

Non-Nutritive Sucking Neonatal Clinical Guideline

V3.0

January 2023

Summary

Prior to Use:

Explain the rationale for NNS to the infant's parents / care givers enabling an informed decision regarding its use, with their infant.

Once consent gained, document this on the infant's Nutritional care-

If parent planning to breastfeed then this can be achieved at the breast, depending on gestational age, otherwise select appropriate pacifier for infants gestational age from supplies available on the ward.

Ensure the pacifier is sterilised, prior to each NNS episode as per unit policy and stored in a named pot when not in use.

Document in the infant's notes if NNS has been used, and its effects on the infant.

Use of a pacifier

Encourage infant to open their mouth wide and extend their tongue (to mimic pre-feeding behaviour) by stroking around the mouth and on each side of the infants cheeks.

For the preterm infant who has never been fed, a pacifier can be offered if the infant is awake and behavioural cues indicate that they may be receptive to a sucking experience.

For the tube fed neonate, offer a pacifier 5-10 minutes before a tube feed. Offer it again during and after the feed until the infant does not appear to want it anymore.

For the breastfed neonate, when the infant begins to establish regular breastfeeding, discontinue use of NNS.

For the bottle-fed neonate, offer a pacifier 5-10 minutes before a bottle feed if they show signs of hunger, enabling them to establish a quiet awake state, before beginning the bottle feed. When bottle-feeding is fully established the use of a pacifier for deliberate NNS will not be required.

1. Aim/Purpose of this Guideline

- 1.1. The aim of this document is to outline the indication for, and provide guidance on the use of pacifiers in Non Nutritive Sucking (NNS). This guideline applies to all staff that care for infants who may benefit from Non Nutritive Sucking.
- 1.2. This version supersedes any previous versions of this document.

Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

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2. The Guidance

2.1. Rationale

Non-Nutritive Sucking [NNS] is when an infant sucks on a pacifier [non-nutritive tool] or gloved finger (or at the breast for those wanting to breastfeed). The infant does not receive any nutritional intake or fluid but may benefit from self-regulation, organisation and relief from pain. It is beneficial for preterm infants and often a useful precursor to breastfeeding.

In utero, the 28-33 week foetus produces rhythmic bursts of NNS. Their ability to suck and swallow gradually develops until approximately 34-36 weeks, when the sucking rhythm and co-ordination matures due to an increase in organisation and regulation of the Central Nervous System. Infants born prematurely miss out on this opportunity to practice and develop their sucking and swallowing skills and by offering them NNS, we can help to develop these.

The rationale for using NNS is to offer infants, who have not fully established oral feeding, the benefits of NNS.

2.2. Advantages of Non Nutritive Sucking.

There are several benefits associated with NNS:

- Pleasurable oral experience, used to comfort and settle the distressed infant.
- Reduces behavioural distress during painful procedures, lowers heart rate, helps infants to self-regulate- improving organised state and physiological

stability, particularly during tube feeding.

- NNS provides a developmentally supportive response to behavioural cues.
- May provide easier or more rapid transition from nasogastric to oral feeding.
- Increases organisation and efficiency of sucking, accelerates the maturation of the sucking reflex, enhances weight gain and may increase gastric emptying.
- Preterm infants have the opportunity to practice sucking skills as they would do in utero.
- Linked to a reduction in the incidence of Sudden Infant Death Syndrome [SIDS].
- Reduction in duration of hospital stay.

2.3. Practice Guidelines

2.3.1. Prior to Use:

- 2.3.1.1. Explain the rationale for NNS to the infant's parents / care givers enabling an informed decision regarding its use, with their infant.
- 2.3.1.2. Once consent gained, document this on the infant's Nutritional care-plan.
- 2.3.1.3. If parents feeding intention is to breastfeed then the infant can be offered the breast for the purposes of NNS (particularly during NGT feeds). Parents can be offered the choice for the use of a pacifier if they wish; for example for use in their absence.
- 2.3.1.4. Select appropriate pacifier for infants gestational age from supplies available on the ward & as they grow, ensure it is changed appropriately to their corrected gestational age.
- 2.3.1.5. Ensure the pacifier is sterilised, prior to each NNS episode as per unit policy and stored in a named pot when not in use.

2.3.2. Document in the infant's notes if NNS has been used, and its effects on the infant.

2.4. Use of a pacifier

- 2.4.1. Encourage infant to open their mouth wide and extend their tongue (to mimic pre-feeding behaviour) by stroking around the mouth and on each side of the infants cheeks. Gently place pacifier in the infant's mouth, never use force.

- 2.4.2. For the preterm infant who has never been fed, a pacifier can be offered if the infant is awake and behavioural cues indicate that they may be receptive to a sucking experience- allow them to suck for as long as they wish.
- 2.4.3. For the tube fed neonate, offer a pacifier 5-10 minutes before a tube feed. Offer it again during and after the feed until the infant does not appear to want it anymore.
- 2.4.4. For the breastfed neonate, when the infant begins to establish regular breastfeeding, discontinue use of NNS.
- 2.4.5. For the bottle-fed neonate, offer a pacifier 5-10 minutes before a bottle feed if they show signs of hunger, enabling them to establish a quiet awake state, before beginning the bottle feed. When bottle-feeding is fully established the use of a pacifier for deliberate NNS will not be required.

2.5. Useful information:

- 2.5.1. As infants grow, the size of the pacifier should be increased accordingly to their corrected gestational age. It is better for an infant to maintain a wide mouth posture for later development and breastfeeding, rather than the tiny, pursed attachment around a teat that has become too small. This information should also be shared with parents to enable them to recognise the importance of moving onto the next size and helps to involve them in their baby's care.
- 2.5.2. Ensure NNS is offered to an infant as a therapeutic intervention and not indiscriminately or for long periods of time to keep them quiet or making them wait for a feed.
- 2.5.3. As a method of pain relief, offer the pacifier shortly before, during and after a painful procedure, until the infant is in an organised state again. Other methods of consolidation should be considered if they are reluctant to partake in NNS, i.e. containment holding.
- 2.5.4. A gloved finger can be used as a short term NNS tool, the glove should be latex free and consent should be obtained if parents are present.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Key changes in practice.
Lead	Dr Chris Bell, Consultant Paediatrician.
Tool	Audit. To be included in the Neonatal Clinical Audit programme. Findings to be reported to the Specialty Audit / governance meetings.
Frequency	As dictated by audit findings.
Reporting arrangements	Child Health Directorate Audit and neonatal Clinical Guidelines meetings.
Acting on recommendations and Lead(s)	Dr Chris Bell, Consultant Paediatrician.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within 3 months of audit. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ['Equality, Inclusion & Human Rights Policy'](#) or the [Equality and Diversity website](#).

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Non- Nutritive Sucking Neonatal Clinical Guideline V3.0
This document replaces (exact title of previous version):	Non- Nutritive Sucking Neonatal Clinical Guideline V2.1
Date Issued/Approved:	January 2023
Date Valid From:	January 2023
Date Valid To:	January 2026
Directorate / Department responsible (author/owner):	Jo Roberts; Neonatal Senior Staff Nurse
Contact details:	01872 252667
Brief summary of contents:	The aim of this document is to outline the indication for, and provide guidance on the use of pacifiers in Non Nutritive Sucking (NNS). This guideline applies to all staff that care for infants who may benefit from Non Nutritive Sucking.
Suggested Keywords:	Non Nutritive Sucking. Pacifier. Dummy. Neonatal. Newborn. Neonate
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Neonatal Audit and Guidelines Group
General Manager confirming approval processes:	Caroline Chappell
Name of Governance Lead confirming approval by specialty and care group management meetings:	Caroline Amukusana
Links to key external standards:	None required
Related Documents:	<ul style="list-style-type: none"> Boiron M et al (2007) Effect of oral stimulation and oral support on non-nutritive sucking and feeding performance in ore-term infants. Developmental medicine and child neurology,

Information Category	Detailed Information
	<p>49, 439-444.</p> <ul style="list-style-type: none"> • Harding. C, Law. J, Pring. T (2006) The use of non-nutritive sucking to promote functional sucking skills in premature infants: An exploratory trial infant Vol2. No.6,pp238-43. • Lall.C (2006) Oral feeding in the pre-term infant. Neo Reviews. Vol 7. No.1. pp19-27 • Pirvianta. H et al (2008) effects of non-nutritive sucking and oral stimulation on breastfeeding rats for pre-term, low birth weight infants a randomised clinical trial. Journal de Pediatria. pp. 423-427. Vol 84. No5. • Jenik. A, Vein N (2009) The pacifier debate. Early Human development. Doi 10.1016 pp1-3 • South Central Neonatal Network Quality Care Group. Guideline framework for non-nutritive sucking.
Training Need Identified?	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical/ Neonatal

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
05:05:2015	V1.0	Initial Issue.	Jo Roberts. Neonatal Senior Staff Nurse
27:01:2016	V1.0	Approved and formatted.	Approved by Neonatal Guidelines group. Formatted by Kim Smith S/N
30:07:2019	V2.0	Full review. Changes made as follows: 2:1 - change from suck and swallow developing at 35 - 36 weeks to "gradually develops until approximately 34 - 36 weeks".	Jo Roberts. Neonatal Senior Staff Nurse

Date	Version Number	Summary of Changes	Changes Made by
13.05.2021	V2.1	Amendments made following review of guideline by infant Feeding Team: 2.1 added in advice for breastfeeding. 2.3.1.3 Added to guideline.	Infant Feeding Team
January 2023	V3.0	Guidance updated regarding size of pacifier for different gestational ages. Branding names for equipment removed. Formatting updated.	Jo Roberts. Neonatal Senior Staff Nurse

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy for the Development and Management of Knowledge, Procedural and Web Documents (The Policy on Policies). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity and Inclusion Team

rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Non- Nutritive Sucking Neonatal Clinical Guideline V3.0
Directorate and service area:	Neonatal
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Neonatal Audit and Guidelines Group
Contact details:	01872 252667

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	To outline the indication for, and provide guidance on the use of pacifiers in Non Nutritive Sucking (NNS). This guideline applies to all staff that care for infants who may benefit from Non Nutritive Sucking.
2. Policy Objectives	As above.
3. Policy Intended Outcomes	The safe and appropriate use of pacifiers in Non Nutritive Sucking (NNS).
4. How will you measure each outcome?	Audit.
5. Who is intended to benefit from the policy?	Medical, nursing and midwifery staff responsible for the care of infants who may benefit from Non Nutritive Sucking, and infants.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	<ul style="list-style-type: none"> • Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	Please record specific names of individuals/ groups: Neonatal Audit and Guidelines Group
6c. What was the outcome of the consultation?	Approved- 04 January 2023
6d. Have you used any of the following to assist your assessment?	National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys: No

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	Any information provided should be in an accessible format for the parent/carer's needs – i.e. available in different languages if required/access to an interpreter if required.

Protected Characteristic	(Yes or No)	Rationale
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	Those parent/carers with any identified additional needs will be referred for additional support as appropriate - i.e to the Liaison team or for specialised equipment. Written information will be provided in a format to meet the family's needs e.g. easy read, audio etc.
Religion or belief	No	All staff should be aware of any beliefs that may impact on treatment decisions.
Marriage and civil partnership	No	
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Neonatal Audit and Guidelines Group

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:

[Section 2. Full Equality Analysis](#)