

How do we translate "what matters" in early brain development to a comprehensive assessment & intervention process for infants and parents?

### What Matters:

- Stress Resilience versus Toxic Stress
- "Serve & return" levels of high quality engagement
- Healthy development of brain networks and circuits

# Assess & intervene to (3 steps to NRF):

- Step 1: Improve stress and stress recovery patterns in child and parent
- Step 2: Improve the level(s) in the quality of engagement in relationships
- Step 3: Improve individual sources of vulnerability (triggers) & resilience (toolkits) in brain networks

# Put Your Oxygen Mask on First, Then Help Others

# Chinese Proverb I hear and I forget I see and I remember I do and I understand

# \*We hold the *potential* to be able to use ourselves as a healing agent of change in families, creating new procedural experiences \*\*Know thyself...\*\* \*Temple of Apollo at Delphi \*\*Thyself\*\* \*\*Thyself\*\* \*\*SOCRATES\*\*

• What are we bringing to the system?

# Parallel Processes... Integrating...from micro to macro Personal Interpersonal Institutional Cultural Simultaneously, similar dynamics occurring on multiple levels

### Reflective Practice....

- We need safe places to digest our stress responses to our families
- We need time to sort out....
  - Is this more about me?
  - Is this more about my family?
  - How are we both being triggered?
  - What does this mean?
  - Are we co-creating an "old" relational procedure?
  - How can we be a part of shifting to "new" relational procedures?



<i>Step #1</i> :	
How do we identify stress	&
stress recovery?	

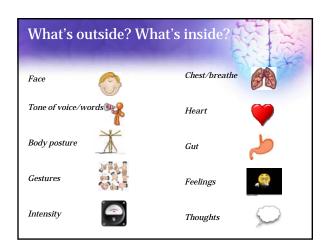
A. Recognize what stress recovery looks like and who we are at our Best!

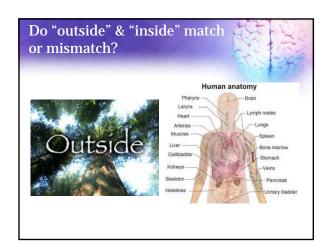


- B. Recognize three primary stress responses and who we are at our Worst!
- C. Recognize four toxic stress patterns

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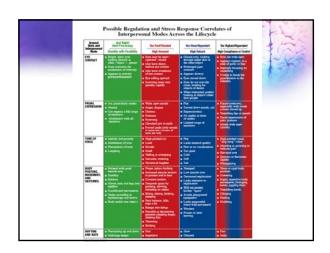
# Step #1A: How do we identify stress recovery? • Recognize what stress recovery looks like: - Deep sleep - Green zone





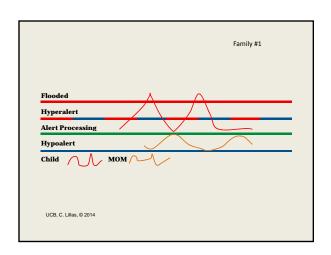




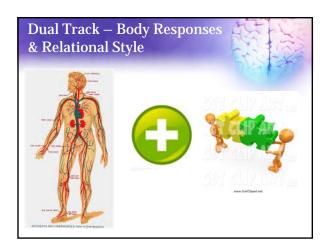


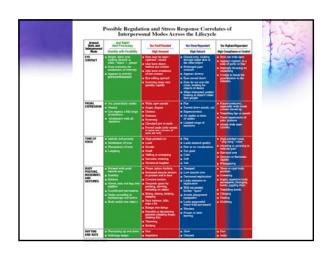






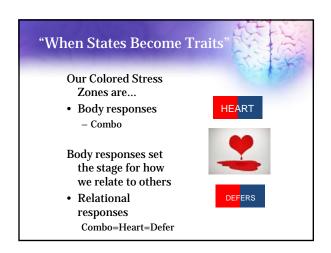


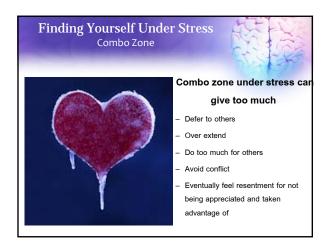












# Awareness of Self as a Cultural Being Heart Under Stress Heart In Green Zone Overly accommodating Empathic Anxious to fix things Connecting Dysfunctional Functional helper rescuing Sharing information Making contact



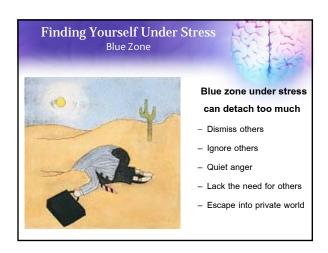
# "When States Become Traits" Our Colored Stress Zones are... • Body responses - Red Body responses set the stage for how we relate to others • Relational responses Red=Hand=Demand



# Awareness of Self as a Cultural Being Hand Under Stress Hand In Green Zone Overly demanding Assertive Directive, action oriented Confrontation Standing up Blaming the victim Standing up Taking responsibility Noticing and sharing differences







# Awareness of Self as a Cultural Being

Head Under Stress Head In Green Zone

Overly detached Overly dismissive Reflective Problem-solving

Denial

Passive-aggressive anger

Avoidance
Antagonistic avoidance
Denial of differences,
culture, political
significance of oppression

Problem-solving Taking responsibility Learning, asking, & noticing the impact



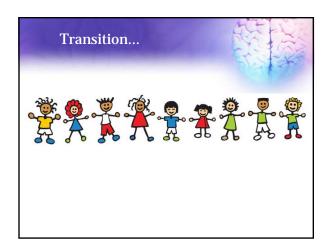
# Cultural Connections to Stress Responses

What is your family system's default mode for stress responses?

What pattern do you see from your family of origin to your current family?

How do these automatic stress responses effect your cultural sensitivity?





At Our Desi	t & Our Worst	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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		100
Heart Under Coordination	Hand Under Coordination	Head Under Coordination
Heart Under Coordination	Hand Under Coordination	Head Under Coordination
Responsive	Directive	Reflective
Engagers	Doers	Thinkers
Body Under Stress	Body Under Stress	Body Under Stress
Hypervigilance	Crying, Anger, Rage	Shut Down, Glazed
Fear, Anxiety	Hyperactivity, Mania	Depression, Dissociation

# Step #1: How do we identify stress & stress recovery? A. Recognize what stress recovery looks like and who we are at our Best! B. Recognize three primary stress responses and who we are at our Worst! C. Recognize four toxic stress patterns (now)

# Step 1C:

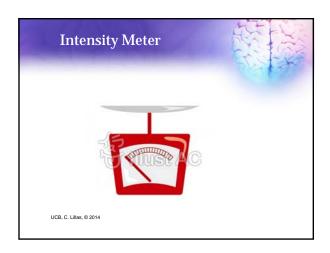
How do we identify toxic stress?

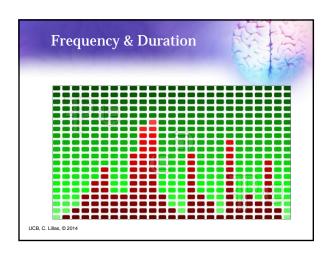
- Allostatic load = the wear and tear on the body
  - Pattern where the rubber band is either too tight or too loose
  - Loss of coordination with too much rigidity or too much chaos

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Toxic Stress	
Stretched out too long, too many times	Overstretched, lost its elasticity
Pu	Shuttesetschen : Melliki)







### Step #1C: How do we identify toxic stress patterns?

Recognize stress responses that are too frequent or too long

### **4 Toxic Stress Patterns**

- 1. Stress responses that occur too frequently and too quickly
- 2. Prolonged stress responses that take too long to recover (more than 10 to 20 mins)
- 3. Cannot adapt to "normal" challenges and transitions
- 4. Cannot recover from stress response back to baseline health (healthy sleep cycle, healthy awake state)

## Adverse Childhood Experiences Scale

### CA's ACE List

- 1. Recurrent physical abuse
- 2. Recurrent emotional abuse
- 3. Contact sexual abuse
- 4. An alcohol and/or drug abuser in the household
- 5. An incarcerated household member
- 6. Someone who is chronically depressed, mentally ill, institutionalized, or suicidal
- 7. Violence between adults in the home
- 8. Parental separation or divorce 9. Emotional or physical neglect
- Resources
- http://acestudy.org/home
- http://www.cavalcadeproduct ions.com/ace-study.html
- http://wichildrenstrustfund.or g/files/WisconsinACEs.pdf

# ACE Score Higher Than 4

### Score 4 or more

### · Twice as likely to smoke

- · Twice as likely to have heart disease
- Twice as likely to be diagnosed with cancer
- · Four times as likely to have emphysema or chronic bronchitis
- · Six times as likely to have sex before age 15
- Seven times as likely to be alcoholics

### Score 4 or more compared to 0

Score 4 or more compared to 0

Twelve times as likely to have attempted suicide

Men with a score of 6 or more compared to 0

· Forty-six times as likely to have injected drugs

Connie Lillas, PhD, MFT, RN infantmentalhealth@earthlink.net www.the-nrf.com

### Stress Patterns & Associated Health Issues

Disease does not begin at the onset of symptoms.

In fact, maladaptive stress related conditions are implicated in all of the following:

Toxic Patterns #1 to 3

- Increase in heart attack & hypertension
  Melancholic depression
- · Obsessive compulsive disorder
- Panic disorderAlcoholism
- Lowered immune system
- Decrease in memory functions
- Diabetes

- MalnutritionHyperthyroidismFunctional gastrointestinal disease

Toxic Pattern #4

- Allergies
- Asthma Autoimmune diseases
- Chronic fatigue syndrome
- Rheumatoid arthritis
- Post Traumatic Stress Disorder

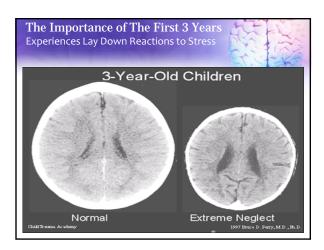


## The Ripple Effect: **Trauma-Informed Shift**

- Shift from , "What's wrong with you?" (bad behavior)
- To a curious and kind attitude, "What happened to you?"





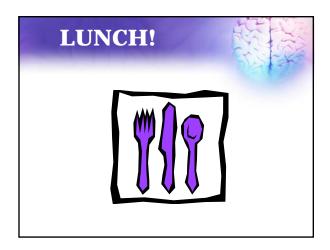


# Bucharest Early Intervention Program (Los Angeles Times, July 24, 2012)

Following 136 Romanian orphans for now 12 years, first randomized control study of its kind between institutional care, foster care and typically developing children:

- MRI's on 76 of these Inst children. Compared to orphans that went into foster care or had remained in their own homes, those children that remained in institutional care had less white matter (tissue that connects different regions of the brain)
- Essentially, there is less electrical activity in these brains. If a typically developing child is a 100 watt light bulb, these children were a 40 watt light bulb; increased rates of anyiety and degreesion are prevalent.
- Those who left the institution and went into foster care between 6 and 31 months still
  had poorer outcomes similar to institutionalized children, both having increased rates
  of ADHD & oppositional defiant behaviors

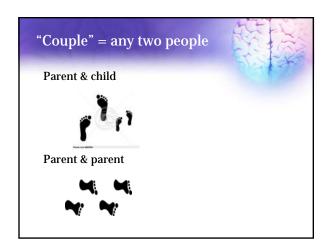




## Working Together to Provide Emotional Care

- · Providing emotional care supports resilience
- · Resilient factors come from:
  - 1. Concrete support in times of need
  - 2. Parental resilience (stress & stress recovery)
  - 3. Social connections
  - 4. Children's social and emotional development
  - 5. Healthy parent & child relationships
  - 6. Knowledge of parenting and child development
  - . Center for Social and Public Policy; Strengthening Families Illinois





Step #2: How do we identify high-quality relationships and positive procedural memories?

A. Recognize what high-quality "bottom-up" relationships looks like

B. Recognize what high-quality "top-down" relationships looks like

C. Link high-quality relationships with positive procedural memories



# The Zone of Proximal Development

What a child or "couple" can do on their own, you let them do

What a child or "couple" cannot do on their own, you provide support

- How far up the relational ladder can the relationship get on its own?
- Where do things break down?
- Start at the earliest point in the breakdown to build new procedures
- Get support where you need it!









### Step 2A:

Recognize "Bottom-up" Levels

### Bottom-Up (non-verbal capacities)

Level 1 Getting calm (green) together

Level 2 When calm able to make eye contact & look at faces

Level 3 When making eye contact, able to share joy & fall in love

Level 4 When sharing joy, able to create a continuous back-and-forth flow of communication ("circles")

Level 5 When in a flow, able to expand and read non-verbal emotional and gestural cues

SE Milestone Language Adapted by Connie Lillas

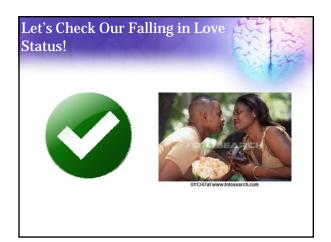
# Level 1 & 2: Couple's build on sturdy green zone with eye contact to share joy...

## What you are going to see

- · Watch for the bright eyes
- Look for the baby breaking gaze, looking away, then coming back to the face again
- Feel the rhythm of the back and forth, the up and down in intensity of joy
- See the father's low intensity facial expression
- Notice his vocal rhythm is slow or not present

## What you are going to see

- · Feel the difference in the rhythm and joy
- Look for the baby's hyper-vigilance, furrowed brow and whiny cry
- Look for the baby's glassy and glazed eyes, with low tone in his facial muscles and flat expression
- See the second of engagement and how it's not sustained into any joy or back and forth
- Look for the mom's facial features from green zone, to anxious rolling of her eyes, to frustration in pulling on his face





### Step #2: How do we identify highquality relationships and positive procedural memories?

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# Step 2A: Recognize "Bottom-up" Levels Greenspan, 1985, 1992; Greenspan & Louric, 1981; ZERO TO THREE, 1994, 2005 Bottom-Up (non-verbal capacities) Level 1 Getting calm (green) together Level 2 When calm able to make eye contact & look at faces Level 3 When making eye contact, able to share joy & fall in love Level 4 When sharing joy, able to create a continuous back-and-forth flow of communication ("circles") Level 5 When in a flow, able to expand and read non-verbal emotional and gestural cues

SE Milestone Language Adapted by Connie Lillas



### What is a "circle"?

- The first person begins a connection
   Could be a look, a sound, a gesture
- The second person responds
- The first person responds back!



- It takes 3 prongs to complete a circle
- We call it opening a circle and then closing a circle

# What we are going to see

- Look for the back and forth circles on a sensory-motor level ("daddy going to get you!")
- Look for the back and forth circles on a facial, joyful level
- Look for the back and forth circles on a vocal level
- What happens to baby when Daddy changes the game and he get's stressed? Does he keep the circles going?

## **Circles of Communication**

• <a href="https://www.youtube.com/watch?v=JS4">https://www.youtube.com/watch?v=JS4</a> fVSsPWw

Level 5: Couple's build on sturdy green zone to share joy, create circles of communication, & read non-verbal cues...

Sender Message

VERBAL 35%

NONVERBAL 65%
Feedback

Receiver

NONVERBAL 65%
Free Group Receiver

Receiver

NONVERBAL 65%
Free Group Receiver

Receiver

# What we are going to see

- Watch the play, including the gestures, looks, and sounds involved
- As soon as the mother goes "still" look for all of the baby's same gestures, looks, and sounds as she tries to re-engage her mom
- These are all of her procedural memories!
- Notice as they do not work, she increasingly becomes distressed
- Notice how quickly they "repair" and the reunion occurs after the "rupture"

# What we are going to see

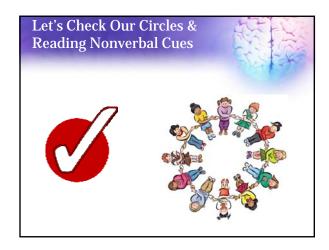
We are going to watch the "pre-clip" of a teen mom and her child

- 1. Do we have a mutual green zone?
- 2. Do we have mutual eye contact?
- 3. Do we have mutual joy?
- 4. Do we have mutual back and forth circles?
- 5. Do we have mutual reading of non-verbal cues?

# Now, what are the changes?

- Notice that he approaches Mom
- They make facial contact and smile
- He brings her toys to play with
- · He cuddles in her lap

hat we are going to see	
Just as children need to be shown how to play, so parents need to be shown how to	
play with their children	
Parents with no procedural memories for	
these levels of relationship will not know	<u> </u>
how to get to these levels, without your	
heln!	-



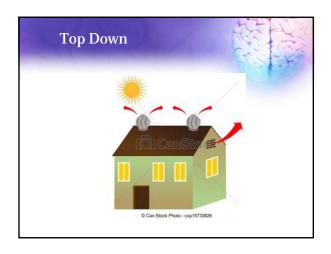


Step #2: How do we identify high-quality relationships and positive procedural memories?

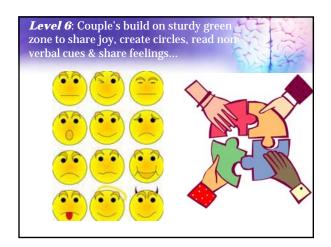
A. Recognize what high-quality "bottom-up" relationships looks like

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# **Showing & Sharing Feelings**

<a href="http://www.youtube.com/watch?v=gE9r1LkR">http://www.youtube.com/watch?v=gE9r1LkR</a>
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## What we are going to see

Early forms of pretend play, simple daily activities one does with a baby

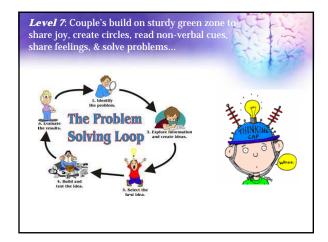
What are her procedures?

- Feeding babies
- · Nurturing babies
- Putting them to bed routine (notice her procedures)
- Her own procedures kick in, with her pretending to be a baby

## 27 months Patli

Different themes of pretend play:

- First minute, sharing juice with Mommy
- 3:40, Good morning babies!
- Mini rupture-repair, patting the babies, helping them recover from crying
- · Helping them fall asleep
- 5:15, Feeding the babies
- 8:15 Putting the babies to bed
- 8:30 Kissing the babies
- · Becoming a baby!



## What we are going to see

- Working out fears and anxieties with "baby dragon"
- Tries to be brave and still shows fears
- · Uses grandmother to help her
- Grandmother slowly "titrates" the dose of stress and challenge to Cammy so she can slowly be less frightened

## What we are going to see

- 3 year old who is arguing with his mother
- $\bullet\,$  She never closes the circle by mirroring him
- They both are "talking" to each other, but not opening and closing circles together
- She is not able to follow his feelings; she's only interested in his following her feelings!

# **Solving Problems**

• <a href="http://www.youtube.com/watch?v=seM2">http://www.youtube.com/watch?v=seM2</a> <a href="www.youtube.com/watch?v=seM2">wby6QmQ</a>
<a href="mailto:3">3</a> year old, 2 min, 36 seconds; three year old arguing with his mother</a>

## What we are going to see

- From "time-outs" to "time-ins"
- Mom trying to help down-regulate her son
- Mom has been in a paradigm of rewarding "good" behavior and giving consequences for "bad" behavior
- They cannot organize to Level 1
- Feel the mismatch back and forth
- How "delayed" are they?
- What if his pacifier is the only thing that calms him down?



# Step Two: Levels of Relationship

Bottom-up, Inside the Emotional House

- · Level 1: Getting to green zone together
- · Level 2: Sharing eyes and faces together
- · Level 3: Sharing joy and falling in love
- · Level 4: Creating circles back and forth
- Level 5: Reading non-verbal cues & gestures

Top-down, the Roof to the Emotional House

- Level 6: Sharing feelings through pretend play and talking
- Level 7: Able to make-sense of feelings and solve problems together

# Going up & down a ladder or an elevator

# Cultural Connections to Disciplinary (Un)Collaboration

Levels of Engagement Apply to Culture!

- Mono-culturalism (a superior attitude)
- Multi-culturalism (an attitude of appreciating our own and other cultures)
- Cultural inclusion (an attitude of honoring differences and similarities, including the contribution of each group to the whole community)
  - Batts, Capitman, & Lundrum-Brown, 2011

















