

Utilising the Premature Infant Pain Profile- Pain (PIPP) Assessment Tool.

*This LOP is developed to guide clinical practice at the Royal Hospital for Women.
 Individual patient circumstances may mean that practice diverges from this LOP.*

PURPOSE & SCOPE: To objectively assess responses to acute procedural pain in pre- term and term infants, utilizing a validated pain assessment tool.

EQUIPMENT: The Premature Infant Pain Profile (PIPP) Score.
 Oxygen saturation and heart rate monitoring equipment.

NOTE: A self directed learning package is available on the computer in Level 3. Regular in-service is also provided.
 Post surgical infants, infants on pain relief, painful procedures, chest drains, infants with pain symptoms should be on a PIPP Assessment Tool.

PROCEDURE

	PROCESS	RATIONALE
1	Undertake the first 2 assessments, with another RN, who is familiar with the tool.	To validate your scoring method. <i>Ballantyne et. al. (1999), Jonsdottir and Krisjansdottir (2005), Stevens et.al. (1996.)</i>
2.	<p>Using the Pain Score Chart (Appendix 1):</p> <ul style="list-style-type: none"> • Score gestational age. • Score behavioural state by observing the infant for 15 seconds, <i>prior to cares.</i> • Record baseline heart rate and oxygen saturation. • Observe the infant for 30 seconds immediately <i>following</i> the event. Look back and forth from the monitor to the baby's face. Score physiologic and facial action changes seen during that time • Record final score, following the 30 second observation period. 	<p>Categories for gestational age were determined using results of research which examined premature infants' pain responses. Infants of lesser age receive a score of 1-3, older infants receive a score of 0, thereby raising the score for younger infants. <i>Ballantyne et. al. (1999), Stevens e.t al. (1996).</i></p> <p>Infants in alert/awake states traditionally exhibit most behavioural activity, however, Infants in sleep states, receive higher scores than babies who are awake and active, so as not to penalise younger/sleeping infants, who are often incapable of demonstrating robust behavioural and physiological responses to pain. <i>Ballantyne et. al.(1999), Stevens et. al. (1996).</i></p> <p>All indicators that are continuous (e.g heart rate, oxygen saturation and three facial actions) are collapsed into categories. HR,SpO2 and facial actions will fluctuate, depending upon the infants experience of pain. <i>Ballantyne et. al.(1999), Beacham (2004), Stevens et. al. (1996).</i></p> <p>As the clinician caring for the baby, it is best to respond to relative changes in the baby's response, rather than absolute scores. <i>Ballantyne et. al.(1999), Stevens et. al. (1996).</i></p>

NOTE: Absolute scores must be viewed with caution.

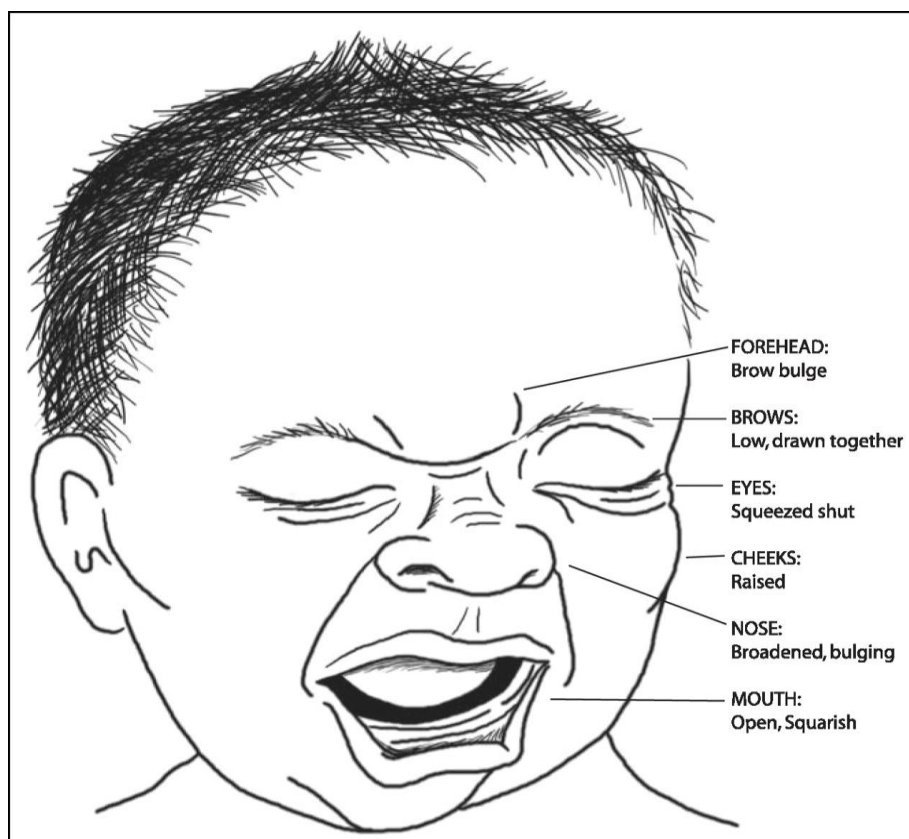
Utilising the Premature Infant Pain Profile- Pain Assessment Tool continued

PROCEDURE		
	PROCESS	RATIONALE
3	<p>Using the Pain Score Chart (cont'd...):</p> <ul style="list-style-type: none"> • Score ≤ 5 indicates no acute pain. • Score >10 indicates moderate to severe pain. <p>ACTION PLAN:</p> <ul style="list-style-type: none"> • A: Score ≤ 5 No action required. • B - C: Score 6-10 Rationalise the number of painful procedures. Assess and provide comfort measures. <ul style="list-style-type: none"> • Modify the environment (e.g. reduce noise and light). • Swaddling. • Non-nutritive sucking. • Oral Sucrose +/- pacifier. • Containment. • Breastfeeding. • D: Score >10 Assess. Consult with medical staff. Consider pharmacological treatment. Consider increasing medication dose, if prescribed. 	<p>A score of ≤ 5 indicates that the infant is not experiencing acute pain. Continue to assess trends and act appropriately to changes. <i>Ballantyne et. al.(1999), Stevens et. al. (1996).</i></p> <p>Oral sucrose ameliorates the pain response in infants by, encouraging endogenous endorphin release. Research continues on the cumulative effect of sucrose on the neuro-development of pre-term infants. <i>American Academy of Pediatrics (2006), Holsti and Grunau (2010).</i></p> <p>Non-pharmacological measures have been demonstrated to reduce pain, encourage self-soothing ability and assist state control in pre-term and term infants and work best when combined (e.g sucrose and pacifier, sucrose and containment <i>American Academy of Pediatrics (2006), Holsti and Grunau (2010), NSW Department of Health (2006).</i></p> <p>Judicious use of narcotics, is recommended, as research continues on both the short term and long term, risk/benefit to infants. <i>American Academy of Pediatrics (2006), Bellu, de Waal and Zanini (2007), Whit-Hall, Boyle and Young (2007).</i></p>

PROCESS	INDICATOR	0	1	2	3 DATE TIME	SCORE								
CHART	Gestational Age	36 weeks and more	32 weeks to 35 weeks, 6 days	28 weeks to 31 weeks, 6 days	27 weeks and less									
Observe infant for 15 seconds Observe baseline: Heart Rate, O ₂ Saturation	Behavioural State	Quiet/sleep <i>Eyes closed No facial movement</i>	Quiet/Awake <i>Eyes open No facial movement</i>	Active/sleep <i>Eyes closed Facial movement</i>	Active /Awake <i>Eyes open Facial movements</i>									
Observe infant for 30 seconds	Heart Rate Max_____	0-4 beats/min increase	5-14 beats/min. increase	15-24 beats/min increase	25 beats/min or more increase									
	O₂ Saturation Min_____	0-2.4% decrease	2.5-4.9%	5.0-7.4%	7.5% or more decrease									
	Brow Bulge	None 0-9% of time	Minimum 10-30% of time	Moderate 49-69% of time	Maximum 70% of time or more									
	Eye Squeeze	None 0-9% of time	Minimum 10-39% of time	Moderate 49-69% of time	Maximum 70% of time or more									
	Nasolabial furrow	None 0-9% of time	Minimum 10-39% of time	Moderate 49-69% of time	Maximum 70% of time or more									
Ref: Stevens, B., Johnston, C., Petryshen, P. & Taddio, A., 1996. Premature Infant Pain Profile: Development and Initial Validation, The Clinical Journal, Lippincott-Raven Publishers, 12(1), p 13-22.					TOTAL SCORE									
Management Initiated as per guide														
Procedural Pain Management in NCC														
Pain Score <5	No action required A	Pain Score 6 - 10	Assess→ Provide Comfort Measures	Swaddling Non-nutritive Sucking Oral sucrose B	Containment Breastfeeding Oral sucrose + Pacifier C	Pain Score >10	Assess → Consult with Medical staff → Consider Pharmacologic treatment → Consider increasing medication dose (if prescribed). D							

Guide to Facial Actions:

Brow Bulge; Eye Squeeze, Nasolabial Furrow



Utilising the Premature Infant Pain Profile- Pain Assessment Tool continued

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