Clinical Guideline

Newborn Services: Immuno Supportive Oral Care (ISOC) for Neonates

Sites where Clinical Guideline applies	Special care units across HNELHD, and the Neonatal Intensive Care Unit at JHCH, where neonates receive care.
This Clinical Guideline applies to:	
1. Adults	No
2. Children up to 16 years	No
3. Neonates – less than 29 days	Yes
Target audience	Clinical staff, midwives and nurses, who provide care to neonates in SCU in HNELHD and/or at NICU, JHCH.
Description	This guideline provides information to staff to support practice of immune supportive oral care.

Go to Guideline

Keywords	Breast milk, Colostrum, Immuno Supportive Oral Care (ISOC), Immunity, Nil By Mouth (NBM), NICU, JHCH.
Document registration number	HNELHD CG 19_21
Replaces existing document?	Yes
Registration number and dates of superseded documents	JHCH_NICU_03.08 Immune supportive oral care (ISOC) for neonates in NICU/SCN

Related Legislation, Australian Standard, NSW Ministry of Health Policy Directive or Guideline, National Safety and Quality Health Service Standard (NSQHSS) and/or other, HNE Health Document, Professional Guideline, Code of Practice or Ethics:

- NSW Health PD2010_19 Maternity - Breast Milk: Safe Management
- NSW Health PD2018_034 Breastfeeding in NSW - Promotion, Protection and Support
- NSW Health Policy Directive 2014_036 Clinical Procedure Safety
- NSW Health Policy PD 2005_406 Consent to Medical Treatment – Patient Information
- NSW Health Policy Directive PD 2007_036 Infection Prevention and Control Policy

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Note: Over time links in this document may cease working. Where this occurs please source the document in the PPG Directory at: http://ppg.hne.health.nsw.gov.au/

RISK STATEMENT

This local guideline has been developed to provide guidance to clinical staff in Special Care Units across HNELHD and the NICU at JHCH to assist in providing immune supportive oral care (ISOC) to the newborn until sucking feeds commence. It ensures that the risks of harm to the infant whilst providing ISOC are identified and managed. *Any unplanned event resulting in, or with the potential for injury, damage or other loss to infants/staff/family as a result of this management must be reported through the Incident Information Management System (IIMS) and managed in accordance with the Ministry of Health Policy Directive: Incident Management Policy PD2007_061. This would include unintended injury that results in disability, death or prolonged hospital stay.*
Risk Category*: Clinical Care & Patient Safety*

OUTCOMES

1	All infants are provided with ISOC until sucking feeds commence unless breast milk is contra-indicated
2	The information on the benefits to their infant of ISOC for protective factors are explained to the parents
3	The “5 moments of hand hygiene” will be observed to minimise contamination

CONTENT

GUIDELINE

Introduction

The aim of this guideline is for all babies who are admitted to a Special Care Unit in HNELHD or to NICU at JHCH, and are unable to feed by mouth will receive Immune Supportive Oral Care (ISOC) as early as possible. This facilitates the benefits of immune properties of breast milk even when ‘nil by mouth’, as well as providing developmentally sensitive oral care.

RATIONALE Top

As soon as the infant is born and the mother initiates pumping, oral care with human milk can commence. Oral care mimics what would occur with a healthy term infant feeding by the breast. The primary rationales regarding the benefits of oral care for the infant are;

- Breast milk contains defence factors that include antimicrobial agents, anti-inflammatory factors, immune-modulators and leukocytes. These protective immune factors coat the gastrointestinal and upper respiratory tracts to promote colonisation with the mother's bacteria and help to prevent invasion of mucous membranes by respiratory and enteric pathogens.
- Pleasant oral stimulation, as human milk has a sweet flavour. ISOC therefore acts as a positive experience and helps to reduce adverse oral behaviours.
- Promotes family centred care by allowing parents the opportunity for involvement in their infants care.
- ISOC can be a strong motivator for mothers to keep pumping to build their milk supply for their infant.

INDICATIONS

Top

Every infant (preterm or term) who is not feeding by mouth will receive ISOC unless breast milk is contraindicated.

NBM is **not** a contraindication

CONTRAINDICATIONS

Top

Contraindications for ISOC are the same as contraindications for breast milk feeding, and include:

1. An infant whose mother;
   - Is positive for Human Immunodeficiency Virus (HIV).
   - Is taking anti-retroviral medications.
   - Has untreated active Tuberculosis.
   - Is positive with human T-call lymphotrophic virus type I or II.
   - Is using or dependent on an illicit drug, (except if breast milk is medically indicated/or prescribed).
   - Is taking prescribed cancer chemotherapy agents contraindicated for breastfeeding.
   - Is receiving any medications contraindicated in breastfeeding.
   - Is receiving diagnostic or therapeutic radioactive isotopes or exposure to radioactive materials (for as long as they are radioactive in the milk).

2. An infant diagnosed with galactosaemia, a rare genetic metabolic disorder.

If unsure staff should consultant with a Lactation Consultant &/or Medical Officer.

INFORMATION FOR PARENTS

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Parents will be educated about the benefits of colostrum/breast milk. If possible this will be done before delivery, otherwise as soon as possible after delivery. All members of the interdisciplinary team will be responsible for parent education. Mothers will be encouraged to start hand expression or pumping within 2 hours of delivery or as soon as possible and to save colostrum in SCU/& NICU approved sterile containers/feeding syringes for ISOC.

They will be offered an admission ISOC pack containing;

- 6 x small plastic containers with lids.
- 6 red dot stickers to identify as ISOC.
- 3 packets sterile swabs and,
- An ISOC parent information handout (see appendix 2).

Mothers will be able to use sterile 1ml syringes for colostrum collection for first few days and then sterilise the containers provided in the ISOC pack for breast milk. Mothers will be provided with labels identifying the mother's name, baby's MRN, baby's DOB and the time and date of expression.

Parents will also be educated by the staff on the benefits of ISOC, and how to attend the immune-supportive oral care in a developmentally sensitive approach for their baby. Staff should support the parents to attend their babies' ISOC at each cares, or at a minimum of 4th hourly. ISOC should also be considered prior to any painful procedure as added non-pharmacological support measure.

Figure 1: ISOC pack (*Picture from NICU, JHCH*)

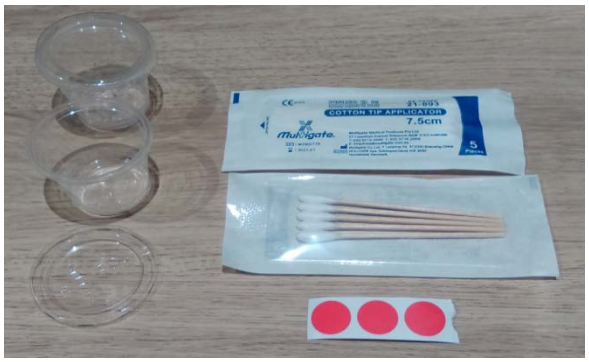

Figure 2: ISOC equipment (*Picture from NICU, JHCH*)

MILK USE FOR ISOC

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- ISOC is best administered using fresh breast milk. The immune-protective properties in frozen colostrum or breast milk are altered when milk is frozen, however, if only frozen milk available it may be used. No additives will be added to milk intended for ISOC.
- ISOC will be initiated as soon as a drop of colostrum/breast milk is available. If there is <1 ml of available colostrum/breast milk this can be allocated to ISOC, however when it reaches this volume or above it requires prioritisation to enteral feeding.
- Fresh colostrum may be stored in the refrigerator for up to 48 hours.
- ISOC will be administered directly from a cotton tipped swab stick (to use one sterile pack per shift, then discard-contains 5 swabs). The amount of breast milk required to saturate a cotton swab is 0.2mls.
- ISOC procedure will be performed at care times 3rd or 4th hourly at a minimum.
- ISOC will be recorded on the infant flow chart/observation chart in the oral feed section. Document ISOC attended in the relevant area with 2 signatures and NBM if no other gastric feeds are being given.
- Co-checking of milk can occur between the following;
    - baby's mother or
    - an EEN
    - an RM or
    - an RN

- Both parties must sign they have checked *including the baby's mother*.
- ISOC will continue until the baby has its first sucking feed (*defined as an established breastfeed where the milk coats the buccal mucosa*).
- If baby requires oral Nilstat administration it may be given at the conclusion of 'cares' with/without enteral feed and the ISOC should be given at the commencement of 'cares'.

In the event of a Transport

- If a baby is born at a regional centre and requires retrieval by a NETS team please consider asking the mother if she would like to hand express some milk that could be transferred with the baby and the NETS team. This milk could be used for ISOC purposes until the mother's transfer is deemed medically suitable.
- In this case the expressed milk will need to be labelled with the matching details on the baby's identification band, this includes;
    - The baby's MRN,
    - The Mother's name,
    - The baby's DOB and
    - The sex of the baby.
- The milk must be stored in a small container with some bagged ice to ensure the milk remains cooled during the transfer.

Pasteurized Human Donor Milk/or Formula preparations are not be used for ISOC

PROCEDURE

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Considerations

- Colostrum or EBM is decanted into smaller containers, a small amount (3-5mls) of fresh breast milk to use for oral care within 48 hours of pumping and label with red dot sticker to identify for use as ISOC.
- If the mother has ceased expressing, then frozen milk is decanted by the nurse into the ISOC container for use.

Procedure steps

- Hand hygiene will be performed before and after collection or handling of breast milk and wearing PPE (gloves and goggles) as per unit policy.
- ISOC will be double checked by 2 appropriate parties and co-signed on the fluid/or flow chart. EBM must be checked against the milk identification label and with 1 of the 2 patient identification labels on the baby at a minimum.
- Dip a new sterile swab into ISOC. Ensure the swab absorbs all drops of colostrum/breast milk or is saturated (0.2mls will achieve this) when there is ample supply.
- Ideally ensure the infant is rousing or in the awake state.
- Apply the milk in the following developmentally sensitive manner;

a. Gently press the cotton bud against the baby's top lip.

b. Allow the baby to recognise the cotton bud and wait for them to open their mouth.

c. Touch the bud to the baby's tongue.

d. Slowly move the cotton bud towards the cheek in a "press and scoop" motion.

(Pictures from NICU, JHCH)

- Repeat on other cheek ensuring you coat the entire buccal mucosa bilaterally.
- Discard used cotton bud and repeat hand hygiene following procedure.
- Record on infant fluid/or flow chart.
- Continue ISOC until the first sucking feed defined as, *an established breastfeed where the milk coats the buccal mucosa*.

NOTE – If only tiny drops of colostrum are available the milk can be placed directly into the mouth with a syringe, slowly paced in the described developmentally sensitive manner above.

DOCUMENTATION OF ISOC

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Documentation of ISOC must be completed in the following places;

- The infants fluid/or flow chart
- The infants care plan or patient care board and
- The NICUS database

Record ISOC administration by writing ISOC in green pen and signing with 2 signatures, being the person administering and person checking.

NOTE ***- *** *ISOC milk checks are independent of milk feed checks, therefore if the infant is also having milk feeds this must be checked and co-signed for separately, i.e. 4 signatures required when feed and ISOC given.*

IMPLEMENTATION PLAN

The clinical guideline will be:

- Circulated to General Managers and Cluster Managers
- Circulated to the clinicians via the Children Young People and Families Network and the Women's Health and Maternity Network
- Made available on the intranet (PPG) and HNEKids website
- Presented at facility units meetings and tabled for staff to read.

MONITORING AND AUDITING PLAN

- The person or leadership team who has approved the clinical guideline is responsible for ensuring timely and effective review of the guideline.
- Evaluation will require a review of the most current evidence as well as consideration of the experience of HNELHD staff in the implementation of the clinical guideline.
- Data derived from monitoring and evaluation should inform the review of the clinical guideline either as required or scheduled.
- Implementation, education support and monitoring compliance be completed by local clinical educators and Managers.
- Amendments to the guideline will be ratified by the Clinical Director of the WHaM Network prior to final sign off by the Children Young People and Families Network.

CONSULTATION WITH KEY STAKEHOLDERS

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OTHER USEFUL LINKS

- HNELHD: JHCH_NICU_09.03 Expressed Breast Milk-Freezing, Storage and Checking

APPENDICES

1. Abbreviations & Glossary
2. Parent information handout

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FEEDBACK

Any feedback on this document should be sent to the Contact Officer listed on the front page.

APPENDIX ONE

GLOSSARY & ABBREVIATIONS

Acronym or Term	Definition
Immuno Supportive Oral Care (ISOC)	Colostrum/breast milk (fresh never frozen) will coat the inside of the cheeks bilaterally with the clean cotton bud provided for oral care, and absorbed into the mucous membranes
Colostrum	The early milk produced in the first few days after birth, when the tight junctions in the mammary epithelium are open. Colostrum contains large amounts of antibodies to protect the newborn against disease, as well as being lower in fat and in higher in protein than mature breast milk.
EBM	Expressed Breast Milk, expressed by the infants own mother
Preterm Infant	An infant of gestational age (GA) less than 37 weeks
Term Infant	An infant of gestational age equal to or greater than 37 weeks
SCU	Special Care Unit
NICU	Neonatal Intensive Care Unit
RN	Registered Nurse
RM	Registered Midwife
EEN	Endorsed Enrolled Nurse
MRN	Medical Record Number
DOB	Date of Birth
NETS	Newborn Emergency Transport Service
HNELHD	Hunter New England Local Health District
JHCH	John Hunter Children’s Hospital
NBM	Nil by Mouth
PPE	Personal Protective Equipment

APPENDIX TWO

PARENT INFORMATION HANDOUT FOR ISOC

When your baby is admitted to NICU/Special Care Nursery

- Premature babies are at higher risk of infection due to their immature immune system
- Colostrum (your first milk) is important in protecting your baby from infection and can be given to your baby as early as possible after birth
- Breastmilk can be given to babies of the earliest gestation
- Expressing within 1 to 2 hours of birth in birth suite or recovery is ideal
- Aim to express 7 to 8 times per 24 hours
- Early and frequent expressing helps to ensure a sustained milk supply

For more information ask your baby's nurse, midwife or NICU Lactation Consultant

How do we do ISOC?

- Gel hands before starting

- Soak provided cotton bud in breast milk, ensuring swab is saturated

- Gently press against your baby's top lip

- Allow your baby to recognize the cotton bud on the lip and wait for them to open their mouth

- Touch bud to baby's tongue

- Move the cotton bud slowly towards the cheek in a "press and scoop" motion. Repeat on other cheek

- Pleasurable oral stimulation with sweet flavoured breast milk provides a positive experience for your baby

- Discard used cotton bud and gel your hands again

Ideally ISOC should be provided at each of your babies care times so please discuss with your babies bedside nurse