THE COLOSTRUM-KIT
A quality improvement project implementing the evidence-based strategy to provide colostrum to the sick or premature newborn infant

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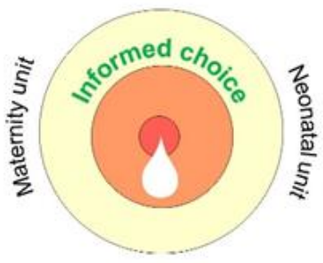
Background

In Sweden approximately 10% of all newborn infants need admission to neonatal care. Establishing and maintaining a milk production can be a major challenge for a mother whose child is admitted to neonatal care. Mother's own milk (MOM) provides several benefits for all newborn infants and colostrum may be applied to the oral mucosa as immunological protection.

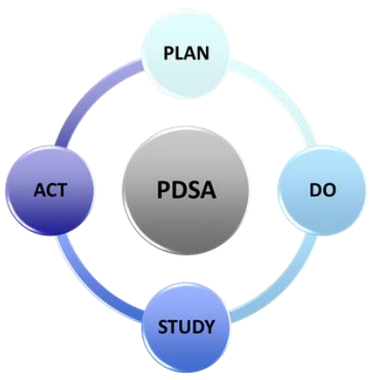
Hypothesis and aim

We hypothesize that if parents are provided with information to be able to make an informed choice about colostrum, the proportion of infants receiving colostrum within the first hours of life will increase, leading to early stimulation of breast milk production, resulting in a higher rate of infants receiving mother´s own milk (MOM) during hospitalization and at discharge from the neonatal intensive care unit (NICU).



Methods

Local lactation and nutrition teams at Karolinska University Hospital, Department of Neonatology, Stockholm developed an information brochure about early administration of colostrum and early initiation of breastmilk expression. A *"colostrum-kit"*, with tools needed for colostrum expression and administration was composed and handed out together with the information.



Breastfeeding at discharge from NICU was investigated prior to implementation of the colostrum-kit and investigated four month after implementation.

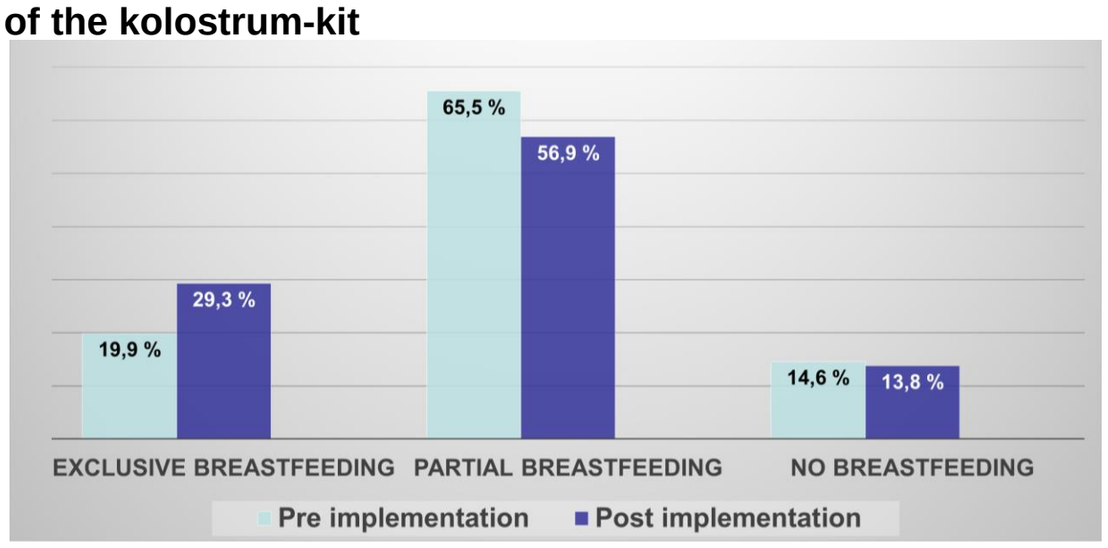
Breastfeeding was defined as exclusive (only MOM regardless of route), partial (formula in addition to MOM) and no breastfeeding (no MOM) at discharge from NICU was investigated prior to implementation of the colostrum-kit and investigated four month after implementation.

Local hospital data was retrieved from the Swedish neonatal quality register (SNQ).

Results

Nutritional discharge data was available for 95,5% (171/179) of infants discharged home during the pre implementation period January to April 2018. During the post implementation period May to August 2018, 98,2% (167/170) had nutritional data available at discharge. After implementation the group of exclusively breastfed infants increased and less infants were partially breastfed. The group of no breastfeeding did not increase.

Breastfeeding at discharge before and after implementation of the kolostrum-kit



Conclusion

By implementation of the colostrum-kit, we support and inform parents based on best practice and existing evidence. We speculate that this quality improvement project may increase exclusive MOM rates at discharge as it supports early stimulation of breast milk production of those mother´s who wish to breastfeed. Further analysis are required to be able to assess associations.

Next step

Evaluating the colostrum-kit tool from three perspectives:

- NICU staff view
- Parental view
- And continuing to exploret he association between implementation of the colostrum-kit, early expression and MOM/breastfeeding at discharge from neonatal care

References: 1.Parker LA, et al. Effect of early breast milk expression on milk volume and timing of lactogenesis stage II among mothers of very low birth weight infants; a pilot study. Journal of perinatology (2012) 32, 205-209 2. Victora CG et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet 2016; 387: 475-90. 3. Hanson LA, Silfverdal SA. The mother's immune system is a balanced threat to the foetus, turning to protection of the neonate. Acta Paediatr. 2009 Feb;98(2):221-8.
4. http://www.ihi.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx

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