TRAUMA IS THE PUBLIC HEALTH ISSUE OF OUR TIME

“I have become convinced that our number-one public health problem is our childhood.” Bernie Siegel, MD
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GOALS!

1. Understand the impact of trauma & neurobiology research on our understanding of homelessness

2. Utilize knowledge to address the biopsychosocial needs of those experiencing homelessness

3. Use expertise to address societal issues responsible for the homeless crisis
THE SERIES

2. Trauma is the Public Health Issue of Our Time - Today
3. The Abyss: Addiction, Homelessness, and Trauma – October 26
4. Hope, Transformation, and Post-Traumatic Growth – November 2
TRAUMA IS THE PUBLIC HEALTH ISSUE OF OUR TIME

- State how trauma is driving a great many issues impacting public health
- Utilize science to better conceptualize the root cause of many patients’ presenting health and social challenges
- Utilize knowledge presented to position services in a way that minimizes re-traumatization

60 Presentation/ 30 Minute Questions
Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan
The three types of ACEs include:

**ABUSE**
- Physical
- Emotional
- Sexual

**NEGLECT**
- Physical
- Emotional

**HOUSEHOLD DYSFUNCTION**
- Mental Illness
- Mother treated violently
- Divorce
- Substance Abuse
- Incarcerated Relative
How Prevalent are ACEs?

Of 17,000 ACE study participants:

- 36% have experienced 0 ACEs
- 26% have experienced 1 ACE
- 16% have experienced 2 ACEs
- 9.5% have experienced 3 ACEs
- 12.4% have experienced 4+ ACEs

64% have at least 1 ACE
PARTNERS IN CRIME: CORTISOL & INFLAMMATORY CYTOKINES

Short-term – Positive roles

• **Cortisol**
  → Action in response to stress
  → Helps return to baseline

• **Cytokines**
  → Destroy infiltrating pathogens
  → Repair tissue damage

Nakazawa, 2016
PARTNERS IN CRIME: CORTISOL & INFLAMMATORY CYTOKINES

Long-term consequences – Negative outcomes

- **Cortisol**
  - Constant low-level release (poverty, homelessness, dysfunctional family) limits normal stress response
  - Overdevelops sympathetic nervous system at expense of cognitive ability and emotional regulation (parasympathetic break)
  - Becomes toxic

- **Cytokines**
  - Damage tissue
  - Tissue damage creates opportunities for disease to develop
  - Responsible for many symptoms leading to high utilization

Nakazawa, 2016
CUP ANALOGY: ROBUSTNESS CAPACITY

- Capacity of stress/trauma an individual can hold
  - Increased by:
    - Healthy lifestyle, healthy relationships, resiliency, and self-confidence
  - Decreased by:
    - Unhealthy lifestyle, dysfunctional relationships/environment, poverty, homelessness, addiction, trauma, and long-term intense stress
Stimulus

Adapted from Time Magazine Article by Joe Letola and Alice Park
CUP ANALOGY: ALLOSTATIC LOAD

- **Intensity**: Duration, importance, and uncertainty
- **Hyperstress**: Levels stay high for long periods of time
- **Trauma**: Submersion in water, overwhelming capacity
- **Passive Trauma**: Submersion continues without help
- **Complex Trauma**: Constant flooding
- **Unresolved Traumatic Memories**: Rocks in the cup
# WINDOW OF TOLERANCE

**Hyperarousal Zone** (Flight/Fight): Increased sensation; emotional reactivity; hypervigilance; disorganized cognitive processing

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<thead>
<tr>
<th>Rigidity</th>
<th>Chaos</th>
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<td>Window of Tolerance: Flexible; adaptive; coherent; energized; stable</td>
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<tr>
<th>Rigidity</th>
<th>Chaos</th>
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<tr>
<td>Hypoarousal Zone (Freeze): Relative absence of sensation; numbing of emotions; disabled cognitive processing; reduction of physical energy</td>
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Siegel, 2010 & Ogden, Minton, & Pain, 2006
“If child abuse and neglect were to disappear, the Diagnostic and Statistical Manual would shrink to the size of a pamphlet and the prisons would be empty in two generations.”

- John Briere, PhD
MEDICAL ISSUES & TRAUMA

- Heart attack
- Miscarriage
- Falls
- Multiple sclerosis
- Stroke
- Gastrointestinal issues
- Obesity
- Autoimmune disease
- Fibromyalgia
- Cancer
- Lung disease
- Diabetes
- Asthma
- Headaches
- Ulcers
- Lupus
- Chronic fatigue
- Liver disease

LIFE EXPECTANCY

People with six or more ACEs died nearly **20 years earlier on average** than those without ACEs.
The three types of ACEs include:

**ABUSE**
- Physical
- Emotional
- Sexual

**NEGLECT**
- Physical
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**HOUSEHOLD DYSFUNCTION**
- Mental Illness
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LIFE EXPECTANCY

People with six or more ACEs died nearly **20 years earlier on average** than those without ACEs.
What did you do?
VINCENT FELITTI, MD

“...it is easier to respond to the symptoms that a patient is presenting in the moment, than it is to understand why that problem exists in the first place, especially if the problem is chronic. But when physicians seek to understand people’s lives as well as their biomedical bodies and symptoms, we create a new possibility for patients to find wellness.”
CURRENTLY

- Total lifetime cost of child maltreatment is $124,000,000,000 annually
- Lifetime medical expenses: $210,120 per maltreated person
What did you do?

What happened to you?

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan
PATIENTS WHO DISCUSSED ACE SCORES WITH THEIR PROVIDER

- 35% reduction in medical visits
- 11% reduction in ER visits

Nakazawa, 2016
CALL TO ACTION

• How can you better assess/discuss trauma with your patients?

• What community partners could benefit from discussions surrounding trauma?
THE ABYSS: ADDICTION, HOMELESSNESS, AND TRAUMA
OCTOBER 26TH 3PM EST

- State the relationship between trauma and addiction
- Utilize models to help patients and staff understand the addiction cycle
- Be able to explain the science behind addiction
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