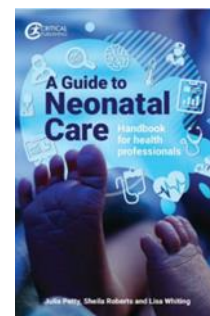


Chapter 9 Developmentally supportive care to promote well-being in the neonatal setting

A Guide to Neonatal Care - Handbook for Health Professionals
Petty J, Whiting L and Roberts S (2024) Critical Publishing



Supplementary information

Kangaroo care (skin to skin) and delivery room cuddles

Refer to the book chapter 9 for information on developmental care, pain assessment and ensuring neonatal well-being. To expand on a specific topic within this content, a key related area to developmental care is that of 'Kangaroo care' or otherwise skin-to-skin contact and the importance of delivery room cuddles. Early care of healthy neonate in delivery suite or home following birth includes the encouragement of early breast feeding and skin to skin contact for many reported benefits; namely, improved outcomes (Conde-Agudelo et al, 2016), better neonatal thermal control (Karlsson et al, 2012), reduction of neonatal stress, improved cardio-respiratory stability and decreased crying (Lee et al, 2021), procedural pain (Johnston et al, 2017) and facilitation of breast-feeding and parental bonding (Siva et al, 2023). For the preterm neonate, it was historically believed that following delivery room stabilisation immediate transfer to the Neonatal Unit was a priority. A brief 'showing' of their baby prior to transfer was common with the needs of the parents to bond with their baby overlooked (Clarke et al, 2021). Cuddling their baby after birth is instinctive for parents, irrespective of gestation and it is now recognised that facilitation of a first cuddle between parents and their newborn in the delivery room is the ideal way for parents to form an initial physical and psychological bond and for baby to feel their first embrace (Clarke et al, 2021). A further compelling justification is that the extremely preterm population remain at high risk of mortality. A delivery room cuddle allows memories of that first cuddle not to be associated with when the baby is dying or terminally ill (Clarke, 2017).

Logistically, delivery room cuddles are far less challenging to facilitate due to the absence of the constraints of the incubator, intravenous and monitoring lines. Regular skin to skin care practice can be undertaken in any part of the neonatal unit, should be routine care and strongly promoted (Zhu et al, 2023).

The full pain tools referred to in Chapter 9 are also below:

Figure 9.1 Neonatal pain assessment tool					
COMFORT scale (van Dijk et al. 2009, cited by Perry et al, 2018)					
	1	2	3	4	5
Alertness	Deep sleep	Light sleep	Drowsy	Awake and alert	Hyper-alert
Agitation	Calm	Slightly anxious	Anxious	Very anxious	Panicky
Respiratory	No coughing	Spontaneous respiration	Occasional coughing with little ventilator resistance	Active breathing against the ventilator	Actively fighting the ventilator
Movements	None	Occasional	Frequent / slight	Vigorous movements of extremities	Vigorous movements of extremities, head, and torso
Blood pressure (mean)	Below baseline	Normal	Infrequent elevations of >15%	Frequent elevations of >15%	Sustained elevation > than 15%
Heart rate	Below baseline	Normal	Infrequent elevations of >15%	Frequent elevations of >15%	Sustained elevation > than 15%
Muscle tone	Relaxed	Reduced tone	Normal tone	Increased tone	Extreme rigidity
Facial tension	Relaxed face	Normal tone	Some tension	Full facial tension	Facial grimacing
<p>This tool can be used for neonates in intensive care receiving ventilation Possible scores range from 5 – 45</p>					

Figure 9.2 Neonatal pain assessment tool
Preterm Infant Pain Profile (PIPP)
 (Stevens et al, 2014 cited by Perry et al, 2018)

Indicator	Finding	Score
Gestation	>= 36 weeks	0
	32 - 35 weeks 6 days	1
	28 weeks to 31 weeks 6 days	2
	<28 weeks	3
Behaviour	Active/awake, eyes open, facial movements	0
	Quiet/awake, eyes open, no facial movements	1
	Active/sleep, eyes closed, facial movements	2
	Quiet/sleep, eyes closed, no facial movements	3
Heart rate maximum	0-4 beats per minute increase	0
	5-14 beats per minute increase	1
	15-24 beats per minute increase	2
	>25 beats per minute increase	3
Oxygen saturation minimum	0 -2.4% decrease	0
	2.5 - 4.9% decrease	1
	5.0 - 7.4% decrease	2
	7.5% decrease or more	3
Brow bulge	None	0
	Minimum (10-39% of the time)	1
	Moderate (40 - 69% of the time)	2
	Maximum (>70% time)	3
Eye squeeze	None	0
	Minimum (10-39% of the time)	1
	Moderate (40 - 69% of the time)	2
	Maximum (>70% time)	3
Nasolabial furrow	None	0
	Minimum (10-39% of the time)	1
	Moderate (40 - 69% of the time)	2
	Maximum (>70% time)	3

Sum scores for all 7 indicators Range 0 to 21
 After recording the gestation, behavioural state, baseline heart rate and oxygen saturations, observe the neonate for 30 seconds following a painful event. Score physical and facial changes during this period and record.

Stop and think

Pain assessment should be incorporated into the neonates' care plan and should form part of holistic, regular assessment along with vital signs and other physiological cues.

Glossary

Bonding: The development of a close relationship between an infant and their parent/caregiver.

Flexion: closing of a joint or decreasing the angle between two bones.

Adduction: Refers to moving a limb toward the midline of your body (Abduction is away from the body).

Swaddling: wrapping an infant securely in a blanket.

Sudden infant death syndrome (SIDS): The sudden, unexpected, and unexplained death of an infant. Good safe sleep practices contribute to reducing the risk for babies and toddlers.

Regurgitation: Milk or stomach contents flow back up the oesophagus to the mouth.

Kangaroo care: Skin to skin or chest to chest holding of an infant.

Skin-to-skin: A newborn or older neonate is placed bare skinned directly onto their mother, father or caregiver's skin - usually the chest.



EXTRA READING – Read more about neonatal developmental care and pain assessment / management.

- Altimier, L and Phillips, R (2016). **The neonatal integrative developmental care model: advanced clinical applications of the seven core measures for neuroprotective family-centered developmental care.** *Newborn and infant nursing reviews*, 16(4), 230-244.
- Campbell-Yeo M, Eriksson M, Benoit B (2022) **Assessment and Management of Pain in Preterm Infants: A Practice Update.** *Children (Basel)*
- Clarke P, Allen E, Atuona S and Cawley P (2021) **Delivery room cuddles for extremely preterm babies and parents: concept, practice, safety, parental feedback.** *Acta Paediatr.* 110(5):1439-1449.
- Perry M, Tan Z, Chen J, Weidig T, Xu W and Cong X S (2018) **Neonatal Pain: Perceptions and Current Practice.** *Crit Care Nurs Clin North Am.* 30(4):549-561.