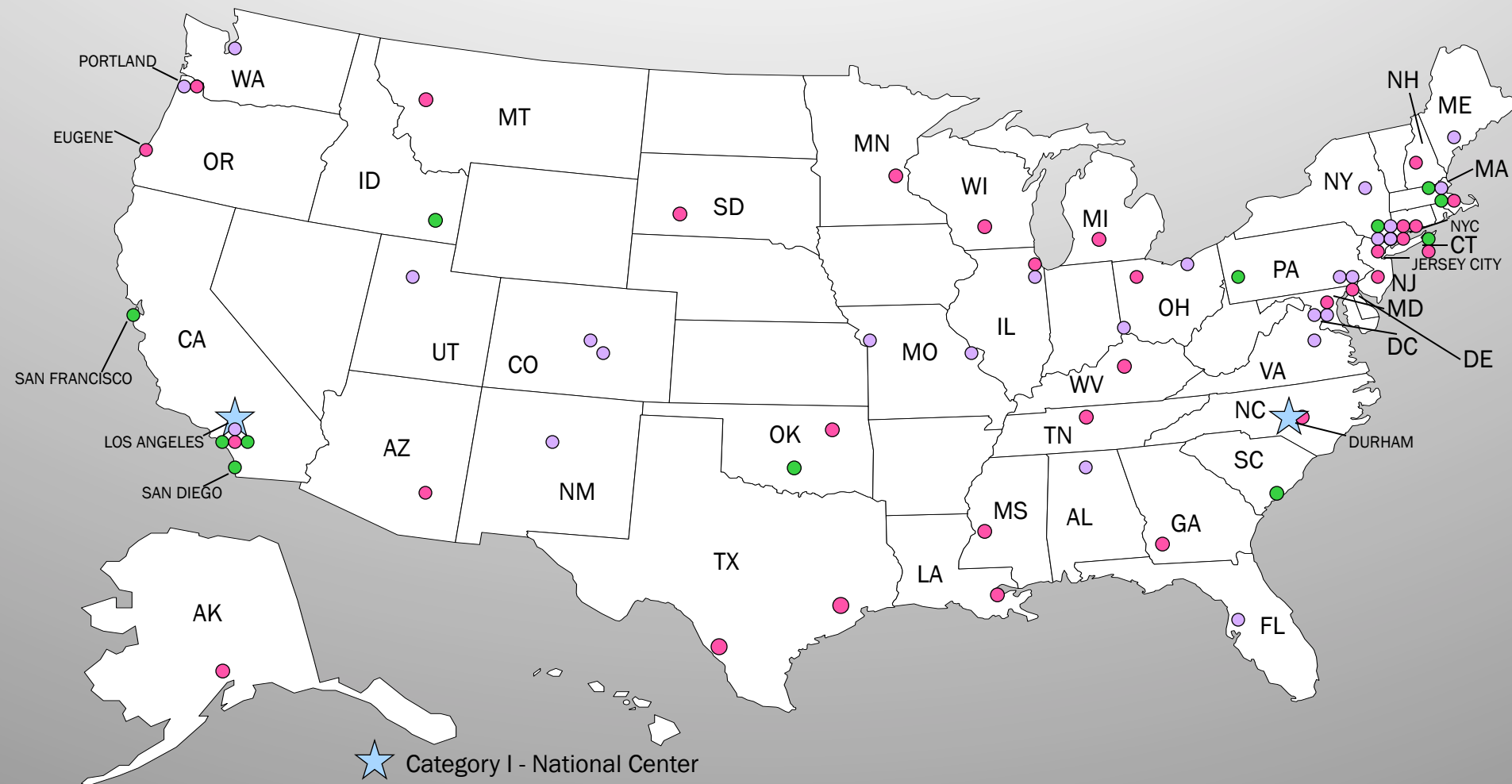


A PARTNER IN
NCTSN

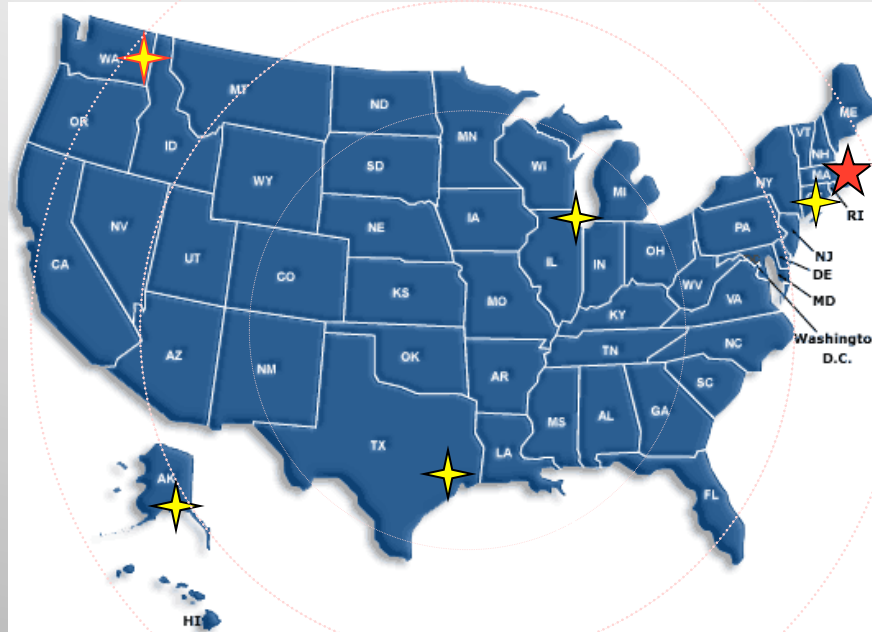


The National Child
Traumatic Stress Network

National Child Traumatic Stress Network (NCTSN) Sites



Complex Trauma Treatment Network (CTTN)



National Coordination & Training Center, The Trauma Center at Justice Resource Institute
(CTTN Director: Joseph Spinazzola; Co-Director: Bessel van der Kolk; Project Coordinator, Hillary Hogden.
Lead Trainers: Margaret Blaustein & Kristine Kinniburgh



Northeast Regional Training & Technical Assistance Center, University of Connecticut
(Co-Director: Julian Ford)



Midwest Regional Training & Technical Assistance Center, La Rabida Children's Hospital
(Co-Director: Bradley Stolbach)



Southern Regional Training & Technical Assistance Center, DePelchin Children's Center
(Co-Director: Robert Hartman)



Pacific Northwest Regional Training & Technical Assistance Center, Alaska Child Trauma Center
(Co-Director: Joshua Arvidson)



Evaluation Center, Washington State University at Spokane
(Evaluation PI: Christopher Blodgett, Natalie Turner.)

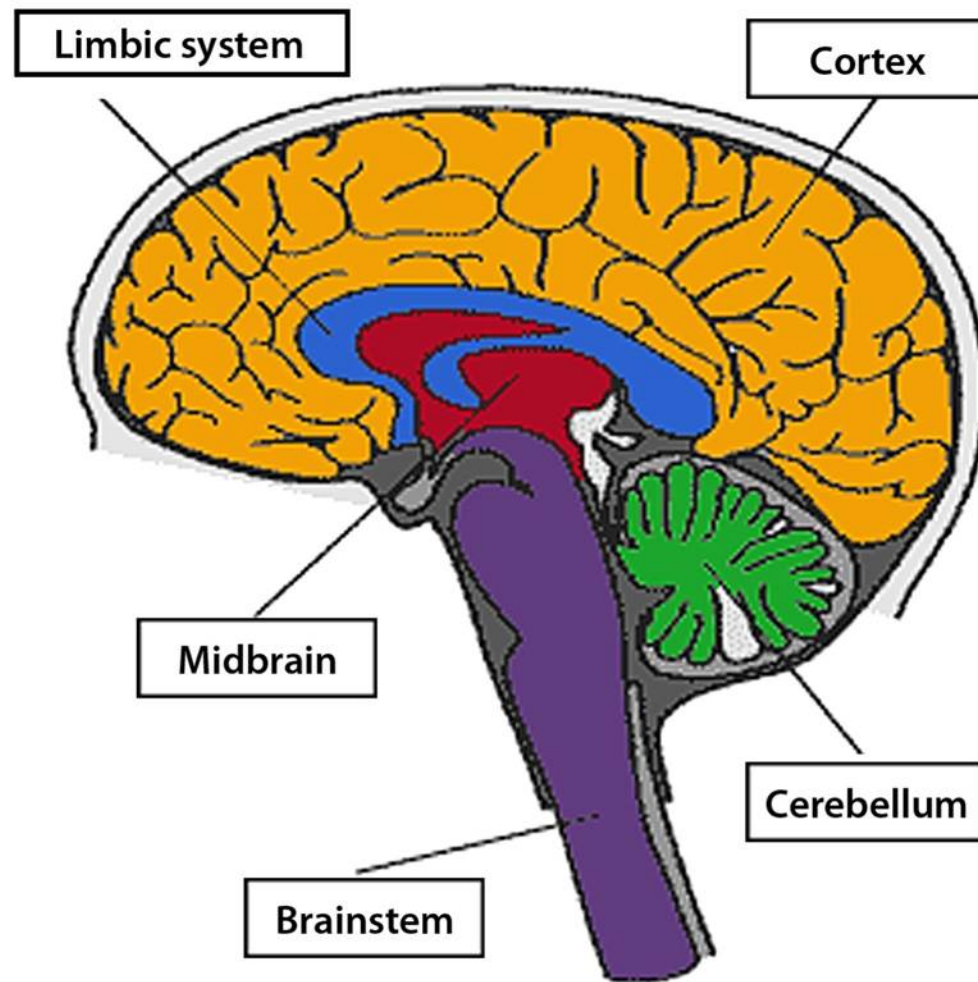
Complex Trauma-Informed (CTI) Systems of Care Initiatives

- Core Concepts
- Trainer Training
- CTI Strategic Planning
- CTI Organizational Evaluation
- Screening & Detection
- EBP Adoption & Dissemination (TARGET, ARC and SPARCS)
- Contextual Adaptation of Assessment & Treatment Materials & Resources
- Sustainability Planning

Training Faculty: Mandy Habib, Robert Abramovitz, Monique Marrow, Ibis Carrion Gonzales, Rocio Chang, Laurel Kiser, Danielle Ferrier.

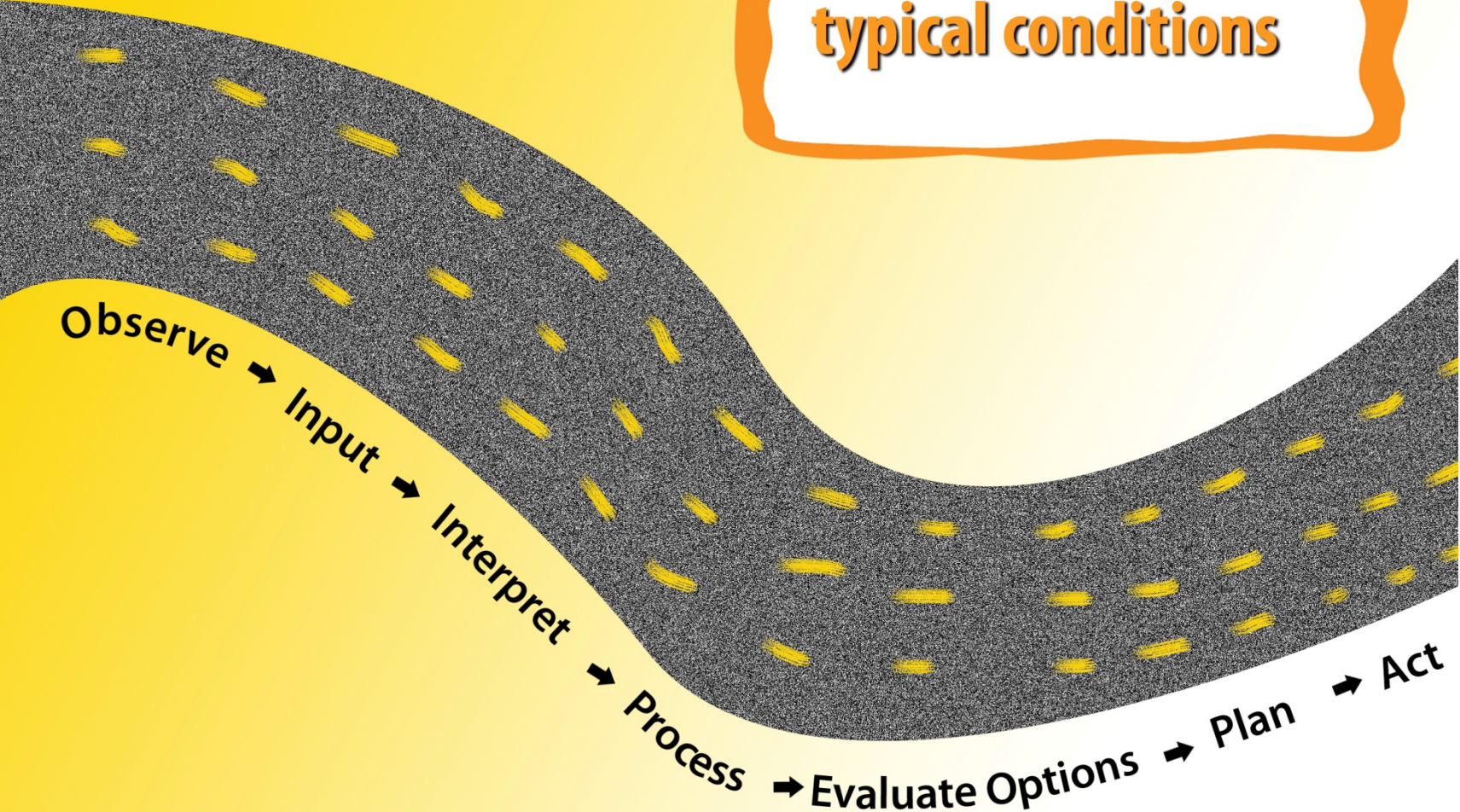


Physiology of Trauma



Brain process under typical conditions

Observe → Input → Interpret → Process → Evaluate Options → Plan → Act



Alarm system "Express Route"

Observe → Interpret

DANGER

Act

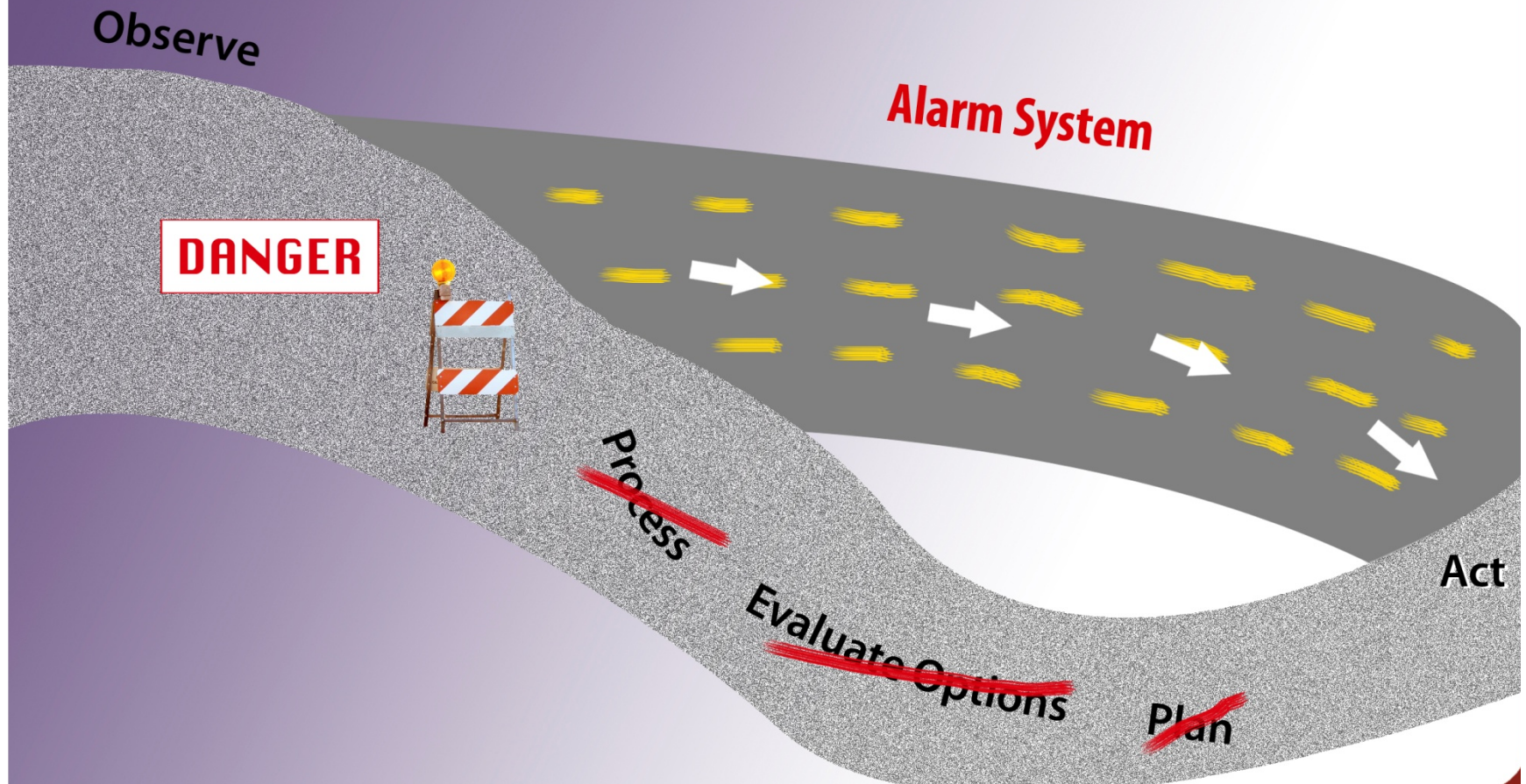
React (Flight - Flight - Freeze)

~~Process~~

~~Evaluate Options~~

~~Plan~~

With repeated stress, the Alarm System
“Express Route” becomes the main road



Area of Scientific Advancement

Physiology of the Human Stress Response

THREAT

- Activation of Threat Appraisal and Response System
- Increased Limbic System Activity
- Alarm system “flood”

SURVIVAL RESPONSE

- Fight, Flight or Freeze
- Survival Oriented Behavior

POST- STRESSOR

- Continued Arousal
- Difficulty Modulating

Adaptation of Brain Processes and Structure

- Physiological Changes in Brain Structure and Function, Decreased Volume of Amygdala and Hippocampus, Prioritization of Stress Pathways

Chronic Exposure to Stress Hormones

- Significant challenges to Regulatory Capacity, Dysregulation, State and Trait Characteristics.

Physiological Adaptations

- Hypervigilance, Hyper and Hypo Arousal, Survival (as opposed to developmental) based orientation. Trauma turns a learning brain into a surviving brain.

Discussion Questions

- Have you had students who operate in reactive/alarm system mode?
- In what situations or conditions was that mode triggered?
- What was helpful for that student?

A close-up portrait of a man in a military uniform, wearing a camouflage cap and jacket. He has a serious expression and is looking directly at the camera. The background is a blurred green field.

James

Vignette 1

Binding of Memory Elements

The hippocampus is involved in integration of memory elements into unified memory.



Memory of a Tree

- *Feel of bark*
- *Green*
- *Smell of pitch*
- *Sound of leaves rustling*



Smell of clothes

Dark place

Sound of a clock

Smothered feeling

I'm afraid

Stress and Splintered Memories

Hippocampal dysfunction in PTSD may lead to abnormalities in normal integration of diverse memory elements into unified memory.

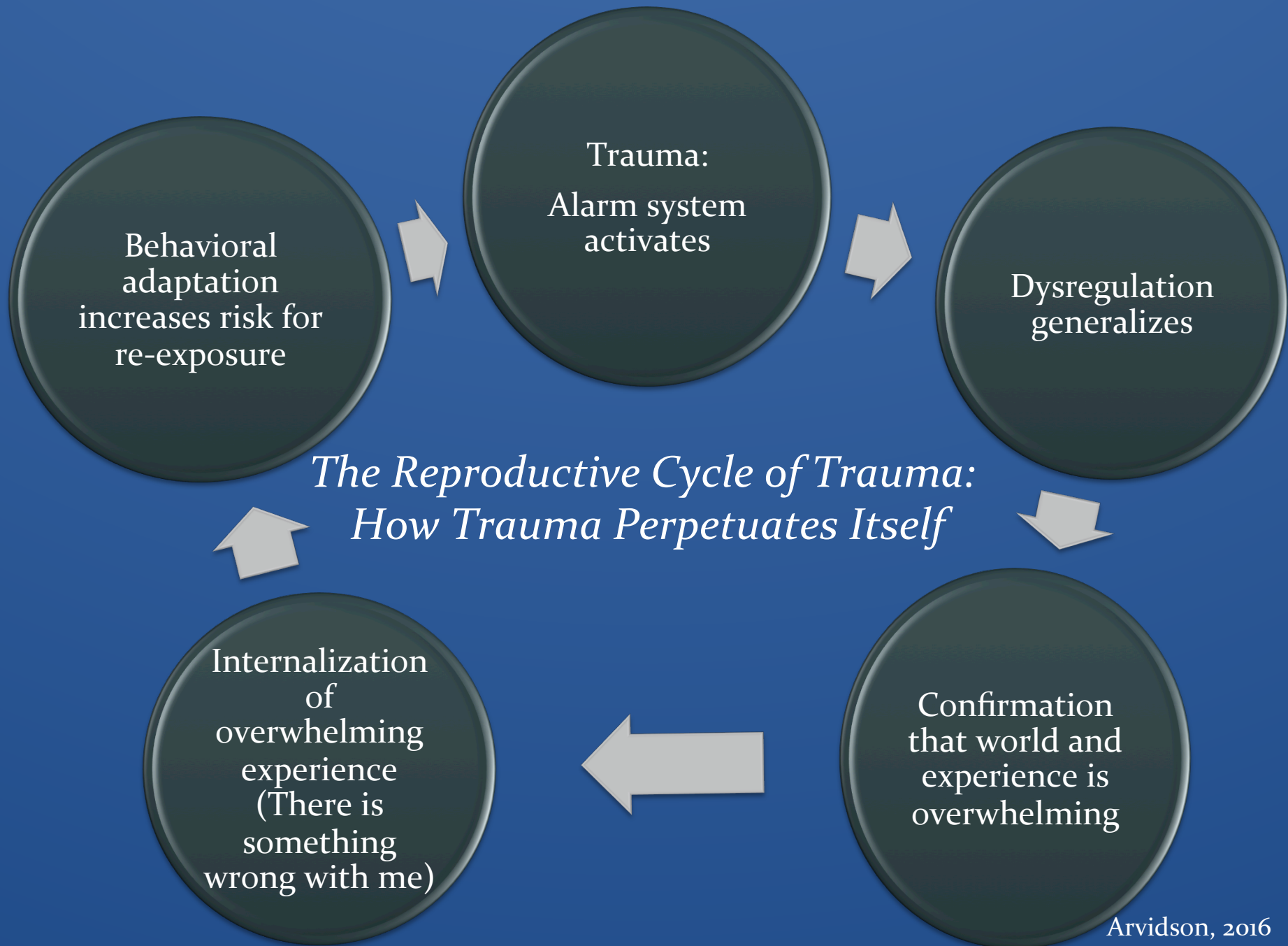
Dark place

Smell of clothes

Smothered feeling

Sound of a clock

I'm afraid



Contextualizing Trauma within the Attachment System

Attachment allows children to safely explore the world and provides a healthy model for self and others.

Attachment is the dance of the limbic systems of the child and parent.

- Allan Schore



Internal Representational Models

Bowlby model delineates formation of *Internal Representational Models*:

- Model of *SELF*
 - e.g., “I am worthy or competent”; “I am unworthy or incompetent”
- Model of *OTHER*
 - e.g., “Others are reliable or trustworthy”; “Others are unreliable or untrustworthy”
- Model of *SELF IN RELATION TO OTHER*
 - e.g., “Others will respond to my needs”; “Others will not respond to my needs”

These models form the basis (“working models”) for future relationships.

What is “Complex Trauma”?

- Dual Definition:
 - Exposure to multiple traumatic events, frequently within a caregiving system that is supposed to be the source of safety and stability
 - Impact of those events, across domains of development, on both immediate and long-term outcomes

The fundamental problem of chronic exposure to traumatic experiences in childhood is that overwhelming stress turns a learning brain into a surviving brain.

But, the brain and the physiological impact of trauma, is only the beginning of the story. Development is the context in which the impact of childhood trauma is fully realized...

...The developmental necessities of childhood: formation of healthy attachments and social development, attentional capacity and cognitive development, mastery, competency, and regulation, (the ability to control one's body, emotions and behaviors) are compromised by chronic exposure to overwhelming stress...

...Childhood trauma can be understood, fundamentally as developmental derailment. Thus, trauma-informed care for children is about helping the child and parent “put the train of healthy development back on the tracks.”

...Trauma-informed care is about helping children and families chart new developmental trajectories that promote healthy development, build resiliency and restore functioning.

- J. Arvidson

Areas Impacted by Complex Trauma

Physiology
and brain
development

Control
impulses and
concentrate

Safely negotiate
conflict and
differentiate
safe from unsafe

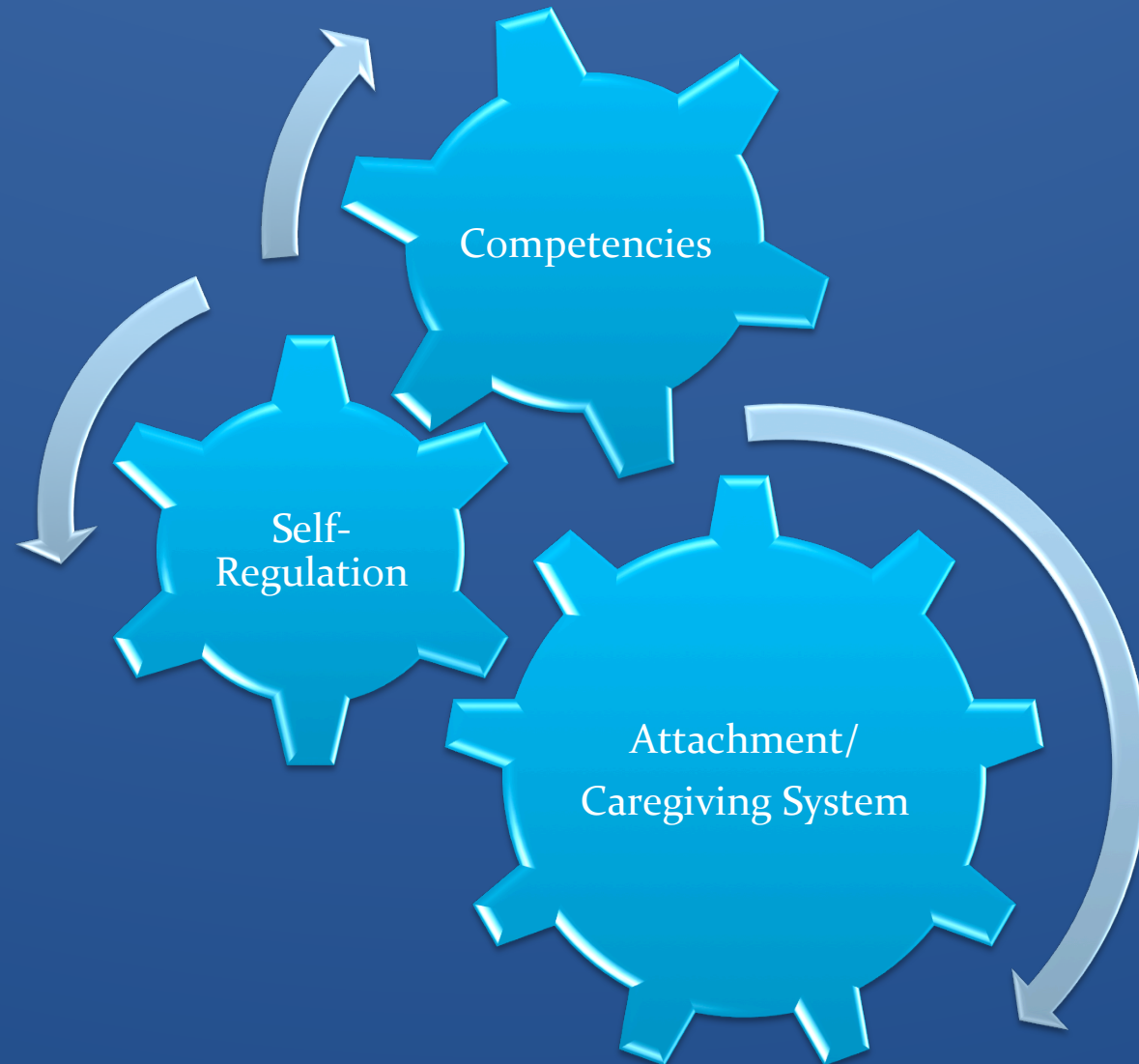
Form a positive
and cohesive
sense of self

Tolerate,
control and
express
emotions and
sensations

Form healthy
attachments
and social
relationships

Learn and
engage in goal-
directed
behavior

Study Conditions: Complex Trauma Treatment using ARC Framework at a clinic serving predominantly child welfare involved clients.

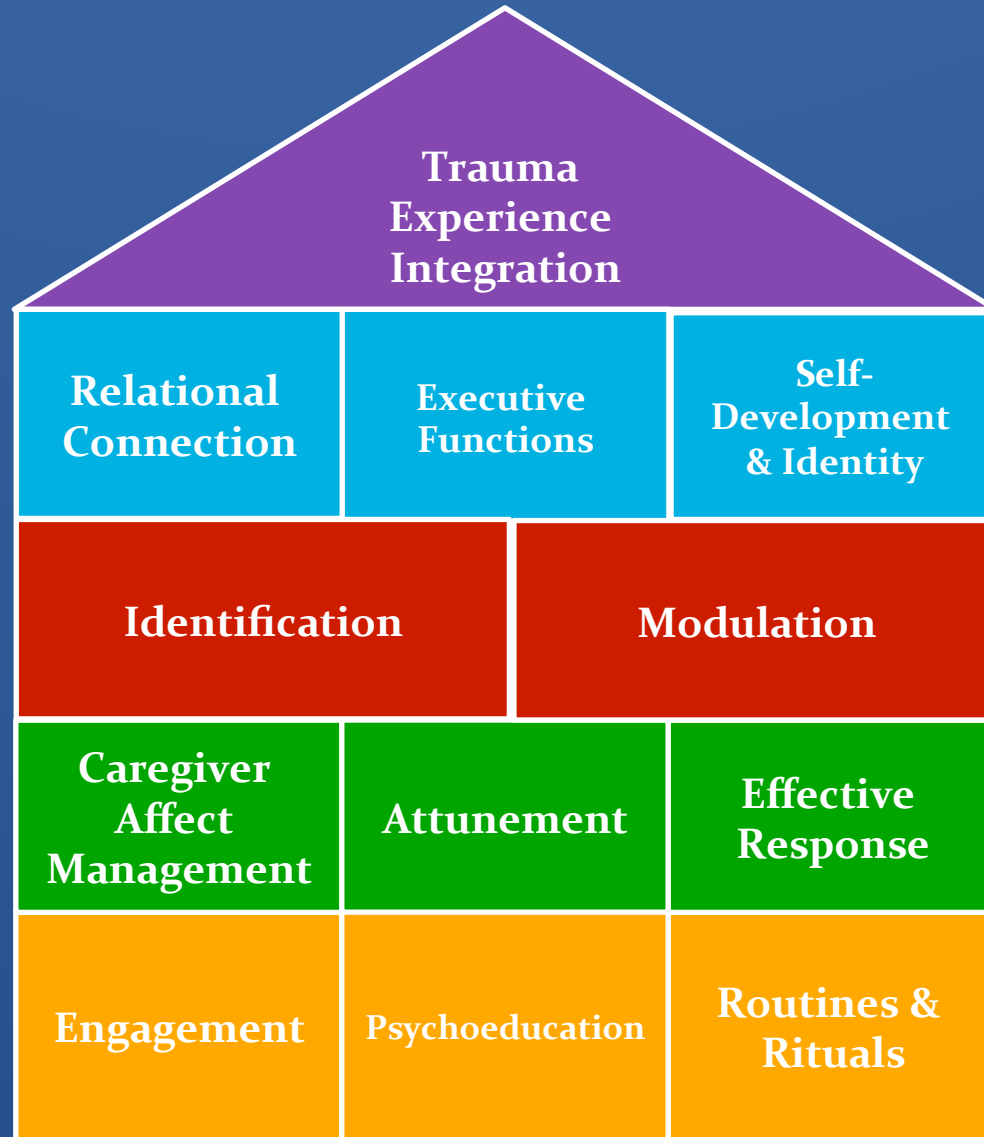


ARC Framework

Competency

Regulation

Attachment



Treatment of Complex Trauma in Young Children: Developmental and Cultural Considerations in Application of the ARC Intervention Model

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The Attachment, Self Regulation, and Competency (ARC) Framework is a theoretically grounded, evidence-informed, promising practice used to treat complex trauma in children and adolescents. This article introduces the ARC model and describes its application with young children of diverse ethnocultural backgrounds involved in the child protection system due to maltreatment. Examination of the clinical application of the ARC model with this population underscores the importance of grounding child complex trauma treatment in the caregiving system. Strategies for successful clinical intervention are identified, with attention devoted to cultural and systemic resources to advance the treatment process. This article presents preliminary evidence of the effectiveness of the ARC model derived from program evaluation conducted at a community-based clinic.

Keywords complex trauma, attachment, regulation, trauma, ARC

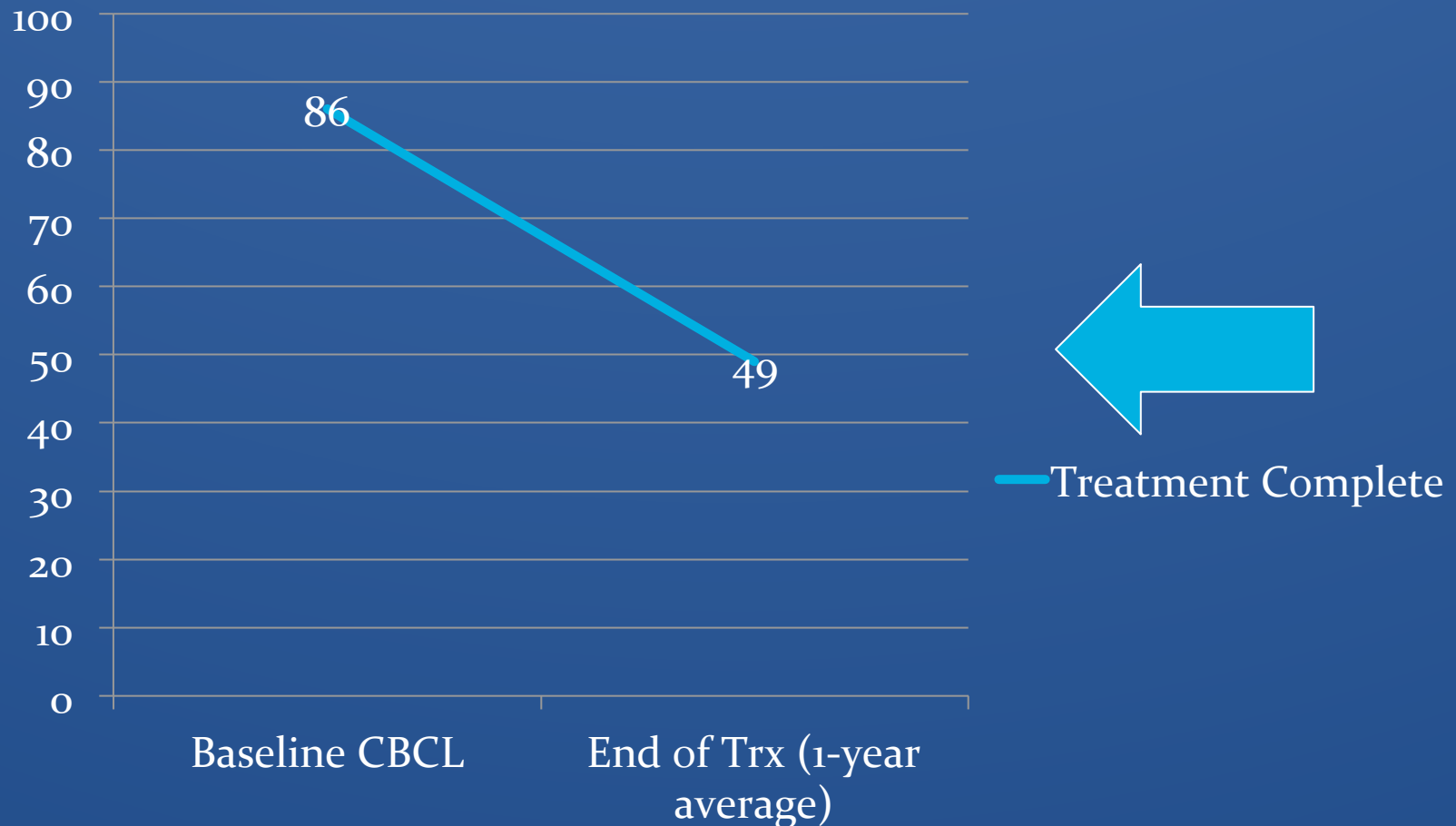
Early development takes place largely within the context of the caregiving relationship. The impact of trauma on infants and young children is unique because it occurs within a critical developmental period and is vastly influenced by the nature and quality of the caregiving system (Scheeringa & Zeanah, 2001). The primary attachment system provides the security and safety necessary for children to master an array of competencies including the ability to self-regulate (Schore, 2001a), develop positive relationships (Schneider, Atkinson, & Tardif, 2001), and acquire cognitive skills relevant to learning (Meins, Fernyhough, Russel, & Clark-Carter, 1998). Additionally, it provides the foundation for self and identity formation (McCarthy, 1998).

When the caregiving relationship is characterized by uncertainty, unpredictability, or fear, it affects a child's basic sense of safety within relationships and in the world (Hesse & Main, 2006). Young children's sense of themselves develops within the context of their perception and internalization of the relationship with their caregiver. If a child's perception

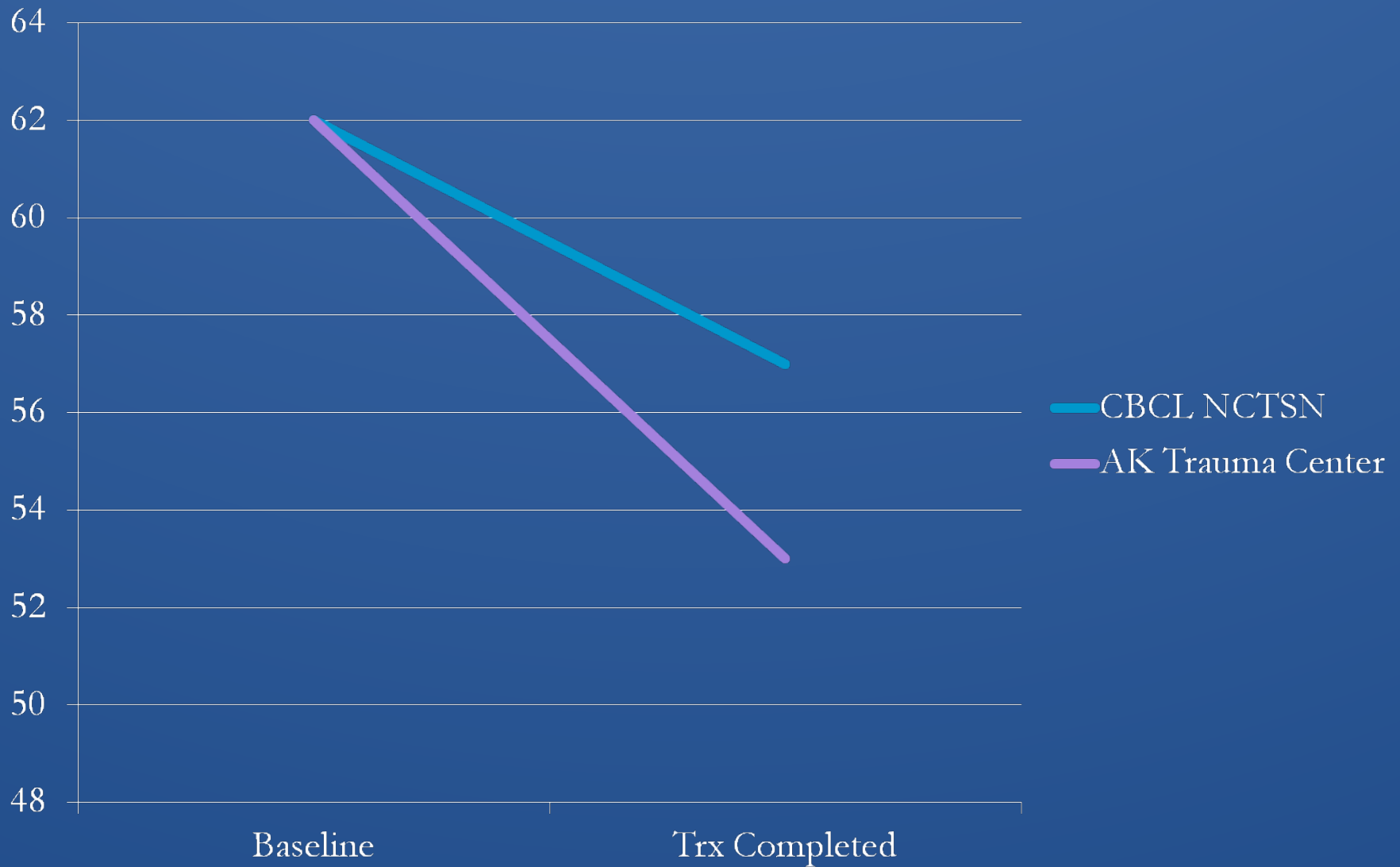
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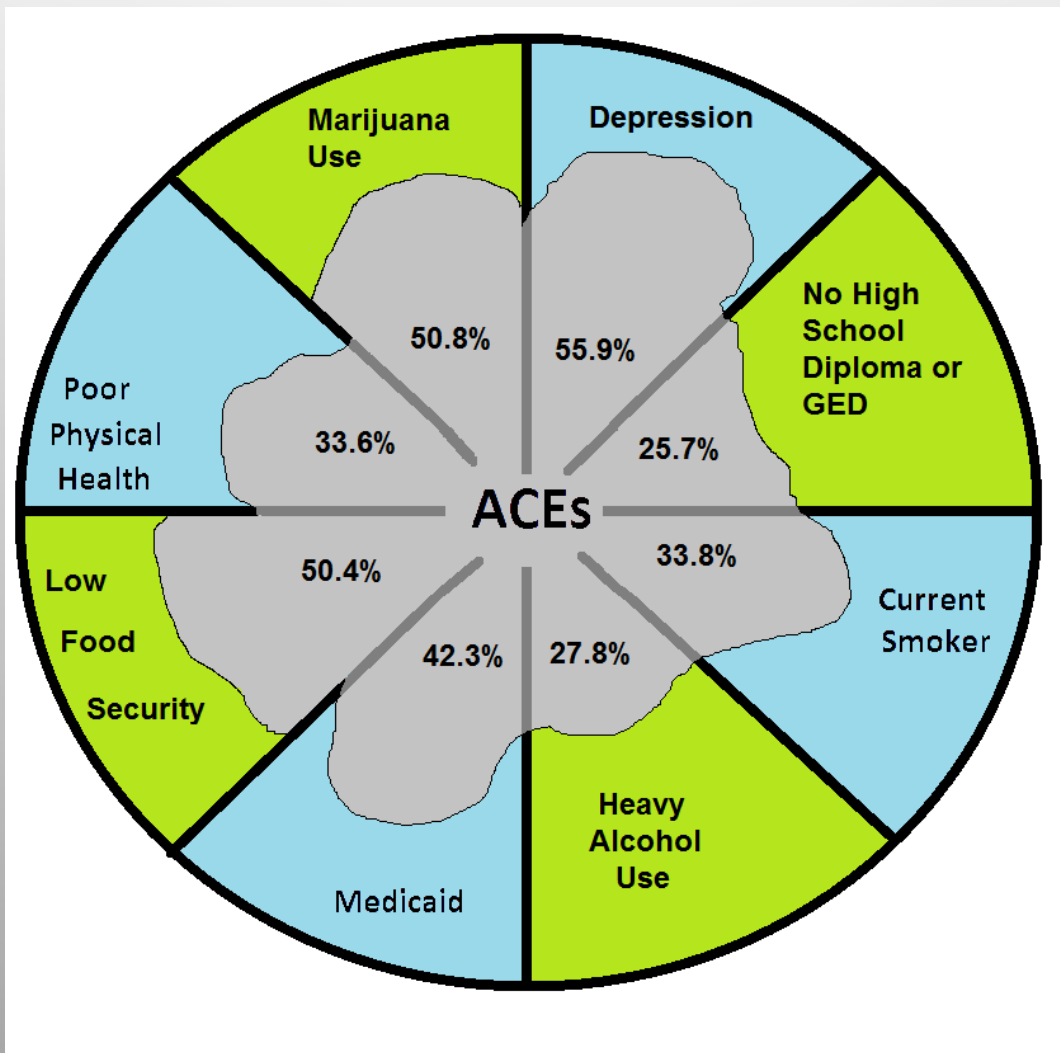
Alaska Child Trauma Center Child Trauma Clinical Outcomes Study CBCL Score Changes with 1 – year Complex Trauma Treatment (Percentile)



CBCL (T-Scores) at Completion of Treatment

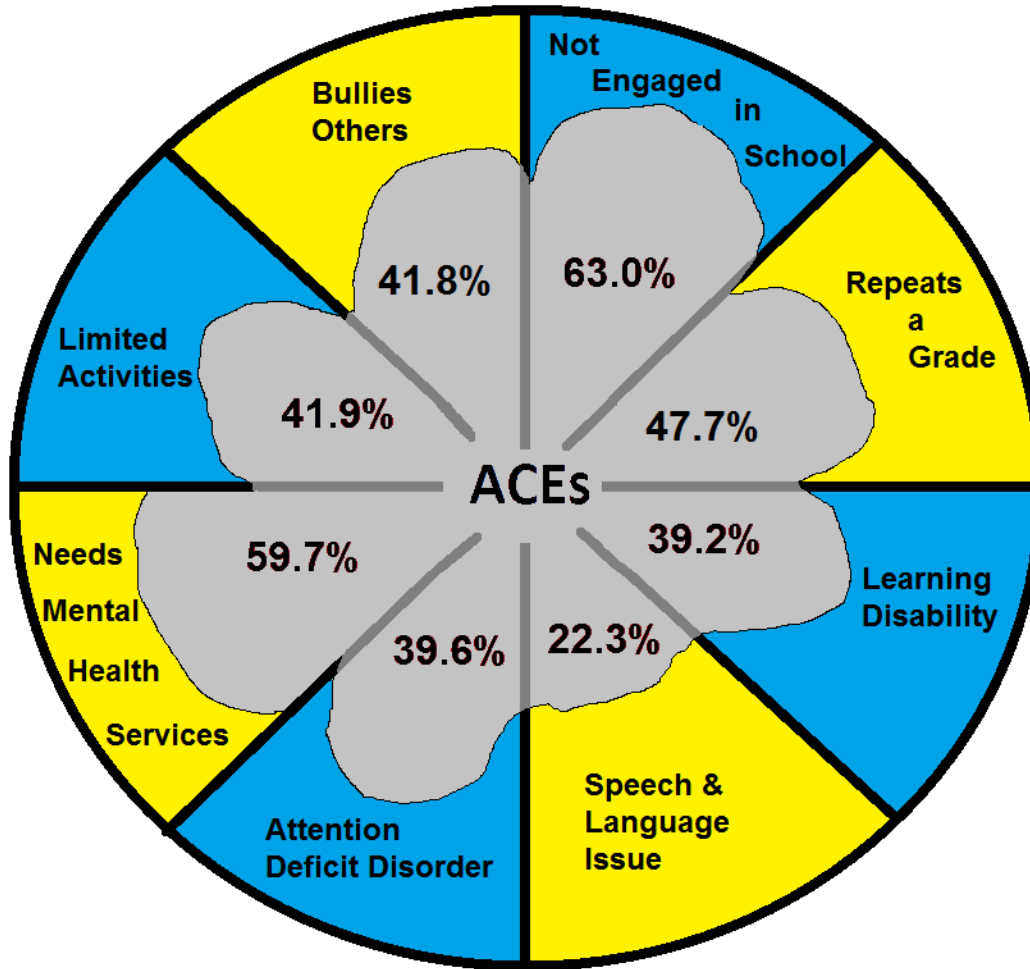


Population Attributable Fraction



Source: 2013-2015 Alaska BRFSS, Section of Chronic Disease Prevention and Health Promotion, Alaska Division of Public Health, Graphic by Alaska Mental Health Board Staff

Population Attributable Fraction



Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff

