ANNEX 1

Newborn health services summary tables by levels of care

Annex 1 is divided into three sections, presenting the following critical services:

- 1A: Essential newborn care (ENC) services for all newborns
- 1B: Services to prevent and manage prematurity
- 1C: Services to prevent and manage newborn infections and sepsis

Within each section, tables are separated by level of care to facilitate easy reference:

- TABLE 1: Household-level care delivery
- TABLE 2: Primary facility-level care delivery
- TABLE 3: Hospital-level care delivery

ANNEX 1A

TABLE 1: ENC for all newborns - HOUSEHOLD LEVEL

Typically delivered by CHWs

Pregnancy	• Identify pregnant women in crisis-affected populations. • Provide pregnant women and families (or others in the community) with information regarding the nearest health facility for skilled care. • Identify women in preterm labor and refer to nearest health facility for care. • Encourage women/families to give birth at the health facility. • Provide respectful, supportive care to the woman: maintain privacy; encourage her to have a birth companion, choose her birthing position, to move around and drink fluids; ensure that all information is communicated clearly to her. • If women are unable to go to a health facility for antenatal care and/or labor/birth: - Provide education on danger signs, need for referral, and referral pathways. - Provide family with a clean birth kit and information about safe birth practices and newborn care. - Emphasize that mother and baby should not be separated, particularly immediately after birth. - Discuss early and exclusive breastfeeding, cleanliness and safe newborn care. • If home birth occurs, encourage women and caretakers to visit a health facility as soon as possible after birth to examine mother/baby. • Distribute newborn care supply kits.

	In malaria endemic areas, distribute ITNs to pregnant women and educate women and families how to use the ITNs. • Counsel women on the importance of seeking care for HIV, STI, and malaria interventions and vaccinations.
Labor/birth	• If labor (including premature) begins at home, support transfer to a health facility. • Employ clean birth practices (clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface. • Provide thermal care immediately by thoroughly drying the baby and placing the baby on mother's chest until the first breastfeeding, including colostrum (initiated usually within the first hour of birth where possible). • For all newborns who are breathing at birth and do not require resuscitation, do not bulb suction the mouth and nose, and practice delayed cord clamping and safe cord care. • For babies who don't start spontaneous breathing within 60 seconds clear the airway and immediately start tactile stimulation by rubbing the back and thoroughly drying.
Immediate postnatal care (within the first hour of birth)	• Ensure that the mother and newborn are not separated; continue thermal care through Kangaroo Mother Care for at least 60 minutes. • Delay bathing for at least 24 hours to prevent heat loss and hypothermia. • Initiate exclusive breastfeeding as soon as possible after delivery, or at least within 1 hour after birth. • Provide clean dry cord care. In settings where the application of harmful substances on cords is prevalent, apply 4% Chlorhexidine (7.1% digluconate gel or liquid) to the cord, in line with national guidelines. • Assess for danger signs and counsel on prompt recognition and care-seeking by the family (not feeding well, reduced activity, difficulty breathing, fever or feels cold, fits or convulsions). • Identify, support, and, if necessary, refer newborns who need additional care (e.g., LBW, sick, mother is HIV-infected). • If CHWs or other cadres are trained to assist in home deliveries, they should have knowledge of the referral system and where advanced care is available nearest to the household before the birth, in case complications arise.
Later postnatal care (2nd hour following birth up to 7 days)	• Distribute newborn care commodities to families that did not receive them during pregnancy. • Weigh the newborn baby using a newborn weighing scale and record birth weight appropriately. • Provide eye care: single-dose tetracycline eye ointment. • Promote essential newborn care, including: - Keeping the baby warm; - Exclusive breastfeeding; - Hand washing for people handling the baby; - Hygienic cord and skin care;

	• During postnatal care contact within the first 24 hours, between 48-72 hours and between day 7-14, examine the newborn for danger signs[1]: - Critical illness: No movement/unconscious, history of convulsions, unable to feed, severe bleeding, or bulging fontanelle. - Clinically severe infection: Fever (temperature greater than or equal to 38°C), hypothermia. (temperature less than 35.5°C), poor feeding, reduced movement, severe chest in-drawing. - Isolated fast breathing: Respiratory rate >60 breaths per minute. • Assist families of newborns identified to have danger signs or severe illness to seek higher-level care immediately. • Encourage HIV-positive mothers to access HIV testing and care for their newborns. • Promote exclusive breastfeeding. • Ensure adherence to local immunization schedules, including Hep B, Polio, and BCG and week 6 visit for immunizations Support with birth registration.

Table 2: ENC for all Newborns - FACILITY LEVEL (Camp, Temporary or Mobile Clinics and Local Health Services)

Delivered by Auxiliary Nurse Midwives, Nurses, Clinical Officers

Pregnancy	• Identify pregnant women in crisis-affected populations. • Provide pregnant women and families (or others in the community) with information regarding the nearest health facility for skilled care. • Counsel women on birth preparedness: - Provide education on danger signs, need for referral, and referral pathways. - Provide family with a clean birth kit and information about safe birth practices and newborn care. - If home birth occurs, encourage women and caretakers to visit a health facility as soon as possible after birth to examine mother/baby. - Distribute newborn care supply kit intended for household use, to families who did not receive it at the community level. • Encourage women to get tested and seek care at a health facility for themselves before birth, and for their newborns after birth. • In malaria endemic areas, distribute ITNs to pregnant women for their use. • Provide the following: - Tetanus toxoid immunization (minimum 2 doses at recommended interval). - Iron and folate supplementation.

[1] WHO. WHO recommendations on maternal and newborn care for a positive postnatal experience. WHO, 2022.

	- Syphilis screening and treatment. - Screening and treatment for urinary tract infections. - Screening and treatment of hypertension, diabetes mellitus, and other chronic conditions. • Encourage women/families to complete at least 4 ANC visits with the first visit as early as possible, preferably in the first trimester. • For women who have completed less than 34 weeks of pregnancy and have one of the five conditions associated with preterm birth (i.e., preterm labor, premature rupture of the membranes, antepartum haemorrhage, multiple pregnancy, severe pre-eclampsia), refer to a hospital for further monitoring.
Labor/birth	• Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface). • Provide respectful, supportive care to the woman: maintain privacy; encourage her to have a birth companion, choose her birthing position, to move around and drink fluids; ensure that all information is communicated clearly to her. • If the primary care facility is equipped to perform normal deliveries, monitor labor with the use of the partogram. • If maternal or fetal distress is recognized, identify transport and use established referral systems to get the woman to a health facility that has basic or comprehensive emergency obstetric and newborn care (BEmONC or CEmONC). • For newborns who do not start breathing on their own after tactile stimulation within one minute after birth, provide basic newborn resuscitation (self-inflating bag and mask and suction device). • Administer antibiotics to newborns who are born with the following risks (even if no signs of clinical infection): - The mother has or had a uterine infection or fever any time from the onset of labor to three days after birth. - The mother had premature rupture of membranes for more than 18 hours before birth and/or foul smelling amniotic fluid. - Duration of antibiotics should be at least 48 hours if laboratory studies and exam are normal. Longer treatment duration is required if laboratory results suggest infection or if clinical signs are present. • Encourage health staff to review maternal records to assess the need for antibiotics and other newborn health interventions. *In case of Intrapartum complications during birth* • Assess adequacy of ventilation by observing chest rise and fall. If normal breathing has not started, use the bag and mask for oxygen administration and monitor oxygen levels with a battery-operated pulse oximeter with probes for neonates. • Have a mucus trap (e.g., Penguin Suction Device) available for suction or a suction machine.

	• If continued oxygen administration is needed and equipment for providing oxygen monitoring saturation is available, use nasal prongs.
Immediate postnatal care (within the first hour of birth)	• Ensure that the mother and newborn are not separated; continue thermal care by practicing Kangaroo Mother Care for at least 60 minutes. • Delay bathing for at least 24 hours to prevent heat loss and hypothermia. • Initiate exclusive breastfeeding as soon as possible after delivery, or at least within 1 hour after birth. • Provide clean dry cord care. In settings where the application of harmful substances on cords is prevalent, apply 4% Chlorhexidine (7.1% digluconate gel or liquid) to the cord, in line with national guidelines. • Assess for danger signs and counsel on prompt recognition and care-seeking by the family (not feeding well, reduced activity, difficult breathing, fever or feels cold, fits or convulsions). • Identify, support and if necessary refer newborns who need additional care (e.g., LBW, sick, mother is HIV-infected). • Provide birth certificate or record of birth in accordance with national practice.
Later postnatal care (2nd hour following birth up to 7 days)	• Distribute newborn care commodities to families that did not receive them during pregnancy. • Perform a complete physical examination following the first hour. • Provide eye care: single-dose tetracycline eye ointment. • Promote essential newborn care, including: - Keeping the baby warm; - Exclusive breastfeeding; - Hand washing for people handling the baby; and - Hygienic cord and skin care. • Provide the newborn with 1 mg of vitamin K intramuscularly (IM) and provide immediate vaccination according to national vaccination protocol, usually including hepatitis B in areas of high endemicity, Polio, and BCG for tuberculosis. • Prior to discharge, assess mothers and their new babies for danger signs of serious infections and for other problems (e.g., congenital malformations, such as cleft palate). - Regularly assess all postpartum women for vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth. • Where possible, keep the healthy mother and baby together in the facility to receive postnatal care for at least 24 hours. Otherwise, coordinate with field staff to organize a first home visit from a trained health worker within 24 hours after birth. • Organise, at minimum, two more home visits for postnatal care to take place between 48-72 hours and between day 7-14 after birth. Where home visits are not feasible, instruct women to return to the facility during these two time periods for two postnatal check-ups.

	• Advise women to return immediately to the facility if they notice any danger signs. • For HIV-positive mothers: - Encourage mothers to access HIV testing and other care for their newborns; - Promote exclusive breastfeeding and observe newborns for danger signs as they are particularly vulnerable to infections; and - Provide HIV treatment to mother and baby as per local protocol.

Table 3: ENC for all Newborns - HOSPITAL LEVEL (Referral Care)

Delivered by Nurses, Clinical Officers, Nurse-Midwives, Doctors

Pregnancy	• Identify pregnant women in crisis-affected populations. • Encourage women/families to complete at least 4 ANC visits, with the first visit as early as possible, preferably during the first trimester. • Provide pregnant women and families (or others in the community) with information regarding the nearest health facility for skilled care. • Counsel women on birth preparedness: - Provide education on danger signs, need for referral, and referral pathways. - Provide family with information about safe birth practices and newborn care. • Encourage women to get tested and seek care at a health facility In malaria endemic areas, distribute ITNs to pregnant women for their use. • For women who have completed less than 34 weeks of pregnancy and have one of the five conditions associated with preterm birth (i.e., preterm labor, premature rupture of the membranes, antepartum haemorrhage, multiple pregnancy, severe pre-eclampsia), monitor and follow WHO recommendations on interventions to improve preterm birth outcomes. • Provide the following: - Ultrasound in the first trimester to accurately estimate gestational age; - Tetanus toxoid immunization (minimum 2 doses at recommended interval); - Iron and folate supplementation; - Syphilis screening and treatment; - Screening and treatment for urinary tract infections; and - Screening and treatment of hypertension, diabetes mellitus, and other chronic condition.
Labor/birth	• Provide respectful, supportive care to the woman: maintain privacy; encourage her to have a birth companion, choose her birthing position, to move around and drink fluids; ensure that all information is communicated clearly to her. • Monitor and document labor with the use of the partogram.

	• If there are signs of maternal or fetal distress, follow guidelines for providing BEmONC or CEmONC services. • If the newborn, including pre-term and/or LBW babies, does not start breathing spontaneously or is not stable, provide newborn resuscitation (self-inflating bag and mask and suction device). • Administer antibiotics to newborns who are born with the following risks (even if no signs of clinical infection): - The mother has or had a uterine infection or fever any time from the onset of labor to three days after birth. - The mother had premature rupture of membranes for more than 18 hours before birth and/or foul smelling amniotic fluid. - Duration of antibiotics should be at least 48 hours if laboratory studies and exam are normal. Longer treatment duration is required if laboratory results suggest infection or if clinical signs are present. • Encourage health staff to review maternal records to assess the need for antibiotics and other newborn health interventions. In case of Intrapartum complications during birth • Assess adequacy of ventilation by observing chest rise and fall. If normal breathing has not started, use the bag and mask for oxygen administration and monitor oxygen levels with a battery operated pulse oximeter with probes for neonates. • Have a mucus trap (e.g., Penguin Suction Device) available for suction or a suction machine. • If continued oxygen administration is needed and equipment for providing oxygen monitoring saturation is available, use nasal prongs.
Immediate postnatal care (within the first hour of birth)	• Ensure that the mother and newborn are not separated; continue thermal care by practicing Kangaroo Mothers Care for at least 60 minutes. • Delay bathing for at least 24 hours to prevent heat loss and hypothermia. • Initiate exclusive breastfeeding as soon as possible after delivery, or at least within 1 hour after birth. • Provide clean dry cord care. In settings where the application of harmful substances on cords is prevalent, apply 4% Chlorhexidine (7.1% digluconate gel or liquid) to the cord, in line with national guidelines. • Assess for danger signs and counsel on prompt recognition and care-seeking by the family (not feeding well, reduced activity, difficult breathing, fever or feels cold, fits or convulsions). • Provide birth certificate or record of birth in accordance with national practice. In case of intrapartum complications during birth: • Provide advanced care for respiratory distress syndrome such as CPAP support with ability to monitor oxygen saturation levels.

	• In addition to respiratory issues, the newborn may have other complications such as convulsions or hypoglycemia. • If the newborn is convulsing, provide IV phenobarbital. • Check glucose for hypoglycemia (<45 mg/dl or 2.5 mmol/l) and treat with glucose by IV or nasogastric tube as indicated.[2] • Once newborn is breathing well and is stable, follow ENC measures.
Later postnatal care (2nd hour following birth up to 7 days)	• Distribute newborn care commodities to families that did not receive them during pregnancy. • Perform a complete physical examination following the first hour. • Provide eye care: single-dose tetracycline eye ointment. • Promote essential newborn care, including: - Keeping the baby warm; - Exclusive breastfeeding; - Hand washing for people handling the baby; and - Hygienic cord and skin care. • Provide the newborn with 1 mg of vitamin K intramuscularly (IM) and provide immediate vaccination according to national vaccination protocol, commonly including hepatitis B, Polio and BCG. • Prior to discharge, assess mothers and their new babies for danger signs of serious infections and for other problems (e.g., congenital malformations, such as cleft palate). • Regularly assess all postpartum women for vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth. • Where possible, keep the healthy mother and baby together in the facility to receive postnatal care for at least 24 hours. Otherwise, coordinate with field staff to organize a first home visit from a trained health worker within 24 hours after birth. • Organise, at minimum, two more home visits for postnatal care to take place between 48-72 hours and between day 7-14 after birth. Where home visits are not feasible, instruct women to return to the facility during these two time periods for two postnatal check-ups. • Advise women to return immediately to the facility if they notice any danger signs.

[2] WHO. Pocket Book of Hospital Care for Children: Guidelines for the Management of Common Childhood Illness. Second edition. WHO, 2013.

ANNEX 1B

TABLE 1: Prematurity/LBW Care - HOUSEHOLD LEVEL

Typically delivered by CHWs

Provide ENC as per Annex 1A

Pregnancy	• During ANC, counsel the mother on good nutrition during pregnancy and breastfeeding. • Encourage immediate and exclusive breastfeeding for the newborn for the first 6 months. • Provide education on risk factors for preterm labor and care for preterm babies.
Labor/birth	• Identify women in preterm labor and accompany if possible to nearest health facility for care. • Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface).
Immediate postnatal care (within the first hour of birth)	• Refer all babies born before 37 weeks gestation and/or all LBW newborns (< 2500g/5.5 lb) to more advanced care (ideally, in a formal hospital setting; see below). • Place all babies weighing less than 2500g/5.5 lb in skin to skin position with their mother or a surrogate and take them immediately to a health facility for follow up.
Later postnatal care (2nd hour following birth up to 7 days)	• Follow-up on all preterm and LBW babies after birth at home or discharge from the health facility through extra postnatal visits, preferably at home; provide support for KMC and breastfeeding, and monitor weight gain. • Ensure immediate referral to facility-based care for newborns showing any danger signs (not feeding well, reduced activity, difficulty breathing, fever or feels cold, fits or convulsions)as well as signs of jaundice.

Table 2: Prematurity/LBW Care - FACILITY LEVEL (Camp, Temporary or Mobile Clinics and Local Health Services)

Delivered by Auxiliary Nurse Midwives, Nurses, Clinical Officers

Provide ENC as per Annex 1A

Pregnancy	• During ANC, counsel the mother on good nutrition during pregnancy and breastfeeding. • Encourage immediate and exclusive breastfeeding for the newborn for the first 6 months. • Provide education on risk factors for preterm labor and care for preterm babies.

	• For women who have completed less than 34 weeks of pregnancy and have one of the five conditions associated with preterm birth (i.e., preterm labor, premature rupture of the membranes, antepartum haemorrhage, multiple pregnancy, severe pre-eclampsia), refer to a hospital further monitoring.
Labor/birth	• Identify women in preterm labor and refer to nearest health facility for care. • For women who are less than 34 completed weeks gestation and for whom preterm labor appears imminent, accompany them to a hospital that can provide ACS. • Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface). • For newborns who do not start breathing on their own within 1 minute after birth after tactile. stimulation, provide basic newborn resuscitation (self-inflating bag and mask and suction device) • For babies who do not require bag and mask ventilation, delay clamping the cord for at least 1 minute.
Immediate postnatal care (within the first hour of birth)	• Provide extra thermal care for small babies through KMC. • Employ strict infection-prevention measures through strict hand washing, ensuring a clean environment and avoiding sharing of incubators.
Later postnatal care (2nd hour following birth up to 7 days)	• Measure the newborn's body temperature every four hours and observe and monitor other newborn vital signs for a minimum of 24 hours. • Weigh the newborn at least once per day. • Monitor for signs of jaundice. • Continue KMC with careful monitoring of feeding, weight gain and signs of illness, especially infection. • Continue providing ENC and feed breast milk every 2 to 3 hours for about 20 minutes per session until the baby is tolerating feeds, is alert and has no signs of hypoglycemia.[3] • Provide feeding support (e.g., cup and spoon, nasogastric tube) if the baby is unable to breastfeed. • For newborns who are having difficulty breastfeeding, ensure mothers are comfortable hand-expressing breast milk. • Provide antibiotic prophylaxis for newborns at risk of infection due to pPROM or meconium aspiration during birth [intravenous (IV)/intramuscular (IM) ampicillin powder for injection 500 mg vial (250mg/ml); IV/IM gentamicin, 40mg/ml (20mg/ml, if available)].

Table 3: Prematurity/LBW Care - HOSPITAL LEVEL (Referral Care)

Delivered by Nurses, Clinical Officers, Nurse-Midwives, Doctors

Provide ENC as per Annex 1A

[3] Edmond K, Bahl R. Optimal Feeding of Low-Birth-Weight Infants: Technical Review. WHO, 2006.

Pregnancy	• Follow measures recommended under Annex 1A.
Labor/birth	• Give ACS to women at risk of preterm birth from 24 weeks to 34 weeks of gestation when the following conditions are met: - gestational age is known; - preterm birth is considered imminent; - there is no clinical evidence of maternal infection; - adequate childbirth care is available; and - the preterm newborn can receive adequate care if needed (including resuscitation, thermal care, feeding support, infection treatment and safe oxygen use). See WHO's recommendations on interventions to improve preterm birth outcomes for further guidance. • Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface). • For newborns who do not start breathing on their own within 1 minute after birth, provide basic newborn resuscitation (self-inflating bag and mask and suction device). • For babies who do not require bag and mask ventilation, practice delayed cord clamping and clean cord care.
Immediate postnatal care (within the first hour of birth)	• If the baby is unstable requiring frequent ventilatory support, and a functional, clean incubator is available, use the incubator until the baby is stable enough to transition to KMC. • If the mother is not available to perform STS or KMC, enlist the support of another caregiver. • Immediate treatment of hypoglycemia if identified. • Once newborn is breathing well and is stable, follow ENC measures.
Later postnatal care (2nd hour following birth up to 7 days)	• Monitor vital signs of at risk newborns for a minimum of 24 hours. • If baby is unstable and incubators are available, consider incubator care until the baby can stay with mother in continuous skin-to-skin care. Continue KMC for preterm babies with careful monitoring of feeding, weight gain and signs of illness. • For newborns who are having difficulty breastfeeding, support mother in hand expressing breast milk for her newborn baby; Support mother to use a feeding cup; if skilled staff and sufficient equipment are available, providers may use a nasogastric tube. • Provide blood glucose measurement before each feeding. - If not yet feeding, provide blood glucose at least every 3 hours until blood glucose remains stable and treat accordingly • Measure temperature every 4 hours. • Weigh the newborn at least 1x/day (ideally, 2x/day). • Continue extra care for preterm babies and special feedings. • Continue monitoring temperature and weight. • Where supplies and the ability to monitor oxygen saturation and cardiorespiratory status are available, provide advanced care for respiratory distress:

	- Surfactant therapy to intubated and ventilated newborns - Continuous positive airway pressure (CPAP) - Prevent and treat apnea of prematurity with caffeine • Manage newborns with jaundice.

ANNEX 1C

TABLE 1: Preventing and managing infections - HOUSEHOLD LEVEL

Typically delivered by CHWs

Provide ENC as per Annex 1A

Pregnancy	• In malaria endemic areas, distribute ITNs to pregnant women for use during and after pregnancy. Advise mothers/family that newborn also sleeps under ITN.
Labor/birth	• Employ clean birth practices (clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface).
Immediate postnatal care (within the first hour of birth)	• Delay bathing for at least 24 hours to prevent heat loss and hypothermia. • Initiate exclusive breastfeeding as soon as possible after delivery, or at least within 1 hour after birth. • Provide hygienic umbilical cord and skin care. • Assess for danger signs and counsel on prompt recognition and care-seeking by the family. • Identify, support and if necessary refer newborns who need additional care (e.g., LBW, sick, mother is HIV-infected). *If any signs of sepsis are present, immediately refer women/babies to hospital*
Later postnatal care (2nd hour following birth up to 7 days)	• Continue to examine the baby for danger signs of serious illnesses, and continue to encourage the family to look for these danger signs and promote appropriate care seeking behaviour. • If danger signs are detected, facilitate access for the mother and baby to the closest health facility or hospital immediately. • Where referral or hospitalization is not possible, recent guidelines from WHO[4] provide recommendations for antibiotic regimens provided by trained health care providers. Note that critical illness should always be treated in hospital and not outpatient facilities. If families refuse hospitalization or referral is not possible, outpatient treatment of infection should be considered by a trained health provider. Treatment regimens should be informed by disease surveillance systems when feasible and appropriate, to ensure treatment approaches consider local antimicrobial resistance trends.

[4] WHO. Managing Possible Serious Bacterial Infection in Young Infants when Referral is Not Feasible. WHO, 2015.

Table 2: Preventing and managing infections – FACILITY LEVEL (Camp, Temporary or Mobile Clinics and Local Health Services)

Delivered by Auxiliary Nurse Midwives, Nurses, Clinical Officers

Provide ENC as per Annex 1A

Pregnancy	• In malaria endemic areas, or for displaced populations coming from endemic areas, treat mothers for malaria using IPTp, and distribute ITN to pregnant women for use Where feasible, test and treat women for syphilis. • Vaccinate pregnant women against tetanus. • For women from high HIV prevalence countries, determine their HIV status. • Follow prevention of mother-to-child transmission guidelines for women who are HIV positive.
Labor/birth	• Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface). • Provide antibiotics for management of pPROM.
Immediate postnatal care (within the first hour of birth)	• Assess for danger signs and counsel on their prompt recognition and care-seeking by the family (not feeding well, reduced activity, difficult breathing, fever or feels cold, fits or convulsions). • For babies exhibiting danger sign or indicators of neonatal infections: - Immediately administer an initial dose of antibiotics, provide respiratory support or anti-convulsant (phenobarbital) if needed, and refer mother and baby to the nearest hospital for advanced care.[5,6] - As good practice, ensure dosing tables for gentamicin and ampicillin by weight band are posted in the labor ward in settings where health workers have difficulty calculating dosages. • If any signs of sepsis are present, immediately refer women/ babies to hospital. • If referral is not possible, provide treatment for fast breathing and severe infection as per the latest WHO recommendation.
Later postnatal care (2nd hour following birth up to 7 days)	• Exclusive breastfeeding. • Drying and keeping the baby warm. • Hand washing before handling the baby. • Hygienic cord and skin care. • Examine the newborn for danger signs of sepsis or pneumonia (or other illnesses): - Not feeding well - Fits or convulsions - Reduced activity or lack of movement

[5] WHO. WHO Recommendations on Newborn Care: Guidelines approved by the WHO Guidelines Review Committee. WHO, 2017.

[6] WHO/UNFPA/UNICEF. Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice. 3rd edition. WHO, 2015.

	- Fast breathing (more than 60 breaths per minute) - Severe chest indrawing - Temperature above 37.5 degrees C - Temperature below 35.5 degrees C - Very small size at birth (<2.5kg) • If danger signs or severe illness detected during home visits, assist mothers/families to seek primary or hospital care immediately. • Encourage HIV-positive mothers to access testing and care for their newborns. • Promote exclusive breastfeeding and observe newborns for danger signs. • Treat HIV in mother and baby according to local protocols. • Provide prophylactic antibiotics to a neonate with risk factors for infection (i.e. membranes ruptured >18 hours before birth, mother had fever >38°C before birth or during labor, or amniotic fluid was foul smelling or purulent). • Observe and monitor vital signs of at-risk newborns for a minimum of 24 hours.

Table 3: Preventing and managing infections - HOSPITAL LEVEL (Referral Care)

Delivered by Nurses, Clinical Officers, Nurse-Midwives, Doctors

Provide ENC as per Annex 1A

Pregnancy	• In malaria endemic areas, or for displaced populations coming from endemic areas, treat mothers for malaria using IPTp, and distribute ITN to pregnant women for use. • Advise mothers/family that newborn also sleeps under ITN. • Where feasible, test and treat women for syphilis. • Vaccinate pregnant women against tetanus. • For women from high HIV prevalence countries, determine their HIV status. • Follow prevention of mother-to-child transmission guidelines for women who are HIV positive.
Labor/birth	• Employ clean birth practices (Clean hands, clean surface, clean cord and tying instruments, sterile cutting instrument and clean cutting surface). • Provide antibiotics for management of pPROM.
Immediate postnatal care (within the first hour of birth)	• Delay bathing for at least 24 hours to prevent heat loss and hypothermia. • Initiate exclusive breastfeeding as soon as possible after delivery, or at least within 1 hour after birth. • Provide hygienic umbilical cord and skin care. • Assess for danger signs and counsel on prompt recognition and care-seeking by the family (not feeding well, reduced activity, difficult breathing, fever or feels cold, fits or convulsions).

	• Identify and support newborns who need additional care (e.g., LBW, sick, mother is HIV-infected).
Later postnatal care (2nd hour following birth u to 7 days)	• Exclusive breastfeeding. • Drying and keeping the baby warm. • Hand washing before handling the baby. • Hygienic cord and skin care. • Examine the newborn for danger signs of sepsis or pneumonia (or other illnesses): - Not feeding well - Fits or convulsions - Reduced activity or lack of movement - Fast breathing (more than 60 breaths per minute) - Severe chest indrawing - Temperature above 37.5 degrees C - Temperature below 35.5 degrees C - Very small size at birth (<2.5kg) • Encourage HIV-positive mothers to access testing and care for their newborns. • Promote exclusive breastfeeding and observe newborns for danger signs. • Treat HIV in mother and baby according to local protocols. • Provide prophylactic antibiotics to a neonate with risk factors for infection (i.e., membranes ruptured >18 hours before birth, mother had fever >38°C before birth or during labor, or amniotic fluid was foul smelling or purulent). • Observe and monitor vital signs of at-risk newborns for a minimum of 24 hours. • Provide case management for neonatal infections including sepsis, meningitis and pneumonia. • Provide antibiotic first line treatment to newborns under 2 months of age: - In the first week of life: ampicillin (IV/IM) 50/mg/kg/day divided every 12 hours and gentamicin (IV/IM) 3 mg/ kg/ dose daily for LBW babies or 5 mg/kg/dose daily for normal birth weight babies - For weeks 2-4 of life: ampicillin (IV/IM) 50/mg/kg/day divided every 8 hours and gentamicin 7.5 mg/kg/dose once daily - For suspected sepsis or pneumonia, treat for 10 days. If meningitis is suspected, treat for 21 days. Consider benzylpenicillin as an alternative for ampicillin if necessary; cloxacillin and ceftriaxone may be used for broader coverage in case of skin infection or meningitis, respectively • If cyanosed or in severe respiratory distress, administer oxygen by nasal prongs or nasal catheter. • If respiratory distress syndrome is diagnosed, provide CPAP and monitor oxygen levels. • If drowsy, unconscious or convulsing, check blood glucose and provide care for hypoglycemia as needed. • If convulsions are present, administer phenobarbital