Breastfeeding is associated with less infection, less obesity and higher intelligence when compared with formula feeding. The benefits of human milk for preterm infants relate to the unique composition, especially protein (nutritional and immune-modulatory components), lipid (LC-PUFA) and probiotics. Mother’s own milk is preferred, but the provision of donor human milk as an alternative to artificial formula is an important contribution to the nutrition and protection from infections for preterm infants. Systematic reviews suggest a lower risk of necrotising enterocolitis with pasteurised donor human milk versus formula. However, human milk needs to be fortified for very preterm infants to achieve growth close to in utero rates. Recent evidence suggests that fortifiers produced from human milk versus bovine milk may further reduce necrotising enterocolitis.

Human milk banks (HMBs) must have a risk management system to maintain a safe product especially as many operate in an unregulated environment. To ensure safety, the HMB in Australia has committed to meet the appropriate standards recommended in the Code of Good Manufacturing Practices (Blood and Tissues) and models risk management during processing on Codex HACCP (Hazard Analysis Critical Control Point) requirements. There is scope to continually reevaluate the screening of donors and quality standards. This will be most effective if strong networks of HMBs are developed with regional reference laboratories to encourage compliance with safety guidelines. Cost effectiveness is most likely when HMBs are associated with large neonatal intensive care units.

Further research and development for treating donor milk to retain full bioactivity is needed. Standard pasteurisation destroys between 30–60% IgA, lactoferrin and lysozyme, and inactivates bile salt-stimulated lipase. Improved technology using methods such as thermal ultrasound or ultraviolet light may provide protection from
disease transmission while retaining full bioactivity of donor human milk. HMB networks will facilitate collection of evidence for refining HMB practice which should translate to improved outcomes for preterm and sick infants.