

PROVIDING SAFE PASTEURISED DONOR HUMAN MILK (PDHM) FOR VULNERABLE INFANTS Singapore Healthcare

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AIMS

- The KK Human Milk Bank (KK HMB) is the first of its kind in Singapore and the region
- It is an important clinical service because an exclusive human milk diet is scientifically proven to improve health outcomes in premature babies
- The aim of the milk bank is to provide a ready supply of safe PDHM for hospitalised premature and sick babies to

supplement the milk supply of mothers who are unable to provide enough breast milk to meet their babies' needs

METHODOLOGY

• The KK HMB adopted internationally established guidelines

Management 2018

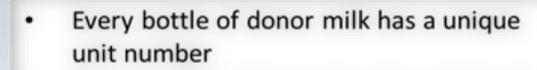
- The processes involved include donor recruitment, donor milk processing and storage as well as ordering and dispensing of PDHM to recipients
- Enterprise risk management (ERM) was undertaken prior to the launch to evaluate, stratify, mitigate and mange the risk of all the processes in its entire workflow to ensure that a robust system is in place and the PDHM provided for hospitalised premature and sick babies is safe and of good quality



- Consent is taken and potential donors fill in a screening questionnaire
- Mandatory blood tests are done to ensure donors are free of transmissible viral illnesses. -HIV, Hepatitis B, Hepatitis C and Syphilis.
- A unique donor identity number is assigned



Donors are educated on hygienic milk expression and collection to minimise bacterial contamination of milk collected



 Frozen milk is delivered to the milk bank and stored in freezers



Donor milk is divided into 50ml,

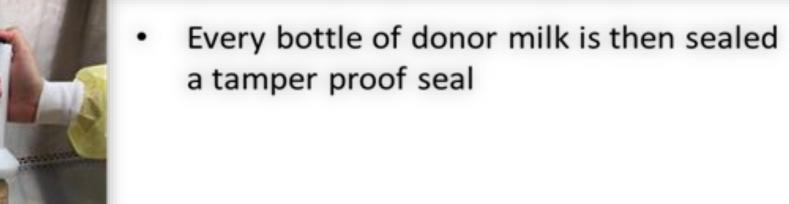


The milk is pooled under sterile conditions



Frozen milk from a single donor is thawed

130ml and 250ml bottles in preparation for pasteurization -----





- Donor milk is pasteurised at 62.5°C for 30 mins (Holder method)
- The pasteurised donor milk is now referred to as PDHM



- Paired milk samples are taken preand post-pasteurisation to test for bacterial contamination
- PDHM not meeting acceptable bacteriological standards are disposed



- A robust IT system ensures donor confidentiality and full traceability of every milk donation from arrival to the bank, during processing, storage to consumption by the recipient
- Additional security measures include security cameras and limiting access to only authorised milk bank staff



- All requests for PDHM is subject to approval by the milk bank director

Size Same

- PDHM are stored in freezers
- Chiller and freezer temperatures are continuously monitored to ensure optimal storage conditions (Building Automation System)

RESULTS

CONCLUSIONS

KK HMB was successfully launched on 17 August 2017. Donor screening was successful with low failure rate

- 0.7% (2 out of 290) of donors failed the screening questionnaire
- 0.7% (2 out of 290) failed the blood tests
 The processing was well managed with little wastage of donor milk received
- 1.4% of 2883 litres of processed PDHM was discarded due to bacterial contamination

All requests for PDHM were successfully fulfilled

- 239 recipients have benefitted from the service
- No adverse events were reported

KK Human Milk Bank has achieved it goal and through ERM it has:

- Established a secure work environment
- Developed a standard for processing donor human milk into safe PDHM through stringent donor screening, bacteriological testing and proper handling and storage of human milk
- Implemented a robust system to ensure donor confidentiality and traceability for the benefit of our donors and recipients