Worcestershire Acute Hospitals NHS Trust

GUIDELINE TO SUPPORT DEVELOPMENTAL CARE FOR INFANTS UNDERGOING ROP SCREENING

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Approved by Neonatal Guidelines Review Meeting on:	11th November 2022
Review Date This is the most current document and should be used until a revised version is in place:	11th November 2025

Key Amendment

Date	Amendment	Approved by
15th January 2020	New document	Paediatric QIM
November 2022	Document approved for 3 years with no amendments	Dr Gregory/ Neonatal Guidelines Review Meeting

Introduction

Aim of this policy is to support and promote a healthy outcome for premature neonates undergoing ROP Screening (Retinopathy of Prematurity) through evidenced developmental care practice. Pain pathways are functional from 24 weeks gestation. Pain is a response to an acute, noxious stimuli which causes a stress response. Stress is a physical, chemical or emotional factor that causes bodily or mental tension. Stress and pain have similar physiological and behavioural responses in preterm infants and there is growing evidence that pain experience in early life has an impact on developmental outcomes.1

This guideline is for use by the following staff groups :

Ophthalmologists
Neonatologists and their medical teams
Neonatal/ Transitional Care Nursing Staff
MDT involved with neonates

Introduction

There are seven core areas detailed in the 'Neonatal Integrative Care Model'2, Healing Environment, Partnering with Families, Positioning and Handling, Safeguarding Sleep, Minimising Stress and Pain, Protecting Skin and Optimising Nutrition. By considering each of these areas and providing sensitive individualised care to each neonate we can aid recovery, growth and development and lead to improved long-term developmental outcomes.

This guideline aims under the core area of 'Minimising Stress and Pain' to ensure all staff working with neonates undergoing ROP Screening use the guideline to minimise neonatal stress and pain as a result of the procedure and to aid a faster recovery.3

Details of Guideline

Responses to Stress and Pain

Physiological	Hormonal	Behavioural
↑↓ heart rate	↑ Cortisol	Facial expressions
↑↓ respirations	↑ Epinephrine	Body movement - withdrawal
↑↓ blood pressure	↑ norepinephrine	Limb extension
↓ oxygen saturations	↑↓ Prolactin	Arching
↑ Intracranial Pressure	↓ Immune response	Finger splaying/ fisting
↑ Blood flow in somatosensory cortex	↑ Glucose	Hypertonia/ hypotonia
Colour change		Cry
Hiccoughing		

Actions

The professional will need to gain informed parental consent prior to the day of screening. The unit leaflet on ROP screening should be made available to the parents. If a parent wishes to be present during the procedure this should be supported but ensure they would be able to leave should they find the procedure upsetting.

The professional will prepare the neonate prior to the procedure by:

- Dimming of room lighting prior to insertion of dilating eye drops.
- Applying a cot canopy to shield the neonate from direct light.
- Administer MEBM (mothers expressed breast milk) or Sucrose buccally prior to insertion of eye drops.
- Provide comforting measures – comfort hold, NNS (non-nutritive sucking), nesting, swaddling to support neonate with pain felt from eye drops.
- Background noise reduced to diminish stress associated with noise.
- Delay or give part of a feed if due immediately prior to the procedure to reduce risk of vomiting. Feeding post procedure may give comfort.

Duct occlusion on administering eye drops will prevent the drop draining away and so will maximise dilatation of the pupils reducing the risk of repeated eye drops being required. The effect of the eye drops can last up to 18 hours. The professional caring for the neonate must ensure the cot canopy and dimmed lighting remains in place for this period. Administering of MEBM/ sucrose and NNS can minimise the pain experienced and support self-regulation.

The Professional will developmentally support the neonate during the procedure by:

- Swaddling the neonate with a sheet/ blanket
- Administering MEBM/ sucrose
- Offering NNS
- Comfort holding
- Holding head in a stable position

Ideally two professionals should be comforting the neonate to allow the procedure to be completed successfully and speedily.
One professional or ideally the parent should stay with the neonate post procedure to ensure comfort is provided for as long as the neonate requires, until their distress has diminished.

References

- . Vinall J et al, 2014, Invasive procedures in preterm children: brain and cognitive development at school age, *paediatrics*, 133(3): 412-421.
- 2. Lesley Altimier, Raylenen M. Phillips. (2013) The Neonatal Integrative Developmental Care Model: Seven Neuroprotective core Measures for Family-centred Develomental Care*. Newborn & Infant Nursing Reviews* 13(2013) 9-22.
- 3. Kleberg.A et al. (May 2008). Lower Stress Responses after Newborn Individualised Developmental Care and assessment program care during eye screening examinations for retinopathy of prematurity: A randomised study. *Pediatrics*, May 2008. Volume 121/issue 5.
- 4. Warren (2015). Foundation Toolkit for Family Centred Developmental Care*. Stress, Pain and Comfort.* Pg 33.

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	**Does the policy/guidance affect one group less or more favourably than another on the basis of:**		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	No	
4.	**Is the impact of the policy/guidance likely to be negative?**	No	
5.	**If so can the impact be avoided?**	N/a	
6.	**What alternatives are there to achieving the policy/guidance without the impact?**	None	
7.	**Can we reduce the impact by taking different action?**	No	

If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources.

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Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval.