

# Identifying Feeding Practices and Nutritional Requirements for Low Birth Weight Infants in Low- and Middle-Income Countries



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## Context

Roughly **20 million babies** are born each year with low birthweight (LBW), defined as a birthweight of less than 2500 grams. The vast majority of these births occur in low-resource settings. LBW infants experience higher rates of mortality, morbidity, and poor growth as compared to infants with birthweights above 2500 grams. Through direct and indirect causes, LBW contributes to **60-80% of neonatal deaths**. Many of these deaths are preventable with improved feeding practices. However, there is **limited data** to inform guidance around optimal feeding practices for this vulnerable population.

## Objective

This project explored **current** feeding practices and nutritional requirements of LBW infants. Through a formal desk review, the project reviewed the current literature and guidance available on:

- ❖ Use of supplements, fortification, and growth outcomes, as related to donor human milk (DHM)
- ❖ Volume requirements for supplementation, breastfeeding, and fortifiers
- ❖ Outcomes and logistics of DHM use in various settings

## Methods

- ❖ Generated primary research questions to assess current feeding practices and nutritional requirements of LBW infants
- ❖ Developed a search strategy to answer primary research questions
- ❖ Built a database to record findings
- ❖ Wrote summaries to address the primary research questions
- ❖ Identified areas where further searches are required



*Thank you to the Maternal, Newborn, Child Health and Nutrition team at PATH, especially Kimberly Mansen and Kiersten Israel-Ballard for their constant support and guidance on this project.*

## Lessons Learned

- ❖ LBW is a heterogeneous term: includes small-for-gestational age, preterm, and term
- ❖ Common outcomes include growth, bronchopulmonary dysplasia, and necrotizing enterocolitis (NEC)
- ❖ Nutritional needs vary by weight and age
- ❖ Growth acts as proxy for nutritional status
- ❖ Majority of research conducted in developed countries
- ❖ LBW infants fed formula as sole diet or as supplement to mother's own milk have improved short-term growth, but higher rates of NEC compared to those fed DHM
- ❖ Individual fortification is preferred over standard fortification, but may not be feasible in all settings

## Recommendations

- 1) Future targeted searches to explore feeding in outpatient settings
- 2) Explore market and logistical considerations of DHM
- 3) Evaluate the effectiveness of nutrition counseling for LBW infants
- 4) Identify cost and availability of human milk fortifiers in low- and middle-income countries