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Halimatussaadia Mother's Milk Centre (HMMC): A Unique Shariah Compliant Human Milk Bank with Single Donor Pools, Satiety Based Distribution

Human milk is widely acknowledged as the gold standard for infant nutrition, especially for preterm and low birth weight neonates. World Health Organization summarized a few factors in relation to the global implementation of human milk banking which include regulatory issues, quality criteria and management, data registries, ethical issues, and global coordination.¹ In Muslim majority countries where Islamic jurisprudence guides medical decisions, milk kinship often takes precedence over other clinical considerations. This is particularly relevant in the context of human milk banking, where milk kinship carries significant ethical and legal implications under Shariah law.²

Donor milk handling practices in human milk banks vary, pooling milk from a single donor to combining donations from multiple anonymous donors. For instance, the United Kingdom Association for Milk Banking (UKAMB) adopts a single donor pooling model, allowing traceability within a donor's milk while maintaining anonymity. In contrast, the Human Milk Banking Association of North America (HMBANA) allows pooling from multiple- donors, typically between two to six - resulting in fully anonymous mixed batches. While pooling improves efficiency and standardization, donor anonymity poses challenges in tracing milk kinship, which carries ethical and legal implications in certain cultural and Islamic contexts.²

In some Muslim-majority countries, human milk bank initiatives without prior endorsement by Islamic councils often face religious pushback and are either transformed or dismantled completely.³ In Turkey, a pilot human milk bank was halted due to religious concerns over milk kinship, and hence absence of consensus with religious authorities can hinder implementation.⁴

The Halimatussaadia Mothers' Milk Centre (HMMC), officially established in July 2022 at the Sultan Ahmad Shah Medical Centre (SASMEC) @IIUM, Kuantan, Pahang, represents a significant milestone in Malaysia's advancement of Shariah-compliant donor milk services. As the country's first Islamic-compliant milk bank recognized by the Malaysia Book of Records, HMMC operates under stringent protocols that are reviewed annually by the Pahang State Religious Council, ensuring continuous adherence to Islamic bioethical principles.

Central to the operations of Shariah-compliant milk banks is the concept of milk kinship, which is established when a child receives breast milk from a woman other than the biological mother. In Malaysia, where the Shafii jurisprudence is followed, milk kinship can be formed through any method of feeding, including bottle, cup, or nasogastric tube not limited to direct breastfeeding. According to the Shafii and some Hanbali scholars, at least five separate satiety feedings are required to establish this kinship, regardless of the feeding method. This interpretation has significant implications for milk bank operations and legal parentage considerations under Islamic law.

However, assessing satiety in preterm and sick neonates can be difficult, as these infants may not consistently exhibit typical cues of fullness such as turning away or ceasing to suck that are readily observed in term infants.⁵

HMMC exemplifies a single-donor-pools, satiety based distribution model that integrates strict satiety based volume control to reduce the risk of milk kinship while ensuring the safe provision of high quality donor milk. In this model, "satiety feeding" refers to a controlled feeding volume intended to meet the infant's immediate needs

without exceeding the threshold that would establish kinship under Islamic law. At HMMC, satiety is operationally defined using a modified total fluid intake index tailored to each recipient's clinical needs. During non-satiety feeding, a recipient may receive repeated feeds from the same donor until their own mother's milk becomes available. In contrast, under satiety feeding protocols, infants may receive up to three satiety feedings from one donor. If further satiety feedings required and indicated while waiting for access to mother's own milk (MOM), milk from different donors should be used. Each feed is meticulously recorded to ensure traceability and compliance with Shariah principles.

This approach mitigates risks associated with multi donor pooled milk particularly the loss of donor recipient traceability while upholding both safety and religious integrity. It exemplifies operational excellence in Shariah-compliant neonatal nutrition, harmonizing biomedical ethics with Islamic jurisprudence through structured implementation and oversight.

Religious and Ethical Safeguards: Under Shafii jurisprudence, five or more feedings that induce satiety in infants under two years of age establish milk kinship. At HMMC, most donors prefer to avoid forming such ties. To accommodate this, the centre imposes strict volume limitations per donor. In rare cases where milk kinship may be unavoidable, informed consent is obtained from both the donor and the recipient's guardian before the threshold is met. Families are then formally introduced, fostering a lifelong commitment to honour the religious and social responsibilities associated with milk kinship. A milk kinship card is issued for transparency and lifelong documentation.

Comparative Ethical and Operational Considerations: Unlike conventional donor milk models relying on anonymous pooling, HMMC adopts a personalized, traceable approach grounded in religious and ethical accountability. Informal community milk sharing may support cultural values but often lacks institutional safeguards. HMMC

bridges this gap by providing a regulated, safe, and Shariah-compliant alternative meeting both medical and religious standards.

Implications and Recommendations: The HMMC model establishes a meaningful benchmark for Shariah compliant donor milk systems in Sunni Muslim majority contexts. It offers an ethically sound alternative to anonymous single or multi-donors pooling, demonstrating that religious jurisprudence can be integrated with evidence-based neonatal care. Neonatal units in similar settings can replicate the HMMC framework to respect both faith and science.

To expand HMMC's impact, scaling its principles across Malaysia and other Muslim majority countries is imperative. Integrating digital tracking systems will enhance donor-recipient traceability and safety protocols. Continuous collaboration between neonatologists and Islamic scholars remains vital for refining protocols as religious guidance evolves. Additionally, research into satiety thresholds in preterm infants is needed to support clinical standardization and strengthen the scientific foundation of Shariah-compliant feeding protocols.

The Halimatussaadia Mothers' Milk Centre exemplifies how Islamic bioethics can shape and guide modern neonatal care. Through its single-donor-pools model with strict satiety based volume control, HMMC offers a replicable, ethically sound, and Shariah-compliant model for human milk banking setting a pioneering precedent for Muslim-majority healthcare systems worldwide.

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