

# Lessons learned in implementing the Low Birthweight Infant Feeding Exploration (LIFE) study: a large, multi-site observational study

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## Abstract

**Objective:** Globally, early and optimal feeding practices and strategies for small and vulnerable infants are limited. We aim to share the challenges faced and implementation lessons learned from a complex, mixed methods research study on infant feeding. **Design:** A formative, multisite, observational cohort study using convergent parallel, mixed-methods design. **Setting:** 12 tertiary/secondary, public/private hospitals in India, Malawi, and Tanzania **Population or Sample:** Moderately low birthweight infants (MLBW; 1.50-2.49kg) **Methods:** We assessed infant feeding and care practices through: 1) assessment of in-facility documentation of 603 MLBW patient charts; 2) intensive observation of 148 MLBW infants during facility admission; and 3) prospective one-year follow-up of 1114 MLBW infants. Focus group discussions and in-depth interviews gathered perspectives on infant feeding among clinicians, families, and key stakeholders. **Results:** Hospital-level guidelines and provision of care for MLBW infants varied across and within countries. 89% of charts had missing data on time to first feed; 56% lacked discharge weights. Among 148 infants observed in-facility, 18.5% were discharged prior to meeting stated weight goals. Despite challenges during COVID, 90% of the prospective cohort was followed until 12 months of age. **Conclusions:** Enrolment and follow-up of this vulnerable population required additional effort from researchers and the community. Using a mixed-methods exploratory study allowed for a comprehensive understanding of MLBW health and evidence-based planning of targeted large-scale interventions. Multi-site partnerships in global health research, which require active and equal engagement, are instrumental in avoiding duplication and building a stronger, generalizable evidence base.

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