Colostrum Collection – Antenatal UHL Obstetric Guideline	University Hospitals of Leicester NHS NHS Trust **Trust Reference C55/2020**

1. Introduction and Who Guideline applies to

Scope:

This guideline is for medical, midwifery and nursing and support staff involved with the care of the pregnant woman antenatally in hospital or in the community.

This guideline covers the principles of:

- *Hand expression*
- *Antenatal colostrum collecting from 36 weeks gestation*
- *Storing and transporting colostrum*

Legal Liability (standard UHL statement):

Guidelines issued and approved by the Trust are considered to represent best practice. Staff may only exceptionally depart from any relevant Trust guidelines providing always that such departure is confined to the specific needs of individual circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible health professional' it is fully appropriate and justifiable – such decision to be fully recorded in the patient's notes.

Related UHL documents:

- Prevention and management of symptomatic or significant hypoglycaemia in neonates
- Admission to the neonatal unit
- Policy for Standard Infection Prevention Precautions
- Hand Hygiene Policy
- Maternity Records Documentation UHL Obstetric Policy
- Joint Infant Feeding Policy
- Management of Breastfed Babies who are slow to feed

1.0 Background:

1.1 University Hospitals of Leicester NHS Trust supports and promotes breastfeeding as the healthiest way for a mother to feed her baby and recognises the evidenced based health benefits known to exist for both the mother and infant.

1.2 This guideline is intended to inform staff about safely supporting antenatal mothers with hand expressing to obtain and store colostrum.

1.3 This guideline is principally for the benefit of mothers who have reason to believe that they may have a delay or difficulty in establishing breastfeeding or in producing breastmilk, and to protect babies who are at risk of hypoglycaemia or feeding difficulties from the risks of formula milk supplementation. It also supports any women who wish to collect colostrum antenatally.

1.4 To support initiation, exclusivity and duration of breastfeeding.

2. Guideline Standards and Procedures

2.0 Objectives:

2.1 To improve breastfeeding initiation and duration in high risk pregnancies.

2.2 To optimise breastmilk and milk production for all mothers who wish to breastfeed.

2.3 To contribute to women becoming comfortable and competent with hand expressing, this has been shown to improve breastfeeding outcomes.

2.4 To have colostrum readily available for the baby in the early hours after birth.

2.5 To facilitate women who desire to exclusively breastfeed.

2.6 To ensure that the Trust supports the UNICEF BFI standard of supplementing with formula milk only when medically indicated.

3.0 Rationale:

3.1 Colostrum is the first fluid produced for the newborn baby and is rich in antibodies, growth factors and is easily digested. It has a laxative effect and aids the passage of meconium. Colostrum contains factors that stimulate early protective immunological responses in the infant's gut and, where possible, should be the first food given to infants.

3.2 From the CEMCH 2007 report; 'infant formula supplementation may suppress the process of normal metabolic adaptation. Breast milk is thought to promote ketogenesis and should therefore be the first choice for babies of women with diabetes as they are at risk of hypoketonaemic hypoglycaemia.'

3.3 Infant formula is often used to stabilise blood glucose levels while adequate breastfeeding is established in infants who are at risk of hypoglycaemia in the first few hours after birth, but the newborn's blood glucose levels can be more optimally stabilised with antenatally expressed colostrum and avoid the need for formula supplementation.

3.4 All mothers should be supported to initiate early and exclusive breastfeeding and having a supply of colostrum, and being confident with hand expressing may help with this.

3.5 Infant formula contains cow's milk protein which is associated with triggering an auto-immune response linked to an increased risk of Type 1 diabetes mellitus, particularly where there is a strong family history of diabetes.

4.0 Who May Benefit from Antenatal Colostrum Collecting:

4.1 All pregnant women can express their breast milk from 36 weeks gestation, but it may be particularly beneficial if they have a condition known to increase the risk of having a baby with low blood sugar in the first few hours after birth, feeding difficulties or challenges with breastmilk supply. For example:

- Women with diabetes in pregnancy (pre-existing or gestational)
- Mothers having an elective caesarean section
- Women with breast hypoplasia
- Women who have had breast surgery
- Hormonal disorders (e.g. polycystic ovarian disease, hypothyroidism)
- Women with multiple sclerosis
- Strong family history of dairy intolerance or inflammatory bowel disease
- Mothers with high blood pressure
- Mothers taking beta blockers (e.g. labetalol)
- Raised BMI
- Twin or triplet pregnancy
- Infants antenatally diagnosed with cleft lip and/or palate
- Congenital conditions (e.g. Trisomy 21)

- Small for gestational age (SGA, growth below the 10th percentile)

5.0 Contraindications:

5.1 Antenatal colostrum expression is contraindicated in the following circumstances:

- History of threatened/actual premature labour
- Cervical incompetence
- Cervical suture in situ
- History of antenatal bleeding in this pregnancy.

6.0 Process (if women fall into the categories listed above):

6.1 Women should have a discussion about infant feeding with a health professional between 28 and 36 weeks gestation (appendix 1) and be given a copy of the patient information leaflet "Antenatal Colostrum Collecting". The discussion should include the benefit of antenatal colostrum collecting and the contraindications.

6.2 Women who wish to collect their colostrum should be shown how to hand express using a knitted breast.

5.3 A small selection (3) oral colostrum collectors will be provided.

6.4 Women should be advised that they may wish to use a small container, which they keep for this purpose only, to collect the colostrum in and then draw it up into the colostrum collector and seal with the enclosed bung. The colostrum collector is then labelled and placed in a plastic container or zip lock bag and put in the freezer.

6.5 Women should be advised that when they go to hospital in labour for induction or elective caesarean birth, they should bring in the syringes of frozen colostrum. It should be stored in a freezer bag with freezer blocks and transferred to the postnatal ward milk fridge on arrival. The postnatal wards do not have freezers. Therefore, if the birth is not imminent, the colostrum may be brought in later. Once defrosted, the colostrum must be used in 24 hours. It may be necessary to bring small amounts of the colostrum to the hospital over a period of days to avoid unnecessary wastage through inability to store a large quantity safely.

6.6 Once in hospital, the colostrum should be clearly labelled with mother's name, hospital number and the date and time it was removed from the freezer.

6.7 If the mother does not fall into the categories listed above the discussion can still take place but the woman would be advised to obtain her own colostrum collectors which should be suitable for this purpose. If the health professional is unsure about this they can refer the woman to the Infant Feeding Team for further information.

7.0 Technique:

7.1 Teaching hand expression and storage of colostrum in the antenatal period:

- Highlight the importance of hand washing before starting to express
- Discuss the role of oxytocin and how to stimulate it, e.g. privacy, low lighting, massage and warmth
- Using a demonstration breast, demonstrate gentle breast massage to encourage oxytocin and the let-down reflex
- The thumb should be placed above the nipple and the fingers below in a "C" shaped hold, 2-3 cm from the base of the nipple, then gently squeezed and released in a regular, rhythmic motion
- If no colostrum is seen, the mother can adjust her fingers on her breast and try again
- Once colostrum starts to drip/flow, the mother can collect it in the colostrum collector or in a small, clean container and then draw up with the colostrum collector

- When the milk flow slows, she should move her hands around to a different position, in a “U” shape to ensure that all lobes are drained
- Once the flow subsides, she should repeat this on the second breast

7.2 Colostrum can be collected 2-3 times over a 24 hour period and stored in the same syringe. The syringe should be capped off with the bung and kept in the back of the fridge to a maximum temperature of 2-4°C.

7.3 If the woman is leaking colostrum earlier than 36 weeks gestation, this can be collected and frozen, but active expression is not recommended.

7.4 After 24 hours, the syringe containing colostrum should be placed in the freezer in a labelled zip lock bag/plastic container.

7.5 Each syringe should be labelled with the mother’s name, hospital number and expressing date.

7.6 Expressed colostrum can be stored in the freezer for:

- 2 weeks in a freezer compartment of a fridge
- 3 months in a freezer around -18°C
- 6 months in a deep freezer below -18°C.

7.7 Defrosted colostrum should be used or discarded within 24 hours.

7.8 Feeding support and advice can be obtained from the Specialist Midwife for Infant Feeding on **07765787279** during the antenatal period or whilst the mother is an inpatient. The Neonatal Infant Feeding Nurse can also be contacted if the mother is likely to have a baby needing NNU care.

8.0 Documentation:

8.1 Document the discussion, including giving the leaflet, mother’s decision and the equipment given to facilitate antenatal hand expression.

8.2 On admission to hospital, document if any colostrum has been brought with the mother and which ward fridge it is stored in. The colostrum collector should be labelled with the date and time it was removed from the freezer and when it will expire.

8.3 Document in in the ‘first feed’ line in the baby’s postnatal diary if defrosted colostrum is given, including the date, time and amount. If given as a second feed, document in that line. If given at a later stage, document on the appropriate postnatal day.

Key Points

1. Antenatal colostrum collection can commence after 36 weeks gestation.
2. It is suitable for all women, but particularly for those who have extra risk factors.
3. Hand hygiene is paramount when colostrum collecting.
4. Lack of antenatal colostrum is not indicative of future breastmilk supply.
5. The recent DAME RCT (2017) found that antenatal colostrum harvesting did not induce labour in the groups studied.
6. In recognition that repeated and long periods of nipple stimulation may cause mild uterine contractions, it is recommended that women:
   - Commence daily expression between 36 and 37 weeks gestation
   - Start with 3-5 minutes on each breast

- Once proficient, the total time expressing should only be 5-10 minutes at each session but can be done more than once a day
- Painless Braxton Hicks contractions are acceptable whilst hand expressing. Advise the woman to stop expressing if the uterine contractions become regular and painful. If the contractions do not settle down, they should call MAU.

Fresh colostrum and breastmilk is always preferable to defrosted and should be used first. All mothers should be helped to initiate early and effective breastfeeding, and antenatal colostrum does not replace the need for all staff to ensure mothers and babies are able to breastfeed as soon as possible after birth.

3. Education and Training

All midwifery and obstetric staff must attend yearly mandatory training.

All

Monitoring	
Process for monitoring:	Retrospective case note review
How often will monitoring take place:	Quarterly
Population:	0.5% of health records of newborn babies
Person responsible for monitoring:	Midwifery Manager Consultant Obstetrician
Auditable standards:	• Antenatal documentation • Postnatal documentation
Results reported to:	Neonatal Governance Group Maternity Governance Group
Action plan to be signed off by:	Maternity Governance Group
Person responsible for completion of action plan:	Midwifery manager Consultant Obstetrician

midwifery and obstetric staff are to ensure that their knowledge and skills are up-to-date in order to complete their portfolio for appraisal

4. Monitoring Compliance

5. Supporting References (maximum of 3)

1) East C.E., Dolan W.J., Forster D.A., 2014. Antenatal breast milk expression by women with diabetes for improving infant outcomes. Cochrane Database of Systematic Reviews, 7 (CD010408) Available at: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD010408.pub2/full

2) Foster, D.A., et al, 2017. Advising women with diabetes in pregnancy to express breastmilk in late pregnancy (Diabetes and Antenatal Milk Expressing [DAME]): a multicentre, unblinded, randomised controlled trial. The Lancet, 389(10085), pp 2204-2213 Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140- 6736(17)31373-9/fulltext?elsca1=tlxpr [Accessed on 31/12/19]

3) Martens, P.J., Shafer, L.A., Dean, H.J., et al, 2016. Breastfeeding initiation associated with reduced incidence of diabetes in mothers and offspring. Obstetrics and Gynecology, 128(5), pp 1095-1104 Available at: https://www.ingentaconnect.com/content/wk/aog/2016/00000128/00000005/art00028 [Accessed on 31/12/19]

4) National Institute for Health and Care Excellence (2006) Postnatal care up to 8 weeks after birth NICE Guideline (CG37) Updated 2015. Available at: https://www.nice.org.uk/guidance/cg37 [Accessed 31/12/19]

5) The Confidential Enquiry into Maternal and Child health (CEMACH) (2007) Diabetes and Pregnancy: caring for the baby after birth. Findings of a national enquiry: England Wales and Northern Ireland. CEMACH. London Available at: https://www.publichealth.hscni.net/sites/default/files/Saving%20Mothers%27%20Lives%202003-05%20.pdf [Accessed 31/12/19]

6. Key Words

Colostrum, collection, antenatal,

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT		
Author / Lead Officer:	Ann Raja and Julia Austin	**Job Title:** Specialist Midwife – infant feeding Consultant Midwife

Reviewed by:			
Approved by:	**Maternity Services Governance Group**		**Date Approved: 18/11/2020**
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Appendix 1 – Conversations in Pregnancy

Conversations in pregnancy: Key points

Remember: explore what parents already know → accept → offer relevant information*

Encouraging parents to connect with their baby	Taking time out to connect: talking to baby, noticing and responding to movements
Skin contact	The value of skin contact What this means for mother and baby
Responding to baby's needs	How closeness, comfort and love can help baby's brain develop Responsive feeding (and paced bottle feeding where appropriate)
Feeding	Value of breastfeeding as protection, comfort and food How to get off to a good start

Confirmation that a conversation has taken place to cover relationship building, responsiveness and feeding, as per mother's needs

	Signature:	Date:	Comments:
1			
2			
3			

*refer to the health professionals' guide for more information: http://unicef.uk/conversations