





Choo Yin Looi Winnie, KKH Chew Siong Beng, KKH

#### Introduction

Breast milk, uniquely protective and nutritious, is best for infants, more so for ill or premature infants. The quality improvement project on early initiation of breast milk feeding had resulted in an exceedingly enormous supply of expressed breast milk (EBM) being collected from mothers with babies admitted to Neonatal Intensive Care Unit (NICU).





# Problem: Is it necessary to bring all EBM?

Not only did storage capacity become an issue, the thawing of frozen EBM also increased the workload of the nurses. Upon the baby's discharge, unfinished bottles of EBM accumulated over the infant's stay would be returned which was a hassle for the parents to transport back home. Incidences disputing the total number of EBM bottle that parents brought and the number returned were not uncommon. This often resulted in the hospital having to waive charges in order to appease parents.

## Methodology

Research confirmed that fresh EBM possess advantages over frozen EBM. Following that, education of parents and staff on evidence-based practice began. And a workflow for fresh EBM storage was derived. Parents were told to bring adequate fresh EBM for daily feeding and given home storage advice for the infants' return home. This process is monitored and the workflow re-enforced as necessary.



**Excess Fresh EBM** 

Return to Parents

Advise home storage

## Results

Not only were parents and staff relieved of extra baggage, the entire process became less cumbersome for all involved. Feed preparation times were reduced, as was general time and cost.

### Conclusion

With the use of fresh EBM, the baby's nutritional status is enhanced and the storage issue is resolved. Both staff and parents are better served by this new process, thus achieving increased satisfaction in the hospital and at home.





#### Reference

Aksu, T., Atalay, Y., Turkyilmaz, C., Gulbahar, O., Hirfanoglu, I. M., Demirel, N., Onal, E., Ergenekon, E., Koc, E. (2015). The effects of breast milk storage and freezing procedure on interleukine-10 levels and total antioxidant activity. The Journal of Maternal-Fetal & Neonatology Medicine, 28(15), 177-802.

Chang, J.C., Chen, C.H., Fang, L.J., Tsai, C.R., Chang, Y.C., & Wang, T.M. (2013). Influence of prolonged storage process, pasteurization, and heat treatment on biologically-active human milk proteins. Paediatric and Neonatology, 54, 360-366.

Hanna, N., Ahmed, K., Anwar, M., Petrova, A., Hiatt, M., Hegyi, T. (2004). Effect of storage on breast milk antioxidant activity. Archives of Disease in Childhood. 89(6); F518-520. Slutzah, M., Codipilly, C.N., Potak, D., Clark, R.M., Schanler, R.J. (2010). Refrigerator storage of expressed human milk in the Neonatal Intensive Care Unit. Journal of Pediatrics, 156(1), 26-28.