

7**From Knowing to Doing: A Nurse-Led Model for Building Maternal Competence in the Home Care of Low-Birth-Weight Infants****Medonna S.^{1*} & Prof. Dr. Gaurav Tyagi²**¹Research Scholar, Department of Nursing, Desh Bhagat University, Mandi Gobindgarh, Punjab, India.²Professor, Department of Nursing, Desh Bhagat University, Mandi Gobindgarh, Punjab, India.

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Abstract

Low birth weight (LBW) (weight <2500g, irrespective of gestational age) is one of the most important maternal and newborn health issues and is linked to neonatal mortality, infection, hypothermia, feeding difficulties, poor post natal growth and adverse developmental outcomes. With improvements in neonatal care, more of these fragile babies are now surviving, and this has resulted in a huge burden on mothers and families for the continuation of care upon leaving the hospital. That transition relies not only on the knowledge of mothers, but on whether their knowledge is brought home in the form of safe, consistent care. This chapter looks at the gaps in knowledge–practice in the care of LBW and preterm infants and the strategies for improving home-based care, focusing on thermal protection, breastfeeding, Kangaroo Mother Care (KMC), hygiene and infection prevention, danger-sign recognition, growth monitoring, health-care-seeking behaviour, discharge preparation and continuity of professional care. One thing the evidence agrees on is that information alone is seldom enough to lead to lasting behaviour change. The use of structured education combined with demonstration and supervised practice, family involvement, discharge planning, home visits and professional or digital follow-up is much more effective. The chapter discusses the adaptation of mothers to the demands of caring for an LBW infant in the context of Roy's Adaptation Model and a planned home-based maternal intervention in Kollam District, Kerala. Nurses are strategically placed as the cornerstone of care between the hospital and the community, as they provide competency-based education, support breastfeeding, promote KMC, deliver psychosocial care, assess home practices and provide timely referral. The chapter concludes that culturally appropriate, family-centred, nurse-led approaches to home care are clearly effective in enhancing the safety of the hospital-to-home transition and building maternal caring capacity. Future studies should focus on directly observed practice, longer-term outcomes, and family

involvement, in addition to short-term knowledge acquisition and feasibility for implementation, and infant health outcomes.

Keywords: Low Birth Weight, Preterm Infant, Home Based Care, Maternal Education, Maternal Practice, Nursing Intervention, Kmc, Breastfeeding, Neonatal Care, Kerala.

Introduction

Birth weight is a single most important measure of maternal, neonatal and population health. Low birth weight (LBW) is defined as a birth weight < 2500 g at any gestational age as defined by the World Health Organization. LBW is caused by premature birth, restriction in fetal growth or a combination of the two. Around 14.6% of live births in 2015 were estimated to be low birth weight (LBW), with the majority of these babies born in low and middle-income countries (LMICs) and Southern Asia having a disproportionately high share of these babies (Blencowe et al., 2019).

The public-health importance of LBW is far more than just about birth weight. These infants are at increased risk of short-term developmental problems, have greater problems with thermoregulation, feeding, hypoglycaemia, breathing, infection and growth, and have an increased risk of long term developmental problems. It is therefore important that appropriate care is provided during the neonatal period, not only for survival, but for the course of growth and development thereafter.

LBW is still a big public-health issue in India. The fifth National Family Health Survey (2019-2021) analysis again reveals the prevalence and determinants of LBW which are interrelated maternal, nutritional, socio-economic and obstetric factors (Girotra et al., 2023).

An important paradigm shift in neonatal care today is the understanding that successful care is not synonymous with 'survival to discharge'. The transition home from the hospital is a pivotal time of care itself. Most of the monitoring of temperature, feeding, infection, respiratory status and growth is passed on to mothers and families when the infant is discharged from hospital.

The pertinent question is no longer just whether an LBW infant can be stabilised in a health facility. It's also about whether the family is truly ready to take safe care home with the baby.

Home-based Care as an Integral Part of the Continuum of Neonatal Care

The home-hospital interface for an at-risk infant can be a fine balance. Discharge does not mean an end to specialist care, it means a move in the location of specialist care – and in who provides it.

Mothers should ensure the baby is kept warm, fed correctly, be able to provide good hygiene, know how to provide KMC when necessary, watch for signs of trouble, and identify the need for professional assistance. These activities are demanding both factual knowledge, psychomotor skill, confidence, family support and health care facilities.

The most recent WHO guidance for preterm and LBW infants is now on this continuum. The guideline of 2022 emphasizes family engagement, structured education and counselling, preparation for discharge, post-discharge support and home visiting by trained health workers, in particular the latter (World Health Organization, 2022).

This policy guidance is directly applicable to the home-based intervention that is planned in Kollam District, where mothers are provided education, demonstration, and printed material to reinforce their knowledge and practice. It is indicative of a general trend of moving away from one-off health education sessions and towards a continuous family support.

The Maternal Knowledge–Practice Gap

Knowledge is generally deemed as the primary 'lever' that can be used in neonatal-health interventions and this is reflected in the use of 'maternal education'. Knowledge doesn't necessarily lead to behaviour.

Although a mother might be aware that an LBW infant requires to remain warm, she might not always engage in skin-to-skin care. She may know what breast-feeding is for, but she might not feel attached, she might not be able to express or she might not have the baby on the breast often enough. Similarly, identifying a danger sign does not mean the person will seek care in time if it is hard to access a health provider, or if financial or family issues are involved.

This is the knowledge–practice gap and can be understood at three interacting levels.

- **Individual Factors**

Factors influencing the capacity for care include maternal age, education, previous caregiving experience, health literacy, self-efficacy, and post-childbirth physical and emotional health.

The care of a very young or fragile baby can also cause anxiety. Some mothers don't feel confident enough to hold the baby, afraid they might hurt them; others know what to do, but cannot do it every time because of other time-consuming responsibilities they have at home.

Educational programmes should therefore be geared to confidence and skill as well as knowledge.

- **Family and Interpersonal Factors**

Family and Interpersonal Factors—Consuming alcohol or other drugs while interacting with family and friends.

Moms seldom make decisions about caring for their newborns alone. Fathers, grandparents and other relatives play a role in relation to feeding, bathing, thermal practices, traditional remedies and opinions regarding seeking medical care and when.

Within the family, support can help to decrease the mother's workload and support appropriate practices and conflicting beliefs can hinder adherence.

The evidence of family integrated care reinforces the fact that parents are partners in neonatal care and not visitors to neonatal care. Family-integrated models have been linked to positive outcomes such as breastfeeding, parent readiness and outcome for some babies, including a multi-centre, cluster-randomised trial in China that showed positive results of family-integrated care on breastfeeding and a variety of clinical outcomes (Hei et al., 2021).

- **Structural and Health-System Factors**

There is a third set of issues which are entirely beyond the mother and family. Mothers may not be able to apply what they have learnt due to poverty, distance, transportation issues, lack of trained staff, inadequate referral systems, poor lines of communication with hospital staff and/or community staff.

The knowledge–practice gap should not, therefore, be interpreted as failure of maternal responsibility. It is mostly a product of a combination of personal ability, family environment and opportunity structure in most instances.

Roy's Adaptation Model and Maternal Caregiving

The Adaptation Model developed by Sister Callista Roy is used as the conceptual framework in this chapter as it is well suited for understanding the adaptation of the mother after the birth of an LBW infant.

Roy views the human being as an adaptive system which is constantly interacting with an evolving environment. The reactions to environmental stimuli can be appropriate or inappropriate depending on the coping resources the person has.

New LBW infants are at a critical moment when a lot of change is happening in the caretaking environment: the infant is fragile and the care is very intensive. In Roy's terms, the knowledge, skills, and needs of caregivers are the focus stimulus and previous caregiving experiences, social support and health education are the contextual stimuli. Maternal age, education, occupation, parity, family income, gestational age and the birth weight of the infant act as residual stimuli that further influence the adaptive process.

Nursing is not just about conveying information in this context. It is about building mother knowledge, skill and confidence in an adaptive response.

The conceptual pathway is summarized in Figure 1: demands of caregiving and the surrounding contextual stimuli shape maternal perception and coping and structured nursing intervention is provided to support the development of knowledge, practical skill and confidence, which in turn enables adaptive home-care behaviour and safer and more consistent care of the infant.

Figure 1. Roy's Adaptation Model applied to maternal caregiving for the LBW infant

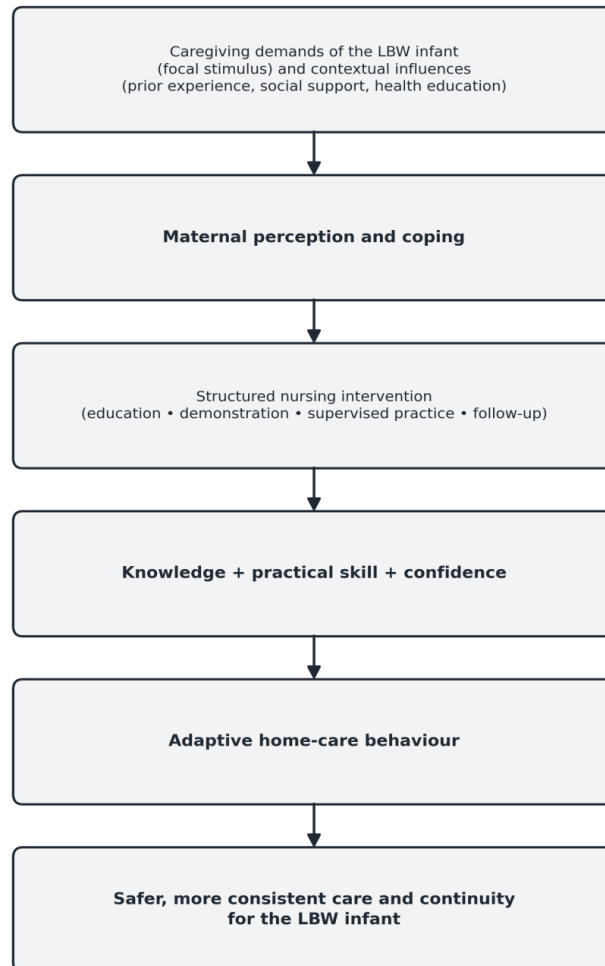


Figure 1: Roy's Adaptation Model applied to maternal caregiving for the LBW infant

This framework reinforces the case for interventions that combine cognitive education with the deliberate development of practical skill.

Other LBW Care Components

- **Thermal Protection**

There is a particular risk of hypothermia in LBW and preterm infants due to inadequate subcutaneous fat, a high ratio of body surface area to body mass and poorly developed thermoregulatory mechanisms. Creating the proper thermal environment is thus an integral part of the care profession.

Parents (specifically mothers) should be given clear instructions on wrapping, skin to skin contact, clothing and minimising unnecessary exposure to cold. Also, the caregiver's capacity to detect abnormal temperature should be developed, along with the knowledge when to seek professional advice.

- **Kangaroo Mother Care**

KMC is now one of the most-supported interventions for preterm and LBW infants, which includes additional skin-to-skin time, feeding and monitoring.

In the WHO Immediate KMC Study Group (2021), initiating KMC as early as possible following birth in infants weighing 1.0-1.799kg resulted in better survival outcomes than the traditional way of stabilising the infant before commencing KMC.

This recommendation has been supported by further evidence. A systematic review and meta-analysis of 31 trials with 15,559 infants in 2023 showed that KMC reduced the risk of death and possibly severe infection, with earlier initiation of KMC being associated with lower neonatal mortality (Sivanandan & Sankar, 2023).

The benefits of KMC go beyond just the physiological. Similarly, systematic-review evidence suggests that there are also psychological advantages for mothers, such as a decrease in moderate to severe postpartum depressive symptoms (Anwar et al., 2023).

However, the effectiveness of KMC at home is dependent on mothers' ability to practice KMC correctly and confidently. Demonstration with return demonstration will thus be critical.

- **The focus of this section is on breastfeeding and human milk.**

Fragile newborns are especially dependent on human milk. The current WHO guidance is to exclusively breastfeed preterm and LBW babies for 6 months as appropriate, and the American Academy of Pediatrics considers breastfeeding and human milk as the gold standard in infant nutrition (Meek et al., 2022).

But for mothers of LBW babies, a call to breastfeed is not sufficient. Small or premature babies may have a weak suck, fatigue during feeding or may not be able to learn how to suck, swallow and breathe in sync.

It is important, therefore, that nursing education include positioning, attachment, frequency of feeds, signs of successful nursing, expressing breast milk if necessary, and early signs of feeding problems. Breastfeeding should be seen, not just encouraged.

- **Hygiene & Infection Prevention**

LBW babies' immune systems are less developed and they are therefore more susceptible to infection. Home-care education should include topics such as maintaining good hand hygiene, wearing appropriate clothes, maintaining proper cord care, handling the baby safely, not touching unwell individuals unnecessarily, and keeping the home environment clean.

Advice should be practical for the particular household. Recommended solutions that are too complex to maintain are likely to yield knowledge but not necessarily practice.

- **Recognising Danger Signs**

Mothers must be sufficiently knowledgeable to identify early signs of decline: poor or absent feeding; lethargy, abnormal temperature; difficulty in breathing; convulsions or changes from the normal condition of the infant.

Cautionary signs cannot be taught without providing the caregiver with a clear action plan; who to go see and how urgent that is.

- **Growth Monitoring and Follow-up**

Weight gain continues to be an important measure of nutritional progress as well as overall infant health and planned follow-up visits allow for infant feeding, development, immunisation and maternal concerns to be reviewed.

Home-based care is not meant to take the place of formal health services but rather to establish a relationship between the family and the health system.

Beyond Health Education: A Know–Show–Do–Support Model

Traditional health education tends to concentrate on the "know" stage — telling mothers what they should do. Research on transitional and family-centred newborn care instead points to four linked stages of effective intervention:

- Know — provide accurate, understandable information.
- Show — demonstrate the caregiving behaviour directly.
- Do — let the mother carry out the behaviour herself, with the nurse observing and correcting technique.
- Support — reinforce the practice after discharge, through home visits, counselling, telephone contact, or suitable digital follow-up.

This model applies particularly well to KMC, breastfeeding, thermal protection, and hygiene, where skill matters as much as knowledge.

Recent evidence supports this multimodal approach. A nurse-led Indian randomised controlled trial of a multi-component transitional programme — combining family-centred education, demonstration, a home-care guide, an early home visit, and video-call follow-up — produced a significant effect on maternal knowledge and skill, and was associated with better infant weight at some follow-up points, although it found no significant difference in readmission or mortality.

This finding matters because it reframes a modern home-care intervention as a process to be sustained over time, rather than a single teaching session delivered once at the bedside.

Discharge Readiness: From Hospital Supervision to Home Responsibility

The transition out of the neonatal intensive care unit (NICU) can be highly stressful for parents. Having grown used to professional staff monitoring the infant around the clock, parents may suddenly feel solely responsible for identifying and responding to problems themselves.

Discharge preparation is therefore better organised around demonstrated competence than around the delivery of routine information. Rather than asking:

“Has the mother received enough education?”

the more clinically useful question is:

“Can the mother show that she is able to care for her infant safely?”

Discharge preparation accordingly includes observed breastfeeding, a KMC demonstration, a hygiene assessment, recognition of danger signs, guidance on any medication or supplementation, and a clear explanation of follow-up services.

Family-integrated care has attracted growing interest as a way of building this kind of readiness. A 2024 randomised study focused specifically on family-integrated care found benefits for discharge preparation and home-care readiness among parents of premature infants (Tiryaki et al., 2024).

These findings support the broader argument that parental involvement should begin at admission, not at the point of discharge.

Home Visiting and Community-Based Nursing Support

One of the principal advantages of a home visit over hospital-based counselling is that it reveals what actually happens in the place where care is delivered.

A mother may answer confidently when questioned in a health facility, yet still struggle with KMC or feeding once at home. A home visit allows the nurse to observe behaviour directly, understand what is or is not working within the mother's own environment, and give feedback grounded in that reality.

This is one reason WHO recommends that trained health workers conduct home visits for families of preterm and LBW infants.

A structured home-visit assessment typically covers several domains, summarised in Table 1.

Table 1: Domains Covered in a Structured Home-visit Assessment

Domain	What the Nurse Assesses or Supports
Feeding and breastfeeding	Attachment, positioning, feeding frequency, and signs of difficulty with milk transfer
Thermal protection	Clothing, exposure to cold, and skin-to-skin/KMC practice
Hygiene	Hand hygiene, cord care, and cleanliness of the infant's immediate environment
KMC practice	Positioning, duration, and maternal comfort and confidence
Infant condition	Feeding, temperature, breathing, and activity level
Maternal competence	Knowledge, confidence, and demonstrated ability to perform care
Family support	Whether family members are available, informed, and supportive
Referral	Need for immediate or planned professional review

This structured approach is particularly relevant to the planned study in Kollam, whose design combines a structured knowledge questionnaire with an observational practice checklist, rather than relying on self-reported knowledge alone.

Family-Centred Care

The mother's role remains central, but expecting her to manage every aspect of care for a vulnerable newborn alone is often unrealistic.

Family-integrated care involves parents more directly in infant care while providing the education and support needed for them to become competent over time. A 2023 scoping review identified staff training, parent education, parental involvement in care, peer support, care planning, and digital support as common components of family-integrated-care (FICare) programmes, and found broadly favourable breastfeeding outcomes associated with them (Ding et al., 2023). WHO likewise specifically recommends family involvement in the care of preterm and LBW infants.

Fathers and grandparents can be given the same key messages as mothers in home-based interventions, which helps minimise conflicting advice and supports KMC, breastfeeding, and appropriate health-care-seeking.

Family-centred practice does not diminish the mother's role. It aims instead to build a more supportive caregiving environment around both mother and infant.

Psychosocial Support and Maternal Confidence

A purely biomedical approach to home-based care risks overlooking the psychological experience of caring for a vulnerable infant.

Preterm birth, NICU admission, and LBW can all heighten parental fear, uncertainty, and stress, and maternal confidence directly affects a mother's willingness to handle her infant, to practise KMC, and to respond independently to routine caregiving needs. KMC itself can support parental well-being, and educational-behavioural interventions have been shown to reduce maternal stress and anxiety in some populations.

Nurses therefore need to attend not only to whether the infant is being cared for adequately, but to whether the mother feels able to provide that care. Simple supportive strategies help: acknowledging concerns, reinforcing what the mother is doing well, creating opportunities to practise, and helping family members share caregiving responsibilities appropriately.

Digital Follow-Up: An Adjunct, Not a Replacement

Digital communication can usefully supplement, rather than substitute for, face-to-face home visits. Phone calls, text messages, video consultations, mobile applications, and short educational videos can reinforce what has already been taught and give mothers a channel for follow-up questions.

A 2022 scoping review of post-NICU interventions identified home visits, telephone and video calls, text messaging, and web-based applications among the remote strategies used to support families after discharge (Griffith et al., 2022), and a systematic review of digital follow-up for new parents found generally positive effects on infant feeding, parental advice, parental confidence, and the parent–infant relationship (Pajalic et al., 2023).

Digital health should be treated as an enhancement to nursing contact, not a replacement for it. Digital literacy, smartphone and internet access, language, privacy, and maternal preference all need to be considered before relying on it. In Kerala, a hybrid model — in-person nursing visits reinforced by digital follow-up in Malayalam — is worth exploring.

Contextualising the Intervention for Kollam, Kerala

The PhD study underlying this chapter is being conducted in selected community areas of Kollam District, and aims to determine whether a home-based intervention can improve mothers' knowledge and practice in the care of LBW infants.

This setting offers an opportunity to build local evidence, rather than assuming that interventions developed elsewhere will transfer directly to the Kerala context. Maternal education, socio-economic status, parity, family structure, access to public and private health care, distance from follow-up services, cultural beliefs

about caregiving, and prior experience of caring for an LBW infant are all likely to shape how mothers in this setting engage with home-based care.

A locally adapted intervention should therefore incorporate:

- culturally appropriate, understandable education;
- materials in Malayalam where applicable;
- practical teaching alongside theoretical content;
- family involvement;
- home-based observation;
- clear referral guidance; and
- repeated reinforcement over time.

It is important to note that, until data collection and statistical analysis are complete, the sample of mothers and the intervention methodology described here should be understood as planned research rather than as established evidence.

Barriers and Facilitators

Home-based care faces a range of barriers. Breastfeeding difficulties, fatigue, low confidence, and maternal anxiety can all affect adherence. Household responsibilities can interrupt KMC or frequent feeding. Professional advice may conflict with traditional family beliefs, and financial constraints or transport difficulties can delay care-seeking. At the health-system level, mixed messages from different professionals, inadequate discharge preparation, and poor communication between hospital and community services add further difficulty.

Against these barriers, several facilitators stand out:

- a good working relationship with nursing staff;
- practical demonstration of caregiving skills;
- opportunities for return-demonstration;
- clear written and visual information;
- family participation;
- regular home visits;
- peer support;
- a straightforward referral pathway; and
- digital communication suited to the family's circumstances.

Evidence on post-discharge interventions consistently suggests that a combination of strategies, rather than any single educational method, is most likely to be effective.

Suggested Integrated Home-Based Care Model

Based on the evidence presented in this chapter and the conceptual perspective taken, a sequence of eight stages can be followed for an integrated intervention, as illustrated in Figure 2.

- Stage 1 — Assess — Determine what parents know and do, what they are confident with and any past experience and family circumstances.
- Stage 2 — Educate: Give structured information on LBW, breastfeeding, thermal care, KMC, hygiene, infection prevention, danger signs, follow-up.
- Stage 3 — Show: Nurse shows important skills not just talks about them.
- Stage 4 Practise: Mother practices the skill while nurse is observing technique and providing feedback.
- Stage 5 — Support: Key messages are communicated regularly to relevant family members who are supported to assist the mother.
- Stage 6 — Observe: Practices are evaluated in the actual home environment where the obstacles to proper practice may become apparent.
- Stage 7 — Reinforce: Digital or telephone follow-up; clarifies questions & resolves minor issues between visits.
- Stage 8 — Refer: There are clear pathways for escalating danger signs, feeding difficulties, growth concerns and/or maternal difficulty.

Figure 2. The eight-stage cycle of nurse-led, home-based LBW care

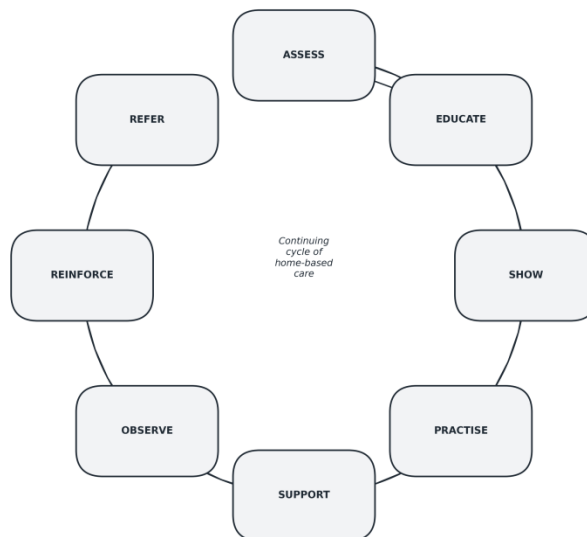


Figure 2: The eight-stage cycle of nurse-led, home-based LBW care

As Figure 2 illustrates, this is not a linear, one-off sequence but a cycle: assessment, education, and support continue across follow-up contacts as the infant grows and new concerns arise. The outcome that matters is not simply that mothers gain knowledge, but that they provide competent, consistent, and sustainable care.

Nursing Practice implications

This evidence base could lead to changes in nursing practice in several aspects.

First, discharge education should be directed toward proven competence, not just to the sharing of information: mothers should be able to demonstrate, not just talk about, important caregiving skills.

Second, knowledge and practice should be evaluated independently as a high knowledge score does not necessarily indicate competent practice.

Third, KMC and breastfeeding should not only be discussed, but directly observed and corrected as required.

Fourth, where appropriate, family members shall be involved in teaching.

Fifth, confidence, anxiety and stress play a significant role in how mothers care for their babies and should be considered as part of the routine follow-up care for newborns.

Sixth, support for home visiting should be reinforced where possible, as this is an effective way to reach the most vulnerable infants.

Finally, digital communication should be used in a complementary fashion to in-person nursing care, and not in lieu of such when clinical judgement deems it necessary.

Implications for Nursing Education

Nursing curricula should include the acquisition of neonatal-care skills, not just knowledge. The core competencies are KMC, breast feeding, thermal protection, infection prevention, neonatal danger signs, discharge counselling, communication, family centred care, home visiting and digital health.

This could be particularly useful with simulation-based teaching as students can rehearse not only the clinical procedure itself but also how they can teach and coach a mother to undertake this procedure.

Thus framed, the nurse's role goes beyond that of the direct neonatal care provider to the development of competence among family care providers.

Policy and Programme Implications

Home-based LBW care is best understood not as a stand-alone research project but as part of an integrated maternal, newborn, and child-health (MNCH)

system. WHO's recommendations on family involvement and trained health-worker home visits already provide policy support for this approach.

Programmes can build standard discharge checklists, competency assessments, follow-up schedules, and referral pathways, with community health workers continuing nursing-led education at community level after hospital discharge. Digital technology can improve efficiency, particularly where in-person contact is difficult to arrange, but any digital component needs to be designed with an awareness of unequal access.

Economic evaluation is also essential. An intensive programme may prove effective yet be impractical to scale. Further research is therefore needed not only on whether such interventions work, but on the professional time and cost they require, and whether they can realistically be built into routine services.

Future Directions and Research Gaps

Several important gaps remain despite a growing evidence base.

First, much of the educational research to date has measured knowledge shortly after an intervention; further work is needed to establish whether behaviour change is sustained over time.

Second, self-reported practice is vulnerable to social-desirability bias, which strengthens the case for greater use of direct observational measures.

Third, research should more clearly distinguish maternal knowledge from caregiving skill, and home-care behaviour from service use and infant outcomes, rather than treating these as interchangeable.

Fourth, family involvement warrants closer study, since fathers and grandparents can meaningfully influence whether recommended practices are sustained.

Fifth, implementation research is needed to establish how feasible it is to embed home-based interventions within existing health systems.

Sixth, mixed-methods research could help explain why some recommended behaviours are adopted by mothers and others are not.

Finally, evidence from Kerala is valuable in its own right, since cultural, educational, socio-economic, and health-system conditions all shape how such interventions can realistically be implemented; region-specific research is therefore likely to support more realistic and scalable intervention design.

Conclusion

LBW babies need continuity of care from the health facility to home. Responsibility for feeding, thermal protection, KMC, hygiene, monitoring and health-care-seeking greatly shifts to mothers and families as infants have a greater chance of survival.

Knowledge is necessary for safe caregiving, but not enough. Maternal behaviour is influenced by confidence, skill, emotional state, family relationships, socio-economic circumstances and access to health care. Thus, the knowledge–practice gap is not just a lack of health information, but is a multi-dimensional phenomenon.

Evidence to date suggests a multimodal intervention consisting of structured education, demonstration, supervised practice, family engagement, discharge planning, home visits, and ongoing follow-up. KMC is one of the more straightforward interventions which can help with infant survival and prevention of infections, support breastfeeding and have a positive impact on the welfare of parents.

Nurses are key players in this transition. They prepare mothers for discharge, develop practical skills, promote breastfeeding and KMC, provide psychosocial support, and link up with other health services.

The home-based intervention for Kollam District is conceptually very relevant with this neonatal care priority; especially it is very relevant to addressing the relationship between knowledge and practice of mothers.

Finally, the question that is more useful is not what the mother knows but whether she can safely, consistently, provide care to her infant with confidence in her own home. This knowledge–practice gap provides a real pathway to improved continuity of care for newborns, maternal competence and better outcomes for vulnerable babies.

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