



## INDONESIA: Support for caregivers using Little Baby Handbook together with MCH Handbook



Little Baby Handbook, the book supplementary used for small infants together with Maternal and Child Health Handbook, Indonesia, 2023

### Background of Little Baby Handbook

In Indonesia, preterm birth and low birthweight (LBW) were the leading causes of infant mortality in 2022, accounting for 35.5% of deaths. With most births now occurring in medical facilities, there is a growing need for a continuum of care (COC) to support preterm and/or LBW infants after discharge. Research shows that mothers of these infants face higher risks of postpartum depression and bonding challenges due to the stress of caregiving. To prevent caregiver isolation, strong support systems are essential. In 2023, with support from the Japan International Cooperation Agency, the Indonesian Ministry of Health launched the Little Baby Handbook (LBH) as a supplement to the Maternal and Child Health (MCH) Handbook. The LBH aims to help caregivers provide ongoing care and support for preterm and/or LBW infants, strengthening the COC.

### What is LBH?

The LBH is distributed to neonates with a birth weight of less than 2,500 grams or a gestational age of 37 weeks or less, and is to be used in conjunction with the MCH Handbook until at least two years of age. The LBH is 35 pages long and comprises health information and health records. It provides guidance on the care of small infants,

emphasizing individualized care to promote infants' healthy growth and development based on their corrected age. This is calculated by subtracting the number of weeks of prematurity from the child's chronological age. The LBH also provides guidance on care to promote bonding and attachment. There are sections for caregivers to take notes on what they observe or notice, as well as care recording forms for health workers. The LBH is designed with the user's interest and viewpoint, featuring extensive use of color illustrations and concise language (Table 1).

### How LBH is used and the roles expected of LBH

Caregiver-infant bonding is a strong emotional rapport built on the interaction between caregivers and their infants. It strengthens the caregiver's emotional responsiveness while promoting the infant's sense of security, emotional and cognitive development, and physiological regulation. Utilizing the LBH, caregivers are guided to acquire supplemental stimulation techniques such as kangaroo mother care (KMC) and touch care immediately after birth, promoting caregiver-infant bonding and attachment. With the support of health workers, caregivers gradually gain confidence in practicing these techniques. In turn, the LBH also empowers health workers to deliver more structured and confident health guidance.

The LBH serves as a tool for monitoring child growth and development. Care for preterm and/or LBW infants requires extensive assessment and individualized interventions. The LBH facilitates caregivers performing frequent anthropometric and developmental assessments of their children based on their corrected age. This enables early detection of abnormalities at the community level, leading to timely intervention. This close monitoring can also enable health workers to provide individualized care tailored to each infant's condition.

The LBH, alongside the MCH Handbook bridges hospitals, primary health care (PHC) workers, and families. It enables mutual understanding of the infant's and family's conditions, which is essential for COC. Furthermore, the LBH can facilitate health workers establishing a wider supporting network for caring for preterm and/or LBW infants. By promoting seamless long-term cooperation among health workers, community members, social workers, educators, parent organizations, and other stakeholders, the LBH contributes to the realization of a comprehensive COC for vulnerable infants.

▼ Table 1. Contents of LBH\*

#### Seven reasons why premature and/or LBW are special:

1. Their organs are still in the process of maturing, requiring intensive care and screening.
2. Their growth and development should be monitored using corrected age.
3. They require warming due to low fat content and thin skin.
4. They require nutrition suitable for premature babies.
5. Their growth and development should be monitored more carefully than in full-term babies until at least 2 years of age.
6. They require regular visual and auditory examinations.
7. They need compassionate care, such as caregiver-infant bonding, emotional support and focused supplemental stimulation.

#### Health Records:

1. Birth information and corrected age
2. Caregivers' proficiency in caregiving skills (e.g., KMC, breastfeeding and milking techniques, bathing, changing clothes, changing diaper, and baby massage)\*\*
3. Hospital care summary (e.g., respiratory management, nutrition, infection, visual, hearing, brain, and cardiac findings)
4. Screening and follow-up visits' evaluation (i.e., brain, vision, hearing, and thyroid function)
5. Fenton growth curves (i.e., weight, height, and head circumference) by gender

#### Important information in caring premature and/or LBW

1. Essential cares
2. Danger signs
3. Misconceptions and traditional practices (e.g., incorrect introduction of solid foods and umbilical cord care)

#### Caregiver's notes:

1. Babies' development (2, 4, 6 months)
2. Caregiving chart for 24-hours (i.e., nutrition, urination and bowel movements, body temperature, and KMC practices)

KMC: kangaroo mother care

\*<https://ayosehat.kemkes.go.id/buku-kia-khusus-bayi-kecil>

\*\* To be completed by caregivers under the guidance of health workers



A village midwife provided health guidance to parents using the LBH during kangaroo mother care

# Pilot Implementation and Effectiveness of LBH Utilization

Prior to the nationwide rollout, a ten-month pilot of the LBH utilization was conducted in Central Java and West Sumatra in 2022. Interventions included the following: i) capacity building for health workers: through the LBH orientation and supportive supervision, health workers strengthened their capacity to holistically assess the condition of small infants using the LBH, including the caregivers' health and psycho-social environment. Health workers also strengthened their skills in health guidance, communication, and emotional support for caregivers using the LBH; ii) caregiver empowerment: caregivers received the LBH as early as possible, with a detailed explanation. Using the LBH, caregivers were encouraged to participate in childcare activities, such as KMC, from the early stages. Caregivers were provided with health guidance using the LBH and emotional support; and iii) COC: upon discharge from the hospital, the LBH served as a handover tool from hospital staff to the PHC teams. The PHC workers continued to provide individualized care and emotional support to the caregivers, ensuring a seamless transition from facility-based to community-based care.

An evaluation study was conducted to assess the impact of the LBH use on health workers and caregivers in the pilot implementation. The study was conducted among health workers at eight pilot health facilities and caregivers of infants born at those facilities who received follow-up care in the community after discharge. The results showed improvements in health workers' behavior after the introduction of the LBH (Table 2). A pre- and

post-implementation evaluation of health workers using a self-administered questionnaire revealed that, following the LBH implementation, they became more confident in using the LBH to provide health guidance and emotional support to caregivers, and were more likely to offer health guidance and counseling to families.

Also, the results of interviews with mothers using the Edinburgh Postpartum Depression Scale, after a period of home care (3–8 months) following discharge from the hospital, showed that the proportion of mothers who may have suffered from PPD in the post-implementation group was significantly lower than that in the pre-implementation group. While quantitative data on caregiver-infant bonding were not collected, qualitative findings suggest that the LBH may have contributed to strengthening caregiver-infant bonding. For example, some mothers who initially felt anxious and fearful about caring for their small newborns described gaining confidence through the LBH-supported health guidance and emotional support from health workers. A mother of an LBW infant shared, *"When I actually saw my baby born small, worry weighed heavily on me. I was very scared to take care of the baby, especially when we were allowed to go home, given the condition of a very small baby. However, thanks to the health guidance provided by the 'LBH' and the proactive support from health workers, I became more confident in caring for my baby."*

## Conclusion

A continuous caregiver support utilizing the LBH enhances caregivers' confidence in caring for their small infants. It may also be effective in preventing PPD by improving self-efficacy and reducing stress and anxiety. Early-initiated affective interventions, which foster a positive relationship between the caregiver and the child, may promote the child's healthy growth, as well as long-term emotional, cognitive, and social development.

Research plans were reviewed and approved by review committees of the Faculty of Medicine, Andalas University, dated January 26th, 2022, and the Faculty of Medicine, Gaja Mada University, dated February 7th, 2023.

Tomoko Hattori,<sup>1</sup> Akemi Toda,<sup>1</sup> Yoko Masaki,<sup>1</sup> Aya Hasegawa,<sup>1</sup> Laila Mahmudah,<sup>2</sup> Keiko Osaki,<sup>3</sup>

<sup>1</sup> JICA-MOH Project for Ensuring the Quality of MCH Program and Implementation of MCH Handbook in the Era of Decentralization, Jakarta

<sup>2</sup> Ministry of Health of Indonesia, Jakarta

<sup>3</sup> Japan International Cooperation Agency, Tokyo

### Further readings:

- Field, T. M., et al. Tactile/kinesthetic stimulation effects on preterm neonates. *Pediatrics*. 1986; **77**(5): 654–658.
- Klaus, M. H., & Kennell, J. H. *Parent-infant bonding*. Mosby; 1982.
- Buehler, D. M. & Als, H.: Effectiveness of individualized developmental care for low-risk preterm infants: Behavioral and electro-physiologic evidence. *Pediatrics*. 1995; (5 Pt 1): 923–932.

▼ Table 2. Evaluation Results of LBH Pilot Implementation in Central Java and West Sumatra Provinces

Health Workers	Before the LBH introduction (N=40)	After the LBH introduction (N=40)	p-value (Wilcoxon test)
<b>Health workers' perception</b>			
The number of health workers who feel fully confident in providing health education to mothers of small infants	20 (50.0%)	28 (70.0%)	p < 0.007
The number of health workers who feel fully confident in providing emotional support to mothers of small infants	18 (45.0%)	27 (67.5%)	p < 0.007
<b>Health Workers' practices</b>			
Number of health workers who feel fully confident to communicate actively with mothers of small infants	14 (35.0%)	27 (67.5%)	p < 0.002
The number of health workers who always provide health education/counseling to mothers of small infants	24 (60.0%)	33 (82.5%)	p < 0.045
The number of health workers who always provide mothers of small infants with necessary information in a timely and empathetic manner	9 (22.5%)	22 (55.0%)	p < 0.001
The number of health workers who always communicate with mothers/families proactively and effectively using the MCH Handbook and the LBH	5 (12.5%)	23 (57.5%)	p < 0.001
<b>Mothers/Caregivers</b>	<b>Before the LBH introduction (N=211)</b>	<b>After the LBH introduction (N=266)</b>	<b>p-value (Mann-Whitney test)</b>
The number of mothers may present with postpartum depression (EPDS > 10)	96 (45.5%)	49 (18.4%)	p < 0.001

EPDS: Edinburgh Postpartum Depression Scale