

# Strengthening Lactation Support For Small and Sick Newborns

A global training curriculum for lactation, nursing, nutrition, and milk bank staff in maternal and neonatal units.



Evelyn Morris  
UW Nutritional Sciences Program, MPH Student & Dietetic Intern

## INTRODUCTION

PRIORITIZING PROVISION OF SKILLED LACTATION SUPPORT FOR SMALL AND SICK NEWBORNS.

- 98% of neonatal deaths happen in low- and middle-income countries (LMICs)
- Small and sick newborns (SSN) account for most neonatal deaths.<sup>1</sup>
- SSN: infants born < 37 weeks gestation, small for gestational age, < 2,500 g birth weight, and require hospitalization<sup>1</sup>
- World Health Organization (WHO) published guidance on unique nutrition and lactation needs for SSN and their parents, but not how to provide specialized care<sup>2,3</sup>



Images source: PATH

## OBJECTIVES

1. Develop a globally adaptable training program to increase providers' knowledge about lactation and feeding for SSN
2. Create evaluation checklists to verify staff skills and knowledge

## METHODS

- Reviewed clinical protocols, WHO publications, and peer-reviewed research to choose module topics
  - i.e. Initiating Expression, Donor Human Milk, Psychological Support, and Direct Breastfeeding
- Researched change management strategies to optimize adoption
- Drafted 14 learning modules and evaluation checklists

## PRODUCT DESCRIPTION

THE TRAINING CURRICULUM CONSISTS 14 ACTIVE LEARNING MODULES AND 14 COMPETENCY EVALUATION CHECKLISTS

Each module in the training guide consists of five main components:

1. Overview of learning objectives, key concepts and lesson time
2. Content section with video, text, and graphics
3. Links to additional resources for staff and parents
4. Activity to practice key concepts and protocols
5. Evaluation checklist to verify staff knowledge and competency

**Initiating Skin-to-Skin for Parents with Small and Sick Newborns (30 minutes)**

**OVERVIEW OF KEY CONCEPTS**

1. Benefits of Skin-to-Skin contact for parents and newborn
2. How to facilitate the initiation of Skin-to-Skin with new parents
3. Considerations for optimal experience during Skin-to-skin and possible contraindications

**LEARN**

1. Skin-to-skin time (S2S) benefits specific to SSN and the parents<sup>1</sup>

Benefits for SSN	Benefits for parents
<ul style="list-style-type: none"><li>• Reductions in mortality and morbidity</li><li>• Increases exclusive breastfeeding</li><li>• Decreases time spent in neonatal ward</li><li>• Decreases hospital readmissions</li><li>• Decreases pain response to procedures common in NICU</li><li>• Helps prevent hypothermia and hypoglycemia</li><li>• Stabilizes respiratory function</li><li>• Some evidence for improved sleep patterns and improved brain maturation</li></ul>	<ul style="list-style-type: none"><li>• Improves milk volume in lactating parent</li><li>• Increases feelings of bonding and attachment</li><li>• Allows parents to feel engaged in caring for the infant</li></ul>

Figure 1: Module Introduction

**ACTIVITY**

1. Role play scenario
  - Choose a partner
  - One of you will play the health care provider and the other will be the parent
  - If you are the health care provider, counsel the parent through the steps of initiating skin-to-skin (holding techniques, positioning, securing) and describe the four categories of observations the parent should look out for during skin-to-skin
  - If you are the parent, provide feedback at the end of the demonstration on the clarity of instructions and your confidence as a parent to recognize signs of distress in the infant
  - Switch roles and repeat

Figure 2: A role play scenario activity to practice skills from module

TOPIC: INITIATING SKIN TO SKIN TIME

Performance Indicator and expected answers	National options	Competent	Needs Improvement
<b>Discuss the importance and management of breastfeeding specific to SSN with pregnant women and their families</b>			
Explain at least 3 reasons why immediate and uninterrupted skin-to-skin time is important for the infant	Question		
<input type="checkbox"/> Reductions in mortality and morbidity <input type="checkbox"/> Increases exclusive breastfeeding <input type="checkbox"/> Decreases time spent in neonatal ward <input type="checkbox"/> Decreases hospital readmissions <input type="checkbox"/> Decreases pain response to procedures common in NICU <input type="checkbox"/> Helps prevent hypothermia and hypoglycemia <input type="checkbox"/> Stabilizes respiratory function <input type="checkbox"/> Some evidence for improved sleep patterns and improved brain maturation			
Explain at least 2 reasons why immediate and uninterrupted skin to skin time is important for the parents	Question		
<input type="checkbox"/> Improves milk volume in lactating parent <input type="checkbox"/> Increases feelings of bonding and attachment <input type="checkbox"/> Allows parents to feel engaged in caring for the infant			
Safely transfer intubated infant to the parent's chest and explain the four main observations the parent will need to conduct throughout skin-to-skin to maintain infant safety	Observation		
<input type="checkbox"/> Follows either facility protocol (if applicable) or the appropriate steps in attached guidelines to place intubated infant in skin-to-skin time <input type="checkbox"/> Discusses four key observation areas and warning signs with parent <ul style="list-style-type: none"><li>o Breathing</li><li>o Temperature</li><li>o Color</li><li>o Activity</li></ul>			

Figure 3. Competency evaluation checklist

## DISCUSSION

IMPROVED HUMAN MILK FEEDING AND HEALTH OUTCOMES FOR SSN DEPEND ON APPROPRIATELY TRAINED STAFF

- One barrier to successful breastfeeding is staff who are misinformed and/or practice without evidence-based protocols<sup>1</sup>
- Trainings educate staff and help establish new protocols
  - WHO Baby Friendly Hospital Initiative training positively impacted nurses' knowledge, attitudes, and confidence about breastfeeding support<sup>4</sup>
- Training participants will receive advanced-practice skills and knowledge specific human milk feeding for SSN & parents
- Next steps: expert panel review, implementation in Kenya

## ACKNOWLEDGEMENTS

Thank you to the Maternal, Newborn, and Child Health and Nutrition Program at PATH, especially Dr Kiersten Israel-Ballard and Kimberly Mansen (MSPH, RDN) for contributing their technical expertise and programmatic leadership to this project. Thank you to PROVIDE, Rush Mother's Milk Club, and all research teams who have published their work and sought to move the field of neonatal training and lactation support forward.

### References

1. World Health Organization (WHO). *Survive and Thrive: Transforming Care for Every Small and Sick Newborn*. Geneva: WHO; 2019. [https://www.who.int/maternal\\_child\\_adolescent/documents/care-small-sick-newborns-survive-thrive/en/](https://www.who.int/maternal_child_adolescent/documents/care-small-sick-newborns-survive-thrive/en/).
2. World Health Organization and United Nations Children's Fund (UNICEF). Protecting, promoting and supporting breastfeeding: the Baby-friendly Hospital Initiative for small, sick, and preterm newborns. Published online 2020. Accessed January 5, 2022. <https://www.who.int/publications-detail-redirect/9789240005648>
3. Blasi L, Mansen K, Israel-Ballard K. Ensuring the special lactation needs of small and sick newborns: a call to action. *Healthy Newborn Network*. Published online November 16, 2020. Accessed January 5, 2022. <https://www.healthynetwork.org/blog/ensuring-the-special-lactation-needs-of-small-and-sick-newborns-a-call-to-action/>
4. Fok D, Chang HF, Meng LY, Ng YPM. The Effect of a 20-Hour Baby-Friendly Hospital Initiative Training Program on Nurses' Breastfeeding Knowledge, Attitudes and Confidence, in a Tertiary Hospital in Singapore. *Am J Perinatol*. 2022;39(4):379-386. doi:10.1055/s-0040-1716489

