Newborn Care until the First Week of Life



Clinical Practice Pocket Guide

World Health Organization
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Republic of the Philippines

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Clinical Practice Pocket Guide

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Foreword



In September 2000, the Philippines was one among 189 countries who committed to the UN Millennium declaration that translated into a roadmap a set of goals that targets the reduction of poverty, hunger and ill health.

To accelerate the progress towards the attainment of MDGs 4 and 5, the country has adopted a national Maternal, Newborn, Child Health and Nutrition strategy that defined a MNCHN policy with corresponding strategic guidelines for its implementation. It focuses on a continuum of care approach that encompasses the pre-pregnancy, pregnancy, intrapartum, newborn and postpartum period. This policy together with the Child Survival Strategy has made clear the Department's seriousness to implement the needed reforms in the health system to make it healthy for mothers, newborns, and children.

It is the firm resolve of the Department of Health to ensure that all deliveries are attended by skilled health professionals in well-equipped and accessible health facilities. It is our thrust to build a health system that can deliver the needed packages of services at multiple service delivery points that will ensure maternal, newborn and child

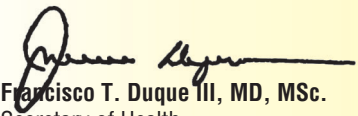
survival. Finally, it is our pledge to bring attention to the health and welfare of newborns, which have fallen through the cracks of neglect during the past decades.

This Pocket Guide for newborns is a simple, concise and straightforward evidence-based guideline that will improve the way our services are provided to babies particularly during the first critical hours of life. It will direct our healthcare providers to improve their skills in addressing the special needs of newborns and be vigilant about the different conditions that threaten newborn lives which require their utmost care and attention. Thus, the success in complying with the guidelines will entail close partnerships with health care professionals and other stakeholders who are in the front line of service delivery in birthing clinics, primary healthcare facilities and hospitals. We need to make the extra push to promote newborn survival at all times and at all levels of health service delivery.

The Countdown to 2015 looms large and near and we are in the critical phase of ensuring that we will win and make it on time to meet our goals before the Countdown is finished.

The development and preparation of this Pocket Guide would not have been made possible without the support of our partners especially the World Health Organization which provided us the platform to push with the Maternal, Newborn and Child Health agenda. On behalf of the DOH, I thank them and all the agencies and development partners who have made significant contributions by way of their time, skills and expertise in the development of this protocol which will be a key document that will ensure a healthy and bright future for our newborns.

Thank you and *Mabuhay tayong lahat!*



Francisco T. Duque III, MD, MSc.
Secretary of Health

Message



Over the past several years, WHO has been honoured to support The Philippines in its endeavour to improve maternal and newborn health. As many are aware, The Philippines is one of the 42 countries that account for 90% of global under-five mortality. The country is presently "on track" to reach its MDG 4 target of reducing under-five mortality. However, the gains have slowed in recent years because neonatal mortality has not improved. Neonatal mortality accounts for 37% of under-five mortality. This translates to about 40,000 newborn babies dying in the Philippines every year. Half of these newborns die in the first two days of life. They die of mostly preventable causes.

WHO has made an organizational mission to support the Philippines to reduce newborn deaths initially by conducting studies to determine the state of implementation of interventions known to prevent common causes of newborn mortality. Next, WHO participated in gathering the rigorous evidence-based reviews and supported the expert and stakeholder panels that followed in developing the Essential Newborn Care (ENC) Protocol.

The ENC Protocol is a series of time bound, chronologically-ordered, standard procedures that a baby receives at birth. At the heart of the protocol are four time-bound interventions: immediate drying, skin to skin contact followed by clamping of the cord after 1 to 3 minutes, non-separation of baby from mother, and breastfeeding initiation. Simple steps, yet, extremely effective:

- Immediate drying prevents hypothermia, which is extremely important to survival.
- Delayed cord clamping until the umbilical cord stops pulsating decreases anemia in one out of every three premature babies and prevents brain hemorrhage in one out of two. It prevents anemia in one out of every seven term babies.
- Keeping the mother and baby in uninterrupted skin-to-skin contact prevents hypothermia, increases colonization with protective family bacteria and improves breastfeeding initiation and exclusivity.
- Breastfeeding within the first hour of life prevents an estimated 19.1% of all neonatal deaths

The Essential Newborn Care Protocol also contributes to hospital efficiency, as it prohibits practices either without evidence to back it up or with evidence of harm. Harmful practices include washing before 6 hours of life, “routine” suctioning, “routine” separation and cohorting of babies, among others.

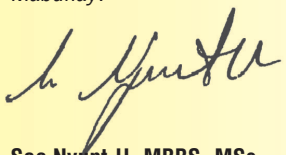
On behalf of WHO, I congratulate the DOH for taking valiant steps to stop newborns from dying, including:

- Development of Maternal, Newborn and Child Health and Nutrition Policy and numerous supporting policies to bring focus to the problems
- Incorporation of ENC into the Basic Emergency Obstetric and Newborn Care Training
- Issuance of Administrative Order to enforce the implementation of Essential Newborn Care Protocol.

The problems are clear. So are the solutions. The science behind the simple, effective, low-cost and immediately-doable steps contained in the Essential Newborn Care Protocol is solid.

We are grateful to Undersecretary Mario Villaverde, Drs. Yolanda Oliveros, Honorata Catibog, Corazon Lucia Teoxon, Juanita Basilio, Joyce Ducusin, Elizabeth Caluag, Zenaida Recidoro, Diego Danila, and Aleli Sudiacal, and the National Center for Health Promotion for facilitating the development process.

Mabuhay!



Soe Nyunt-U, MBBS, MSc
WHO Representative in the Philippines

Acknowledgements

The Department of Health deeply thanks Dr. Maria Asuncion Silvestre for her unceasing efforts, with support from Drs. Howard Sobel and Mariella Castillo to carry the ENC imperative from conception to dissemination.

We thank the Panel of Reviewers and Dr. Leonila Dans of the Asia Pacific Center for Evidence-Based Medicine for moderating the *en banc* review.

We salute Quirino Memorial Medical Center Drs. Annie de Leon and Bella Vitangcol, Philippine General Hospital Drs. Carmelo Alfiler, Jacinto Mantaring III and Ina Crisologo and Dr. Jose Fabella Memorial Hospital Drs. Ruben Flores, Carol Mirano and Mary Anne Ilao and welcome Philippine Hospital Association's strong commitment to operationalize the protocol.

We thank PhilHealth for incorporating this protocol into their accreditation standards and benefit packages toward improving quality care of mothers and newborns.

We are grateful to Undersecretary Mario Villaverde, Drs. Yolanda Oliveros, Honorata Catibog, Corazon Lucia Teoxon, Juanita Basilio, Joyce Ducusin, Elizabeth Caluag, Zenaida Recidoro, Diego Danila and Aleli Sudiacal for facilitating the development process.

Lastly, we thank the UN Joint Programme for Rapid Reduction of Maternal and Neonatal Mortality - AusAid, UNFPA, UNICEF, WHO for prominently incorporating the ENC into their mandate. We specifically thank WHO for supporting the landmark hospital study that revealed gaps in newborn care and the eventual ENC Protocol development.

Rationale

Every year approximately 40,000 Filipino neonates die, mostly from preventable causes. The majority die within the first week. The high mortality and morbidity rates in newborns are directly related to inappropriate hospital and community practices currently employed throughout the Philippines. Furthermore, newborn care has fallen in a gap between maternal and child care.

Further information is available in the technical review.

Purpose

This is intended to provide health professionals with a simple, to-the-point, user-friendly, globally accepted evidence-based protocol to essential newborn care focusing on the **first week of life** which can fit in one's pocket.

Intended users

Doctors, nurses, midwives and others involved in caring for mothers and newborns are the target users. It provides a step-by-step guide to administering a core package of essential newborn care interventions that can be administered at all health care settings.

Guideline Development

The Newborn Care Technical Working Group (TWG) conducted a systematic search and appraisal of foreign and local literature on practices in the immediate newborn period. An evidence-based draft was then developed and reviewed by the Department of Health, WHO, UNICEF, UNFPA, Philippine Obstetrical and Gynecological Society, Philippine Society of Newborn Medicine, Save the Children, the academe and other stakeholders.

This Pocket Guide is based on the Pregnancy, Child Birth, Postpartum and Newborn Care (PCPNC) Manual (2006), which in turn was based on guidelines developed and field tested by international experts from many countries including the Philippines, under the guidance of WHO. The TWG requested extensive comments from users of the PCPNC Manual based on their field experience as well as stakeholders who have developed other guidelines or work with newborns. The TWG reviewed the comments to ensure that modifications were only for improving user-friendliness and not modifying scientifically proven steps. Any variance from the PCPNC is based on TWG review. The guideline was tested in 3 hospitals for usability and feasibility. Finally, the guideline was reviewed by the WHO. All items present within this guideline are considered to have globally accepted level of evidence. Further information can be obtained in the companion technical review.

Panel Reviewers

1. Department of Health
   a) National Center for Disease Prevention and Control (NCDPC)
      – Family Health Office
   b) National Center for Health Facility Development (NCHFD)
   c) Task Force for Rapid Reduction of Maternal and Neonatal Mortality
2. Midwives Foundation of the Philippines
3. Dr. Jose Fabella Memorial Hospital
4. UP-PGH Department of Obstetrics and Gynecology
5. UP College of Medicine Department of Clinical Epidemiology
6. Philippine Obstetrical and Gynecologic Society (POGS)
7. Philippine Society of Newborn Medicine (PSNbM)
8. Philippine Academy of Ophthalmology
9. Save the Children
10. Helen Keller International , Philippines
11. University Research Council/Health Promo
12. Bless Tetada Kangaroo Mother Care Foundation, Phil., Inc.
13. UNFPA
14. UNICEF
15. WHO

Organization

This document is organized by time. It walks a health worker through the process of preparing the delivery area, standard precautions through essential newborn care practices, beginning at the time of perineal bulging until one week of life.

I. Immediate Newborn Care (The first 90 minutes)
II. Newborn Care from 90 minutes to 6 hours after Birth
III. Care prior to discharge
IV. Care from discharge to 7 days
V. Additional Care
    A. Resuscitation
    B. Care of Low Birth Weight newborn
    C. Dealing with feeding problems
VI. Enabling the Environment
    A. Preparing for the shifts
    B. After every delivery
    C. Standard Precautions
VII. Equipment and Supplies Maintenance Checklist
VIII. References
IX. Index

Each section has a tab for ready reference. Additionally, the contents are cross referenced to equivalent sections within the WHO PCPNC Manual (2006) via color-coded icons and also to other appropriate references.

Newborn Care until the First Week of Life

I. Immediate Newborn Care (The First 90 minutes)

TIME BAND: **At perineal bulging, with presenting part visible (2nd stage of labor)**

INTERVENTION: Prepare for the delivery D10

ACTION:
Ensure that delivery area is draft-free and between 25-28°C using a room thermometer.

Wash hands with clean water and soap. *(See page 33)*

Double glove just before delivery.

TIME BAND: **Within the 1st 30 secs**
Call out the time of birth

INTERVENTION: Dry and provide warmth. D11

ACTION:
Use a clean, dry cloth to thoroughly dry the baby by wiping the eyes, face, head, front and back, arms and legs.

Remove the wet cloth.

Do a quick check of newborn's breathing while drying. *(See fold-out on Immediate Care of the Newborn.)*

Note:
During the first 30 seconds:
- Do not ventilate unless the baby is floppy/limp and not breathing.
- Do not suction unless the mouth/nose are blocked with secretions or other material.

TIME BAND: **If after 30 secs of thorough drying, newborn is not breathing or is gasping**

INTERVENTION: Re-position, suction and ventilate

ACTION:
Clamp and cut the cord immediately.

Call for help.

Transfer to a warm, firm surface.

Inform the mother that the newborn has difficulty breathing and that you will help the baby to breathe.

Start resuscitation protocol. K11 *(See page 21)*

Notes:
If the baby is non-vigorous (limp/floppy and not breathing) and meconium-stained, and;

a) Health worker not skilled at advanced resuscitation (or skilled but not equipped with intubation needs):
- Clear the mouth
- Start bag/mask ventilation
- Refer and transport

b) Health worker with advanced skills at resuscitation:
- Intubate the baby and provide positive-pressure ventilation
- Refer and transport as necessary

When appropriate, and when personnel skilled in advanced resuscitation (intubation, cardiac massage) are available, refer to appropriate guidelines.

TIME BAND: **If after 30 secs of thorough drying, newborn is breathing or crying**

INTERVENTION: Do skin-to-skin contact

ACTION:
If a baby is crying and breathing normally, avoid any manipulation, such as routine suctioning, that may cause trauma or introduce infection.

Place the newborn prone on the mother's abdomen or chest skin-to-skin. D11

Cover newborn's back with a blanket and head with a bonnet.

Place identification band on ankle.

Notes:
- Do not separate the newborn from mother, as long as the newborn does not exhibit severe chest in-drawing, gasping or apnea and the mother does not need urgent medical stabilization e.g. emergent hysterectomy.
- Do not put the newborn on a cold or wet surface.
- Do not wipe off vernix if present.
- Do not bathe the newborn earlier than 6 hours of life.
- Do not do footprinting.
- If the newborn must be separated from his/her mother, put him/her on a warm surface, in a safe place close to the mother.

INTERVENTION: Palpate the mother's abdomen. Exclude a second baby. If there is a 2nd baby, get help. Deliver the second newborn. Manage as in Multi-fetal pregnancy D18

ACTION:
If a baby is crying and breathing normally, avoid any manipulation, such as routine suctioning, that may cause trauma or introduce infection. D18

TIME BAND: **1 - 3 minutes**

INTERVENTION: Do delayed or non-immediate cord clamping D11

ACTION:
Remove the first set of gloves immediately prior to cord clamping.

Clamp and cut the cord after cord pulsations have stopped (typically at 1 to 3 minutes)

- Put ties tightly around the cord at 2 cm and 5 cm from the newborn's abdomen.
- Cut between ties with sterile instrument.
- Observe for oozing blood.

Note:
Do not milk the cord towards the newborn.

After cord clamping, ensure 10 IU IM is given to the mother. Follow other protocols per PCPNC D12

TIME BAND: **WITHIN 90 min of age**

INTERVENTION: Provide support for initiation of breastfeeding K2

ACTION:
Remove the first set of gloves immediately prior to cord clamping.

Leave the newborn on mother's chest in skin-to-skin contact.

Observe the newborn. Only when the newborn shows feeding cues (e.g. opening of mouth, tonguing, licking, rooting), make verbal suggestions to the mother to encourage her newborn to move toward the breast e.g. nudging.

Counsel on positioning and attachment. When the baby is ready, advise the mother to:

- Make sure the newborn's neck is not flexed nor twisted.
- Make sure the newborn is facing the breast, with the newborn's nose opposite her nipple and chin touching the breast.
- Hold the newborn's body close to her body.
- Support the newborn's whole body, not just the neck and shoulders.

- Wait until her newborn's mouth is opened wide.
- Move her newborn onto her breast, aiming the infant's lower lip well below the nipple

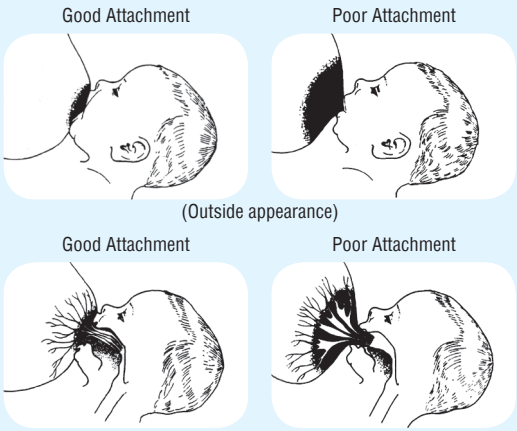
Look for signs of good attachment and suckling:

- Mouth wide open
- Lower lip turned outwards
- Baby's chin touching breast
- Suckling is slow, deep with some pauses

If the attachment or suckling is not good, try again and reassess.

Notes:
- Health workers should not touch the newborn unless there is a medical indication.
- Do not give sugar water, formula or other prelacteals.
- Do not give bottles or pacifiers.
- Do not throw away colostrum.
- If the mother is HIV-positive, see G7 of PCPNC for special counseling.

Diagrams of infants mouth showing good and poor attachment to the breast.



Fr. WHO. Department of Child and Adolescent Health and Development. Relactation: A review of experience and recommendations for practice. Geneva, 1998

INTERVENTION: Provide additional care for a small baby or twin J11 K9

Please see Kangaroo Mother Care

ACTION:
For a visibly small newborn or a newborn born >1 month early:

- Encourage the mother to keep the small newborn in skin-to-skin contact with her as much as possible.
- Provide extra blankets to keep the baby warm
- If mother cannot keep the baby skin-to-skin because of complications, wrap the baby in a clean, dry, warm cloth and place in a cot. Cover with a blanket. Use a radiant warmer if room not warm or baby small.
- Do not bathe the small baby. Ensure hygiene by wiping with a damp cloth but only after 6 hours.

Prepare a very small baby (<1.5 kg) or a baby born >2 months early for referral.

INTERVENTION: Do eye care

ACTION:

Administer erythromycin or tetracycline ointment or 2.5% povidone-iodine drops to both eyes after newborn has located breast.

Do not wash away the eye antimicrobial.

II. Essential Newborn Care from 90 min to 6 hours

TIME BAND: **From 90 Min - 6 Hrs**

INTERVENTION: Give Vitamin K prophylaxis

ACTION:
Wash hands. *(See page 33)*

Inject a single dose of Vitamin K 1 mg IM.
(If parents decline intramuscular injections, offer oral vitamin K as a 2nd line).

INTERVENTION: Inject hepatitis B and BCG vaccinations at birth K9

ACTION:
Inject hepatitis B vaccine intramuscularly and BCG intradermally.

Record.

INTERVENTION: Examine the baby J2

ACTION:
Thoroughly examine the baby.

Weigh the baby and record.

INTERVENTION: Check for birth injuries, malformations or defects. J8

ACTION:
Look for possible birth injury:

- Bumps on one or both sides of the head, bruises, swelling on buttocks, abnormal position of legs (after breech presentation) or asymmetrical arm movement, or arm that does not move.

If present:

- Explain to parents that this does not hurt the newborn, is likely to disappear in a week or two and does not need special treatment.
- Gently handle the limb that is not moving.
- Do not force legs into a different position.

Look for malformations:

- Cleft palate or lip
- Club foot
- Odd looking, unusual appearance
- Open tissue on head, abdomen or back

If present:

- Cover any open tissue with sterile gauze before referral and keep warm.

Refer for special treatment and/or evaluation if available.

- Help mother to breastfeed. If not successful teach her alternative feeding methods K5 K6

INTERVENTION: Cord care K10

ACTION:
Wash hands. *(See page 33)*

- Put nothing on the stump.
- Fold diaper below stump. Keep cord stump loosely covered with clean clothes.
- If stump is soiled, wash it with clean water and soap. Dry it thoroughly with clean cloth.
- Explain to the mother that she should seek care if the umbilicus is red or draining pus. K10
- Teach the mother to treat local umbilical infection three times a day. K13
- Wash hands with clean water and soap.
- Gently wash off pus and crusts with boiled and cooled water and soap.
- Dry the area with clean cloth.
- Paint with gentian violet.

– Wash hands.
– If pus or redness worsens or does not improve in 2 days, refer urgently to the hospital J6

Notes:
– Do not bandage the stump or abdomen.
– Do not apply any substances or medicine on the stump.
– Avoid touching the stump unnecessarily.

INTERVENTION: Provide additional care for a small baby or twin J11 K9

ACTION:
If the newborn is delivered 2 months earlier or weighs < 1500 g, refer to specialized hospital. K9

If the newborn is delivered 1-2 months earlier or weighs 1500 - 2500 g (or visibly small where scale not available), see Additional care for small newborns *(See pages 24)*

Notes:
– Encourage the mother to keep her small baby in skin-to-skin contact.
– If mother cannot keep the baby in skin-to-skin contact because of complications, wrap the baby in a clean, dry, warm cloth and place in a cot. Cover with a blanket. Use a radiant warmer if the room is not warm or the baby small.
– Do not bathe the small baby. Keep the baby clean by wiping with a damp cloth but only after 6 hours.

III. Care Prior to Discharge (but after the first 90 minutes)

TIME BAND: **After the 90 minutes of age, but prior to discharge**

INTERVENTION: Support unrestricted, per demand breastfeeding, day and night J10

ACTION:
Keep the newborn in the room with his/her mother, in her bed or within easy reach. Do not separate them (rooming-in).

Support exclusive breastfeeding on demand day and night.

Assess breastfeeding in every baby before planning for discharge. Ask the mother to alert you if with difficulty breastfeeding.

Praise any mother who is breastfeeding and encourage her to continue exclusively breastfeeding.

Explain that exclusive breastfeeding is the only feeding that protects her baby against serious illness. Define that exclusive breastfeeding means no other food or water except for breast milk.

Notes:
- Do not discharge if baby is not feeding well.
- Do not give sugar water, formula or other prelacteals.
- Do not give bottles or pacifiers.

INTERVENTION: Ensure warmth of the baby K9

ACTION:
Ensure the room is warm (> 25°C and draft -free).

Explain to the mother that keeping baby warm is important for the baby to remain healthy.

Keep the baby in skin-to-skin contact with the mother as much as possible.

Dress the baby or wrap in soft dry clean cloth. Cover the head with a cap for the first few days, especially if baby is small.

INTERVENTION: Washing and bathing (Hygiene) K10

ACTION:
Wash your hands. *(See page 33)*

Wipe the face, neck and underarms with a damp cloth daily.

Wash the buttocks when soiled. Dry thoroughly.

Bathe when necessary, ensuring that the room is warm and draft-free, using warm water for bathing and thoroughly drying the baby, then dressing and covering after the bath.

If the baby is small, ensure that the room is warmer when changing, wiping or bathing K10

INTERVENTION: Sleeping

ACTION:
Let the baby sleep on his/her back or side.

Keep the baby away from smoke or from people smoking.

Ensure mother and baby are sleeping under impregnated bed net if there is malaria in the area. K10

INTERVENTION: Look for danger signs J6

ACTION:
Look for signs of serious illness J7 :

- Fast breathing (>60 breaths per min)
- Slow breathing (<30 breaths per min)
- Severe chest in-drawing

- Grunting
- Convulsions
- Floppy or stiff
- Fever (temperature >38°C)
- Temperature <35°C or not rising after re-warming
- Umbilicus draining pus
- More than 10 skin pustules or bullae, or swelling, or redness, or hardness of skin (sclerema)
- Bleeding from stump or cut
- Pallor

If any of the above is present, consider possible serious illness. See IMPAC: Managing Newborn Problems.

- Start resuscitation, if necessary. *(See page 21)*
- Re-warm and keep warm during referral for additional care. K9
- Give first dose of two IM antibiotics K12
- Stop bleeding.
- Give oxygen, if available.

INTERVENTION: Look for signs of jaundice and local infection J6

ACTION:
Look at the skin. Is it yellow?

- Refer urgently, if jaundice present K14 :
  - on face of <24 hour old newborn
  - on palms and soles of ≥24 hour old infant
- Encourage breastfeeding.
- If feeding difficulty, give expressed breast milk by cup. K6

Look at the eyes:

Are they swollen and draining pus?
- If present, consider gonococcal eye infection.
  - Give single dose of appropriate antibiotic for eye infection. K12
  - Teach mother to treat eyes. K13

- Follow-up in two days. If pus or swelling worsens or does not improve refer urgently.
- Assess and treat mother and her partner for possible gonorrhea. E8

Look at the umbilicus:

- What has been applied to the umbilicus? Advise mother proper cord care *(See page 8)*
- If there is redness that extends to the skin, consider local umbilical infection.
- Teach mother to treat umbilical infection. K13
- If no improvement in 2 days, or if worse, refer urgently.
- If the umbilicus is draining pus then consider possible serious illness
- Give first dose of two IM antibiotics K12
- Refer baby urgently K14

Look at the skin, especially around the neck, armpits, inguinal area:

- Are there pustules?
- If less than 10 pustules, consider local skin infection: Teach mother to treat skin infection. K13
- Follow-up in 2 days. If pustules worsen or do not improve in 2 days or more, refer urgently.
- If more than 10 pustules, refer for evaluation.

INTERVENTION: Discharge Instructions K14

Advise the mother to return or go to hospital immediately if baby has any of the following:

- Jaundice to the soles
- Difficulty feeding*
- Convulsions*
- Movement only when stimulated*
- Fast or slow or difficult breathing (e.g., severe chest in-drawing)*
- Temperature > 37.5°C# or <35.5°C*

* From Lancet 2008, new IMCI algorithm for Young Infant II Study

Cut-off of 38°C per local expert opinion during Panel Review

Schedule Routine Visits as follows:

- Postnatal visit 1: at 48 – 72 hours of life
- Postnatal visit 2: at 7 days of life
- Immunization visit 1: at 6 weeks of life

Advise Newborn Screening test

Schedule additional Follow up Visits depending on baby's problems:

After two days – if with breastfeeding difficulty, Low Birth Weight in 1st week of life, red umbilicus, skin infection, eye infection, thrush or other problems.

After seven days – If Low Birth Weight discharged more than a week of age and gaining weight adequately.

CARE PRIOR
TO DISCHARGE

IV. Care after Discharge to 7 days

TIME BAND: **From discharge to 7 days**

INTERVENTION: Support unrestricted, per demand exclusive breastfeeding, day and night J10

ACTION:
Ask the mother exactly what the baby fed on in the past 24 hours before the visit. Ask about water, vitamins, local foods and liquids, formula and use of bottles and pacifiers. Ask about stooling and wet diapers.

Praise any mother who is breastfeeding and encourage her to continue exclusively breastfeed.

(Re-) explain that exclusive breastfeeding is the only food that protects her baby against serious illness. Define that exclusive breastfeeding means no other food or water except for breast milk.

Reassure her that she has enough breast milk for her baby's needs.

Advise the mother to

- Keep the newborn in the room with her, in her bed or within easy reach
- Exclusively breastfeed on demand day and night (≥8 times in 24 hours except in the first day of life when newborn sleeps a lot).

Observe a breastfeed, if possible.

Ask the mother to alert you if she has breastfeeding difficulty, pain or fever. J9

Observe, Treat and Advise:

- If nipple(s) is/are sore or fissured, and the baby is not well attached, in addition to the above;
  – Reassess after 2 feeds (within the same day).

- Advise the mother to smear hind milk over the sore nipple after a breastfeed.
- Check the baby's mouth for candidal thrush and treat baby and mother.
- If not better, teach the mother how to express breast milk from the affected breast and feed baby by cup until breast(s) is/are better.

– If breasts are swollen but the milk is dripping
  - Reassure the mother, that this is normal breast fullness and will improve with frequent breastfeeding in 36-72 hours

– If breasts are swollen, shiny and the milk is not dripping, mother's temperature is <38°C and the baby is not well attached, treat and advise for engorgement.
  In addition to the above:
  • Breastfeed more frequently
  • Reassess after 2 feeds (within the same day). If not better, teach and help the mother express enough breast milk to relieve the discomfort.

– If breast(s) is/are swollen, painful, there is patchy redness, and mother's temperature is > 38°C, treat and advise for mastitis.
  In addition to the above:
  - Give Cloxacillin 500 mg q 6 hours for 10 days.
  - If severe pain, give paracetamol.
  - Reassess in 2 days. If no improvement or worse, refer to a hospital.

Notes:
– Do not give sugar water, formula or other prelacteals.
– Do not give bottles or pacifiers.

INTERVENTION: Ensure warmth for your baby K9

ACTION:
Explain to the mother that babies need an additiolnal layer of clothing compared to older children or adults.

Keep the room or part of the room warm, especially in a cold climate.

During the day, dress up or wrap the baby.

At night, let the baby sleep with the mother or within easy reach to facilitate breastfeeding.

Notes:
- Do not put the baby on any cold or wet surface.
- Do not swaddle/wrap too tightly.
- Do not leave the baby in direct sunlight.

Ensure additional warmth for the small baby (or twin) K9

INTERVENTION: Look for danger signs
(From New IMCI data from Young Infant II study, Lancet 2008)

ACTION:
Look for signs of "very severe disease"

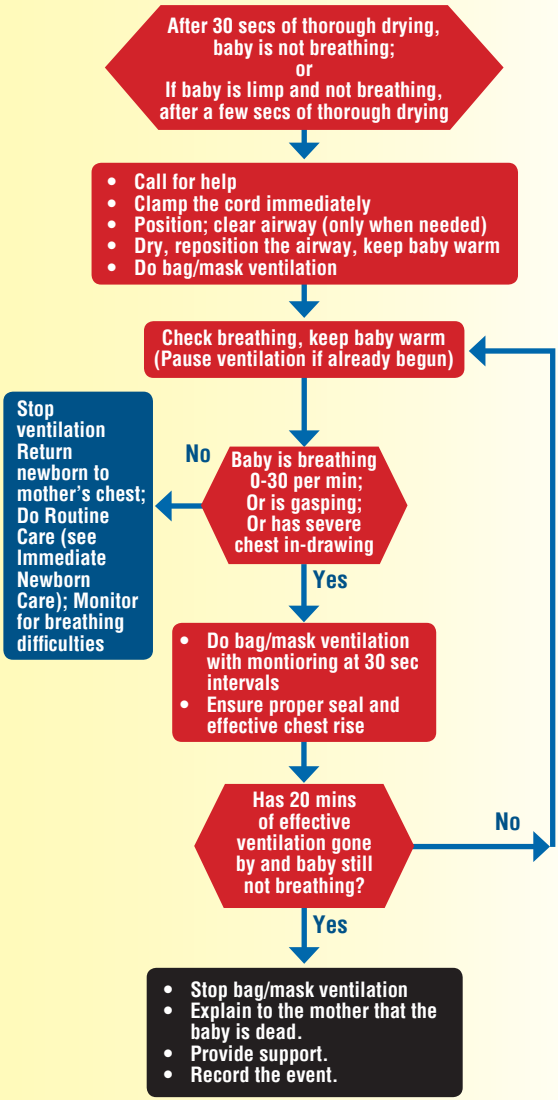
- Yellow skin to the soles
- History or difficulty feeding
- History of convulsions
- Movement only when stimulated
- Respiratory rate >60 per minute
- Severe chest in-drawing
- Temperature > 38.0°C (per local expert opinion)
- Temperature <35.5°C

Refer baby urgently to hospital: K14

- After emergency treatment, explain the need for referral to the mother/father.
- Organize safe transportation.
- Always send the mother with the baby, if possible.
- Send referral note with the baby.
- Inform the referral center, if possible by radio or telephone.

CARE AFTER DISCHARGE

NEWBORN RESUSCITATION



A. Newborn Resuscitation

INTERVENTION: K11 See Algorithm on Resuscitation *(page 21).*

ACTION:
Start resuscitation if the newborn is not breathing or is gasping after 30 seconds of drying or before 30 seconds of drying if the baby is completely floppy and not breathing.

Clamp and cut the cord immediately, if necessary.

Transfer the newborn to a dry, clean and warm surface. Keep the newborn wrapped or under a heat source if available.

Inform the mother that the newborn needs help to breathe.

INTERVENTION: Open airway K11

ACTION:
Position the head so it is slightly extended.

Introduce the suction tube:

- First, into the newborn's mouth 5 cm from the lips and suck while withdrawing.
- Second, 3 cm into each nostril and suck while withdrawing.
- Repeat once, if necessary taking no more than a total of 20 secs.

Notes:
- Do not suction mouth and nose prior to delivery of the shoulders of babies with meconium stained amniotic fluid.

INTERVENTION: Ventilate, if still not breathing K11

ACTION:
Place mask to cover chin, mouth and nose to achieve a seal.

Squeeze bag attached to the mask with 2 fingers or whole hand, according to bag size, 2 or 3 times.

- Observe rise of chest.
  - If chest is not rising: K11
    - First, reposition baby's head
      - If baby's chest is still not rising
        - Check for adequate mask seal
          - If chest is still not rising, squeeze bag harder.

- If chest is rising, ventilate at 40 breaths per minute until newborn starts crying or breathing.

Reassess at 30-second intervals.

- If baby still fails to improve, check the following:

  Failure To Improve Checklist

  - Face-mask seal tight?
  - Airway clear of secretions?
  - Head positioned properly?
  - Is contact with the soft tissue of the infant's anterior neck being avoided?
  - Resuscitator working properly?
  - Adequate pressure being used?
  - Air distending the stomach?
  - Air leak (pneumothorax)?

- If baby starts crying or breathing >30 per minute and has no chest-in-drawing, stop ventilating: K11

- Put the newborn in skin-to-skin contact on mother's chest and continue care D19 while monitoring breathing and warmth. Explain the baby's condition to the mother.

- If after 30 sec of effective bag/mask ventilation, the newborn is gasping/ breathing <30 per min or > 30 per min but has severe chest in-drawing:
  - Continue bag/mask ventilation
  - Continue assessing at 30 sec intervals while transporting or
  - Proceed to intubation per advanced resuscitation guidelines, if skilled personnel and equipment are available

- If after 20 minutes of effective ventilation, the newborn does not start to breathe or gasp at all, stop ventilating.
- Explain to the mother that the baby is dead, give supportive care D24 and record the event. N7

Notes:
- While ventilating, refer and explain to the mother what happened, what you are doing and why.
- Ventilate, if needed, during transport
- Record the event on the referral form and labor record. N6

B. Additional Care of a Small Baby (or Twin): J11
If newborn is preterm, 1-2 months early or weighing 1500 - 2499 g (or visibly small where scale not available)

AREA OF CONCERN: **Warmth**

ACTION:
Ensure additional warmth for the small baby. K9

- Ensure the room is maintained 25-28°C.
- Teach the mother how to keep the small baby warm in skin-to-skin contact via Kangaroo Mother Care *(See page 24).*
- Provide extra blankets for mother and baby, plus bonnet, mittens and socks for baby.

Notes:
- Do not bathe the small baby. Keep the baby clean by wiping with a damp cloth but only after 6 hours.

AREA OF CONCERN: **Feeding Support** K4

ACTION:
Give special support for breastfeeding: K4

- Encourage the mother to breastfeed every 2-3 hours.
- Assess breastfeeding daily: positioning, attachment, suckling, duration and frequency of feeds, and baby satisfaction with the feed.

Weigh baby daily.

When mother and newborn are separated, or if the baby is not sucking effectively, use alternative feeding methods.

Refer to Dealing with Feeding Problems *(See page 27)*.

AREA OF CONCERN: **Kangaroo Mother Care (KMC) (Adapted from WHO. ENCC Jan 2009)**

ACTION:
Start kangaroo mother care when:

- The baby is able to breathe on its own (no apneic episodes).
- The baby is free of life-threatening disease or malformations.

Notes:
- The ability to coordinate sucking and swallowing is not a pre-requisite to KMC. Other methods of feeding can be used until the baby can breastfeed.
- KMC can begin after birth, after initial assessment and basic resuscitation, provided the baby and mother is stable.

If kangaroo mother care is not doable, wrap the baby in a clean, dry, warm cloth and place in a crib. Cover with a blanket. Use

- a radiant warmer if room is not warm or baby small. K9

Explain KMC to the mother:
- continuous skin-to-skin contact
- positioning her baby
- attaching her baby for breastfeeding
- expressing her milk
- caring for her baby
- continuing her daily activities
- preparing a 'support binder'

Position the baby for KMC:
- Place the baby in upright position between the mother's breasts, chest to chest
- Position the baby's hips in a 'frog-leg' position with the arms also flexed.
- Secure the baby in this position with the support binder
- Turn the baby's head to one side, slightly extended
- Tie the cloth firmly

Notes:
- KMC should last for as long as possible each day. If the mother needs to interrupt KMC for a short period, the father, a relative or friend should take over.



Fr. WHO Department of Reproductive Health and Research. Kangaroo mother care: A practical guide. Geneva 2003.

AREA OF CONCERN: **Discharge Planning**

ACTION:
Plan to discharge when:

- Breastfeeding well and gaining weight adequately for 3 consecutive days

- Body temperature between 36.5 and 37.5°C for 3 consecutive days
- Mother is able and confident in caring for baby

C. Dealing with Feeding Problems

AREA OF CONCERN: **Mother-Infant Separation**

ACTION:
When mother and newborn are separated, or if the baby is not suckling effectively use alternative feeding methods: K5

Teach the mother hand expression of milk. Do not do it for her.
- Teach her how to wash her hands thoroughly
- Sit or stand comfortably and hold a clean container below her breasts
- Press slightly inward towards the breast between her finger and thumb.
- Express one side until milk flow slows. Then express the other side.
- Continue alternating sides for at least 20-30 minutes.

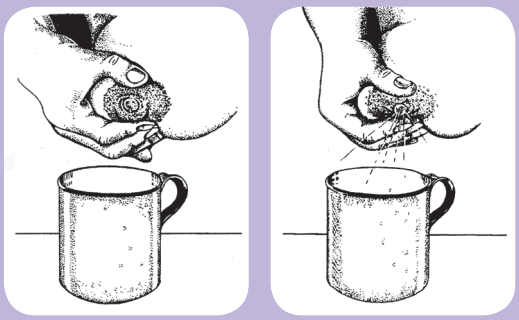
If milk does not flow well:
- Apply warm compresses.
- Have someone massage her back and neck before expressing.
- Feed baby mother's own milk whenever possible by:
  - Expressing directly into the baby's mouth
  - Hold the baby in skin-to-skin contact, the mouth close to the nipple.
  - Express the breast until some drops of breast milk appear on the nipple.
  - Wait until the baby is alert and opens mouth and eyes, or stimulate the baby lightly to awaken her/him.
  - Let the baby smell and lick the nipple.
  - Let some breast milk fall into the baby's mouth.
  - Wait until the baby swallows before expressing more drops of breast milk.

– Repeat this process every 1-2 hours if the baby is very small or every 2-3 hours if the baby is not very small
– Be flexible at each feed, but make sure the intake is adequate by checking daily weights.

Expressing milk by hand

Place finger and thumb each side of the areola and press inwards towards the chest wall.

Press behind the nipple and areola between your finger and thumb



WHO. Department of Child and Adolescent Health and Development. Relactation: A review of experience and recommendations for practice. Geneva, 1998

– Cup feeding, if indicated. K6
  – Do not feed the baby yourself. Teach the mother to feed the baby with a cup:
    – Measure the quantity of milk in the cup.
  – Hold the baby sitting semi-upright on her lap
  – Hold the cup of milk to the baby's lips.
  – Rest cup lightly on lower lip.
  – Touch edge of cup to outer part of upper lip.
  – Tip cup so that milk just reaches the baby's lips.
  – Do not pour the milk into the baby's mouth.
  – Baby becomes alert, opens mouth and eyes, and starts to feed.
  – Baby will suck the milk, spilling some.
  – Small babies will start to take milk into their mouth using the tongue.
  – Baby swallows milk.
  – Baby is finished feeding when mouth closes or when not interested in taking more.

Feeding an infant with a cup



Fr. WHO. Department of Child and Adolescent Health and Development. Relactation: A review of experience and recommendations for practice. Geneva, 1998

- If baby does not take the calculated amount:
  - Feed for a longer time or feed more often.
  - Teach the mother to measure the baby's intake over 24 hours, not just at each feed.
  - Baby is cup feeding well if required amount of milk is swallowed, spilling little, and weight gain is maintained.

- If the mother does not express enough milk in the first few days, or if the mother cannot breastfeed at all, use one of the following feeding options:
  - Donated heat-treated breast milk
  - Donated raw milk, in circumstances where benefit of providing raw donor milk outweighs small risk of HIV transmission
  - Artificial formula

If these methods are used, determine appropriate amount for daily feeds by age. K6 Assess the total

daily amount of breast milk given. Plan to keep the small baby longer before discharging.
If feeding difficulty persists for 3 days, or weight loss >10% of birth weight and no other problems, refer for breastfeeding counseling and management. J11

Assess mother/baby dyad and plan to discharge when:

- Breastfeeding well and gaining weight adequately for 3 consecutive days
- Body temperature between 36.5 and 37.5°C for 3 consecutive days
- Mother able and confident in caring for baby

VI. Enabling the Environment

TIME BAND: **Preparing for the shifts**

INTERVENTION: Prepare workplace for deliveries A3

ACTION:
The incoming and outgoing teams together should perform the following actions:

Complete the Equipment and Supplies Maintenance Checklist to ensure all equipment is disinfected and functioning and that supplies and drugs are maintained at the right quantity *(See Checklist on pages 37-41)*.

Establish staffing lists and schedules.

Maintain and appropriately file all clinical records, certificates, referrals and all other documentation. A3

Ensure there are no violations of the Rooming-In and Breastfeeding Act of 1992 (R.A. 7600), the Philippine Code of Marketing of Breast Milk Supplements (E.O. 51) and its Revised Implementing Rules and Regulations (2006).

TIME BAND: **After every delivery**

INTERVENTION: Restock delivery area

ACTION:
Replace and process used delivery instruments *(See pages 34-36)*

Replace used linen.

Update records:

- Update essential information in logbook
- Document findings, treatments, referral, and follow-up plans on clinical and home-based records.

TIME BAND: **Standard Precautions**

INTERVENTION: General standard precautions and cleanliness A4

ACTION:

Consider every person potentially infectious (even the baby and medical staff). Practice the routine procedures that protect both health workers and patients from contact with infectious materials:

- Wash hands before and during caring for a woman or newborn, before any treatment procedure including cord cutting and after handling of waste or potentially contaminated materials.
- Wear fresh sterile or highly disinfected gloves when performing delivery, cord cutting, or blood drawing.
- Wear clean gloves when handling and cleaning instruments, handling contaminated waste, cleaning blood and body fluid spills.
- During deliveries: Wear gloves, cover any cuts, abrasions or broken skin with a waterproof bandage, wear a long apron made from plastic or other fluid resistant material and shoes, and protect your eyes from splashes of blood.
- Safely dispose sharps in a puncture resistant container kept near the bed.
- Never reuse, recap or break needles after use.
- Dispose of bloody or contaminated items in leak-proof containers.
- Pour liquid waste down a drain or flushable toilet.
- Collect and keep clothing or sheets stained with blood or body fluids separate from other laundry.
- Make sure that instruments that penetrate the skin are adequately sterilized and that single-use instruments are disposed of after one use.
- Thoroughly clean or disinfect any equipment which comes into contact with intact skin.
- Use bleach for cleaning bowls, buckets, bloody or body fluid spills.

INTERVENTION: Hand Hygiene

ACTION:
The incoming and outgoing teams together should

1. Remove hand jewelry, rings, watches.
2. Wet hands with running water. When clean running water is not available, use either:
   a. Basin/bucket of water and pitcher/dipper. Ask another person to pour the clean water for handwashing.
   b. Alcohol handrub/sanitizer
3. Apply plain or anti-microbial soap to your hands, rub and work into a lather covering all surfaces using 5 strokes each as follows:
   a. Rub palms against each other.
   b. Rub dorsum of 1 hand with the palm of the other hand with interlaced fingers. Do the same with the other hand
   c. Flex fingers of both hands and interlock with each other and rub in a to and fro motion.
   d. With fingertips together rub into the palm of the other hand in a circular motion. Do the same with the other hand.
   e. Wrap the thumb with the other hand and rub in semi-circular motion. Do the same with the thumb of the other hand.
   f. Wrap the wrist with the other hand and rub in semi-circular motion. Do the same with the wrist of the other hand.
4. Rinse with a stream of running or poured water.
5. If possible use single use towels to dry your hand.

Alcohol Handrub

1. Pour 3–5 ml (1 teaspoon) of the alcohol handrub into the palm of your hand.
2. Rub hands together, including between fingers and under nails, until dry.

Note:
After 5–10 handrubs, remove build-up of moisturizer by washing off with soap and water.

INTERVENTION: Processing Instruments and Other Items

ACTION:

STEP 1: Decontamination

1. Put items in a plastic container of 0.5% chlorine solution immediately after use.
2. Cover items completely with chlorine solution and soak for 10 minutes.
3. Remove items from chlorine solution (with utility gloves on).
4. Rinse items with water. Set aside until you are ready to clean them.
5. Change chlorine solution: a) at beginning of each day, or b) whenever solution is very contaminated or cloudy.

Using liquid household bleach

You can use any household bleach to make a 0.5% chlorine solution by using the following formula:

[% chlorine in the liquid bleach divided by 0.5%] minus 1= parts of water for each part bleach

Example: To make a 0.5% chlorine solution from a 5% chlorine concentrate, calculate as follows: [5% divided by 0.5%] minus 1 = [10] minus 1 = 9

- Mix 1 part liquid bleach with 9 parts water to get a 0.5% chlorine solution.

STEP 2: Cleaning

1. Wear utility gloves, a mask, and protective eyewear when cleaning.
2. Use a soft brush or old toothbrush, soap, and water to scrub items.
3. Rinse all items well with clean water to remove all soap.

Note:

Use household cleaning soap (bar or liquid), rather than bath soaps. If you use bar soap, keep it in a dish with holes for drainage.

STEP 3: High-Level Disinfection (HLD) by Boiling

1. Put all instruments and other items into a pot with scissors and all instruments with joints opened. Place forceps or pickups on top of all other items.
2. Cover all items completely with water. When water comes to a boil, cover pot and boil for 20 MINUTES.
3. Remove items from pot with HLD forceps or pickups and put in a HLD container.
4. Air-dry boiled items before use or storage. Do not leave boiled items sitting in water that has stopped boiling.

Note:
HLD kills all germs except some endospores (difficult-to-kill bacteria, such as tetanus or gas gangrene). If sterilization is not available, HLD (by boiling or steaming) is the only other acceptable choice.

STEP 3: HLD by Steaming

1. Put water into the bottom of a steamer pot.
2. Put all items onto a steamer tray. Open up scissors and other instruments with joints. Place forceps or pickups on top of all other equipment in the pot.
3. Bring the water to a boil, then when the water starts to boil, cover the pot and boil for 20 MINUTES.
4. Remove items from the pot with HLD forceps or pickups and put in a HLD container.
5. Air-dry items, then use or store items in a covered, HLD container.

Note:
Steaming causes less damage to gloves and other plastic or rubber items, uses less water and fuel and does not cause build-up of lime salts on metal items.

STEP 3: Sterilization by Steaming (Autoclave)

1. Dry all cleaned items to be sterilized. Open all jointed instruments, e.g. scissors so steam can reach all surfaces of item.
2. If wrapping items for autoclaving, use two layers of paper, newsprint, or cotton.
3. Leave space between items so that steam can move about freely. Follow manufacturer's instructions whenever possible. In general, sterilize at 121 °C (250 °F) and 106 kPa (15 lb/in2) pressure. Do not begin timing until autoclave reaches required temperature and pressure: Wrapped items take 30 mins; unwrapped items 20 mins.
4. At end of cycle: If autoclave is automatic, heat will shut off and pressure will begin to fall. If autoclave is not automatic, turn off heat or remove autoclave from heat source.
5. Wait until pressure gauge reaches "zero." Open autoclave lid/door so that remaining steam escapes.
6. Leave instrument packs or items in autoclave until completely dry. Damp packs draw microorganisms from the environment and should be considered contaminated.
7. Remove items from autoclave when dry.
8. Use or store autoclaved equipment immediately.

Notes:
Sterilization kills all germs, including endospores. Any item that will come in contact with the bloodstream or tissues under the skin should be sterilized using steam (autoclaving) or dry heat. Steam sterilization uses moist heat under pressure so both water and heat are needed. The autoclave machine must have a pressure gauge.

STEP 4: Store or Use

After processing, HLD or sterilized items should be used immediately or stored properly to prevent contamination. Proper storage is as important as decontamination, cleaning, sterilization, or HLD.

VII. Equipment and Supplies Maintenance Checklist

AREA OF CONCERN: **Warm and clean room**

_ Light source
_ Heat source
_ Room thermometer
_ Clean bed linen
_ Curtains if more than one bed or impregnated bednet in malaria areas
_ Work surface for resuscitation of newborn near delivery beds
_ Clean surface (for alternative delivery position)
_ Detergent for cleaning walls, windows, floors (if no body fluids present)

AREA OF CONCERN: **Hand washing**

_ Clean water supply
_ Bar soap in small pieces
_ Nail brush or stick
_ Clean towels
_ Alcohol handrub

AREA OF CONCERN: **Waste**

_ Container for sharps disposal
_ Receptacle for soiled linens
_ Pail for soiled pads and swabs
_ Bowl and plastic bag for placenta

AREA OF CONCERN: **Sterilization**

_ Instrument sterilizer
_ Jar for forceps

AREA OF CONCERN: **Supplies**

_ Gloves:
  _ utility or heavy duty, sterile for highly disinfected,
  _ long sterile for removal of placenta
  _ single use, for examination
  _ surgical, sterile for procedures

_ Long plastic apron
_ Urinary catheter
_ Disposable syringes with needles
_ IV tubing
_ Suture material for tear or episiotomy repair
_ Antiseptic solution (iodophores or chlorhexidine)
_ 70% isopropyl alcohol
_ Swabs
_ Bleach (chlorine-based compound)

AREA OF CONCERN: **Miscellaneous**

_ Oxygen source
_ Wall clock
_ Flashlight with extra batteries
_ Log Book

FOR THE MOTHER

AREA OF CONCERN:

Equipment

_ Delivery bed that supports the woman in a semi-sitting position or lying in a lateral position, with removable stirrups (only for repairing the perineum or for instrumental delivery)
_ Stethoscope
_ Blood pressure apparatus
_ Body thermometer

Delivery Instruments

_ Scissors
_ Needle holder
_ Artery forceps and clamp
_ Dissecting forceps
_ Sponge forceps
_ Vaginal speculum
_ Clean (plastic) sheet to place under mother
_ Sanitary pads

Drugs

_ Oxytocin
_ Methylergonovine maleate
_ Magnesium sulfate
_ Calcium gluconate
_ Dexathasone or betametasone
_ Diazepam
_ Hydralazine
_ Ampicillin
_ Gentamicin
_ Metronidazole
_ Benzathine penicillin
_ Lignocaine
_ Epinephrine
_ Ringer's lactate
_ Dextrose 10%
_ Normal saline
_ Sterile water for injection
_ Isoniazid
_ RPR testing kit
_ HIV testing
_ Hemoglobin testing kit
_ Contraceptives
_ Nevirapine (adult, infant)
_ Zidovudine (AZT) (adult, infant)
_ Lamivudine (3TC)

Forms and records

_ Birth certificates
_ PhilHealth forms
_ Death certificates
_ Referral forms

For CEmONC – above plus

_ Equipment for cesarean section
_ Blood supply and needs for blood transfusion

FOR THE NEWBORN

AREA OF CONCERN:

Equipment
- _ Fetal stethoscope
- _ Clean towels for drying and wrapping the baby
- _ Self-inflating bag and mask (term and preterm size)
- _ Suction tube with mucus trap
- _ Feeding tubes (Fr 5 and 8)
- _ Cord ties (sterile) or clamps
- _ Blankets
- _ Bonnets, mittens and socks

Drugs
- _ Eye antimicrobial (2.5% povidone-iodine or erythromycin ointment or 1% silver nitrate)
- _ Vitamin K (phytomenadione)
- _ BCG vaccine
- _ Hepatitis B vaccine
- _ Ampicillin
- _ Gentamicin
- _ Penicillin G
- _ Plain Ringer's lactate or normal saline
- _ Dextrose 10%
- _ Sterile water for injection

Supplies
- _ 1 cc syringes
- _ 3 cc syringes
- _ Digital thermometers
- _ Baby weighing scale
- _ Feeding cups
- _ Support binders for KMC
- _ Newborn screen filter cards
- _ Lancets

Records and Forms
- _ Birth certificates
- _ PhilHealth forms
- _ Death certificates
- _ Referral forms

For CEmONCs - above plus:

_ Laryngoscope with Miller 0 and 1 blades
_ Epinephrine 1:10,000
_ Dopamine
_ Oxygen source
_ Suction machine or wall suction
_ Radiant warmer or heat source
_ Phototherapy units

EQUIPMENT AND SUPPLIES MAINTENANCE CHECKLIST

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