Colostrum Counts!

Improving time from birth to first breastmilk on the neonatal unit

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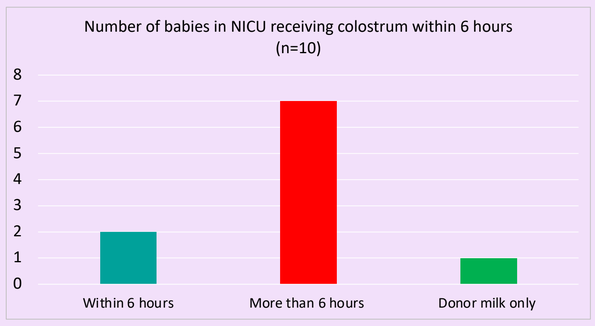
New-born babies are missing out on vital breastmilk. Early colostrum reduces serious infections and improves development. For mothers early expressing empowers them and helps bonding.

BACKGROUND

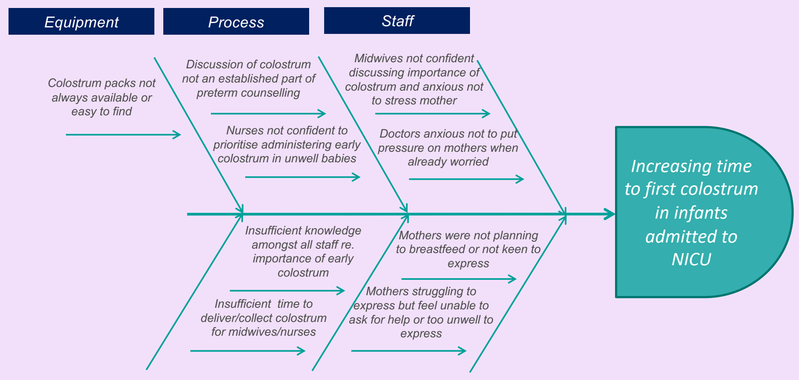
For babies <34 weeks gestation BAPM guidelines[1] recommend colostrum within first 6 hours

- Breastmilk protects from necrotising enterocolitis, a serious, and life threatening gut condition. It also helps the brain, immune system, eyes and lungs.
- For **premature babies**, breast milk is associated with improved development as the baby grows up (development includes skills such as walking, coordination, speech)
- Buccal colostrum **within first 6 hours** reduces time to full enteral feeds and reduces ventilator associated pneumonia and sepsis and shows a trend towards reducing necrotising enterocolitis compared with colostrum introduced later.
- Expression of colostrum **within 1 hour** increases maternal milk volumes and chance of breastfeeding at discharge.

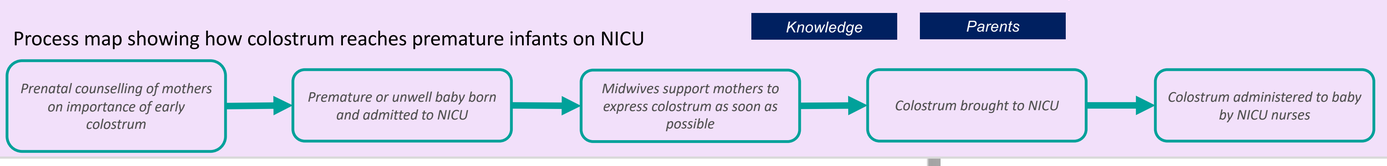
DIAGNOSTICS



Fishbone diagram showing possible causes of increasing time to first colostrum on NICU



Process map showing how colostrum reaches premature infants on NICU



AIM

By January 2024 we will increase the number of babies receiving breastmilk within the first 6 hours to 100%.

As a second choice where colostrum is not available, donor expressed breast milk can be used.

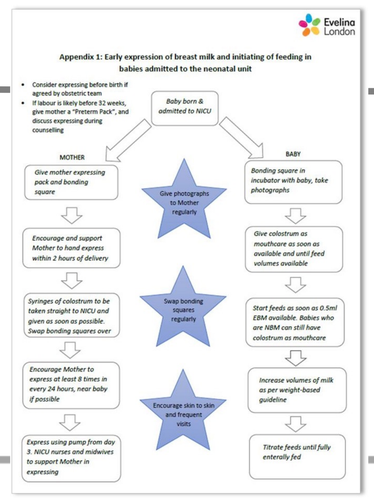
MEASUREMENT DEFINITION

Measure: Time from birth to first breastmilk, to include colostrum

Inclusions: All babies <34 weeks born on the neonatal unit at St Thomas' Hospital, who survive beyond the first 6 hours of life.

Exclusions: Babies born at 34 weeks or above. Babies born at another hospital. Babies who died within the first 6 hours of life.

Sampling method and frequency: Run chart to be updated weekly with new admissions.



CHANGE IDEAS

- ❑ Raising staff awareness with mass email
- ❑ Mobile tea trolley with breast shaped cupcakes and biscuits to raise awareness
- ❑ Add "babies waiting for breastmilk" to ITU huddle
- ❑ Roll out colostrum packs in all areas including birth centre, home from home, postnatal ward, recovery, NICU
- ❑ Colostrum packs to include the Periprem bundle leaflet
- ❑ Cot cards saying "I need my milk by 6 hours please"
- ❑ Breastmilk milestone card in admission pack
- ❑ Teaching on breastmilk for junior doctors, nurses, midwives. Encourage discussion of expression during antenatal counselling
- ❑ QR code with link to expressing video in expressing pack

PDSA cycles

Cycle 1

Update whiteboard in seminar room with project, present it at team meetings, continue to discuss project	Awareness raised with tea trolley with breast shaped cupcakes, whiteboard updated
Good start to awareneness raising but more needs to be done	In first week (time until PDSA 2) 4 babies, 2 >6 hours, 2 <6 hours

Cycle 2

Plan to add red or green countdown to board to say how far baby is over/under 6 hour target	Babies waiting for breastmilk added to NICU huddle
ALL babies met the original unit 24 hour target - possible confusion about aim? Small data set	No change in median time to EBM – in first month 3 babies > 6 hours, 5 babies <6 hours

Cycle 3

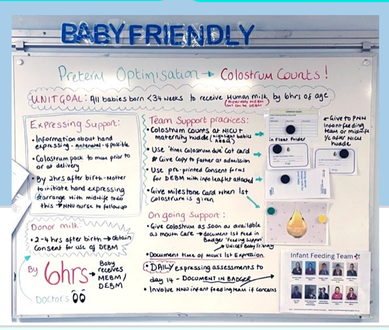
Need colostrum packs to be given out/used earlier/straight after delivery. Midwife education?	Colostrum packs rolled out in all areas (NICU, labour & postnatal wards)
Not effective – perhaps colostrum packs given out but not utilised/explained?	Analysis challenging as happened concurrently with PDSA 4 – in first month 6 >6 hours, 2 <6 hours

Cycle 4

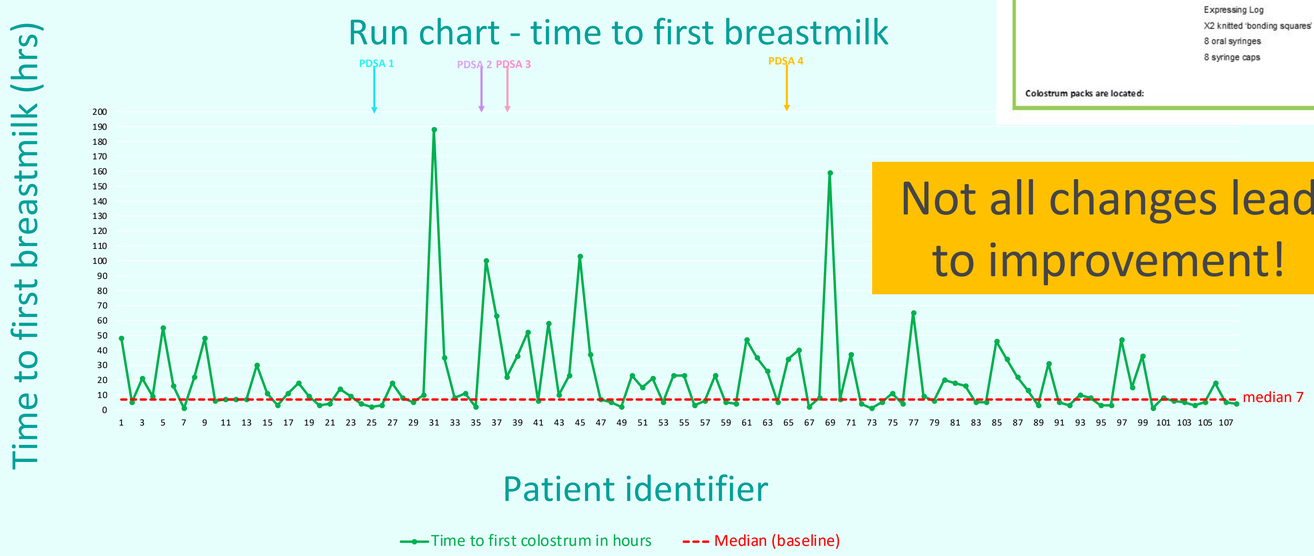
Need to incentivise filling in cot cards – colostrum star of the week?	Rolled out use of cot cards and milestone cards on NNU
Given out but I haven't seen the cards being used consistently	Analysis challenging as happened concurrently with PDSA 4 – in first month 6 >6 hours, 2 <6 hours

Cycle 5

Next step patient involvement	More midwife education and involvement in project
Most effective when strong midwifery involvement but need to see if improvement is sustained	Initial analysis looks promising – latest data shows 7/10 babies received colostrum within 6 hours



RUN CHART – TIME TO FIRST BREASTMILK



Not all changes lead to improvement!

REFLECTIONS & LEARNING

- ✓ Increasing awareness and motivation across all staff groups key to improving time to first breastmilk. Involvement of midwifery staff key in recent improvement. Need more patient involvement!
- ✓ Initial enthusiasm for an initiative quickly wanes – need to make changes to process (e.g. discussion of babies awaiting colostrum at NICU huddle) for lasting change. It all fell apart when I went on holiday!
- ✓ Sometimes initial changes are falsely encouraging – longer term picture is key. Not all changes lead to improvement!

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References: [1] Optimising early maternal breastmilk for preterm infants - a toolkit, BAPM, 2020
Acknowledgements: Dr Alice Roueche (mentor)

Change CHAMPION