



East of England Neonatal ODN  
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## 2. Infant and Family Centred Developmental Care Toolkit: Individualising Care- Behavioural Cues

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### For use in: EoE Neonatal Units

Guidance specific to the care of neonatal patients.

**Used by:** This guideline is intended for all healthcare professionals and staff working within the neonatal unit. The principles outlined should also be shared with parents, supporting a collaborative approach to caring for premature or unwell infants.


**Key Words:** Infant Behaviour, behavioural cues, cue-based care, regulatory behaviours, avoidance behaviours, relationship-based care

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## Individualising care: Infant Behaviour

### Introduction

At full term gestation a baby is born ready to communicate with their caregiver. A baby's movements may look random, but every action that a baby makes is a means of communicating. A baby will tell you what they need, and let you know their specific likes and dislikes through spontaneous movements and behaviours<sup>3,6</sup>. Behavioural cues are behaviours that indicate an infant's readiness to engage, demonstrate distress, hunger or sleep/wake states.<sup>9</sup> Even the preterm infant displays reliable observational behaviours<sup>3</sup> and it should be assumed that all infants display behavioural cues from their birth, even if these cues are more subtle and autonomic in nature<sup>9</sup>.

It is now recognised that approaches of care that are performed 'with the baby', 'cue based cares'<sup>9</sup> understanding their behavioural cues and individual needs, and making sensitive and responsive adjustments in care, are the most developmentally supportive.<sup>2</sup>

Knowledge of infant behavioural cues and responsive care giving is mandatory for professionals directly caring for infants and their families on the Neonatal unit.

All parents should be guided to observe and understand their baby's unique behavioural cues as soon as possible after the neonatal admission. This will enable them to offer sensitive caregiving, build their confidence as their baby's primary caregiver and support the parent-infant relationship.<sup>9</sup>

### Background

The understanding of individualised care originates from 'The neuro-behavioural synactive theory of newborn development'<sup>3</sup> and forms the basis of the Newborn Individualised Developmental Care Assessment Program ([NIDCAP](#)).

Key principals of the NIDCAP programme are that:

- Infants are considered individuals, persons, collaborators in care, supported and nurtured by their parents.
- Parents are considered infants' key nurturers, advocates and caregivers as well as collaborators in care decisions.
- Healthcare Professionals are partners in care with infants, parents and family members. Please refer to *EoE Neonatal ODN Partnering with families* ([Guidelines - East of England](#))

The Synactive Theory of Infant Development provides a framework for understanding the behaviour of infants<sup>3</sup>. It refers to the subsystems of the infant's functioning and how they interact with each other and the environment<sup>3</sup>(Appendix 1).



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Behavioural organisation usually refers to the infant's ability to sequentially develop and then to find a balance between the five subsystems<sup>3,6</sup>:

- autonomic/physiologic,
- motor state organisation,
- attention/interaction
- self-regulation.

How these behaviours are affected by external stimuli, either positive or negative, give us information about the infant's ability to cope and organise their responses (self-regulate)<sup>3</sup>. Infants use behavioural cues to indicate when they are ready for interaction and when they need time out. In preterm infants this reading of cues is especially important<sup>4</sup>.

An understanding of individualised, cue based care along with the training and skill to read the infant's behavioural cues allows for comprehensive individualised care provision for preterm infants and in so doing has the potential to improve the long-term outcome of infants and families<sup>2,5</sup>.

Accurate observation of an infant's behavioural cues should occur prior to, during and on completion of care giving activities.<sup>9</sup> This allows the care to be individualised and can help guide the infant's individual developmental interventions.

### **Regulatory behaviours**

Also known as approach, organisational or self-regulation behaviours. Regulatory behaviours help the infant's ability to maintain a balance as they deal with the demands of the NICU environment. These cues show how competent an infant is at settling itself and they can tell you when an infant is ready to interact and explore. Refer to Appendix 3

### **Avoidance Behaviours**

Also known as stress or time out behaviours show an infant's sensitivity. They include signs of stress, fending off and withdrawing actions. They tell us that an infant has not got a functional balance between the subsystems and may need help, time out or a change. Refer to Appendix 2

### **Relationship based care**

This is a system of caregiving in response to the infant's behavioural cues, including the appropriate provision and modification of sensory stimulation. Behavioural cues can provide the caregiver with valuable information about how to structure and adapt the environment, care and interaction, to enhance the infant's own competencies and prevent or reduce any stress<sup>1</sup>. Observing an infant's behavioural cues and responding sensitively ensures that the care provided is individualised.



Parental confidence may be reduced if their baby continually shows signs of stress when they handle them - early parent participation enabling them to learn, recognise and respond to their baby's behavioural cues will help promote their confidence and support the parent/infant relationship.

<b>Recommendations for supporting individualised cue based care</b>
Educate staff and coach parents to understand infant behavioural cues and how to interpret them and adapt care responsively (see Appendix 1,2,3) .
Accurate observations of the infant should occur before, during and after caregiving activities.
Use of the NIDCAP 5 step dialogue can form the framework in how to approach and support a baby in any interaction
Cares, handling and interventions should be adapted and delivered following observation of an infant's behavioural cues and physiological responses.
Understand and provide strategies that can support an infant's regulation during cares and handling. See Positioning and movement section (insert link).
Appropriate adjustments to care may include timing of procedures, pacing of interaction, continued use of side lying nappy approach.
Provide positive touch/comfort hold during cares/procedures
The need for continued environmental protection (see healing environment section) should be assessed on an individual's vulnerability rather than just led by gestational age.

## References

	Acknowledgements to:	Thames Valley and Wessex Neonatal ODN: Cue based cares Guidelines  Yorkshire and Humber Neonatal ODN: Infant and Family Centred Developmental Care Framework
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6	Nugent J K et al (2007)	Understanding Newborn Behaviour & Early Relationships, The Newborn Behavioural Observations (NBO) System Handbook. Brookes Publishing company.
7	Warren I & Bond C (2010)	A Guide to Infant Development in the Newborn Nursery (5 <sup>th</sup> Edition) Winnacott Infant Unit.
8	Yorkshire and Humber ODN (2024)	Infant and Family Centred Developmental Care Framework
9	Thames Valley and Wessex ODN (2023)	Cue based cares: <a href="#">Cue based cares - Neonatal Network South East</a>
10	NIDCAP	5step dialogue



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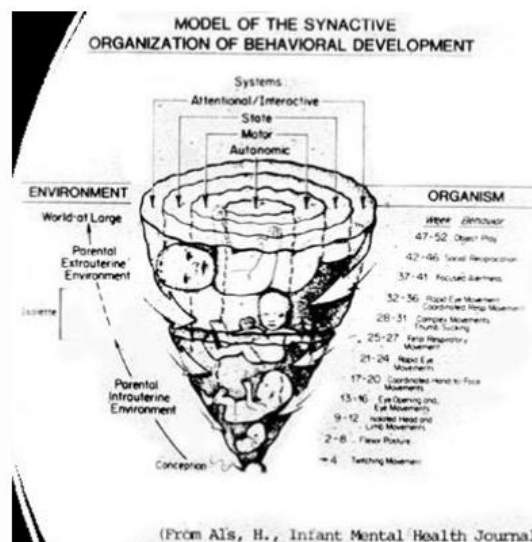
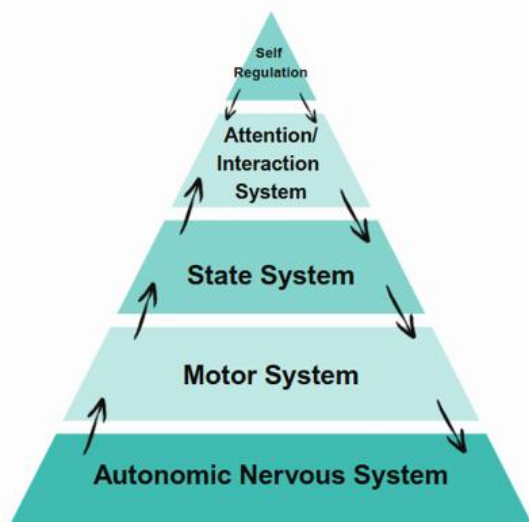
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**Appendix 1**

- In a healthy term infant the subsystems will usually work together with each other. A preterm infant is still developing each subsystem and learning the smoothness and balance of subsystem functioning<sup>3</sup>.

<u>Autonomic</u>	basic physiological functioning of the body for survival. Breathing patterns, variation in colouring over the face and body and digestive
<u>Motor</u>	Muscle tone (high, low, variable), quality of movements (jerky, smooth), flexor and extensor tone (emergence of flexion). Facial expression and gestures
<u>Behavioural State Subsystem</u>	<p>Identify the six behavioural states and the transition between each state. <u>Brazelton behavioural states poster</u></p> <p>For a very small or sick infant the move between states may be abrupt and some states may not be achieved.</p> <p>As the infant matures and becomes more stable the transition becomes smoother with all states available.</p> <p>It is important to remember that for many preterm or sick infants it will not be possible to achieve an audible cry.</p>
<u>Attention/Interaction subsystem</u>	This is the last subsystem to develop and requires balance of the other systems. For example, the importance of eye contact between a parent and infant is paramount and once an infant is able to move into a quiet alert state the caregiver may need to consider additional support e.g. dimming the lights to achieve this eye contact.

Yorkshire and Humber ODN (2024)<sup>8</sup>



## Appendix 2

### AVOIDANCE BEHAVIOUR<sup>6,7</sup>

Examples of Defensive/Avoidance Behaviour That show baby's sensitivity. These include signs of stress, fending off or withdrawing actions. They tell you that the baby may need help, time out or a change.

• Irregular breathing	• Mouth hanging open
• Colour changes e.g. dusky, mottled, pale, red	• Sudden movement
• Positing	• Jerky movement
• Straining	• Tremulousness
• Coughing	• Finger splay
• Sneezing	• Salute
• Sighing	• High guard hands
• Hiccups	• Fussing
• Yawning	• Agitation
• Squirming	• Whimpering
• Arching	• Crying
• Grimacing	• Diffuse states
• Tongue thrust	• Eye floating
• Twitching	• Looking away
• Limp or stiff posture	• Staring
• Bracing legs	• Glazed look
• Bowel movement	• startles

### Appendix 3

#### REGULATORY BEHAVIOUR<sup>6,7</sup>

Examples of coping/approach behaviour that tell you how competent the baby is becoming with efforts to settle, to still movements, to get ready to interact with you, to explore.

• Steady breathing	• Rooting
• Healthy colour	• Sucking
• Hands together, clasped	• Softly flexed posture
• Smooth movements	• Relaxed, open face
• Feet together	• Perky attentive expression
• Grasping	• Orientation to voice or sound
• Holding on	• Smooth state change
• Moving hand to face	• Restful sleep
• Hand to mouth	• Snuggling when held
• Hands clasped together	• Responsive smiling
• Frowning	• Easily consoled
• Settles self	• Smooth state transition



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## Appendix 4

<b>Useful Resources</b>
Human Behaviour leaflet (Sensory Beginnings) <a href="#">HERE</a>
Bliss Look at me I'm talking to you leaflet <a href="#">HERE</a>
Infant behavioural states information leaflet (Brazelton) <a href="#">HERE</a>
How your baby communicates (Brazelton): <a href="#">HERE</a>
Training and certifications on Infant communication: <a href="#">Brazelton Centre UK</a> <a href="#">NIDCAP</a>
TVW ODN <a href="#">Getting to know your baby</a> leaflet



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