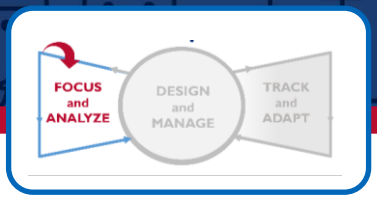
USAID
FROM THE AMERICAN PEOPLE

Think | BIG

Behavior Integration Guidance

How to Use Behavior Profiles to Fill Gaps in Newborn Health Programming

http://www.acceleratorbehaviors.org



ACCELERATE is made possible by the generous support of the American people through the United States Agency for International Development (USAID) and is implemented under Task Order No. AID-OAA-TO-15-00052 by The Manoff Group, Inc. in association with Howard Delafield International, OneWorld UK, Social Impact, Inc., and Sonjara, Inc. ACCELERATE is issued through the Transform IDIQ (Contract No. AID-OAA-I-14-00002). Document Updated: March 2020.

TABLE OF CONTENTS

LIST OF FIGURES

OVERVIEW

INTRODUCTION

This document contains a set of six Sample Behavior Profiles for improving the uptake of key behaviors currently inhibiting global progress in ensuring that all newborns survive and thrive.

A Behavior Profile—a key element of USAID's Think | BIG (Behavior Integration Guidance) process for designing more effective behavior change programming—is an analysis of a specific behavior from the point of view of the primary actor. Figure 1 outlines the standard contents of a Behavior Profile.

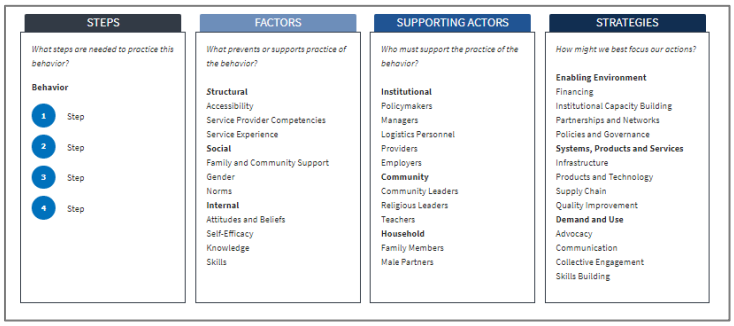


Figure 1: Behavior Profile Template

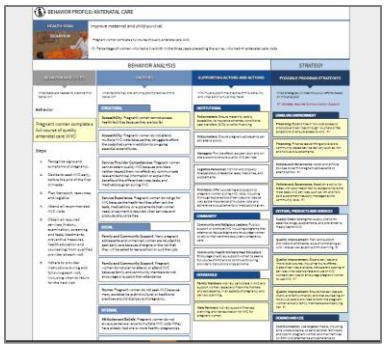


Figure 2: Example of a Behavior Profile

A Behavior Profile creates logical pathways from the behavior through the factors and supporting actor actions to strategies. It identifies the steps needed to practice the behavior, factors inhibiting or supporting the behavior, supporting actors and their actions that are necessary to enable the behavior, and possible strategies (also called illustrative interventions) that programs can implement to ultimately drive positive changes in the behavior over time. Figure 2 shows a Behavior Profile with one logical pathway highlighted.

Programs should create a Behavior Profile for specific audiences and their contexts using desk research, field research, and what is presently known about the behavior.

The USAID Newborn Health team selected the six behaviors analyzed in this document as samples to illustrate the use of Behavior Profiles to strengthen newborn health programming by creating logical pathways to behavior change. Use the profiles contained in this document as a starting point to orient program managers working in the field, and then contextualize the content contained herein.

Behaviors are defined and written as **the primary actor + action verb + issue to be addressed + geography or other specifics as needed.**

The six priority behaviors selected for focus by USAID's Newborn Health team are:

1. Skin-to-Skin: Mother or caregiver maintains skin-to-skin contact (SSC) immediately after birth and during first hour
2. Early Initiation of Breastfeeding: Mother initiates breastfeeding within first hour of baby's life
3. Newborn-Related Hand Hygiene: Skilled health professional and mother, father and other family members practice hand cleansing at critical times during labor, childbirth, and post-natal period
4. Delayed Cord Clamping: Provider delays clamping umbilical cord for 60 seconds post-delivery, or until cord stops pulsating

5. Comprehensive Post-Natal Care: Provider delivers comprehensive post-natal care with counseling for the mother-baby dyad
6. Nurturing Care: Provider delivers nurturing, respectful care throughout the continuum of antenatal care, delivery, and post-natal care

Changing these behaviors requires a comprehensive approach to social and behavior change (SBC), one that meaningfully engages with primary and supporting actors in solving their own challenges. This includes identifying and addressing all critical factors inhibiting or motivating practice of the behavior at the same time in the same place. Using a Behavior Profile provides structure for this holistic way of thinking by focusing on an individual or collective behavior as an outcome, while incorporating the social and structural context within which the behavior is expected to take place.

INTENDED USERS

USAID Mission staff, program managers, and implementing partners who are working on improving newborn health outcomes will find this helpful. This includes those working SBC, service delivery, and other domains.

HOW THIS FITS INTO THINK | BIG

Think | BIG, developed under the USAID ACCELERATE project, is a systems approach to social and behavior change. Think | BIG defines project- and activity-level outcomes as specific behaviors required to achieve a development goal. Ultimately, using Think | BIG means that strategy, project, and activity design are behavior-led, rather than intervention-driven. Creating a Behavior Profile is a key component of Step 1 of Think | BIG – Focus and Analyze. Figure 3 illustrates where creating a Behavior Profile fits into Think | BIG.

Figure 3: Think | BIG

HOW TO USE THE SAMPLE NEWBORN BEHAVIOR PROFILES

The six Sample Newborn Behavior Profiles contained in this document reflect an approach to creating logical, strategic pathways between priority behaviors, the factors inhibiting or motivating practice of the behavior (including structural or systemic factors, social factors and individual factors), key supporting actors, and interventions to address the factors. This approach is designed to ensure that (1) strategies and interventions focus on the issues truly important to enable behavior change, (2) across the various partners working in a particular context, all critical factors are being addressed, and (3) partners are coordinating around a shared outcome.

The USAID Newborn Health team selected the six behaviors presented here because of their global importance to improving newborn health outcomes and their relatively low global uptake. The full list of potential behaviors the team considered was drawn from the World Health Organization's *Every Newborn Action Plan,* found in the Appendix.

A consensus discussion among technical experts and a review of selected global evidence determined the content and pathways in these Sample Behavior Profiles. The content does not represent an

exhaustive literature review, nor were the profiles developed with a particular country or context in mind. Programs should create Behavior Profiles for these or other newborn health behaviors using local and context-specific evidence. Additionally, while the factors presented appear often in the studies cited, they do list all factors that might exist in a particular context. Instead, each sample profile attempts to capture the steps, critical factors, and important programmatic considerations known to be important to achieving a positive behavioral outcome. As mentioned, use these Sample Behavior Profiles as a guide and source for developing Behavior Profiles tailored to the specific country, based on local research and on knowledge and inputs from locally-informed technical experts. Specifically, use these sample Behavior Profiles as:

Orientation: Sample Behavior Profiles can help orient global and local program staff to a holistic way of thinking about behavior change. They can indicate the types of critical factors, supporting actors, and strategies that might be relevant for a given context.

A Starting Point: In some cases, the local team might not have the time or resources to develop a Behavior Profile from the beginning. In those cases, the team can use a Sample Behavior Profile to prompt thinking on what might or might not be locally relevant and important, adding or deleting information from the sample profile as applicable. Similarly, if little local research on critical factors and supporting actors is available, the Sample Behavior Profile contains research that programs can use as proxy information until they can learn more about the local context.

HOW TO USE COUNTRY-SPECIFIC BEHAVIOR PROFILES

Create and use country-specific Behavior Profiles to plan, review your portfolio, and dialogue with implementing partners and others about strengthening social and behavior change for newborn health. Practical applications might include:

Defining a research agenda to fill information gaps in the existing data:
As programs construct Behavior Profiles, they will notice where gaps in understanding and knowledge persist—both around which factors are most critical to address or leverage *and* around the strategies and interventions most appropriate, acceptable, and effective for doing so. These gaps can help structure formative and operational research questions.

Developing and designing projects, strategies, and activities that address all identified critical factors and leverage all supporting actors:
Once profiles have been created and the critical factors and supporting actors highlighted within a donor portfolio, ideally *all* critical factors and *all* supporting actors should be addressed. Mission staff can use the profiles as checklists for design and in dialogue with partners on workplans to confirm that they include approaches to address the necessary factors and supporting actors, as well as appropriate indicators to measure the change. Although one activity might not include all needed interventions, across a portfolio or among those partners and stakeholder working on a particular outcome, ensuring all necessary interventions to achieve the desired change greatly increases the chances of success.

Ensuring all interventions connect to an identified factor and are part of the logical pathway to change:
Mission staff can use Behavior Profiles to foster dialogue with implementing partners about proposed

activities. If an approach, intervention, or activity does not address a critical factor, that approach, intervention, or activity might not be an efficient use of resources.

Coordinating or integrating different kinds of interventions to ensure maximum impact: Sometimes, more than one implementing partner will be working on different aspects of changing a behavior. In such instances, use Behavior Profiles to foster meaningful coordination between partners and to align activities in the same place and time with the same actors. This will help ensure the intended impact.

The **Design and Manage** section of https://acceleratorbehaviors.org/resources has additional tools and resources to help you use your Behavior Profiles to best effect.

The following pages present each Sample Newborn Behavior Profile in table format. You can also find them online at https://acceleratorbehaviors.org/newborn_health. To create your own Behavior Profiles, select the online or offline Behavior Profile tool at https://acceleratorbehaviors.org/tools#content1 (USAID email addresses only) or https://thinkbigonline.org/tools#tab1. You will need to create an account first.

You can explore Sample Behavior Profiles for other behaviors at https://acceleratorbehaviors.org/behavior_profile_p#sample_bps.

SAMPLE 1: SKIN-TO-SKIN

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Mother or caregiver maintains skin-to-skin contact (SSC) immediately after birth and during first hour

Context:

- Although trend data on routine practice are sparse, studies targeting the practice have found that SSC is generally universally low, with one study of 5 sub-Saharan African countries noting its practice below 15% for all births and only 26% for facility births.
- SSC is higher in primiparous mothers, facility births, and low-birthweight babies and is generally lower among newborns born at night.
- SSC does not appear to be significantly associated with mother's age, gestational age, or induction of labor, but rates are generally lower in cases of cesarean section.

Critical Steps	Critical Factors	Key Supporting Actors	Necessary Intervention Areas
Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Who else besides the family and provider is required to ensure practice of the behavior?	What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Provider (including community health worker) supports family to learn about and prepare for skin-to-skin contact at birth during antenatal care (ANC) 2. Provider keeps mother and baby together at all times	**STRUCTURAL** • Some facilities still separate newborns from mothers after birth, especially those who are small or sick • Essential newborn care (ENC) protocols are not always followed: practices often still include immediate washing and wrapping of baby instead of putting baby to chest immediately • Many facilities lack supplies, such as bolsters for propping baby up	**INSTITUTIONAL** • **Facility Managers**: Include SSC in protocols, supervision checklists, and feedback • **Logistics Personnel**: Ensure necessary supplies are on hand via medical supply or locally available avenues (e.g. bolsters, blankets, privacy screens) **HOUSEHOLD AND**	**ENABLING ENVIRONMENT** • For all facilities, craft protocols that include SSC considerations at birth, during facility stay, and in discharge care • Disseminate protocols with SSC to each facility manager; post in facilities • Include options for father/male partner and other family members to support SSC after childbirth, including at night, in the case of a cesarean section or

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
from birth to discharge 3. Provider ensures appropriate environment and supplies for skin-to-skin contact (e.g., bolsters, blankets, pillows) 4. Family accepts SSC by mother and other caregivers 5. Mother requests newborn to be placed on chest and breast immediately (within first hour) after birth 6. Provider supports mother, father, or other family member to continue SSC for at least 1 hour after birth	or beds that can be positioned correctly and safely for a mother to care for newborn • Many facilities lack privacy screens, recovery rooms, or other amenities to allow for SSC • Often family members are not allowed in recovery area or post-natal ward to assist mother with SSC as needed **MANAGEMENT AND PROVIDER CAPACITY AND COMMITMENT** • Providers fear newborns might fall if SSC is practiced unsupervised and if mother is unsupported by bolsters or pillows • Managers and providers are not always aware of importance of immediate SSC • Many providers do not consider SSC required protocol, and they prioritize other concerns • Usually, few providers are on duty at night, which limits their time to support SSC • Providers often are not trained or equipped to orient families during	**COMMUNITY** • **Grandmothers**: Encourage mothers on SSC and encourage fathers to support this practice • **Male Partners**: Agree prior to birth to support SSC; support at birth and thereafter • **Other Family Members**: Support SSC	other need **SYSTEMS, PRODUCTS AND SERVICES** • Include key supplies in the logistics program or identify locally available sources for pillows, bolsters, and blankets • Use a Knowledge-to-Action training approach, including simulation and post-training support and follow-up, to train providers on skills; elicit and resolve important feedback on learning and capacity • Create support mechanisms for provider peer groups to discuss new protocols and practices and to hold each other accountable • Facilitate reviews of ENC, including SSC, to identify and address gaps • Incorporate SSC in community health worker activities, including ANC education and promotion **DEMAND AND USE** • Use targeted media to highlight experiences of providers who

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	ANC and after birth ● In more complicated births, including those requiring a cesarean section, mothers and babies are often separated, inhibiting skin-to-skin **FAMILY AND COMMUNITY SUPPORT AND NORMS** ● Families and home/traditional birth attendants are often unaware of the benefits of SSC ● Male norms do not encourage fathers' involvement in supporting partner to provide SSC (or providing it themselves when the mother cannot) and do not promote that providers speak with male partner/father about providing support		support families to practice SSC ● Develop easy-to-use job aids to support counseling on SSC at birth, within one hour after birth, and during the first 48 hours ● Organize community dialogues and home visits before birth to discuss skin-to-skin contact as part of the childbirth experience and to prepare with father/male partner and other family members ● Recognize high-performing providers (across all priority behaviors or care provision) through local and subnational media

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- ➢ Ensure all facilities are equipped with the necessary supplies to support families in safely and privately practicing SSC, including bolsters to support the mother's arms, an adjustable bed or pillows to prop the mother up, and covers or blankets to ensure warmth and privacy.
- ➢ Ensure providers recognize SSC as a key element of clinical protocol and are supervised and evaluated based on its rate of practice in facilities, night and day.

- Equip providers to orient pregnant women, their male partners, and other family members during ANC and after childbirth on SSC, focusing on its relative ease.
- In locales with large numbers of home births, within the strategy to transition to facility births, communicate how important it is for the woman, male partner/father, and other family members to ask the skilled health professional or TBA (or CHW or others present at the birth) for SSC, or to agree to SSC if recommended.
- Better include discussions and conversations on SSC as part of birth preparedness.
- Incorporate information, training, and outreach to traditional birth attendants to ensure SSC is practiced in all birthing situations.

SELECTED REFERENCES: SKIN-TO-SKIN CONTACT

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Alenchery AJ et al. Barriers and enablers to skin-to-skin contact at birth in healthy neonates-a qualitative study. BMC Pediatrics 18.1 (2018): 48.
2. Anderson, GC, Chiu, SH, Morrison, B, Burkhammer M & Ludington-Hoe, SM. (2004). Skin-to-skin care for breastfeeding difficulties postbirth. In Field, T. (Ed.). "Touch and massage in early child development" (pp. 115-136). Skillman, N.J.: Johnson & Johnson Pediatric Institute.
3. Bee, Margaret et al. Neonatal care practices in sub-Saharan Africa: a systematic review of quantitative and qualitative data. Journal of Health, Population, and Nutrition vol. 37,1 9. 16 Apr. 2018, doi:10.1186/s41043-018-0141-5.
4. Cleveland, Lisa, et al. Systematic review of skin-to-skin care for full-term, healthy newborns. Journal of Obstetric, Gynecologic & Neonatal Nursing 46.6 (2017): 857-869.
5. Feldman-Winter, Lori et al. Safe sleep and skin-to-skin care in the neonatal period for healthy term newborns. Pediatrics vol. 138,3 (2016): e20161889. doi:10.1542/peds.2016-1889.
6. Marín Gabriel, M. A., et al. Randomized controlled trial of early skin-to-skin contact: effects on the mother and the newborn. Acta Paediatrica 99.11 (2010): 1630-1634.
7. Mbalinda, Scovia, et al. Experience of perceived barriers and enablers of safe uninterrupted skin-to-skin contact during the first hour after birth in Uganda. Midwifery 67 (2018): 95-102.
8. Mohadeseh Adeli; Elham Azmoudeh. Influential factors of mother-infant skin-to-skin contact based on the precede-proceed model from the perspective of midwives in Torbat Heydariyeh hospitals. Journal of Midwifery and Reproductive Health, 4, 3, 2016, 644-653. doi: 10.22038/jmrh.2016.6992.

9. Nahidi, Fatemeh, et al. The Mother-Newborn Skin-to-Skin Contact Questionnaire (MSSCQ): development and psychometric evaluation among Iranian midwives. BMC Pregnancy and Childbirth 14.1 (2014): 85.
10. Niela-Vilén, Hannakaisa, Nancy Feeley, and Anna Axelin. Hospital routines promote parent–infant closeness and cause separation in the birthing unit in the first 2 hours after birth: A pilot study. Birth 44.2 (2017): 167-172.
11. Nyqvist, Kerstin H., et al. Early skin-to-skin contact between healthy late preterm infants and their parents: an observational cohort study. PeerJ 5 (2017): e3949.
12. Stevens, Jeni, et al. Immediate or early skin-to-skin contact after a caesarean section: a review of the literature. Maternal & Child Nutrition 10.4 (2014): 456-473.
13. Zwedberg, Sofia, Josefin Blomquist, and Emelie Sigerstad. Midwives' experiences with mother–infant skin-to-skin contact after a caesarean section: 'Fighting an uphill battle'. Midwifery31.1 (2015): 215-220.
14. Rhonda K. Lanning, Marilyn H. Oermann, Julee Waldrop, Laura G. Brown and Julie A. Thompson. Doulas in the Operating Room: An innovative approach to supporting skin‐to‐skin care during cesarean birth. Journal of Midwifery & Women's Health. 64, 1, (112-117), (2018).
15. World Health Organization, Department of Reproductive Health and Research and the Department of Maternal, Newborn, Child and Adolescent Health: Intrapartum care for a positive childbirth experience. 2018. Accessed November 2019: https://apps.who.int/iris/bitstream/handle/10665/260178/9789241550215eng.pdf;jsessionid=478B8987DEB9AF46D5788400F093AF98?sequence=1.
16. Sitrin, Deborah, et al. Evidence from household surveys for measuring coverage of newborn care practices. Journal of Global Health 7.2 (2017).

SAMPLE 2: EARLY INITIATION OF BREASTFEEDING

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Mother initiates breastfeeding within first hour of baby's life
Note: In cases where the mother cannot initiate breastfeeding due to maternal or newborn complications, the desired behavior is for her to begin expressing milk and for baby to receive mother's milk (or donor human milk) as early as possible.

Context:

- Immediate initiation of breastfeeding is critical: compared to those who initiated breastfeeding within one hour of birth, infants who began breastfeeding 2-23 hours after birth had a 33% greater risk of neonatal mortality, and those who initiated breastfeeding ≥24 hours after birth were more than twice as likely to die during the neonatal period.
- Globally, only 44% of infants initiate breastfeeding within the first hour of life, ranging from 14% to 95%. The lowest percentages were found in Peru (17.7%), Ecuador (20.1%) and the Philippines (39.9%), and the highest in Angola (98.4%), Cuba (89.2%) and Sri Lanka (88.5%).
- Of 129 countries reporting on the indicator, only 22 have early initiation rates over 70%, the Global Breastfeeding Scorecard target for 2030.
- Early initiation of breastfeeding is less common for women who had obstetric complications or complicated births, including cesarean section.

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	**Critical Factors** What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	**Key Supporting Actors** Who else besides the family and provider is required to ensure practice of the behavior?	**Necessary Intervention Areas** What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Provider or birth attendant facilitates early and uninterrupted skin-to-skin contact (SSC) 2. Provider or birth attendant supports all	**STRUCTURAL** • Facilities that include specific standards for immediate initiation of breastfeeding see higher rates of success • Early newborn care (ENC) protocols are not always followed: practices often still include	**INSTITUTIONAL** • **Managers**: Remind providers that ENC includes putting baby to breast and SSC. • **Managers**: Control local environment within a facility for breastmilk substitutes,	**ENABLING ENVIRONMENT** • Revise clinical protocols and quality assurance for facility births to include explicit metrics for immediate breastfeeding post-birth, as well as for keeping mother and baby together. • Create policy to limit use of

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
mothers to initiate breastfeeding (BF) as soon as possible after birth 3. Mother allows newborn to suckle immediately even if milk does not appear to be presenting 4. All caregivers refrain from offering pre-lacteal feeding, providing breastmilk substitute, and offering pacifiers or dummies 5. Providers offer mother practical support to initiate and establish BF, and manage common BF problems, starting during antenatal care (ANC)	immediate washing and wrapping of baby instead of putting baby to chest immediately • Newborn and mother are often separated immediately after birth for unnecessary reasons • Breastmilk substitutes are often widely available in health facilities • Although national guidelines for breastfeeding by HIV-positive women exist, understanding and practice of protocol at facility level is often confused or out-of-date **PROVIDER CAPACITY AND COMMITMENT** • Providers sometimes believe breastmilk substitute is easier or more nutritious • Providers sometimes believe babies need milk immediately and turn to breastmilk substitutes before the mother's milk has come in • Providers trained on breastfeeding are more likely to actively support immediate initiation • Although women are more likely to request immediate initiation if	ensuring their dissemination is not standard practice • **Policymakers**: Clarify baby-friendly hospital policy, including prevention of routine use of breastmilk substitutes • **Policymakers**: Review clinical protocols for ENC to ensure that guidance for immediate breastfeeding is clear • **Logistics Personnel**: Ensure breastmilk substitutes are not readily available as part of delivery supplies • **Providers:** Work with mother, male partner/ father, and other family members during ANC to prepare for immediate breastfeeding, including discussing the importance of colostrum and suckling to stimulate milk production, uterine contractions, and effective latch **HOUSEHOLD AND**	breastmilk substitutes to times when mother truly cannot breastfeed and donor milk is not available • Clarify policy on immediate breastfeeding for HIV-infected women **SYSTEMS, PRODUCTS AND SERVICES** • Use Knowledge-to-Action training approach, including simulation and post-training support and follow-up, to train providers on skills, including assisting women with breastfeeding problems; elicit and resolve important feedback on learning and capacity • Create support mechanisms for provider peer groups to discuss new protocols and practices and to hold each other accountable • Incorporate provider support to women on immediate and continued breastfeeding into supervision, mentoring, and quality improvement activities **DEMAND AND USE**

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
6. Providers give mothers coaching and support to express milk in the event that they are separated from baby 7. Providers keep mothers and newborns together at all times from birth to discharge, unless medically necessary due to complications requiring specialized medical care, in which case, see Step #4 above 8. Providers support mothers to practice responsive feeding	they have discussed it (including importance of colostrum) during ANC or as part of birth preparation, providers do not always have time or willingness to provide such counseling • For women who had obstetric complications or cesarean sections, providers do not always believe the woman will be able to breastfeed immediately and therefore do not assess the possibility **FAMILY AND COMMUNITY SUPPORT AND NORMS** • Some mothers and family members do not understand the importance of immediate suckling and colostrum, even without milk presenting • Families often believe breastmilk substitutes to be more nutritious because they see more affluent families using them • In some places, babies, especially those born at home, are given pre-lacteal feeds with cultural importance	**COMMUNITY** • **Grandmothers**: Support new mothers to immediately place the baby to breast, even before wrapping or washing • **Male Partners**: Encourage and support new mothers to breastfeed immediately post birth • **Traditional Birth Attendants, Community Midwives, and Community Health Workers**: Discuss breastfeeding (immediate initiation, exclusivity, extended) during ANC, and then facilitate immediate initiation at birth	• Communication: Add early initiation of breastfeeding to the full range of health education, communication, and counseling materials used during birth preparation, ANC, and pregnancy support groups • Include discussion on immediate initiation of breastfeeding in counseling and other birth preparedness • Reframe importance of early initiation of breastfeeding as critical for newborn health even when the mom's milk hasn't yet come in • Ensure early initiation of breastfeeding is positioned as something critical for women and babies of all socio-economic levels to do • Recognize high-performing providers (across all priority behaviors or care provision) through local and subnational media

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	• In some cultures, colostrum is considered inappropriate for the baby • Some mothers believe their babies need milk immediately and turn to breastmilk substitute or other substances if they are not producing milk immediately at birth		

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- Ensure provider facilitation of immediate breastfeeding is part of clinical care guidelines.
- Explain benefit and importance of early suckling and colostrum even in the absence of breastmilk.
- Ensure immediate breastmilk feeding is standard of care even in cases of obstetric complication or cesarean section.

SELECTED REFERENCES: EARLY INITIATION OF BREASTFEEDING

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. Lancet (London, England). 2013;382(9890):427-451. http://www.ncbi.nlm.nih.gov/pubmed/23746772. doi: 10.1016/S0140-6736(13)60937-X.
2. de Jesus PC, de Oliveira, Maria Inês Couto, Fonseca SC. Impact of health professional training in breastfeeding on their knowledge, skills, and hospital practices: A systematic review. Jornal de Pediatria. 2016. doi: 10.1016/j.jped.2015.09.008.

3. Edmond KM, Zandoh C, Quigley MA, Amenga-Etego S, Owusu-Agyei S, Kirkwood BR. Delayed breastfeeding initiation increases risk of neonatal mortality. Pediatrics. 2006;117(3):e386. http://pediatrics.aappublications.org/cgi/content/abstract/117/3/e380. doi: 10.1542/peds.2005-1496.
4. Hansen CH, Schellenberg, Joanna R M Armstrong. Modest global achievements in maternal survival: More focus on sub-Saharan Africa is needed. Lancet (London, England). 2016;387(10017):410-411. http://www.ncbi.nlm.nih.gov/pubmed/26869551. doi: 10.1016/S0140-6736(16)00099-4.
5. İnal S, Aydin Y, Canbulat N. Factors associated with breastfeeding initiation time in a baby-friendly hospital in Istanbul. Applied Nursing Research. 2016;32:26-29. http://www.sciencedirect.com/science/article/pii/S0897189716300076. doi: 10.1016/j.apnr.2016.03.008.
6. Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. The Cochrane Database Of Systematic Reviews. 2012(5):CD003519. http://www.ncbi.nlm.nih.gov/pubmed/22592691.
7. Tawiah-Agyemang C, Kirkwood BR, Edmond K, Bazzano A, Hill Z. Early initiation of breast-feeding in Ghana: Barriers and facilitators. Journal of Perinatology. 2008;28(S2):S52. http://dx.doi.org/10.1038/jp.2008.173. doi: 10.1038/jp.2008.173.
8. Takahashi, Kenzo et al. Prevalence of early initiation of breastfeeding and determinants of delayed initiation of breastfeeding: secondary analysis of the WHO Global Survey. Scientific Reports vol. 7 44868. 21 Mar. 2017, doi:10.1038/srep44868.
9. WHO. Breastfeeding Policy Brief. World Health Organization. 2014:143.
10. WHO, Guideline: Protecting, promoting, and supporting breastfeeding in facilities providing maternity and newborn services. (2017) https://www.who.int/nutrition/publications/guidelines/breastfeeding-facilities-maternity-newborn/en/.

SAMPLE 3: NEWBORN-RELATED HAND HYGIENE

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Skilled health professional and mother, father, and other family members practice hand cleansing at critical times during labor, childbirth, and post-natal period

Context:

- Cleansing hands before childbirth in health facilities is often below 50%; at home it is even lower.
- Healthcare workers on night shifts have the lowest levels of hand hygiene compliance in low and middle income country hospital settings.
- The vast majority of caregivers do not wash their hands before newborn care events including holding or bathing the baby, or caring for the cord, although young mothers wash more often than older mothers, elders, and men.

Critical Steps	Critical Factors	Key Supporting Actors	Necessary Intervention Areas
Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Who else besides the family and provider is required to ensure practice of the behavior?	What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Create hand cleansing station at delivery and recovery site 2. Provide soap, water, and clean towel for drying OR hand sanitizer 3. Provider and family members cleanse hands at all contact with mother during pre-delivery,	**STRUCTURAL (FACILITY)** • Hand cleansing stations do not always exist near each mother or newborn or at convenient locations within a facility • Cleansing stations are not always equipped with soap and water or hand sanitizer • Lack of clean or disposable towels to dry hands means providers who do wash have to wait for hands to dry before attending to mother or baby • Facility cleaning protocols do not	**INSTITUTIONAL** • **Policymakers:** Ensure water, sanitation, and hygiene (WASH) supplies are considered part of essential equipment for facilities • **Managers**: Ensure equipped hand cleansing stations exist in all delivery sites, and ensure hand hygiene is a priority within facility • **Logistics Personnel or Pharmacist**: Ensure	**ENABLING ENVIRONMENT** • Conduct routine audits of hand hygiene practices in facilities, and make public the data to motivate improvement and compliance • Ensure policy guidance stressing the importance of WASH actions within clinical care • Create and equip hand cleansing stations in close proximity to delivery site and recovery site in clinics and homes. Include soap, water, and towels, and consider incorporating foot pedals or

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
delivery, and post-natal period 4. Providers follow proper glove-use protocol	include the cleaning of cleansing stations, meaning these stations themselves become contaminated • There is an insufficient supply of new gloves **STRUCTURAL (HOUSEHOLD)** • For babies born at home (or once a mother-baby dyad returns home from delivery) many homes lack hand cleansing stations near the newborn's place, even if they have them near the toilet • Caregivers lack time to wash hands every time they touch the baby, especially after the first 48 hours when they return to busy life (e.g., multiple children, household chores) • Some households lack easy supply of clean water **PROVIDER CAPACITY AND COMMITMENT** • Providers are motivated by appearing professional and competent and minimizing personal risk; hand cleansing is not	supplies for hand cleansing station are on site at all times (soap, water, and towels, or water-free cleanser) • **Facility Cleaners & Maintenance Workers**: Ensure cleaning protocol includes the cleaning of hand cleansing stations **HOUSEHOLD AND COMMUNITY** • **All Family Members**: Encourage hand cleansing for all moments of contact with a new baby by everyone • **Male Partners**: Facilitate setting up and maintaining a hand cleansing station near where the mother and baby will be during and after delivery	elbow taps to improve hygiene of station. Review Clean Clinic Approach to leverage best practices • Designate maintaining the hand cleansing station (including all supplies) as someone's job within a facility • Incorporate monitoring of provider hand cleansing and cleansing station as part of clinical quality improvement activities **SYSTEMS, PRODUCTS AND SERVICES** • Expand provider training to better link health outcomes to hand cleansing for all patients at all times, but especially for vulnerable periods like delivery and post-natal • Consider distribution of soap and hand sanitizer to clinics as part of essential supplies • Consider distribution of latex-compatible lotion to clinics • Include soap in delivery packs women receive • Create support mechanisms for

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	always seen as contributing to those goals • Clinicians have the worst compliance with hand cleansing and model poor behavior for other staff and for family members • Constant handwashing leaves providers' hands dry and chapped • Providers believe in importance of cleansing or disinfecting hands after delivery when they are visibly dirty, but not always prior to each contact • Providers do not recognize hand cleansing as part of their clinical duties; they do not perceive a risk to themselves by not cleansing hands and are therefore sometimes less motivated to practice it • Providers who have access to gloves do not see the importance of hand cleansing as well as they see the use of gloves as protective to themselves **SOCIAL SUPPORT AND INTERNAL MOTIVATION** • Families and mothers do not feel		provider peer groups to discuss new protocols and practices and to hold each other accountable • Create community dialogue on addressing issues of water scarcity **DEMAND AND USE** • Integrate promotion of hand cleansing on baby products such as diapers to improve association of clean hands and newborn health for wealth quintiles accessing such products • Offer new mothers signs from the health center to hang near newborn's place asking any caregiver to wash hands prior to contact (to avoid her having to break cultural tradition) • Consider a harm-reduction approach to identify most critical moments for cleansing hands (e.g., during all vaginal exams, all contact with baby in first 48 hours, and always before feeding,) • Recognize high-performing providers (across all priority behaviors or care provision) through local and subnational

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	empowered to ask clinician to cleanse hands ● In some cultures, it is inappropriate for a new mother to request an elder or a man to clean hands before holding the baby ● Importance of cleansing hands before attending to a newborn, including cleaning the cord, is not well-understood: newborns are seen as vulnerable to respiratory illnesses, but connection to hand cleansing is not clear for many ● Constant handwashing leaves hands dry and chapped		media ● Empower families to request hand cleansing from providers ● Better link hand cleansing to performance for providers ● In cultures where seclusion for mother and newborn after birth is customary, use their presumed vulnerability as an entry point for encouraging hand hygiene at household level

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- Ensure proximity of hand cleansing stations to sites of care provision.
- Equip hand cleansing stations with necessary supplies.
- Include hand cleansing before care of newborn as part of critical times for hand cleansing efforts.
- Provide job aids and hand cleansing reminders (or other environmental cues) for providers.
- Ensure appropriate hand cleansing is a part of all clinical training, mentorship, and quality improvement activities.

SELECTED REFERENCES: NEWBORN-RELATED HAND HYGIENE

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Akagbo SE, Nortey P, Ackumey MM. Knowledge of standard precautions and barriers to compliance among healthcare workers in the Lower Manya Krobo District, Ghana. BMC Res Notes. 2017;10(1):432. doi:10.1186/s13104-017-2748-9.
2. Bazzano A, Oberhelman R, Potts K, et al. Environmental factors and WASH practices in the perinatal period in Cambodia: Implications for newborn health. Int J Environ Res Public Health. 2015;12(3):2392-2410. doi:10.3390/ijerph120302392.
3. Bazzano A, Taub L, Oberhelman R, et al. Newborn care in the home and health facility: Formative findings for intervention research in Cambodia. Healthcare. 2016;4(4):94. doi:10.3390/healthcare4040094.
4. Biswas A, Bhattacharya SD, Singh AK, Saha M. Addressing hand hygiene compliance in a low-resource neonatal intensive care unit: A quality improvement project. J Pediatr Infect Dis Soc. doi:10.1093/jpids/piy076.
5. Dhingra U, Gittelsohn J, Suleiman AM, et al. Delivery, immediate newborn and cord care practices in Pemba Tanzania: A qualitative study of community, hospital staff and community level care providers for knowledge, attitudes, belief systems and practices. BMC Pregnancy Childbirth. 2014;14(1):173. doi:10.1186/1471-2393-14-173.
6. Friedrich MND, Kappler A, Mosler H-J. Enhancing handwashing frequency and technique of primary caregivers in Harare, Zimbabwe: A cluster-randomized controlled trial using behavioral and microbial outcomes. Soc Sci Med. 2018;196:66-76. doi:10.1016/j.socscimed.2017.10.025.
7. Gon G, Ali SM, Towriss C, et al. Unpacking the enabling factors for hand, cord and birth-surface hygiene in Zanzibar maternity units. Health Policy Plan. 2017;32(8):1220-1228. doi:10.1093/heapol/czx081.
8. Hirschhorn LR, Krasne M, Maisonneuve J, et al. Integration of the Opportunity-Ability-Motivation behavior change framework into a coaching-based WHO Safe Childbirth Checklist program in India. Int J Gynecol Obstet. 2018;142(3):321-328. doi:10.1002/ijgo.12542.
9. Kallam B, Pettitt-Schieber C, Owen M, Agyare Asante R, Darko E, Ramaswamy R. Implementation science in low-resource settings: using the interactive systems framework to improve hand hygiene in a tertiary hospital in Ghana. Int J Qual Health Care. doi:10.1093/intqhc/mzy111.
10. Kamm KB, Vujcic J, Nasreen S, et al. Is pregnancy a teachable moment to promote handwashing with soap among primiparous women in rural Bangladesh? Follow-up of a randomised controlled trial. Trop Med Int Health. 2016;21(12):1562-1571. doi:10.1111/tmi.12782.
11. Machibya M. The role of clean delivery packs in reducing maternal mortality: a case of Chamwino Ikulu and Mlowa health centres. [Master's Thesis]. Mzumbe University. 2015.
12. Miller-Petrie MK, Voigt L, McLennan L, Cairncross S, Jenkins MW. Infant and young child feces management and enabling products for their hygienic collection, transport, and disposal in Cambodia. Am J Trop Med Hyg. 2016;94(2):456-465. doi:10.4269/ajtmh.15-0423.
13. Moyer CA, Adongo PB, Aborigo RA, Hodgson A, Engmann CM. 'They treat you like you are not a human being': Maltreatment during labour and delivery in rural northern Ghana. Midwifery. 2014;30(2):262-268. doi:10.1016/j.midw.2013.05.006.
14. Mwangi JK, Pertet AM. Mothers' knowledge, attitude and self efficacy of clean home birthing practices in a rural community of Kenya. Int J Community Med Public Health. 2018;5(5):1730-1734. doi:10.18203/2394-6040.ijcmph20181678.

15. Odu O, Emmanuel E, Amu EO, et al. Practice of effective hand washing and associated factors among caregivers of infants attending infant welfare clinics in Ado-Ekiti, Ekiti State, Nigeria. BJMMR. 2017;19(11): 1-8.
16. Oksanen T. The roles of local authority people in the community-centered promotion program of hand washing with soap in multiethnic Northern Vietnam - a case study. [Master's Thesis]. University of Tampere. 2015.
17. Parveen S, Nasreen S, Allen JV, et al. Barriers to and motivators of handwashing behavior among mothers of neonates in rural Bangladesh. BMC Public Health. 2018;18(1):483. doi:10.1186/s12889-018-5365-1.
18. Ram PK, Kumar S. Handwashing in the perinatal period: Literature review and synthesis of qualitative research studies from Bangladesh, Indonesia, and Kenya. USAID and Maternal and Child Health Integrated Program.
19. Ram PK, Nasreen S, Kamm K, et al. Impact of an intensive perinatal handwashing promotion intervention on maternal handwashing behavior in the neonatal period: Findings from a randomized controlled trial in rural Bangladesh. BioMed Res Int. 2017;2017. doi:10.1155/2017/6081470.
20. Reddy NR, Sreeramareddy CT. Perinatal care practices in home deliveries in rural Bangalore, India: A community-based, cross-sectional survey. WHO South-East Asia J Public Health. 2017;6(1):75. doi:10.4103/2224-3151.206169.
21. S S, G B, Patel S, S H, Anjum SK. Knowledge, attitude and practice of mothers in infantile skin care. Int J Contemp Pediatr. 2018;5(2):536-541. doi:10.18203/2349-3291.ijcp20180550.
22. Assessing hand hygiene compliance among healthcare workers in six Intensive Care Units: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5668933/.
23. Erasmus V, Daha TJ, Brug H, et al. Systematic review of studies on compliance with hand hygiene guidelines in hospital care. Infect Control Hosp Epidemiol 2010; 31: 283-294. https://www.ncbi.nlm.nih.gov/pubmed/20088678.
24. Pittet D, Simon A, Hugonnet S, et al. Hand hygiene among physicians: performance, beliefs, and perceptions. Ann Intern Med 2004; 141: 1-8. https://www.ncbi.nlm.nih.gov/pubmed/15238364.

SAMPLE 4: DELAYED CORD CLAMPING (DCC)

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Provider delays clamping umbilical cord for 60 seconds post-delivery, or until cord stops pulsating

Context:

- Although a growing body of research suggests that both pre-term and full-term babies benefit from extra blood transfer that happens during DCC, DCC is still far more common for pre-term babies than full-term.
- In low and middle income country settings, immediate cord clamping for all babies is still the norm, both in facility birth and home birth settings. In areas with higher facility birth rates, DCC rates are higher, with one study from Nepal reporting DCC at nearly 50%.
- Midwives are more likely to delay cord clamping than obstetricians.
- DCC is less likely for infants requiring any intervention, most importantly resuscitation.

Critical Steps	Critical Factors	Key Supporting Actors	Necessary Intervention Areas
Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Who else besides the family and provider is required to ensure practice of the behavior?	What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Establish timer immediately upon delivery 2. Wait 30-60 seconds or until cord stops pulsating, while continuing active management of the third stage of labor (AMTSL) and implementation of other newborn care	**STRUCTURAL** • Facility might lack timer to measure interval post-birth for DCC • Lack of clear clinical protocol or guidance on DCC for all babies and for small or sick babies • Lack of leadership and coordination within clinic for implementation of DCC protocols **PROVIDER CAPACITY AND COMMITMENT**	**INSTITUTIONAL** • **Managers**: Ensure ongoing training opportunities on key issues and practices relating to newborn survival like DCC • **Policymakers**: Clarify DCC policy and disseminate to all providers **HOUSEHOLD AND COMMUNITY**	**ENABLING ENVIRONMENT** • Ensure post-natal policies and all clinical care guidelines include DCC for all babies • Incorporate DCC as a clinical quality standard and collect data on it as routine • Make DCC protocol explicit (exact timing, when it should be performed, if there are cases when it should not, etc.) **SYSTEMS, PRODUCTS AND**

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
protocols 3. Clamp and cut cord after 30-60 seconds, or after cord stops pulsating 4. Ensure multi-disciplinary care team is present at birth, especially in instances of complications or cesarean	• Providers are unconvinced of the benefit, especially to healthy babies • Providers with many years of experience cut cord immediately out of habit • Providers are anxious about babies born with complications and unsure of DCC's importance in those settings • Although not adding extra work, DCC represents a process change and often feels like a burden to an already overwhelmed provider **SOCIAL/COLLEAGUE SUPPORT AND INTERNAL MOTIVATION** • Some providers feel they have been successfully delivering babies for their whole careers and are reluctant to change their practice • Providers are heavily influenced by the practices and beliefs of colleagues, especially in resource-limited settings. DCC is not the norm, so providers are reluctant to attempt it • Some providers adopt DCC after	• **Family Members**: Learn about DCC and encourage any birth attendant to implement it	**SERVICES** • Use Knowledge-to-Action training approach, including simulation, to train providers on new skills (DCC); elicit and resolve important feedback on learning and capacity • Create support mechanisms for provider peer groups to discuss new protocols and practices and to hold each other accountable • Identify senior clinical provider as champion to promote or influence practice • Use tools like the Delivery Room Brief and Debrief tool to provide quality assurance and follow-through for guidelines like DCC • Provide ongoing or continuous site-specific informal and formal clinical education fora to relay new global data on best practices such as DCC and discuss local implementation **DEMAND AND USE** • Clearly communicate safety of DCC and mitigate

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	• introduction to it but revert to immediate clamping without reminders and supervision • Providers want to support mother-baby dyad and the family's interest in immediately drying and wrapping the baby		• clinicians' concerns over side effects (if relevant in context) • Include the idea of DCC in ANC counseling to mothers to help them prepare and welcome it • Convince mothers of importance of DCC and encourage them to ask all birth attendants to implement it

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- Clarify and publicize explicit policies on DCC for healthy, pre-term, small, and sick babies.
- Provide continuous training and evidence on benefit of DCC.
- Provide job aids and process reminders for service delivery points on elements of new standards of care such as DCC.
- Create opportunities for peer and colleague support for this practice.

SELECTED RESOURCES: DELAYED CORD CLAMPING

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Braddick, Louise, et al. A mixed-methods study of barriers and facilitators to the implementation of postpartum hemorrhage guidelines in Uganda. International Journal of Gynecology & Obstetrics 132.1 (2016): 89-93.

2. Faucher, M. A., et al. Midwives in India: a delayed cord clamping intervention using simulation. International Nursing Review 63.3 (2016): 437-444.
3. Gams, Rebecca L., et al. How to engage your team to implement delayed cord clamping. Nursing for Women's Health 21.6 (2017): 489-498.
4. Hill, Allyson L., and Holly B. Fontenot. Beliefs and practices of obstetric care providers regarding umbilical cord clamping. Nursing for Women's Health 18.5 (2014): 413-419.
5. Hutton, Eileen K., Kathrin Stoll, and Natalie Taha. An observational study of umbilical cord clamping practices of maternity care providers in a tertiary care center. Birth 40.1 (2013): 39-45.
6. Leslie, M. S., et al. Umbilical cord clamping practices of US obstetricians. Journal of Neonatal-Perinatal Medicine 11.1 (2018): 51-60.
7. Leslie, Mayri Sagady, Debra Erickson-Owens, and Maria Cseh. The evolution of individual maternity care providers to delayed cord clamping: is it the evidence? Journal of Midwifery & Women's Health 60.5 (2015): 561-569.
8. McAdams, Ryan M., Carl H. Backes, and David JR Hutchon. Steps for implementing delayed cord clamping in a hospital setting. Maternal Health, Neonatology and Perinatology 1.1 (2015): 10.
9. Nelin, Viktoria, et al. Factors associated with timing of umbilical cord clamping in tertiary hospital of Nepal. BMC Research Notes 11.1 (2018): 89.
10. Niermeyer, Susan, and Sithembiso Velaphi. Promoting physiologic transition at birth: re-examining resuscitation and the timing of cord clamping. Seminars in Fetal and Neonatal Medicine. Vol. 18. No. 6. WB Saunders, 2013.
11. Oddie, Sam, and Penny Rhodes. Barriers to deferred cord clamping in preterm infants. Archives of Disease in Childhood-Fetal and Neonatal Edition 99.5 (2014): F391-F394.
12. Rich, Diana. Delayed cord clamping: A multidisciplinary Approach. Journal of Obstetric, Gynecologic, & Neonatal Nursing 44.s1 (2015): S9-S10.
13. Tarnow-Mordi, William, et al. Delayed versus immediate cord clamping in preterm infants. New England Journal of Medicine. 377.25 (2017): 2445-2455.
14. World Health Organization. Guideline: delayed umbilical cord clamping for improved maternal and infant health and nutrition outcomes. World Health Organization, 2014.

SAMPLE 5: COMPREHENSIVE POST-NATAL CARE

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Provider delivers comprehensive post-natal care with counseling for the mother-baby dyad

Context:

- Globally, less than 50% of women and even fewer newborns receive any post-natal care within 2 days of delivery.
- In some studies, fewer than 13% of women who deliver at home see a provider to assess their health or their baby's health in the 2 days following delivery, and even fewer receive additional follow-up visits.

Critical Steps	Critical Factors	Key Supporting Actors	Necessary Intervention Areas
Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Who else besides the family and provider is required to ensure practice of the behavior?	What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Conduct immediate post-partum exam of mother-baby dyad one hour after birth to identify potential complications 2. Provide second thorough post-natal (PNC) care exam to mother baby dyad before discharge, delaying departure for as long as possible 3. Provider or family	**STRUCTURAL** • Continuum of care often is not operationalized in post-natal period • Space constraints mean women are often discharged within a few hours of birth, making PNC within the facility inadequate • Insufficient number of health workers to conduct adequate PNC prior to discharge and afterward • Providers lack transportation to get into communities to provide follow-up care, and new mothers lack transportation to clinics	**INSTITUTIONAL** • **Managers:** Plan and budget for appropriate PNC follow-up services • **Policymakers:** Prioritize adequate PNC for mother-baby dyad in decision making, staff allocation, and community outreach approaches **HOUSEHOLD AND COMMUNITY** • **Family Members:** Support mother to seek appropriate	**ENABLING ENVIRONMENT** • Ensure all policies, guidelines, and training materials are aligned, and promote PNC visits at the appropriate times, per WHO recommendations • Provide sufficient human and financial resources to clinics to conduct PNC visits via primary provider or community extension worker • Create mechanism to track home births to the extent possible, through ANC visits or reporting by birth attendants to facilitate first PNC visit

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
member continue close monitoring of mother and baby for the first 24 hours if discharge happens prior to that 4. Include counseling on maternal and newborn care on discharge (breastfeeding, hand hygiene, appropriate cord care, thermal care, follow-up visits, post-partum family planning, identification of danger signs, and timely care-seeking for both mother and baby) 5. Link mother and baby to post-natal care as close to their home as possible before discharging them—including time and	• No infrastructure is available for PNC (e.g., space, equipment, supplies) • Policy mandating PNC for home births is often unclear or nonexistent **PROVIDER CAPACITY AND COMMITMENT** • Providers often consider women and newborns without complications within hours of birth as healthy and do not explain ongoing risks, danger signs, or vulnerabilities within first few days • Providers are often unaware of home births and therefore do not have opportunity to conduct timely first visit • Providers are unclear on specific content for post-natal counseling • Busy providers often view counseling as an "extra" and not always delivering a significant benefit to the woman or family **SOCIAL SUPPORT AND INTERNAL MOTIVATION**	PNC and welcome provider into home on outreach visits • **Community:** Implement emergency committees for care- seeking for danger signs	• Explore use of mobile technology to do post-natal follow-up with women in remote areas • Ensure PNC takes place as close to the community as possible to limit need for women to return to facilities, and address situations where women remain secluded in the home after birth **SYSTEMS, PRODUCTS AND SERVICES** • Determine if additional beds are required in facilities to support recommended hospital stay after delivery • Train providers on PNC and effective counseling • Ensure the use of checklists to provide thorough pre-discharge counseling and check-out **DEMAND AND USE** • Train new mothers or caregivers and family members on essential newborn care including cord care • Adapt and disseminate standard checklist and support materials

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
place 6. Clinical provider or community extension worker conducts post-natal follow-up visits with each mother-baby dyad within the first seven days post birth, per WHO recommendations 7. Clinical provider or community extension worker conducts post-natal follow-up visits to high risk newborns (small and sick) post-discharge, per WHO recommendations	• Importance of PNC visits is not understood by women or their families • Often, PNC visits are of poor quality or limited in scope, and women do not see value in them • In some cultures, it is not appropriate for a woman to leave the house in the first month after birth to seek care		for post-natal care and counseling topics for providers (including exclusive breastfeeding, thermal care, cord care including chlorhexidine if applicable, hand hygiene, immunization, and care-seeking for danger signs) • Create opportunities to discuss and plan for care-seeking for danger signs or emergencies

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- ➢ Enforce use of pre-discharge exam checklist and thorough counseling on danger signs, planning for care-seeking in an emergency, and timing for next PNC visit.

- Reconsider discharge policies to delay departure for as long as possible.
- Consider PNC an integral part of the care continuum and appropriately resource its implementation, including technology as appropriate and home visits by community health workers or extension agents.
- Identify opportunities to better engage communities in PNC for women, including planning for care-seeking for danger signs and emergencies.
- Re-position and re-prioritize the post-natal period (especially the first day and first week) as a time of high risk for morbidity and mortality, requiring follow-up visits to ensure that mother and baby survive and thrive.

SELECTED RESOURCES: COMPREHENSIVE POST-NATAL CARE

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Adam T, Lim SS, Mehta S, et al. Achieving the millennium development goals for health cost effectiveness analysis of strategies for maternal and neonatal health in developing countries. BMJ. 2005; 331 (7525):1107.
2. Ahmed S, Sobhan F, Islam A, Barkat-e-Khuda n. Neonatal morbidity and care-seeking behaviour in rural Bangladesh. J Trop Pediatr. 2001;47(2):98-105.
3. Bassat Q, Simkiss D, Edmond K, Bose A, Troy S, eds. Care of the newborn in developing countries. Journal of Tropical Pediatrics.
4. Callaghan-Koru JA, Seifu A, Tholandi M, et al. Newborn care practices at home and in health facilities in 4 regions of Ethiopia. BMC Pediatr. 2013;13:198. Published 2013 Dec 1. doi:10.1186/1471-2431-13-198.
5. Carlo WA, Goudar SS, Jehan I, et al. Newborn-care training and perinatal mortality in developing countries. New England Journal of Medicine. 2010;362(7):614-623.
6. Darmstadt GL, Hassan M, Balsara ZP, Winch PJ, Gipson R, Santosham M. Impact of clean delivery-kit use on newborn umbilical cord and maternal puerperal infections in Egypt. J Health Popul Nutr. 2009;27(6):746-754.
7. Fikree FF, Ali TS, Durocher JM, Rahbar MH. Newborn care practices in low socioeconomic settlements of Karachi, Pakistan. Soc Sci Med. 2005;60(5):911-921.
8. Fujino Y, Sasaki S, Igarashi K, et al. Improvement in mothers' immediate care-seeking behaviors for children's danger signs through a community-based intervention in Lusaka, Zambia. The Tohoku Journal of Experimental Medicine. 2009;217(1):73-85.
9. Ganle JK, Parker M, Fitzpatrick R, Otupiri E. A qualitative study of health system barriers to accessibility and utilization of maternal and newborn healthcare services in Ghana after user-fee abolition. BMC Pregnancy and Childbirth. 2014;14(1):425.

10. Kayode, Gbenga A., et al. Individual and community determinants of neonatal mortality in Ghana: a multilevel analysis. BMC pregnancy and childbirth 14.1 (2014): 165.
11. Marsh DR, Darmstadt GL, Moore J, Daly P, Oot D, Tinker A. Advancing newborn health and survival in developing countries: A conceptual framework. Journal of perinatology; Document Updated: June 2018. Official Journal of the California Perinatal Association. 2002;22(7):572-576.
12. MEASURE Evaluation. Newborn health: http://www.cpc.unc.edu/measure/prh/rh_indicators/specific/nb.
13. Murray J, Adeyi GN, Graeff J, et al. Emphasis behaviors in maternal and child health: Focusing on caretaker behaviors to develop maternal and child health programs in communities. 1997.
14. Newbrander W, Natiq K, Shahim S, Hamid N, Skena NB. Barriers to appropriate care for mothers and infants during the perinatal period in rural Afghanistan: A qualitative assessment. Global public health. 2014;9 Suppl 1(sup1):S109.
15. Shiferaw S, Spigt M, Godefrooij M, Melkamu Y, Tekie M. Why do women prefer home births in Ethiopia? BMC Pregnancy and Childbirth. 2013;13(1):5.
16. Sinha LN, Kaur P, Gupta R, Dalpath S, Goyal V, Murhekar M. Newborn care practices and home-based postnatal newborn care programme - Mewat, Haryana, India, 2013. Western Pacific Surveillance and Response Journal: WPSAR. 2014;5(3):22-29.
17. Sreeramareddy CT, Joshi HS, Sreekumaran BV, Giri S, Chuni N. Home delivery and newborn care practices among urban women in western Nepal: A questionnaire survey. BMC Pregnancy and Childbirth. 2006;6(1):27.
18. World Health Organization. WHO recommendations on postnatal care of the mother and newborn. World Health Organization, 2014.
19. WHO, UNICEF. Home visits for the newborn child: A strategy to improve survival. 2009.
20. WHO. Newborn death and illness. WHO Web site: http://www.who.int/pmnch/media/press_materials/fs/fs_newborndealth_illness/en/.
21. WHO. Newborns: Reducing mortality. WHO Web site. http://www.who.int/mediacentre/factsheets/fs333/en.

SAMPLE 6: NUTURING CARE

This behavior is part of an expanding body of evidence on the critical importance of nurturing care for infants and young children to ensure not only neonatal, infant, and child survival but also maximum opportunity to thrive. USAID's August 2019 document, "Nurturing Care for Small and Sick Newborns: An Evidence Review and Country Case Studies" explains the evolution of this new domain of care:

> "In 2018, WHO, UNICEF, the World Bank Group, and other partners launched Nurturing Care for Early Childhood Development: A Framework for Helping Children Survive and Thrive to Transform Health and Human Potential at the 71st World Health Assembly. The new Nurturing Care Framework draws on state-of-the-art evidence regarding early childhood development to guide the design of effective policies and services to ensure that parents and caregivers are providing nurturing care for babies. Nurturing care is defined as "a stable environment that is sensitive to children's health and nutritional needs, with protection from threats, opportunities for early learning, and interactions that are responsive, emotionally supportive, and developmentally stimulating".(3)(p91) The Nurturing Care for Early Childhood Development: A Framework for Helping Children Survive and Thrive to Transform Health and Human Potential pertains to all newborns, infants and children from zero to three years, and sets out five components of nurturing care: good health, adequate nutrition, responsive caregiving, opportunities for early learning, and security and safety."

This evidence review provides a clear framework for the key actions or behaviors required within each of these components and compiles and discusses evidence on current context for the practice of those behaviors. The Behavior Profile presented below complements this framework and highlights one nurturing care behavior that health care providers must practice during and immediately after birth. It attempts to illustrate the type of logical analysis required to understand not only what needs to happen, but also why health care providers do not currently practice this behavior and how development investment could catalyze change.

Because this behavior is new for many providers, there is comparatively less evidence on the motivations and barriers to its practice than on other components of nurturing care or newborn care more broadly. As such, the profile ends with a set of research questions.

GOAL: Ensure every newborn survives and thrives

Key Behavioral Outcome:
Providers deliver appropriate, family-centered developmental care throughout the continuum of antenatal care, delivery and post-partum care

Critical Steps	Critical Factors	Key Supporting Actors	Necessary Intervention Areas
Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Who else besides the family and provider is required to ensure practice of the behavior?	What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
1. Providers share all medical information with clients 2. Providers offer clients opportunities to ask questions 3. Providers treat clients and families with dignity and respect 4. Providers establish a healing environment in facilities, including prioritizing sleep for newborn and mother, minimizing stress and pain of newborn and mother, and engaging the parents in feeding, bathing, practicing Kangaroo	**STRUCTURAL** • Lack of clear policies and guidelines on these aspects of care, and policies that exist are still in development or not widely shared • Existing policies and guidelines often limit parental involvement in delivery and inpatient special newborn care • Parental role in newborn care, even including consent for care, is not discussed during ANC, making engagement at birth complicated • Clients often have limited medical literacy and do not feel equipped to request anything different from the status quo; often, they are also disempowered or not informed about the important role a healing environment can play in their child's life • Facilities do not have physical space and accommodations (e.g.,	**INSTITUTIONAL** • **Policymakers:** Adopt, clarify, and enforce policies on family-centered, developmentally appropriate care • **Facility Managers:** Identify opportunities to create a more healing environment within facilities • **Peer Providers:** Encourage and support colleagues in adoption of new practices **HOUSEHOLD AND COMMUNITY** • **Families:** Engage more meaningfully in preparations for newborn • **Families:** Address traditional gender roles to permit both mothers and fathers to participate in	**ENABLING ENVIRONMENT** • Create dedicated newborn care rooms with appropriate lighting and quiet • Ensure locations for clinical care in facilities include space and facilities for families to participate • Create and disseminate clear policies on required aspects of family-centered developmental care, emphasizing mother-baby dyad care, family engagement in care, consent, and specific components of a healing environment, including clustering clinical care, minimizing painful procedures, providing pain mitigation when necessary, creating a supportive micro-environment (nesting), and maintaining skin integrity. **SYSTEMS, PRODUCTS AND SERVICES**

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
Mother Care (KMC), and nesting the newborn 5. Families actively participate in newborn care while in facility to support a healing environment including prioritizing sleep, minimizing stress and pain of newborn, feeding (breastfeeding or cup-feeding), bathing, practicing KMC, and nesting the newborns	comfortable chairs, hand cleansing and toilet facilities, breast pumps) that allow parents to be physically present with the newborn • A discharged mother might live far from the facility where her baby remains an in-patient, making regular engagement very difficult **PROVIDER CAPACITY AND COMMITMENT** • Lack of training on newborn neurodevelopmental concerns: providers are well-trained on pathology and physiology, but not on psychological aspects • Providers feel engaging parents in care is a risk to efficient or effective care, rather than a benefit in them • Lack of understanding of the importance of creating a quiet, low-light, or other soothing environment • Capacity of parents to engage in care varies widely, making systematic engagement timely and complicated	caregiving	• Incorporate training on newborn neurodevelopment in all provider training • Create exchange programs with providers from facilities with improved nurturing care practices **DEMAND AND USE** • Orient and educate parents about nurturing care in the facility and after discharge • Facilitate discussion on newborn neurodevelopment with families during ANC • Empower families to more actively participate in newborn care, including asking questions of providers

Critical Steps Break down behaviors to better determine gaps and opportunities: What steps are required to practice this behavior?	Critical Factors What factors are known to support or inhibit the behavior or each step, i.e., why doesn't the behavior take place? What are gaps to explore?	Key Supporting Actors Who else besides the family and provider is required to ensure practice of the behavior?	Necessary Intervention Areas What kinds of activities are necessary to resolve or leverage identified factors and engage the supporting actors?
	SOCIAL SUPPORT AND INTERNAL MOTIVATION • Providers feel nurturing care behaviors at times challenge their authority or compete rather than complement other care actions in terms of time or resources • Nurturing care behaviors are new, and more established providers do not see benefit • Families do not feel empowered to participate in care while in a facility		

IMPLICATIONS FOR PROGRAMMING:

Although these implications will change based on country contextualization of this profile, this analysis suggests the following implications for programming:

- Ensure care for mother and baby is provided as a dyad (couplet) at all times.
- Re-examine physical space within facility to create improved soothing environments and opportunities for families to participate in care.
- Improve training on newborn neurodevelopmental concerns for all providers.
- Introduce health education on nurturing care for all parents.
- Consider provider exchange programs to reinforce new norms.
- Include key aspects of nurturing care in all hospital protocols, including emphasizing key aspects of creating a healing environment during clinical care, including clustering procedures, minimizing painful interventions, providing pain mitigation when necessary, creating a supportive micro-environment (nesting), and maintaining skin integrity.
- Empower families to ask questions and participate in care.

RESEARCH QUESTIONS:

- How can requirements of nurturing care be introduced to providers in a manner that seems easy and not as a challenge to their authority

and role or as another demand competing for limited time and resources?

- How can family-provider relationships be strengthened, given constraints of time, staffing turnover, or limited engagement prior to delivery?
- What would motivate providers to embrace family-centered developmental care as the gold standard?
- How can a healing environment best be established in low-resource settings?

SELECTED RESOURCES: NURTURING CARE

Please note, these references are by no means an exhaustive compilation of available evidence on the behavior, but rather were used to illustrate the process of analysis required to unpack what is required to enable the identified behavior. Consult appropriate, local evidence when constructing Behavior Profiles for a particular country.

1. Altimier, Leslie B. The neonatal intensive care unit environment. Neonatal Nursing Care Handbook: An Evidence-Based Approach to Conditions and Procedures. (2016): 413.
2. Altimier, Leslie, and Raylene M. Phillips. The neonatal integrative developmental care model: seven neuroprotective core measures for family-centered developmental care. Newborn and Infant Nursing Reviews 13.1 (2013): 9-22.
3. Benzies, Karen M., et al. The health care system is making 'too much noise' to provide family-centred care in neonatal intensive care units: Perspectives of health care providers and hospital administrators. Intensive and Critical Care Nursing. 50 (2019): 44-53.
4. Best K, Bogossian F, New K. Language exposure of preterm infants in the neonatal unit: a systematic review. Neonatology. 2018;261–76.
5. Burke S. Systematic review of developmental care interventions in the neonatal intensive care unit since 2006. J Child Health Care. 2018 Jun;22(2):269–86.
6. Etchegary, Holly, et al. Consent for newborn screening: parents' and health-care professionals' experiences of consent in practice. European Journal of Human Genetics. 24.11 (2016): 1530.
7. Goyal NK, Teeters A, Ammerman RT. Home visiting and outcomes of preterm infants: A systematic review. Pediatrics. 2013;132(3):502–16.
8. Jolley J, Shields L. The evolution of family-centered care. J Pediatr Nurs. 2009 Apr;24(2):164-70.
9. Lavallée A, De Clifford-Faugère G, Garcia C, Fernandez Oviedo AN, Héon M, Aita M. Part 1: Narrative overview of developmental care interventions for the preterm newborn. J Neonatal Nurs. 2019;25(1):3–8.
10. Liao J-H, Hu R-F, Su L-J, Wang S, Xu Q, Qian X-F, et al. Nonpharmacological interventions for sleep promotion on preterm infants in neonatal intensive care unit: A systematic review. Worldviews Evid Based Nurs. 2018;15(5):386–93.
11. Norman, Vivian, Kim Rossillo, and Katie Skelton. Creating healing environments through the theory of caring. AORN Journal. 104.5 (2016): 401-409.

12. Pineda R, Guth R, Herring A, Reynolds L, Oberle S, Smith J. Enhancing sensory experiences for very preterm infants in the NICU: an integrative review. J Perinatol. 2017 Apr;37(4):323–32.
13. Simpson, Tanika E., et al. Demystifying infant mental health: what the primary care provider needs to know. Journal of Pediatric Health Care. 30.1 (2016): 38-48.
14. Sudia-Robinson, Tanya M., and Sarah B. Freeman. "Communication patterns and decision making among parents and health care providers in the neonatal intensive care unit: A case study." *Heart & lung* 29.2 (2000): 143-148.
15. New, K, Durairaj A, Robb-McCord J et al. Nurturing Care for Small and Sick Newborns: Evidence Review and Country Case Studies. United States Agency for International Development, Maternal and Child Survival Project; 2019

APPENDIX: COMPREHENSIVE POST-NATAL CARE

GOAL: Ensure all babies survive and thrive											
Type of Necessary Support: Domain (per causes analysis)	**Behaviors for ALL babies** (Essential Newborn Care)	**Behaviors for small/sick babies** (+ Essential Newborn Care)	**Primary Actor**			**Time of Practice**				
			Mother/ Family	**Facility - based Provider**	**Community-based Provider**	**Ante-partum**	**Intra partum**	**48 hrs Post-partum**	**2-28 days**	**28-59 days**
	Note: bold indicates the behavior is one of the current 18 "Accelerator Behaviors"									
Cardiorespiratory	• Provider takes fetal heart rate on admission in labor	• Provider assesses pregnant woman/newborn and makes referral to higher level of care, as appropriate	X	X	X		X			
	• Provider attempts newborn resuscitation for any baby born not breathing	• Provider safely uses oxygen		X			X			
	• Provider delays cord clamping	• **Family seeks care immediately for any signs of breathing distress**	X	X	X		X	X	X	X
Thermal	• Provider (or family) immediately dries baby after birth		X	X	X		X			
	• Family maintains skin-to-skin contact immediately after birth and during first hour	• Family practices KMC	X				X	X		
	• Provider takes baby's temperature by 90 minutes						X			
Feeding	• Provider weighs and takes length of baby at birth and monthly	• Provider monitors weight gain during first months		X	X		X	X	X	X

	• **Mother initiates breastfeeding within first hour of baby's life**	• Provider facilitates expression of breast milk within first hour after birth	X	X	X		X			
	• **Mother exclusively breastfeeds**	• Mother feeds more frequently	X					X	X	X
	• Mother feeds on demand, throughout day and night	• Mother expresses breastmilk and feeds with cup/spoon	X					X	X	X
	• Families seek assistance for breastfeeding problems	• Provider facilitates nasogastric feeding when indicated	X	X				X	X	X
		• **Family seeks care for difficulty feeding**								
Infection Prevention, Control, and Management	• Providers minimize invasive procedures in care of baby			X			X	X		
	• **Family and provider practice handwashing at critical times during labor, delivery and after as well as before holding baby**		X	X	X		X	X	X	X
	• Provider uses sterile instrument to cut cord			X	X		X			
	• Family properly cares for cord		X				X	X	X	
	• **Caregivers seek a full course of timely vaccinations for infants**	• **Family seeks care for danger signs of infection in a sick newborn**	X					X	X	X
Developmentally Supportive Care	• Provider and family carry out respectful, communicative relationship		X	X	X	X	X	X	X	X
	• Provider practices family-centered care: ○ Develops, follows, explains a plan of care			X	X	X	X	X	X	X

	○ Prevents unnecessary separation of mother and baby ○ Facilitates family privacy ○ Supports family-newborn attachment									
	● Provider manages sensory environment ○ Encourages skin to skin ○ Optimizes nutrition ○ Calibrates sound and light and clusters care to safe-guard sleep ○ Appropriately engages parents to minimize stress and pain ○ Positions newborn appropriately			X	X		X	X		
	● Family actively engages in care of the newborn		X			X	X	X	X	X