THAMES VALLEY & WESSEX NEONATAL OPERATIONAL DELIVERY NETWORK

Nursing Guideline for Individualised Cue-Based care	
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Related documents / References	Altimier,L. and Philips, R. (2013) The neonatal integrative developmental care model; Seven neuroprotective core measures for family-centred care. Newborn & Infant Nursing Reviews. Vol.13 (1), pp, 9-22**.** Als, H., & McAnulty, G. B. (2011). The Newborn Individualized Developmental Care and Assessment Program (NIDCAP) with Kangaroo Mother Care (KMC): Comprehensive Care for Preterm Infants. *Current women's health reviews*, *7*(3), 288–301. https://doi.org/10.2174/157340411796355216 Anderson. P et al (2010) Early Sensitivity Training for Parents of Preterm Infants:Impact on the Developing Brain. Pediatric Research, Vol. 67 No. 3 pp 330-335. The Australasian Nidcap Training Centre (2021, March 23) The Five Step Dialogue. Facebook https://www.facebook.com/watch/?v=201520481739516 Brazelton.TB (1973) www.brazleton-institute.com Brazleton Newborn Behavioural Assessment Scale. Blackburn,S. (1998) Environmental impact of the N.I.C.U. on developmentaloutcomes. Journal of Perinatal Nursing,Vol 4, pp42 – 54. Bliss. (2006). Look at me – I am talking to you. Watching and understanding your premature baby. London: Bliss. Retrieved from: https://shop.bliss.org.uk/shop/files/Lookatme2019WEB.pdf CUH (2015) Supporting and comforting your baby. Cambridge University Hospitals.

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Implications of race, equality & other diversity duties for this document	**This guideline must be implemented fairly and without prejudice whether on the grounds of race, gender, sexual orientation or religion.**

Version Control:

Version	Date	Details	Author(s)	Comments
3	March 2018		Quality Care Group	
4	April 2023	Changed title from 'Behavioural Cues' to 'Cue Based Care'	A Clifford, TVW ODN OT Lead	
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Nursing Guideline for Individualised Cue-Based Care

Contents

1.0 Aim of Guideline

To provide a framework to optimise individualised care in neonatal units based on the behaviours exhibitedby neonates.

2.0 Scope of Guidelines

Thames Valley		
TRUST	**Hospital**	**Designation**
Oxford University Hospitals NHS Foundation Trust	- John Radcliffe Hospital, Oxford	NICU
Buckinghamshire Healthcare NHS Trust	- Stoke Mandeville Hospital, Aylesbury	LNU
Frimley Health NHS Foundation Trust	- Wexham Park Hospital, Slough	LNU
Milton Keynes University Hospital NHS Foundation Trust	- Milton Keynes General Hospital	LNU
Royal Berkshire NHS Foundation Trust	- Reading	LNU

Wessex		
TRUST	**Hospital**	**Designation**
University Hospital Southampton NHS Foundation Trust	- Princess Anne Hospital	NICU
Portsmouth Hospitals University NHS Trust	- Queen Alexandra Hospital	NICU
Dorset County Hospital NHS Foundation Trust	- Dorset County Hospital, Dorchester	SCU
Hampshire Hospitals NHS Foundation Trust	- Basingstoke and North Hampshire Hospital	LNU
Hampshire Hospitals NHS Foundation Trust	- Royal Hampshire County Hospital, Winchester	LNU
Isle of Wight NHS Trust	- St Mary's Hospital	SCU
University Hospitals Dorset NHS Foundation Trust	- Poole Hospital	LNU
Salisbury NHS Foundation Trust	- Salisbury District Hospital	LNU
University Hospitals Sussex NHS Foundation Trust	- St Richard's Hospital, Chichester	SCU

3.0 Guideline Summary

- Cue-based care is an approach that recognises and responds to the infant's behavioural cues and their state of arousal. This informs the adaptation of procedures, routines and the environment to facilitate the neurodevelopmental needs of the infant.

- Cue-based care supports an individualised approach where the required care is variable and is based on interpretation of the infant's signals over the routine or rigid protocol-based approach to care where individual needs are not considered.

- Behavioural cues are defined as non-verbal and special forms of communication that newborns and young infants use widely, to express their needs and wants.

- These cues may include behaviours indicating an infant's readiness to engage, demonstrate distress, hunger or sleep/wake states.

- The goals of cue-based care are to provide an environment that is both physiologically and developmentally supportive.

- All neonates should receive individualised care, based on the behaviours they exhibit. This can be achieved by adapting the environment and care giving approach to each baby, based on the cues they have displayed. The outcome should be a facilitation of the infant's self- regulatory behaviours and reduction in the infant's stress.

- It should be assumed that all infants display behavioural cues from their birth, even if these cues are more subtle and autonomic in nature.

- Accurate observation of these behavioural cues should occur prior to, during and on completion of care giving activities.

- It is the clinician's responsibility to adapt the environment, care routines and procedures to support each individual's unique needs

- 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.

- All procedures (other than emergencies) should be carried with full consideration of the baby's behavioural cues.

- Use of the NIDCAP 5 step dialogue can form the framework in how to approach and support a baby in any interaction.

4.0 Guideline Framework

4.1 Background information

- Behavioural cues are defined as non-verbal and special forms of communication that newborns and young infants use widely to express their needs and wants. Early and appropriate interpretation of these behavioural cues by caregivers, is a vital piece of developmentally appropriate care, promoting infant organisation and enhancing optimal neuro-developmental outcomes.

- Identification of behavioural cues that demonstrate comfort, pleasure, sleep/wake states will facilitate physiological/behavioural organization.

- Evidence suggests that responsive caregiving informed by the infant's behavioural cues has been found to support greater physiological stability, fewer days of ventilation, reduction in complications, earlier feeding readiness, shorter stay in hospital and enhanced parent-infant relationship.

- All procedures (other than emergencies) should be carried with full consideration of the baby's behavioural cues.

4.2 Parent education and support

- It is a priority to provide parents with education and support as early as possible to identify and to respond appropriately to their infant's behavioural cues.
- Parents/carers should be offered both individualised cotside and more generalized teaching and support on how to recognise their infant's behavioural cues and make informed / appropriate choices about their care giving.
- Parents/carers should be encouraged to respond appropriately to their infant's behavioural cues.

- Information / comments from parents/carers on their infant's behavioural cues should be acknowledgedand documented into the infant's developmental and nursing care plans.
- Information booklets on behavioural cues should be offered to all parents/carers, within the first week oflife and explanation of contents given: This should be recorded in the infant's care plan.

4.3 Practice Guidelines

4.3.1 Preparation for interactions / cares

- Plan and time interventions with the parent in relation to their availability and other interventions needed for the baby throughout the whole day/night.
- **Delay handling if baby is in quiet/deep sleep**. Cares and interaction is best when a baby is in a quiet and alert state, and demonstrating approach signals.
- ***Cluster care as tolerated*** to provide long periods of undisturbed rest.
- Prepare for the activity to ensure all equipment is ready to use to reduce stress on the baby through unpredictable touch/timing.
- Ensure external environment is calm - dimmed lighting, low levels of noise.
- Supportive measures should be put in place before carrying out cares, procedures or interacting with an infant, to promote the infant's calm state. This includes swaddling and nesting to support midline position and containment (i.e. hands to face, foot brace support)
- Ensure dummy and breastmilk is available if required and appropriate for non-nutritive suck

4.3.2 During cares

- Encourage parents to be their baby's primary caregiver wherever possible- taking the lead as they feel confident, being guided by their needs for support.
- Encourage the parent to use their voice with their baby as the predominant auditory input - staff to keep own voice in background.
- Gently rouse the infant prior to care giving activities. This will avoid sudden disturbance in sleep or movement. This can be accomplished by gently talking to the infant and using still, steady touch on a less-sensitive body area (e.g. back, top of head). The NIDCAP 5-step dialogue is a helpful tool to form the framework in how to approach and support a baby in any interaction. *See attachment.*
- Handling/positional changes should be slow, supported in flexion and minimal. Turning of the baby should be in small increments with pausing between stages - Use of muslin swaddle is recommended. See Positioning and Handling Guideline for more specific information. Interventions should be observed and evaluated regularly throughout process, watching for the baby's response or 'cues' to inform support needs.
- Individualise all additional stimuli (e.g. auditory, tactile, visual) as appropriate for baby's gestational and postnatal age and medical condition.

4.3.3 Observing behaviours

- Recognise behavioural cues (signs of stability or stress, approach cues, coping/self-calming cues, stress / time-out cues) and provide or modify care as appropriate.
- When a baby displays **organized** or 'coping /approaching' behavioural cues, it is the optimal time to engage and carry out cares or potentially feeds.

- When a baby displays **disorganized** 'defensive/ avoidance' behavioural cues, responsively implement strategies to support. This may include pausing the activity to wait for the baby to stabilise and calm before continuing.

Refer to Appendix A for detailed information in recognising behavioural cues.

NOTE: *Should the baby lose muscle tone, go floppy and move quickly into a sleep state during cares or procedures, **immediately stop**, provide containment, reduce external sensory stimulation and allow for recovery. This behaviour is termed 'shut-down' and it is the baby's coping mechanism and physiological response to extreme overstimulation. They are not sleeping through the cares or procedure.*

4.3.4 Strategies to support infant's organisation for cares

- Assess the infant's ability to manage clustered cares and adjust as necessary. If a baby is unable to cope with a particular cluster of care, then perform fewer care procedures in succession.
- The baby should set the pace for interaction, and engagement and disengagement cues need to be recognised and responded to appropriately.
- Have short containment breaks between interventions for recovery and observe the infant's responses. This will avoid over stimulation and 'disorganisation'
- Provide containment for baby if a change of position is required - use swaddling to support hands to midline and containment. Avoid sudden position changes.
- Minimise unnecessary light and noise during cares to avoid over-stimulation

- **Facilitate self-consoling/calming behaviour through soothing interventions or comfort measures:**

  - Skin to skin
  - Consider cares or procedures in a side-lying position rather than supine.
  - Keep one hand on baby at all times, with a minimal amount of light, 'on-off' unpredictable touch.
  - Help baby achieve hands to mouth position with full or half-swaddle
  - Ensure containment (e.g. hand hugs, nesting, Zaky hand)
  - Foot bracing (e.g. place hand on soles of feet, and bring hips and knees up)
  - Provide opportunities for positive sensory tastes with breastmilk if available and use a dummy, or breast if appropriate, for non-nutritive suck (NNS).
  - Encourage parents to interact with their baby by using a gentle soothing voice and/or ensure their baby can see their face to provide connection and reassurance.
  - Speak gently and calmly to the baby.
  - Pace activity according to the infant's cues and communication

- **Recognise signs of stress and sensory overload and respond to baby's disengagement cues by:**

  - stopping or pausing the activity providing support, to enable physiological recovery before continuing
  - adjusting activity rate/speed
  - modify positioning as needed - side lying often allows for better baby's self-regulation.
  - Providing appropriate still touch or a containment hold,
  - Offering dummy and breastmilk, or non-nutritive sucking opportunities at the breast if appropriate
  - Offering finger to grasp
  - Reducing light and noise in the immediate environment.

4.4 Documentation

- Assess the infant's response to care giving activities or procedures to identify those behavioural signals that indicate stress, discomfort, hunger or pain in each infant and document your action or plan.
  Note: Disorganised behaviour may occur following activity.
- Document the infant's stressors/behavioural cues and the modifications made to care routines and procedures.
- Identify those behavioural signals that demonstrate comfort, pleasure, sleep/wake states and physiological/behavioural organisation in each infant. Document your findings.
- Document those interventions that promote comfort - see Comfort measures and Developmental positioning protocols.
- the environmental and physiological strategies used to facilitate these coping/ approaching behavioural cues should be documented in the baby's individualised developmental care plan, nursing care plan and medical notes, so that others can use this information to individualise the baby's care.

4.4 Specific Cares

- Refer to parent / staff handouts attachments outlining developmentally supportive strategies for specific cares. Included:
  - swaddled bathing
  - swaddled weighing
  - side lying nappy changes.
- Refer to ***Mouth Cares Guidelines*** for detailed information regarding developmentally supportive practices.

5.0 Appendix A – Identifying Behavioural Cues

Organised: Coping / approach behaviours are those which an infant does when it is able to manage the interaction or activity and is in a receptive state for communication

Disorganised: Defensive / avoidance behaviours are those which an infant displays when it is stressed and either not enjoying or not able to cope with the demands of the interaction or the activity occurring.

	Organisation Approach / coping cues	**Disorganisation** Distress / Avoidance cues
Physiological responses	Stable heart rate, respiratory rate, oxygen saturations Stable skin colour Tolerance of feeds	Fluctuations in heart rate and respiratory rates that may result in apnoea or bradycardia Skin colour changes from pink to pale to dusky, mottled, white tip of nose/lip Increased stooling and inability to tolerate feeds Hiccoughs and sneezing, gagging or yawning Blood pressure instability
Motor responses	Smooth and synchronous body movements Utilising of self-consoling behaviours such as finger sucking, hands-to-face Soft hands and grasp	Frantic body movements and jitteriness Changes in muscle tone to flaccid and limp Limited use of self-consoling behaviours
Behavioural responses ○ **arousal/alertness** ○ **regulation**	Smooth transitions between sleep/wake states Smooth sleep-wake transitions Care giver able to console when upset Sucking Orienting to voice and/or face Calm, alert, attentive expression	Sudden state changes and/or prolongation of the alert state Inability to modulate state Inability to be consoled Poor sucking coordination Eye gaze aversion Glazed or ‘high alert’ expression