

## First Steps for BABIES Day 2

1

## Welcome back!

Check in

Questions and/or comments

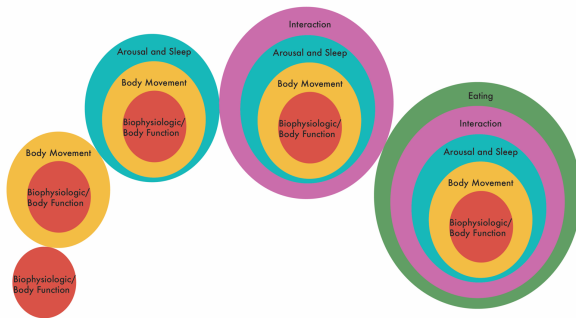
Updates on the schedule

What to expect for today

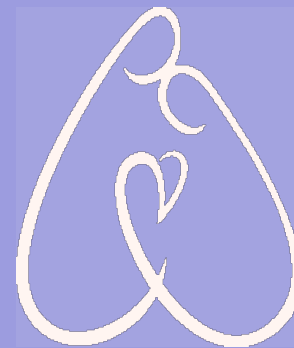
- Integrative exercises with videos
- Focus on family issues and parents
- Reflective practice in action
- Next steps

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## Adaptive Domains



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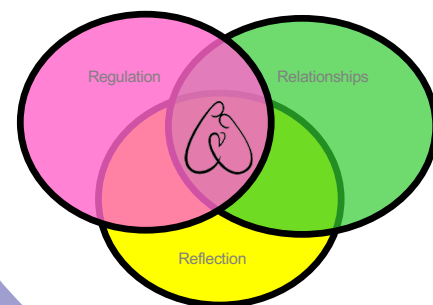


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## The Context for Development Infant - Caregiver Relationships



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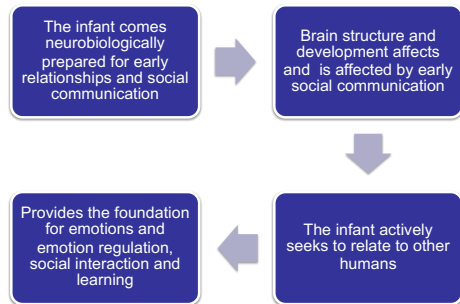


BABIES and PreSTEPS R3 Model

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### Foundations for Early Regulatory Relationships

(Siegel, 1999, 2001; Trevarthen, 1993, 2001; Insel and Fernald, 2004; Feldman 2009; Poehlmann, 2011; Habersaat, 2013)



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### Essential Caregiving Relationships



Roxanne Swentzel

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### Hidden Regulators

A mother's environment(her body) provides a mechanism for infant regulation

Physiological  
Nutritional  
Behavioral  
Sensorimotor  
Social-emotional  
Timing

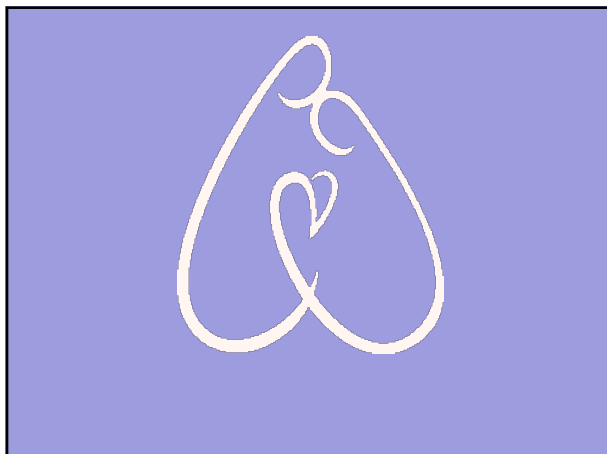
Hofer, 1994

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### The Baby, In Turn, Provides Regulation to the Mother through Biobehavioral Synchrony

Feldman et al. 2016, 2017,

10

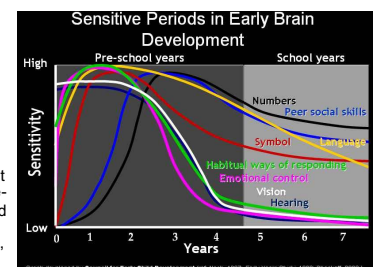


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### Sensitive periods

(Bornstein 1989; Knudson, 2004; Troller-Renfree and Fox, 2017).

- Limited time windows in development when a system is particularly sensitive to experience
- Explains how early experiences of deprivation have strong effects on brain and behavior.
- More commonly thought of as periods of brain re-organizing in infants and adolescents, e.g. visual development, language, attachment, brain development, social mores, etc.



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- Knudsen (2004) has defined sensitive periods as “when the effects of experience are particularly strong on a limited period in development (p. 1412).”



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### Is there a Sensitive Period for Parents?

- First mention of a sensitive period for parents (Kennell, Trause, Klaus 1975)
  - Wrote of experiences of mothers who were separated from their babies and compared with mothers who were not separated
  - Described a “sensitive period” shortly after birth where there is a time period which has lasting effects on attachment (and may impact the development of the baby)



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### Parent Sensitive Periods

- Since the Kennel, Trause and Klaus description there has been much more of an emphasis on biological preparation for and transformation to parent hood



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### Transformation from being pregnant to being a parent

(Feldman, 2015; Kim, et al. 2014, 2016; Swain, et al. 2007, 2011, 2014; Gettler, et al. 2011; Kuo, et al., 2018)

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Mothers show physiological changes           <ul style="list-style-type: none"> <li>– Increases in oxytocin in pregnancy and delivery</li> <li>– Brain plasticity shaped by infant behavioral exchanges</li> <li>– Functional network connectivity</li> <li>– Gray matter volume increases</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Fathers show physiologic changes to parenting           <ul style="list-style-type: none"> <li>– Decrease in testosterone</li> <li>– Increases in Oxytocin</li> <li>– Brain organization changes</li> <li>– Increases in gray matter</li> </ul> </li> </ul> |
|--|--|

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### Parents' brains are shaped by biobehavioral synchrony with their infant (Feldman, 2015)

- Mothers and fathers have significant neuronal and physiological changes that are consistent with sensitive periods
- Mothers and fathers are affected by and affect their infant's physiology through biobehavioral synchrony or lack thereof.
- Mothers and fathers need time and nurturing supports to adapt physiologically and psychologically to parenthood

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### Reward-stress dysregulation model of Parenting

Rutherford and Mayes, 2017

- Infants and caregiving are inherently rewarding and neurophysiologic changes enhance maternal caregiving
- Oxytocin and vasopressin enhance parenting closeness but
- Stressful events and separation from the baby could co-opt other rewards including social and affective relationships



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## Post Partum Stress Responses

- Critical period of vulnerability given demands of hospitalization; infant caregiving demands
  - Infant irritability may trigger trauma related thoughts and behavior
  - Stressful events affect cognition and reflective functioning



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## Post Partum Stress Responses

- Seeing baby suffer resulting in guilt and shame and dealing with the consequences.
  - Relating to her own experience of earlier trauma
  - Feelings of inadequacy trying to comfort their inconsolable baby

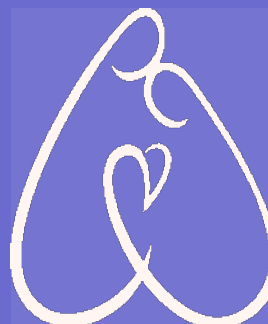
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## Perspectives on sensitive periods in parenting and parent health outcomes

(Saxby, Rossin-Slater and Goldenberg, 2018)

- Transformative experience of parents from a neuroplasticity and psychological perspective.
  - Heightened psychosocial stress and health behavior changes (sleep disruption and decrease in physical activity)
  - Allostatic load and inflammation increases
  - An "inflection point" for obesity and many experience depression
  - Critical window for determining mental and physical health later in life

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## Poll if you experienced a difference post partum.

- Sleep habits
- Activity
- Weight change
- Stress



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## Who co-regulates the Parent During their Sensitive Period?

- Mothers and fathers need time and nurturing regulators to adapt physiologically and psychologically to parenthood

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## The Baby Provides Regulation to the Mother through Biobehavioral Synchrony

Feldman et al. 2016, 2017,

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### Challenges to co-regulation beginning in the hospital



Environments  
Space  
Procedures  
Policies  
Covid restrictions



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### Challenges to co-regulation at home



Environments  
Disrupted sleep  
Feeding difficulties  
Medical concerns

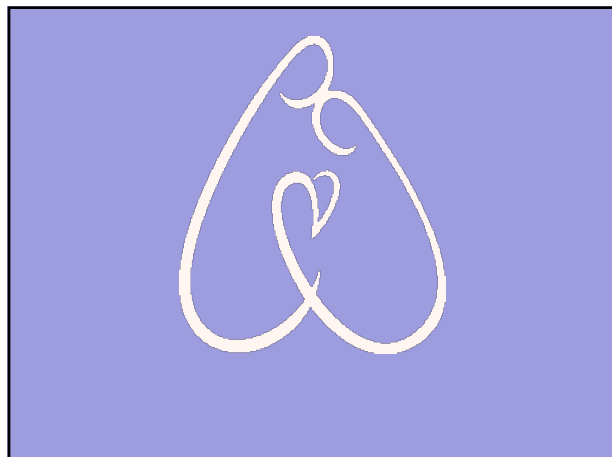


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## Intervention Strategies for Co-Regulation

Encourage	Encourage skin to skin continuation
Assure	Assure good sleep habits for both parent and infant
Explore	Explore when the baby and parent are most in tune with each other
Discuss	Discuss coping/regulatory strategies in both baby and parent Explore adequate nutrition for baby and parent

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## Strategies for Supporting Parental Regulation and Thus, Regulation in their Baby

Shonkoff, 2011

**“Interventions that enhance the mental health, executive function skills and self regulation capacities of vulnerable mothers** beginning as early as pregnancy, suggest promising strategies to protect the developing brains of their children”.



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## What is Executive Function?

- **Executive function** is a set of skills that allow people to control their behavior and direct it toward longer-term goals, rather than doing what is automatic or easiest to accomplish.



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These skills are exercised when we pause and reflect before reacting.

These skills are essential for parenting



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## What does Executive Function Help Us Do?

- Put in chat



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Executive functioning skills help you get things done. These skills are controlled by an area of the brain: the frontal lobe.

- Executive function helps you:
  - Manage time
  - Pay attention
  - Switch focus
  - Plan and organize
  - Remember details
  - Avoid saying or doing the wrong thing
  - Do things based on your experience
  - Multitask



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When a person experiences stressful events executive function may not function well or fail altogether



There will be trouble focusing on, analyzing, planning, organizing, scheduling, and completing tasks.



There will be a lack ability to handle frustration, start and finish tasks, recall and follow multi-step directions, stay on track, self monitor, and balance what has to be done.



People with ADHD, depression, or learning disabilities or other mental health issues often have problems with using their executive functions effectively.

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Who has experienced these kinds of blips when stressed?

Use Annotate to Identify.

- Trouble
  - focusing,
  - analyzing,
  - planning,
  - organizing,
  - scheduling and
  - completing tasks
- Lack ability to
  - handle frustration,
  - start and finish tasks,
  - recall and follow multi-step directions,
  - stay on track,
  - self monitor, and balance what has to be done.



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## To Support Executive Function:

Make	Make a checklist for implementing recommendations.
Write down	Write down your conversation and provide to parent.
Break down	Break down into simple terms and steps.
Discuss	Discuss small goals and provide feedback when goals are reached
Meet	Meet regularly and frequently to review accomplishments and troubleshoot problems.

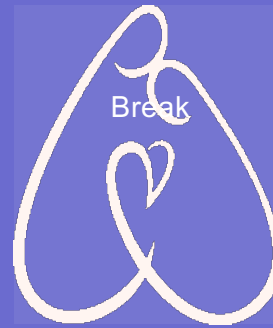
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## Examples of how you have helped parents with using executive function

- Put in chat



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## Caregiver's Contribution To The Relationship

- Awareness
- Responsiveness



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## PreSTEPS Model of Caregiver Contributions



- PREDictability and continuity
- State and arousal supports
- Timing and Pacing
- Environmental protection and supports
- Positioning, movement and handling support
- Soothing supports



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## PREDictability and Continuity



- Awareness of Infant's Response to Continuity and Predictability
- Limit Caregivers
- Consistency Across Caregivers
- Predictable Daily Schedule
- Introduce Self

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## State and Arousal Organization



- Awareness of Infant's State Organization
- Support State Transition
- Socially Interacts During Caregiving
- Verbalizes Competencies
- Playfulness
- Smiles
- Respond to Distress

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### Timing and Pacing



- Awareness of Infant's response to Pacing and Timing
- Infant Initiated
- Paces Interactions
- Gives Time to Respond
- Avoids Unnecessary Interventions
- Maintains Contact
- Gradually Removes Support
- **Stays with the Infant**

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### Environmental protection and support



- Awareness of Infant's Response to the Environment
- Adjusts Sound Level
- Adjusts Visual Stimulation
- Adjusts Activity Level
- Limits New Environments

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### Positioning, handling and movement support



- Awareness of Infant's Response to Movement, Handling, and Positioning
- Supports a Tucked Position
- Smooth / Gentle Handling
- Support During Movement
- Rhythmicity
- Recommended Positioning

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### Soothing supports



- Awareness of Infant's Strategies to Soothe
- Effect of the Environment on Soothing
- Effect of Fatigue on Soothing
- Positioning for Soothing

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### Integration of Observation of the baby's behavior and the caregiver's contributions

#### Breakout Groups and Worksheet #2



#### Video Vignette #4 (Fidel)



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### Breakout Groups to Discuss BABIES and PreSTEPS observations

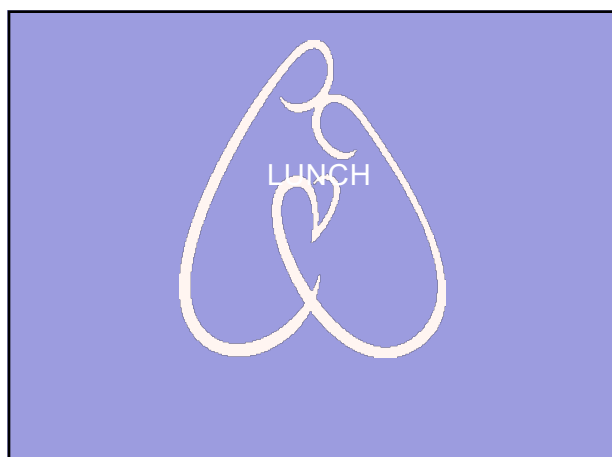
BABIES

Caregiver Contributions



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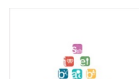




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## Parental mental health issues that affect outcomes

- Traumatic stress disorder
- Post partum depression
- Anxiety
- Grief reaction
- Prior mental illness



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## Acute Stress Disorder

In NICU mothers, 28% met diagnostic criteria for acute stress disorder 1 week after their infant was admitted (Jubenville et al., 2012).

1 month after infant NICU admission, PTSD was diagnosed in 15% of NICU mothers (Lefkowitz, et al., 2010).



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PTSD has significant relationship to preterm birth (Cook, et al. 2018, Schechter, et al. 2020; Gateau, et al. 2021)



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## Perinatal Stress Effects

- Premature birth affects mother–infant interaction
- Mothers of high-risk infants, as well as mothers that had experienced traumatic stress in the perinatal period, were less sensitive and more controlling at 6 months.
- The preterm infant was different from that of the full-term infant at 18 months of age, and was correlated with maternal traumatic stress but not with perinatal risk factors. Muller-Nix et al. / Early Human Development 79 (2004) 145–158

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## Post partum depression

10-20% of mothers have post partum depression

17-24% of mothers of toddlers

Up to 60% of mothers who have had a baby in an NICU



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## Post partum Depression Effects on the Mother's Parenting

Abdollahi, et al., 2017; Lefkowitz, et al. 2010; Kingston, et al, 2018

Association with parenting behavior in 3 domains: negative or hostile behavior, disengaged behavior, and to a lesser extent positive behavior (Lovejoy, 2000)

Difficulty for mothers to maintain routines

Increased risk of substance abuse, and suicide

Less likely to have their baby immunized

Start solids earlier

Less likely to successfully breast feed

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## Some Post Partum Depression Outcomes on Babies

Health effects and developmental delay  
(Abdollahi, 2017)

Increased rate of internalizing and externalizing behavior at 3 years (Kingston, 2018)



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## Post partum depression affects the mother/child relationship

The child learns the mother is not physically or emotionally available

Less secure attachment

Child feels less safe to explore and be confident

Poorer mental, motor and emotional development

Interacts less.

Likely to withdraw or be intrusive

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## Generalized Anxiety

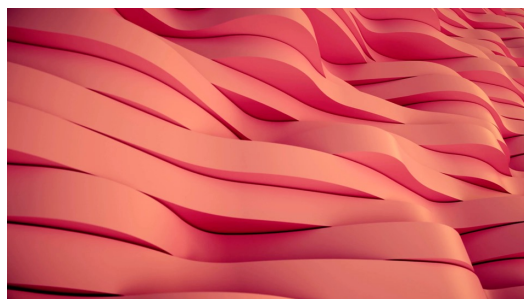
Markedly higher in mothers of high-risk (26%) and low-risk (23%) preterm infants than mothers of term infants (7%) (Singer et al., 1999).

Estimates of clinically significant anxiety symptoms of generalized anxiety in NICU mothers range from 18% to 43% (Carter, Mulder, Bartram, & Darlow, 2005; Rogers, Kidokoro, Wallendorf, & Inder, 2013).

Adverse effects on breast-feeding, bonding, mother-infant interactions, infant temperament, sleep, mental development, health and internalizing behavior and on conduct disorder (Field, 2018)

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## Red Flags for Infant and Toddler Mental Health Issues For BABIES and Caregivers



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## Implications for the Provider

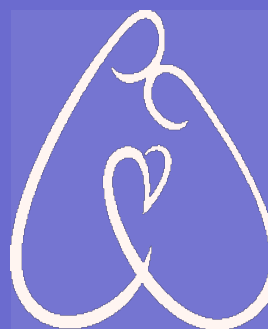
- Use mental health screening instruments and refer as appropriate
- “Normalize” having mental health concerns
- Explore what interventions would work with a particular family
- Refer appropriately



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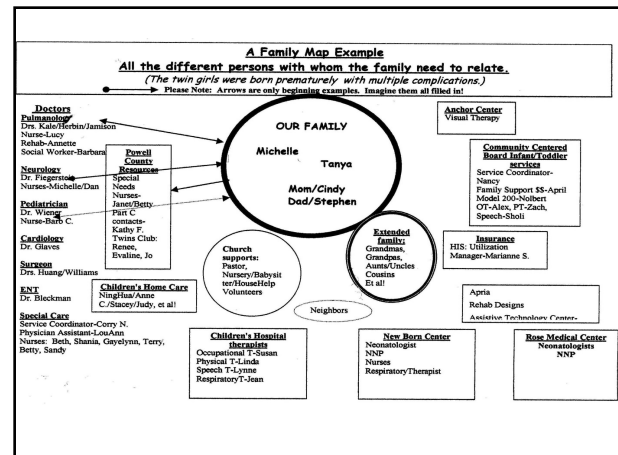


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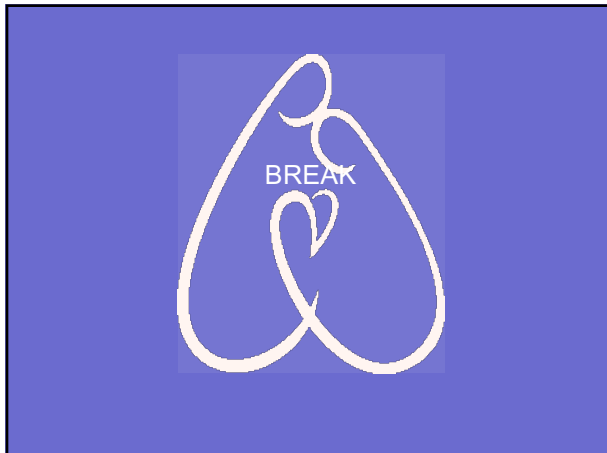
## What Parents Have to Tell Us

- Understanding the parents' perspective: In their own words.

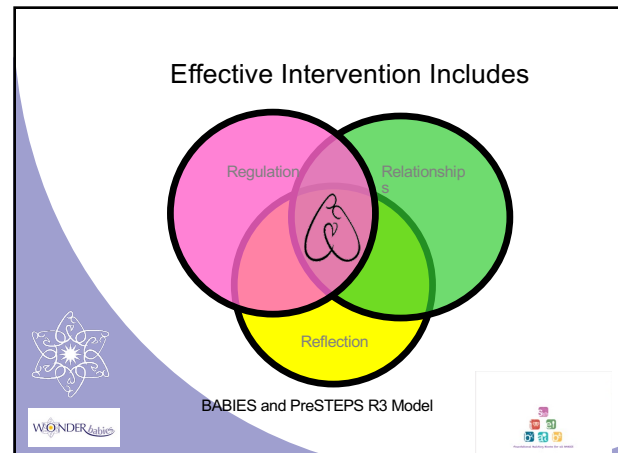
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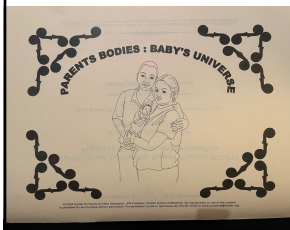


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## Reflective Functioning and Reflective Practice



"A Professional's Guide to Reflective Practice"



"A Coloring Companion for Reflective Practice"

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## Why do We Practice Reflectively with Families?

- If we promote parents and family members' reflective functioning skills, we professionals strengthen the parent infant relationship.
- These reflective skills then help parents to interact with their infants in ways that further support the relationship, foster the development of co- and self-regulation skills, and promote cognitive, physical and social-emotional development.

R.4fba421ab8fb16940e30f7591637d98e.jpeg

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### Professionals can help parents and family members to

- Reflect on their personal experiences, thoughts and feelings
- Reflect on what the baby's emotional world might be like
- Make connections between parents' hopes, dreams and expectations and the realities of having a baby who started life in the hospital
- Obtain the information they need to understand their baby, read their baby's behavioral communication and respond to them; advocate for their baby, parent their baby, develop plans for their baby, and put those plans into action.

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### Alternatives to Giving Answers: Using Reflective Questions

- Using the parents' own responses to questions can be a powerful way of helping parents and professionals solve problems using their own capabilities, thus promoting their own self confidence and coping skills
- Remember Edgar Dale's "Cone of Learning" - 10% of what she hears, 70% of what she says herself

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### How to use Reflective Questions: Understand their purpose: can often "unstick" a situation that seems "stuck"

#### Type of Question

- Miracle and exception questions
- Coping and presumptive questions
- Action questions

#### How it can be used

-  Offer the opportunity to consider a future with different possibilities
-  Identify strengths and accomplishments and suggest competence
-  Support to move forward by identifying and using their own capabilities.

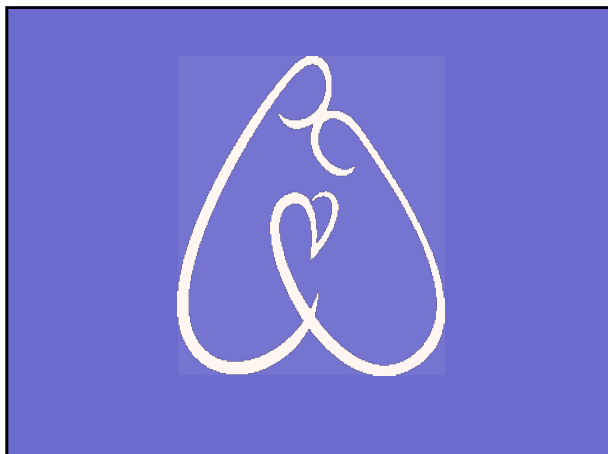
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### Reflective Support for Parents

When professionals:	Parents and caregivers:
<ul style="list-style-type: none"> <li>• indicate that it matters what a parent knows</li> <li>• build parents' confidence</li> <li>• create teachable moments</li> </ul>	<ul style="list-style-type: none"> <li>• feel respected and validated as being able to care for their baby</li> <li>• feel confident</li> <li>• observe and assess their experiences, values, knowledge and feelings</li> </ul>
<ul style="list-style-type: none"> <li>• suggest ways to consider a situation or challenge without offering "the" answer</li> <li>• provide parents with the opportunity to recognize and apply their knowledge</li> <li>• provide parents with the opportunity to identify need for more information</li> <li>• supply information that is based on the parents' request or a parent-identified need</li> <li>• create meaningful moments</li> <li>• offer to be on the journey with parents, walk beside them and provide support</li> </ul>	<ul style="list-style-type: none"> <li>• develop the skills to critically assess and select possible solutions on their own</li> <li>• feel knowledgeable and experienced, like they are the experts about their babies</li> <li>• recognize gaps in knowledge and identify what information they need</li> <li>• see themselves as collaborators, rather than recipients of services; feel listened to and validated</li> <li>• experience meaningful connection with their baby</li> <li>• feel supported and not alone</li> </ul>

Adapted from Smith &amp; Wollesen, 2004

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### Evidence for Effective Regulatory and Relationship Intervention

- Individualized developmentally supportive, family centered care in the NICU (e.g. NIDCAP; Stockholm Family Centered Care Program; Family Nurture Program)
- Continuum of regulatory and relationship intervention in the community (e.g. MITP, IBAIP, BABIES model)



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## Importance for overall positive outcomes

- Emphasis on parent-infant relationships and relationship based caregiving may show the most benefit long term.
- Early developmental intervention according to identified babies' needs and the supports that parents provide may be seen to buffer against other adverse family circumstances, and thus may be seen as preventive intervention.



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## Continuity Hospital to Home



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## Some Resources to Think About

- "Getting to Know Your Baby"
- BABIES and PreSTEPS Learning Collaborative
- [WONDERbabies.org](http://WONDERbabies.org)
- Caregiver Guide for Supporting Parents

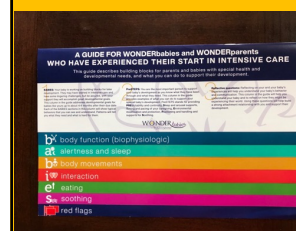


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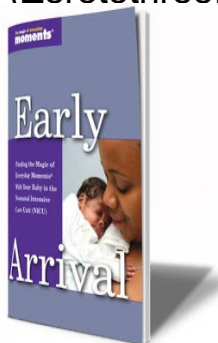
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## Caregiver Guide



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## Helpful Zero To Three Resources (Zerotothree.org)



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## Family Centered Care

- Psychosocial program standards for NICU parents. (2015). Hynan and Hall, Eds. Journal of Perinatology, 35, S1-S4.



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## Newborn and Infant Nursing Reviews



- Browne and Talmi, Editors,
- December, 2016

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## Possible Next Steps

- Learning Collaborative
- Mentoring
- Babies Adaptive Behavior Inventory (BABI) training



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## Acknowledgements

- University of Colorado at Denver and Health Sciences Center, School of Medicine, Department of Psychiatry and The Children's Hospital Department of Psychiatry and Behavioral Sciences
- Irving Harris Program in Child Development and Infant Mental Health
- WONDERbabies, LLC

Browne & Talmi, 2010. Do not duplicate without permission

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## Summary, Reflections, Sign out, Next Steps Evaluation

- Survey Monkey survey
  - Takes about 4 minutes to complete
  - Gives us valuable information



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# *Fini*

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