Fostering Family Partnerships: An Intro to the Neurorelational Framework (NRF)

Connie Lillas, PhD, MFT, RN

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Infant Mental Health Context Sets the Stage

First, the steady growth of Infant Mental Health (IMH) as a field

In 2000 WAIMH Handbook, Fitzgerald & Barton describe Infant Mental Health:

- IMH as a "relatively young" field
- Building upon the synthesis of evolutionary, systems theories, and psychoanalytic theories
- By necessity, is multidisciplinary and international, emerging as an interdisciplinary field

National Shifts Move Us Further Along

Historical Background		*Current & Future Directions*
Singular & Categorical	Diagnoses **to**	**Multiple Causes & Underlying Dimensions**
		
Homogenous Samples	Population Samples **to**	**Heterogeneous Samples**
		

Historical Context and Recent Shifts

The pressure for Evidence-Based Treatments forced organizing treatment models around ONE Diagnosis

In one extensive literature review, 99% of the evidence-based treatments were done in laboratory settings, with laboratory research clinicians, with subclinical populations based on a singular diagnosis…

Weisz, J. R., Doss, A.J., & Hawley, K.M. (2005). Youth psychotherapy outcome research: A review and critique of the evidence base. *Annual Review of Psychology*. 56:337-63. Doi: 10.1146/annurev.psych.55.090902.141449

Evidence Based Treatments (EBT) are being equated with EB-Practice

- Evidence-Based Practice (EBP) is:
  - **A decision making *process* that holds the tension between:**
    - The best available clinical research (EBTs)
    - Professional wisdom based in sound theory and practice
    - Cultural and family values (with informed choice)
      - » Buysee and Wesley, 2006

National Shifts Move Us Further Along

Historical Background — *Current & Future Directions*

Views of Brain Development
Research Methodologies

Linear **to** **Nonlinear (Systems Science)**

Research Perspectives

Isolation **to** **Collaboration (Interdisciplinary, Translational, Community-Based Participatory Research)**

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National Shifts Move Us Further Along

Historical Background		*Future Directions*
	Clinical Practice	
Simple		**Complex**
	Population Samples	
Laboratory Samples		**Real World Representations**
	Diagnoses	
Categorical		**Dimensional**
	Research Methodologies	
Linear		**Nonlinear (Systems Science)**
	Research Perspectives	
Isolation		**Translational/Community Collaboration**

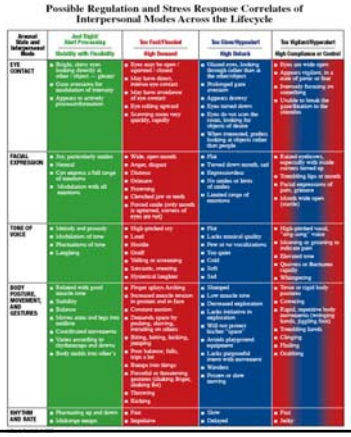
The Neurorelational Framework (NRF) "translates" what matters in early brain development to a comprehensive assessment & intervention process for infants and parents

What Matters:

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

What assessment information to obtain (3 steps to NRF):

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



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

Recognize stress responses that are
too frequent, too quick / intense, too long

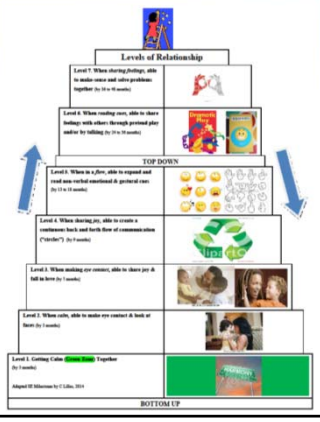
4 Toxic Stress Patterns

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

Step #2 Quality of Relationships

"Serve and Return" on All Levels

Step Two: Levels of Engagement



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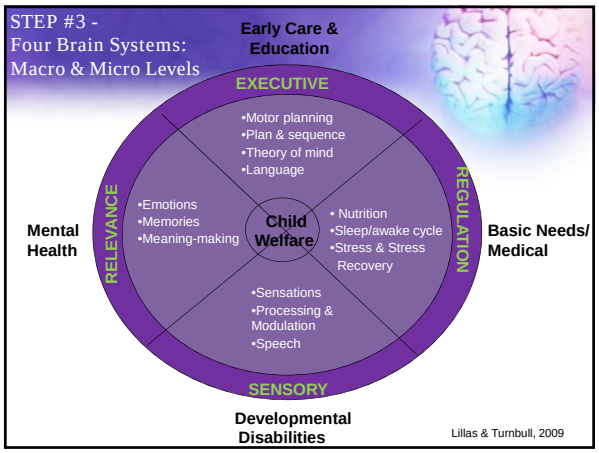
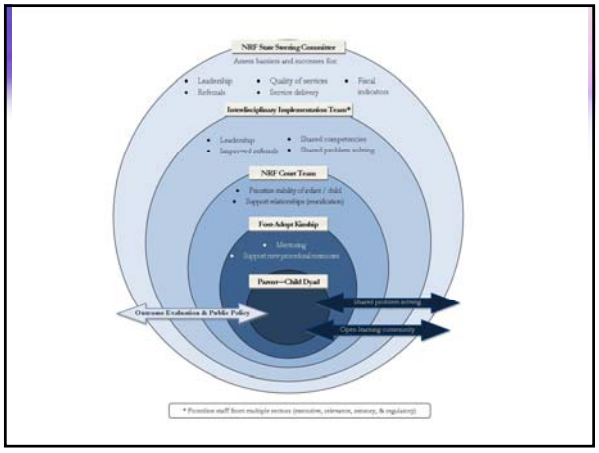


Functional behaviors representing brain systems

Lillas & Turnbull, © 2009

• Regulation	• States of Arousal
• Sensory	• Reactions to all sources of sensory information (including vestibular, proprioception, pain, temperature)
• Relevance	• Emotions, memories, & meanings
• Executive	• Ability to *initiate* and *shift* as well as *inhibit* and *sustain* motor (includes attention) activity and behavior according to the context



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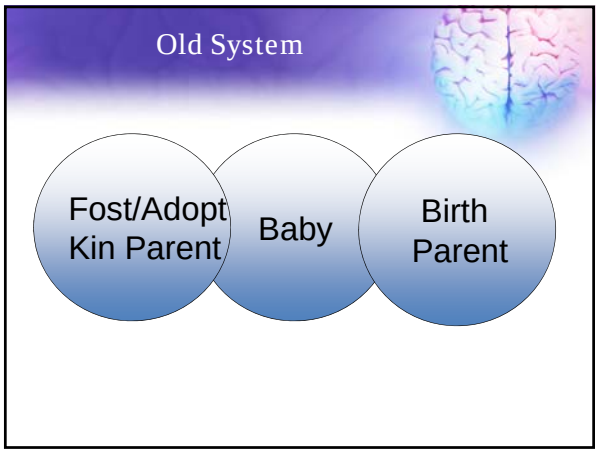

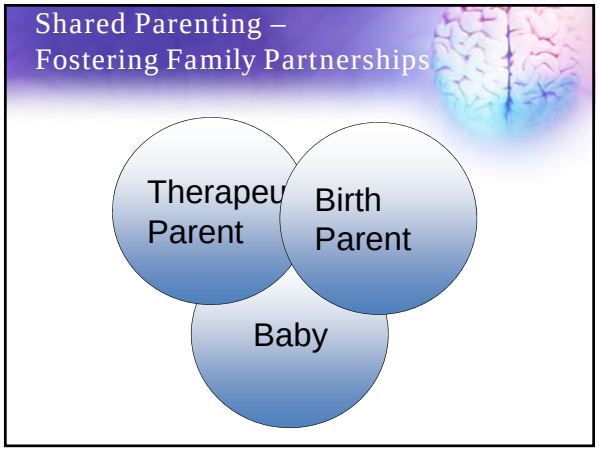

Fostering Family Partnerships

- #1 goal is to stabilize infant's relationships with high quality engagement to reduce toxic stress and to preserve and enhance brain architecture
- #2 provide additional support through coaching and modeling for reunification (important but not primary goal)
- #3 provide coaching and mentoring to all involved in infant's life
- #4 support "shared parenting" approach
- #5 provide an open-ended attachment relationship to whomever the baby is with

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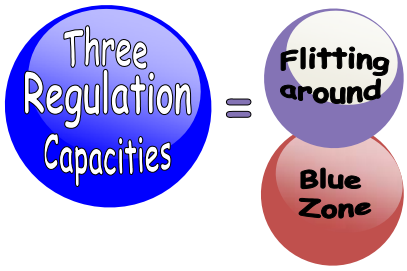
Adverse Childhood Experiences

- Linear increase in negative health/mental health outcomes as number of adverse childhood experiences increase
  - **Events include:**

Abuse
Physical Abuse
Emotional Abuse
Sexual Abuse

Neglect
Physical Neglect
Emotional Neglect

Household Dysfunction
Family Violence
Parental Mental Illness
Separation or loss of a parent
Parental Criminality
Parental Substance Abuse



What we are going to see...

3 video clips

- Tania (teen mom) and Anthony in separate universes
- Anthony moving from activity to activity, blue zone, motorically unstable
- Six weeks, later, connecting and engaging together (at what level?)

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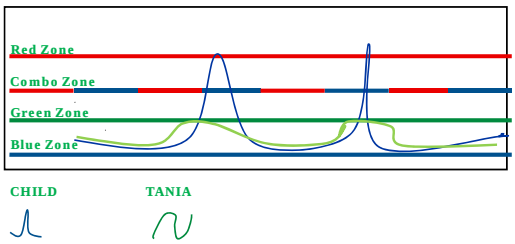
Step #1
Case #2, A & T



CHILD TANIA

Case #2

PARENT-CHILD RELATIONSHIP MILESTONES

Child: _____ Caregiver: _____ Examiner: _____ Date: _____ Diagnosis: _____

e an X in the box that :hes the milestone and evement levels	1 Age appropriate under all conditions, including stress, with a full range of emotions	2 Age appropriate but vulnerable to stress and/or constricted range of emotions	3 Has capacity but not at age appropriate level	4 Inconsistent/needs sensorimotor support and structure to function at this capacity	5 Barely evidences capacity even with support	6 Has not reached this level
unctional Capacities						
		BOTTOM-UP				
l 1. Getting Calm (Green) Together (by 3 months)						X
		These functions are built upon the capacity to be calm together				
l 2. When calm, able to eye contact & look at months)						X
l 3. When making eye ct, able to share joy & n love (by 5 months)						X
l 4. When sharing *joy*, to create a continuous and forth flow of unication ("circles") months)						X
l 5. When in a *flow*, able pated and read non- al emotional & gestural (by 13 to 18 months)						X
		TOP-DOWN				
l 6. When *reading cues*, to share feelings with s through pretend play r by talking (by 24 to 36 s)						
l 7. When *sharing* gs, able to make-sense solve problems together to 48 months)						

DIR® Institute adapted from the DMIC, ICDL Press

Original functional levels from ICDL's FEDL: adapted language & organization by Connie Lillas

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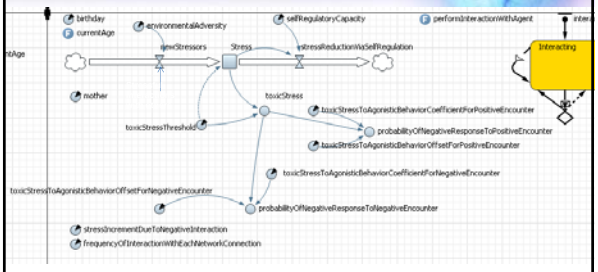
   McEwen

Toxic Stress is a Public Health Crisis

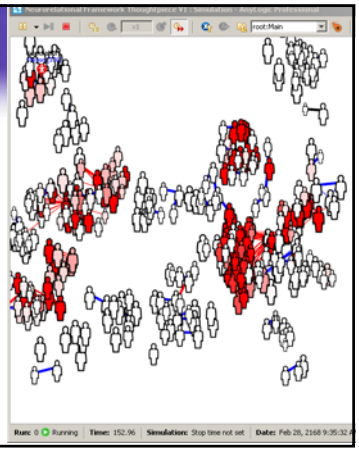
A "toy" model highlighting Systems Science Models, viewing toxic stress and adversity over time in population health (Dr. Nathaniel Osgood)

- Notice how it grows in clusters
- How it advances over time
- What happens when you get some to gain stress recovery health pattern

Dynamics of Stress



Family Groups, with Heterogeneous Toxic Stress Profiles



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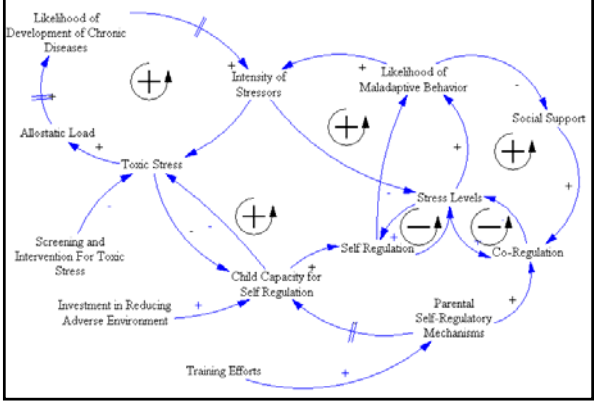
Original functional levels from ICDL's FEDL; adapted language & organization by Connie Lillas

Tania's First Crisis

- Anthony shift to grandma's...creates housing crisis for Tania
- She shifts into unstable housing
- We see a shift from her meeting all of the "demands" from both probation and family court to missing her appointments, not taking drug tests

Longer Term Perspective



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Tania's Second Crisis

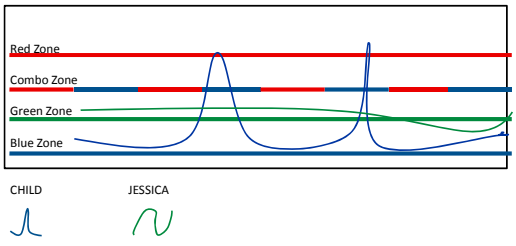
- Judge Pellman, "You need to go to rehab."
- Tania, "I don't want to be locked up."
- Ends up living in a crack house
- Reaches out to Jessica for help...
- "I'm ready to turn myself in...." Goes through intake and ditches
- Unable to re-unify, lost to her substance use

What we are going to see...

2 video clips

- We begin again, a year later, similar to where we were a year before
- Anthony's blue zone disconnect; Jessica working hard with her "best" Buzz Lightyear voice to engage him

Step #1
Case #2, A & J



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Cultural & Institutional Clash Crises

- Jessica's real concerns

We hear Margarita is a relative

- Jessica's anxiety to repair & anger at feeling falsely accused (using translator)
- Jessica's humiliation w/me (never not been able to repair a therapy relationship)
- Grandma feeling blamed (she pretends she's so nice, but she's always causing trouble; he's fine at Margarita's)
- Grandma's further detachment, wanting to fire Jessica
- Team unsure how to undo the grid lock

Heart, Hand, and Head Patterns

	Under Coordination		Under Stress	
Heart 1s	Warm Empathic Connect Repair	Functional helper Share info. Make contact Cross-sector communication	Overly accommodating Overly controlling Anxious to fix things	Dysfunctional rescuing
Hand 2s	Assertive Directive, action oriented	Take the lead Confront Stand up Notice and share differences	Overly demanding Hostile attack	Blaming the victim Blaming the system
Head 3s	Neutral Reflective Problem-solve	Take responsibility Learn, ask, & notice the impact	Overly detached Overly dismissive Passive-aggressive anger Denial	Passive avoidance Antagonistic avoidance Denial of differences across domains

Dr. Valerie Batts

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The Role of the Cerebellum, Integrating "Bottom-up" & "Top Down"!

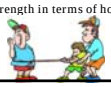
An Integrated Clinical Concept

Sensorimotor difficulties can manifest in Over-shooting and Under-shooting behaviors that result in problems with adjusting the *rate, rhythm and force* of behavior according to the context:

- *Rate of behavior* - the speed of how fast something happens over time

- *Rhythm of behavior* - how fast or slow things are repeated over time

- *Force of behavior* – intensity and strength in terms of how high or low



Dysmetria of Thought

- "In the same way that the cerebellum regulates the rate, rhythm, force and accuracy of movements, so does it regulate the speed, consistency, capacity, and appropriateness of mental or cognitive processes."
- "The cerebellum is an integral node in the distributed neural circuits subserving sensorimotor, cognitive [executive], autonomic [regulation] and affective [relevance] processing."

– Jeremy Schmahmann, Harvard

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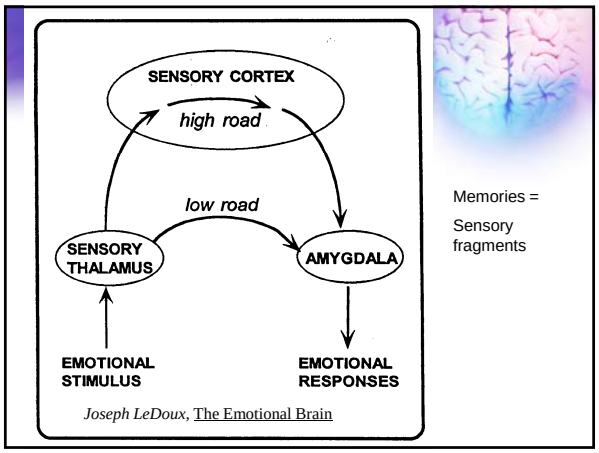

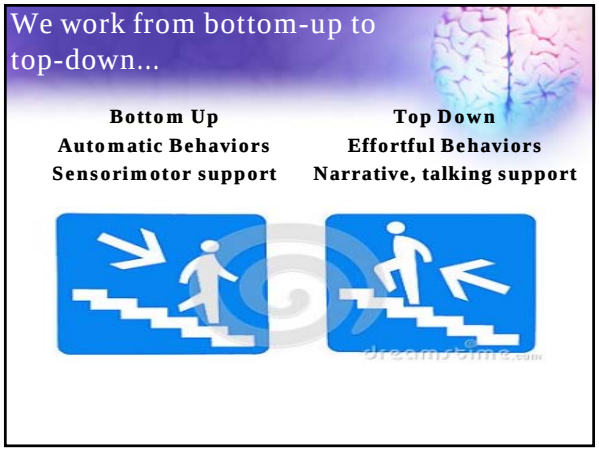

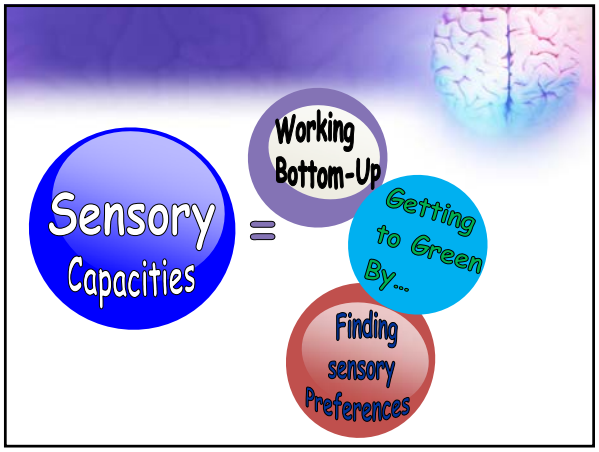

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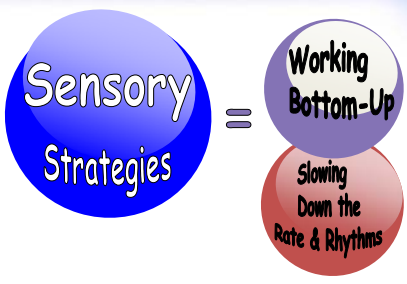
What we will see...

3 clips

- Working "bottom-up" we have to find a sensory preference to shift A's arousal from blue to green zone
- By focusing on his getting sensorimotor input at the front end of a session, A's more available
- What level of engagement is he shifting to now, in the last two clips? (which he can now sustain)

Speech Delay Crises

- At 3 years of age, only 5 words that were difficult to understand with much articulation
- He had had one year of twice a week speech at this point with little to no improvement
- His socio-emotional engagement was greatly improving but his speech development was at a dangerous plateau



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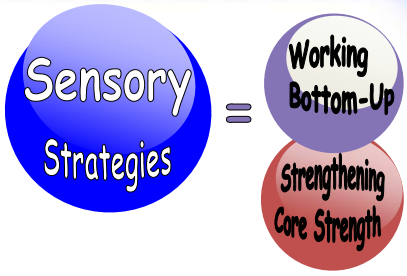
What we will see...

2 clips

- With all the improvement in engagement, we had not made enough language gains; by 3 years of age, only 5 words with articulation problems
- Added SLP expertise to shift to trans-disciplinary work
- With apraxia, over-talking noticed
- Shifted to under producing sounds & increasing gestures



What we will see...

2 clips

- With all the improvement in engagement, we were still concerned about his sensorimotor synchronicity
- Added OT expertise to shift to trans-disciplinary work
- You see his poor core strength when on the therapy ball
- Improving core strength through crawling, bear crawling, and using arms to support trunk

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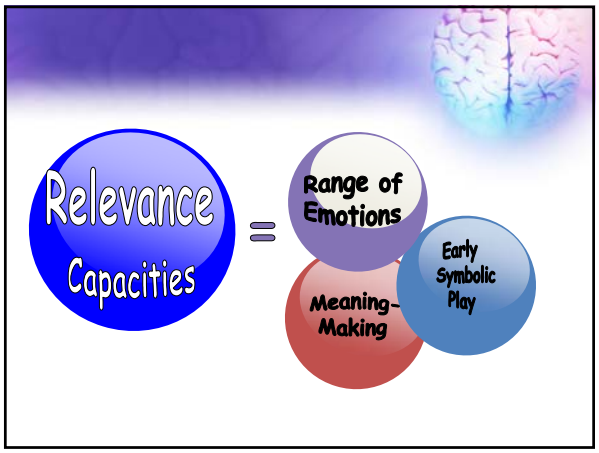
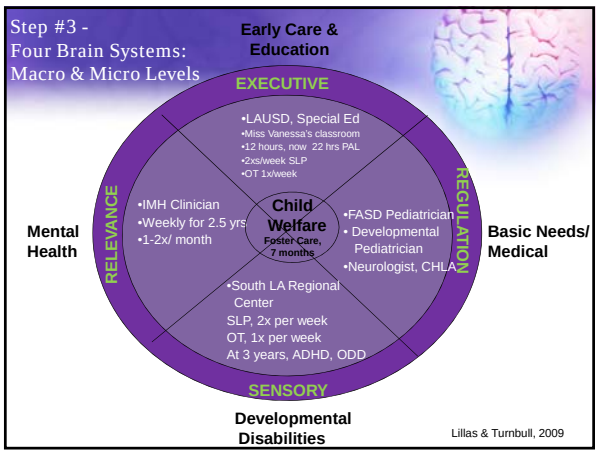


What we will see...

2 clips

- Moving up the relational ladder to early symbolic play
- Theme of "help" & "kissing for thank you"
- Increase in language production, "I want in."

- Gestural/emotional sensorimotor play with grandmother, who is adopting Anthony



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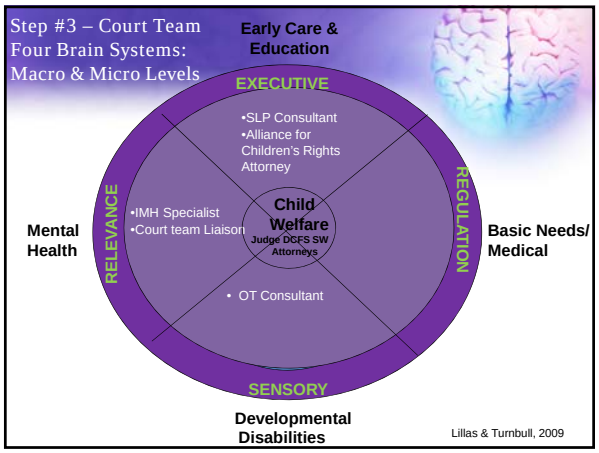
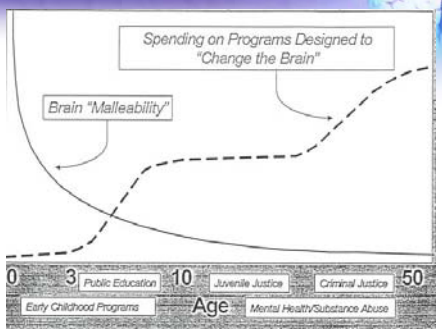


Building Healthy Communities

A "toy" model highlighting Systems Science Models, viewing the need for health care in the context of community resources in population health (Dr. Nathaniel Osgood)

- Notice how it grows in clusters
- How it advances over time
- What happens when you get some folks to gain needed health care services

Pay Now or Pay Later



Bruce Perry, 2004

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Take Home Points

What To Look For:

- Toxic stress can be identified through non-verbal behaviors across the lifecycle and is especially important to be "seen" in birth to five year olds
  - Toxic stress can show up through red zone, blue zone, and/or combo zone behaviors that are too frequent or last too long
- Key red flags that indicate the need for "dyadic" (parent-child) intervention are:
  - Any toxic stress pattern
  - If the parent (e.g., birth/foster/kinship/adopt) cannot soothe his/her child
  - If the parent-child (e.g., birth/foster/kinship/adopt) cannot engage in joy

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