

Enhancing Early Intervention: Putting Research Into Practice To Serve Infants, Toddlers & Their Families

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Disclosures

Nothing to Disclose!

California Families Infants & Toddlers: Birth to Three



- 1,500,000 babies birth to three
- 34,000 Early Start families with babies with special needs

California Early Start State Eligibility
Infants & Toddlers: Birth to Three

33% Developmental Delay :

- motor
- communication
- cognitive
- adaptive
- social or emotional functioning

Established Risk: Probability of delay

California Early Start State Eligibility
At Risk: 2 Biomedical Factors

- Low birth weight
- Assisted ventilation
- Small for gestation
- Asphyxia
- Prenatal exposure
- Neonatal seizure
- CNS lesion
- Failure to thrive

California Early Intervention Services Act
Early Start

Family service system for infants, toddlers and their families that coordinates health, developmental, educational and social services that are culturally competent and responsive to family-identified needs.

--- CEISA, Title 14, *95001

California Early Start Families Infants & Toddlers: Birth to Three

- Audiology
- Nursing
- Nutrition
- Occupational Therapy
- Physical Therapy
- Psychology
- Social Work
- Speech & Language
- Family Training
- Family Counseling
- Service Coordination
- Transportation
- Vision Services
- Assistive Technology
- Health Service
- Medical Services

Part C Federal Requirements California Early Start Program

- \$53 million federal support, with \$ 256 M from state general fund = \$309,000,000
- Federal mandates, including Performance Plan and Annual Report on 10 indicators of compliance
- 2014 Added Requirement of a **State Systemic Improvement Plan** addressing an outcome for high interest but low performance indicator

State Systemic Improvement Plan (SSIP) 2020 Achievable Measureable Result

- Improves outcomes for infants and toddlers and their families
- Based on State data and Stakeholder input
- Recommended by the State Systemic Improvement Plan Task Force



**CA State Identified Measurable Result
Social and Emotional Development By Three**

- Turns to caregivers for TLC, solace, attention & guidance
- Manages emotions & behaviors to developmental expectations
- Has the initiative to explore, discover, learn & make friends

**State Identified Measureable Result
Social and Emotional Development**

- Stakeholder Input
- State Data
- Critical preschool inclusion indicator
- Infant brain research

**State Identified Measureable Result
Social and Emotional Development**

- Infant brain research: mother-infant relationships play a crucial role in long-term outcome

**1997 White House Conference
Brain Development in Young Children**

Insights on Early Mother-Child Nurturing Relationships

- Influence how the intricate circuitry of the brain is wired
- Influence extremity and frequency of stress levels of cortisol
- Interpersonal interaction, not sensory stimulation, as the key to healthy development

**Infant/Family Mental Health
Relationship as the Centrality of Development**

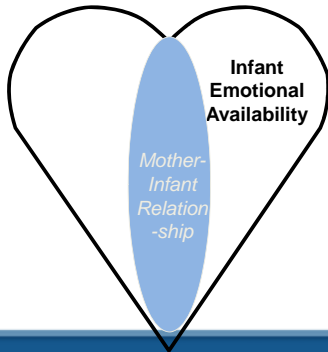
Maternal Emotional Availability Infant Emotional Availability

Mother-Infant Relationship

**Early Caregiving
Relationships Matter!**

- Every child needs a close intimate bond with at least one person who is sensitive to his needs and responsive to his cues.

**Infant/Family Mental Health
Relationship as the Centrality of Development**



**Infant Emotional Response Vulnerability
Neurobehavioral Sensitive Status**

- Prematurity
- Low birth weight
- Substance exposure
- Special health care needs
- NICU experience
- Antenatal depression

**NICU Infant Experience
Neurobehavioral Impacts**

- Sensory over-stimulation
- Repeated medical procedures
- Pain
- Parental separations
- Multiple caregivers

Antenatal Depression, Trauma & Anxiety Neurobehavioral Sensitive Status

- Prenatal distress acts through the placenta to alter fetal development
- Prenatal distress predicts increased behavioral reactivity and cortisol in response to novelty in infants.

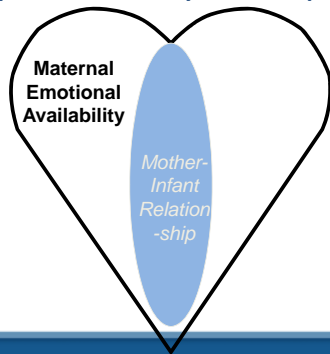
--- Monk et al, 2012

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Infant Emotional Availability Neurobehavioral Status that Influence Relationships

- Organization of engagement behavior
- States of arousal
- Sleeping regulation
- Crying consolability

Infant/Family Mental Health Relationship as the Centrality of Development



Mother as Regulator

- Requires regulation of own emotional state
- Requires understanding/attunement to infant's internal state
- Requires positive social supports

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Motherhood is NOT an Innate Skill

- Survey of new mothers
46% found it hard to care for their baby

- 61% found motherhood harder than expected

- 20% believed their babies had the motivation to be angry with them

- Motherhood is learned from a community of moms & home support!

Social Capital

- **Benefits derived from personal social relationships that influence parenting**

-- Desmond Runyon, 1998

Social Capital that Supports Parenting Adapted

- Presence of 2 parents or parent-figures
- Social support for maternal caregiver
- Number of children relative to family emotional resources
- Neighborhood support
- Regular church/synagogue/mosque attendance by the family

Where is the Community of Moms and Home Support!

Life in the 21st Century

- Smaller families of origin
- Single parenthood
- Separation from families of origin
- Neighbors in the workforce
- Down church, temple, mosque attendance

How Do Infants Learn Healthy Crying, Sleeping and Feeding Patterns?

- Parents play an important role in setting up the neural circuitry that helps infants learn to regulate their behavior.

--- Bruce Perry

- Who is helping the mothers with sensitive babies with special needs?
- Who is helping the overwhelmed, anxious, depressed mother?

Mothers of Babies with Delays, Disabilities and Biomedical Risks

- May be first time moms
- May be experiencing anxiety or depression
- May be alone
- May be worried about family circumstance
- May be experiencing birth-related posttraumatic stress disorder

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Maternal Psychosocial Stressors: Family Stability and Family Harmony

- Economic worries: shelter, food, health care
- Family discord
- Family illness
- Family separation
- Ethnic discrimination
- Community violence

Maternal Stress/Trauma Circumstances Risks to Post Traumatic Stress Disorder

Living in Fear!

- Undocumented status
- Domestic violence
- NICU experience

"Trauma causes an emotional concussion to the brain"

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California's Challenging Family Circumstances

- 24% live below federal poverty level
- 46% babies live in low income families
- 32% live in single parent families
- 45% babies born to foreign-born mothers
- 10-15% on new mothers experience postpartum depression

California's Challenging Family Circumstances

- 19% of mothers did not finish high school
- 12% live in families with parents who are unemployed
- 23% of babies experience high mobility
- 65% of babies have at least one risk factor known to increase the chance of poor health, school & developmental outcome

**Maternal Depression/Anxiety/Trauma
Prolonged Effects if Severe & Complex**

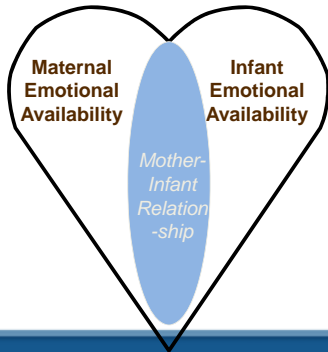
- The notion of **CUMULATIVE RISK** asserts that the greater the number of biological and social-environmental negative circumstances, the greater is the risk for negative developmental outcomes for mother & infant.

**Maternal Depression/Anxiety/Trauma
Severe Effects with Multiple Stressors**

- History of depression
- Poverty
- Single, isolated parenthood
- Stressful live events
- Conflictual relationship with baby's father
- Infant health & development problems

- **Impact of maternal depression, anxiety and trauma on infant – mother relationships**

Infant/Family Mental Health Relationship as the Centrality of Development



Patterns of Depressed Parenting Responses to Cries and Cues

- Sad, under-stimulating & withdrawn
- TLC devoid of affect
- Tense facial expressions and handling
- Inconsistent caregiving rituals & routines
- Less gentle touching & stroking
- Lack of contingent responding to infant cues
- Blunted brain response to crying baby

Maternal Depression Infant Consequences

Consequence of maternal depression

- Infants withdrawn and less active
- Infants become fussy
- Infants with shorter attention
- Elevated heart rates and cortisol levels
- 75% with less frontal brain activity
- Greatest risk between 6 and 18 months

--- Dawson, 1994; Fields, 2010

Infant Brain-Behavior Relationships

- **What does infant brain research tell us about child neurobehavioral sensitivity, family discord, stress, distress proneness & the regulation of behavior?**

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Behavior is Communication!

- **Infants who experience antenatal stress may have more sensitive & reactive nervous systems**
--- Monk et al., 2012
- **Infants and young children who chronically experience stressors within the home may have more sensitive and reactive nervous systems!**
--- Jack Shonkoff,
Early Childhood Summit, 2010

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Stress Raises Cortisol Levels

Toxic Stress Increased Levels of Cortisol

- Destroys brain cells & connections between brain cells
- Affects: impulse modulation
emotional regulation
behavioral control

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Chronic Stress Becomes Toxic Can Effect Architecture of the Brain




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Impact of Toxic Stress on the Brain

Center on the Developing Child
HARVARD UNIVERSITY


Persistent Stress Changes Brain Architecture

Normal



Typical neuron—
many connections

Toxic stress



Damaged neuron—
fewer connections

Prefrontal Cortex and Hippocampus

Source: Reddy et al. (2004)
Buck et al. (2005)

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Behavior is Communication!

- Infants and toddlers may respond to chronic stress with inconsolable crying, night awakening, noncompliance, & temper tantrums.

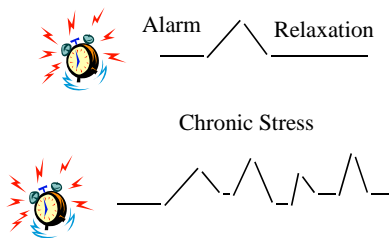
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Distress Proneness

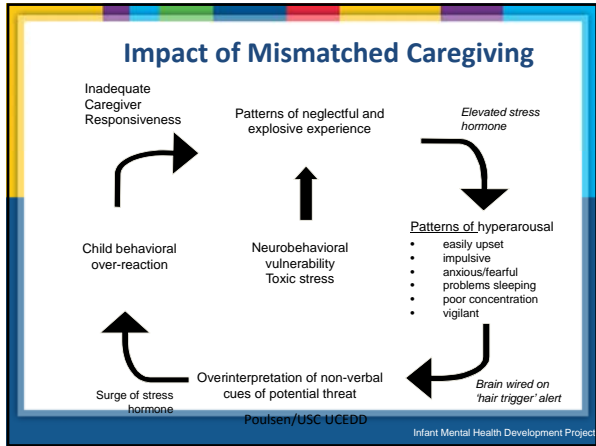
- Long periods in high or low arousal states.
- Repeated experiences encoded in implicit memory as expectations of what the world is all about.
- Cortisol leads to altered development of CNS
- Perceived threat overloads the brain's 'stress management' system

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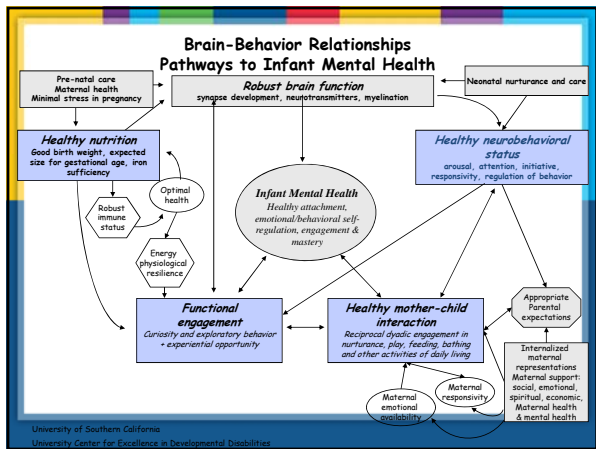
Normal and Chronic Stress



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Roots of Social-Emotional Development Responsive Meaningful Caregiving

- **Promotion:**
Anticipatory Guidance
- **Preventive Intervention:**
Special Caregiving Strategies
- **Intervention/Treatment**
Mother-Child Dyadic Intervention
- **Family supports**

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Infant/Family Mental Health Support For Mothers and Babies

When baby shows.....

- Excessive fussiness & sleep deprivation
- Feeding problems with low weight gain
- Lack of initiating with mom
- Lack of responding to TLC
- Pervasive sadness or withdrawal
- Long & frequent toddler tantrums
- Extreme non-compliance in toddlers
- Overly active with disinterest in play

Dyadic Intervention

- Most efficacious treatment approaches will be those that address the needs of the mother, child and their relationship: reduce mother's symptoms and increase her understanding of her infant's internal experience.

Dyadic Interventions

- Infant Massage
- Floortime
- Interaction Guidance
- Parent-child Psychotherapy

Interaction Guidance Susan McDonough

- Relationship-based approach for “hard to reach” over-burdened mothers
- Assist mothers in gaining
 - enjoyment from their child, and
 - an understanding of child’s development & behavior
- Through an interactive play experience
- Videotaped mother-infant/toddler dyadic play and review with mother

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Interaction Guidance Relationship-based Approach

- Partner with mother: working alliance
- Build on parenting strengths: focus on mother-infant relationship
- Clarify interpretation of infant/toddler cues
- Provide developmental guidance
- Model a supportive, nurturing and caring interactive style with mother
- Respond to request for concrete assistance

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Mother-Child Psychotherapy

- For mothers who are struggling with emotional conflicts related to parenting that need to be addressed.
- Internal preoccupations prevent attention to their babies.
- Search for 'ghosts in the nursery' that preoccupy mother's psyche

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**'Double Whammy' Crisis
Maternal Depression & Colicky Baby**

- *"A fussy baby doesn't make you sad, it makes you mad."*
- *"I just want to open the door, keep running and not come back."*
- *"I don't even know if I like this child."*

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Mother-Child Psychotherapy

- Aims at understanding how mother interprets baby's crying, sleeping, feeding and play behavior.
- Aims at understanding the connection between mother's experience of her infant and her own relationship experiences, current and past.

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Mother-Child Psychotherapy

- The mother's subjective experience of herself as a mother and of herself as a child is explored.
- Observed interactions of mother with her baby in the sessions are used to discuss mother's affective responses.
- Negative attributions of infant and self are challenged sensitively.

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Mother-Child Psychotherapy

- Belief that mother's behaviors change as her perceptions of self and infant change.
- Used when mother has pressing internal conflict about her situation, displays *intense* interpersonal affect toward the child, and has the capacity for insight.

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Risk is Not Destiny!

- Many perinatal risks decline over the course of development.
- Dyadic interventions play critical roles in helping infants build resilience.
- Focusing on dyadic relationship can improve outcome even if maternal depression/anxiety remains.

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Seminal References

- National Scientific Council on the Developing Child (2010) *The Foundations of Lifelong Health Are Built in Early Childhood*. (<http://www.developingchild.net>)
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- Shonkoff, JP & Phillips, D. (Eds.) (2000) *From Neurons to Neighborhoods: The Science of early childhood development*. Committee on Integrating the Science of Early Childhood Development. Washington, D.C.: National Academy Press.

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- Schore, A. N., (1994) *Affect Regulation and the Origins of Self: The Neurobiology of Emotional Development*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publisher.
