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Clean and Safe Home Birth

Clean and Safe Home Birth⁵

This chapter deals with the importance of providing a clean and safe home birth when a family wishes to give birth at home.

Introduction

HM/HC fully supports the MOHP policy of encouraging institutional birth. However, it is important for health care providers to recognize that the tradition of giving birth at home in Egypt remains strong. The transition from home birth to hospital birth is a process that takes place over time and is best achieved by offering the highest and most humane quality of care to families, whatever their choice of birthplace.

A relationship of **mutual respect** and understanding between the physician, the midwife and the daya is critical to ensure a clean and safe home birth. The goal is to ensure quality obstetric and neonatal care, no matter who attends the birth or where the delivery takes place.

"It is everyone's responsibility to help families choosing to give birth at home to have a safe and clean labor, delivery, and postpartum experience" (Ross, 1998).

Problem in Egypt

The ENMMS 2000 showed that over 50% of all births in Egypt take place at home. Of these, 10% were conducted by physicians, 13.9% by a nurse or nurse/midwife, and 68.6% by dayas. The study also showed that 29% of all maternal deaths and 75% or more of neonatal deaths occurred at home. The majority of maternal deaths occur within 24 hours of delivery, and 81% occur due to one or more avoidable factors.

Reasons Families Choose to Give Birth at Home

"It is safe to say that a woman should give birth in a place she feels is safe, and at the most peripheral level at which appropriate care is feasible and safe" (WHO, 1996).

For a low-risk pregnant woman, delivery can be at home, at a primary health care unit, or at a maternity clinic or center. However, it must be a place where all attention and care are focused on her needs and safety, and it must be as close to her home and to her own culture as possible.

- Reasons families choose to give birth at home include:
- Local tradition and/or customs
- Greater comfort and privacy
- Trust in the daya who is often known and respected in the local community.

⁵ This chapter is taken from Ministry of Health and Population, Arab Republic of Egypt, *Basic Essential Obstetric Care: Protocols for Physicians* (Cairo, 2004), chap. 13.

Factors that Contribute to Maternal and Neonatal Mortality and Morbidity at Home

Two major factors contribute to maternal and neonatal mortality and morbidity at home:

- Harmful practices b providers
- Delays in recognizing complications, and seeking and receiving care

Harmful Practices

Research in Egypt conducted within the past five years has shown that one of the biggest problems contributing to maternal and neonatal mortality and morbidity is HARMFUL PROVIDER PRACTICES while attending home births.

Harmful practices identified during research include the following:

- Extensive use of oxytocin and ecbolics (misoprostol) to speed up labor (mothers had received oxytocin to speed up labor in 63% of all still births)
- Use of forceps and vacuum extractions at home by doctors and sometimes by nurses
- Application of fundal pressure to speed up delivery
- Performance of cesarean sections at home (3% of birth at home in one study)
- Lack of infection control precautions

Four Delays

There are four common delays that may occur during home birth that are responsible for many maternal and neonatal deaths:

- **Delay # 1:** Delay in recognizing the problem (lack of awareness of danger signs)
- **Delay #2:** Delay in deciding to seek care (health facility inaccessible, fear of costs, fear of poor treatment).
- **Delay #3:** Delay in reaching the health facility (lack of transportation).
- **Delay #4:** Delay in receiving adequate treatment once a woman has arrived at the health facility (lack of equipment, supplies, trained personnel, drugs, blood).

Symptoms and Signs that Identify Women at Risk

It is important to identify women at risk to deliver at home in terms of four types of existing risk factors, and also to screen women for symptoms and signs that may arise during pregnancy that make delivery at health facilities safer than at home.

Table 9.1 Women at risk to deliver at home

Home	Obstetrical	Medical	Fetal
Infectious disease present (e.g., hepatitis)	Pre-eclampsia or eclampsia	Cardiac disease	Breech or transverse lie
Unsanitary conditions	Multiple gestation	Tuberculosis	Gestation < 37 weeks
	Placenta previa	Diabetes	Gestation > 42 weeks
	Polyhydramnios	STI	Previous or current

Home	Obstetrical	Medical	Fetal
			pregnancy with intrauterine fetal death
	Rh isoimmunization	Essential hypertension	Previous or current pregnancy with intrauterine growth retardation
	Previous cesarean section	Severe anemia	Previously diagnosed congenital fetal malformation
	Previous still birth or neonatal death	History of infertility	
	Multipara > 4		

Table 9.2 High-risk Symptoms and signs that Necessitate Referral to the Hospital during Pregnancy

Symptoms	Signs
Vaginal bleeding Premature rupture of the membranes (PROM) Preterm labor pains before 37 weeks Decreased or absent fetal movements Severe headache Severe epigastric pain Blurring of vision Convulsions	Height > 150 cm Blood pressure \geq 140/90 mmHg Temperature > 37.5°C Fundal height < period of amenorrhea Fundal height > period of amenorrhea Abnormal fetal heart rate (< 120 bpm or > 160 bpm) Marked edema of the anterior abdominal wall

Counseling for Home Birth

Women should be counseled on the importance of a facility-based delivery. However, if the woman is adamant on delivering at home, then she needs to be counseled on the importance of ensuring the following:

1. A family birth plan
2. Birth preparedness
3. Complication readiness
4. Awareness of danger symptoms and signs that might occur during the course of birth (obstetrical complications)

Birth Plan

Every family should have a "birth plan" that addresses the following topics, regardless of where they plan to deliver:

- **Communication.** How will the person attending the birth (daya, midwife, or physician) as well as the support people be contacted (for example: cell phone, local phone, neighbor's phone, send someone)?

- **Knowledge of danger signs.** How will the family and birth attendant decide when to seek help and/or transport the woman to the referral center? What are the danger signs they should look for?
- **Who decides?** Who will make the decision to transport the woman, if necessary (for example: father, mother-in-law)?
- **Transportation.** How will the woman be transported to a health facility when needed (for example: taxi, community vehicle, ambulance)?
- **Where?** Where will the woman be transported and is there an arrangement with a referral facility and/or provider (private doctor)?
- **Antenatal Care Card.** This card contains important prenatal and medical history data, such as blood type, obstetrical history, history of the present pregnancy, vital signs, and immunizations. It should be carried with the pregnant woman at all times.
- **Cost.** What is the cost of transportation and of care at the referral facility? How will it be paid (for example: family savings, a loan)?
- **Blood donation.** Who will donate blood, if necessary?

Birth Preparedness

Despite local traditions, it is critical that pregnant women and their families be prepared for any eventuality of birth and the possibility of an emergency. Being prepared for a safe home delivery yet ready for a prompt transfer in case of an emergency will reduce these life-threatening delays and save the lives of both mother and newborn.

Birth preparedness includes the following plan for the woman and her family:

- Know what to expect during pregnancy, including self-care (e.g., nutrition and workload) and the expected date of delivery.
- Plan the appropriate location within the home for the delivery.
- Choose a skilled provider (PHC physician, nurse/midwife), or at an absolute minimum when a skilled provider is not available in the area, a trained birth attendant (daya).
- Have the needed supplies to conduct a clean and safe delivery. Use a birth kit. If not available obtain a clean sheet or plastic to use as a clean delivery surface, a new sterile blade, a cord clamp for tying the cord, disinfectant soap and water (see Preparation for Home Birth Checklist p.246).
- Have the needed supplies for a clean postpartum period for the mother and newborn (clean clothes for the mother and newborn, a towel or cloth to wipe the newborn, a clean wrap for the newborn sanitary pads or cloth for the mother).
- Identify support people to help with transportation, to take care of the children and/or household, and to accompany the woman to a health facility in an emergency.

Complication Readiness

Since birth-related complications cannot be reliably predicted, it is important to provide all pregnant women and their families with adequate information about the signs of an obstetric emergency, actions required if a complication should arise, and the importance of seeking care without delay when complications do occur.

- Determine a way to communicate with a source of help (skilled attendant, facility or transportation).
- Identify and contact support people to help with transportation, to take care of the children and/or household, and to accompany the woman to a health facility in an emergency.
- Know the location of the nearest health facility where essential obstetric care is available and functioning 24 hours a day.
- Have a means of transportation to this facility.
- Set aside funds for medical care in advance so that the woman can reach the appropriate medical facilities as quickly as possible.
- Know who will be the blood donor and know the mother's blood type.

High-risk Symptoms and Signs during Birth that Necessitate Referral to the Hospital

Women need to be counseled on the importance of awareness of the following danger symptoms and signs that might occur during the course of birth (obstetrical complications):

- Gestation < 37 weeks
- Vaginal bleeding (fresh, bright blood)
- Temperature > 37.5°C
- Blood pressure \geq 140/90 mmHg
- Abnormal fetal lie or presentation
- Abnormal fetal heart rate (< 120 bpm or > 160 bpm)
- Prolapse of the umbilical cord
- Progress of labor crosses the Alert Line of the partograph
- Delivery of the fetus delayed > 4 hours after the rupture of the membranes
- Meconium stained liquor

Woman's Health Card

The health care provider should fill in the *Woman's Health Card* at each antenatal care visit and should stress the importance of having this card with the pregnant woman at each subsequent visit and at birth.

Assessment of the Place of Birth

During an antenatal care visit, the nurse who is working in the primary health care facility should arrange a home visit with the woman. The aim of this visit is to identify the address of the patient's home and the quickest way to get there, and to inspect the home for the following:

- Ensure the availability of clean water.

- Choose a room or area in the home to be the place for delivery. The room should be clean, with enough light, and an adequate distance from where animals are present. It should be as near as possible to the main entrance of the home to prevent delay if referral is needed.
- Ensure the availability of the supplies needed during birth to make the delivery clean and safe using the Preparation for Home Birth Checklist, which appears below.
- Plan with the woman and/or her family a way to communicate between the home and the caregiver in case an emergency arises.
- Ensure that the woman and the people in the home are aware of the danger symptoms and signs during pregnancy and labor and the immediate necessary actions to be taken.

Preparation for Home Birth Checklist

Give the family this checklist at least a month before the due date if they are planning a home birth, to help ensure they have everything ready for a safe home birth.

The nurse/midwife or daya should visit the home at least two weeks before the expected date of delivery with this checklist to make sure the family is prepared.

- Family birth plan
- Clean home
- Clean surfaces in room where woman will give birth
- Light for birth attendant (flashlight is OK if no electricity)
- Clean gowns for mother
- Sanitary napkins
- Bath towels
- Clean sheets with pillowcases
- Plastic sheeting to protect mattress (to be placed under sheets during delivery – can cut up large plastic bags if necessary)
- Disinfectant soap
- Cord clamp
- Disposable sterile scalpel (to cut the cord)
- Disposable single-use gloves
- One trash can (preferably lined with plastic bags) for trash and/or waste products
- Clean cotton blankets to receive newborn
- Diapers
- Clean clothes for newborn
- If it is cold, a source of heat should be provided so that the newborn is not born into a cold environment.

Service Standard for the Home Birth Kit (for Physicians)

Supplies

- Alcohol 70% or alcohol swabs for umbilical stump care
- Head cover and mask (one)
- Plastic disposable mattress cover (one)
- Povidone iodine 10% for disinfection (200 ml)
- Bowls of different sizes for emesis and povidone iodine (two)
- Four-inch square gauze pads (6 packs, 2 per pack = 12 total)
- Dipsticks for urine testing (protein and glucose)
- Disposable single-use gloves (one pack)
- Sterile rubber gloves (one pair for delivery, one pair for handling the neonate)
- Disposable plastic gloves for antepartum assessment (one packet)
- Disposable syringes (one each 3 ml, 5 ml, 10 ml)
- Oral and rectal thermometers
- Umbilical cord clamps (two)
- Disposable plastic urinary catheter (one)
- Disposable plastic apron (one)
- Bulb syringe for nasopharyngeal suction (one)
- Black (packages and wraps) and yellow (body fluid contaminated material) plastic bags for waste disposal
- Small, hard plastic box for sharp instrument disposal
- Vicryl #0 stitches (two)
- IV canula size 18 (two)
- IV infusion set (one)
- Maternity size sanitary napkin (two)
- Adhesive plasters/band aids
- Airway size 3 "green" (one)

Instruments

- Sphygmomanometer
- Adult stethoscope
- Pinard fetal stethoscope
- Tape for neonatal measurements
- Neonatal scale
- Needle holder (one)

- Kocher clamp (two)
- Curved episiotomy scissor (one)
- Sterile scalpel blade for umbilical cord cutting (one)
- Sim's speculum (one)
- Toothed tissue forceps (one)

Drugs

- Xylocaine 1% for local perineal infiltration (one bottle)
- Syntocinon (oxytocin) for postpartum use (four ampules, 5 IU each)
- Lactated Ringer's solution 500 ml (two bottles)
- Methergine ampules in case of postpartum hemorrhage (two)
- Antibiotic eye drops
- Vitamin A capsule (100,000 IU)

Steps Required to Conduct a Clean and Safe Home Birth

Step #1 Upon Arrival at the Home

- Ensure cleanliness of the place of delivery and that the assigned place for delivery fulfills the expected criteria.
- Reconfirm the availability of transportation in case of complications or if an emergency arises.
- Review the *Woman's Health Card* to have an updated overview of the patient's prenatal care.

Step #2 History Taking

- LMP and EDD
- History of the onset of labor pains, their frequency, and duration
- History of vaginal bleeding
- History of rupture of membranes
- History of decreased fetal movements
- History of severe headache
- History of severe epigastric pain
- History of blurring of vision
- History of convulsions

Step #3 Physical Examination

General

- Blood pressure

- Pulse
- Temperature
- Respirations
- Check for pallor or jaundice

Abdominal examination

- Fundal level
- Fetal lie and presentation
- Fetal heart sounds
- Inspection for any scars

Pelvic examination

- Examination of the vulva for rigid perineum, existing scars, or marked varicosities
- Cervical dilation
- Status of the membranes and color of amniotic fluid
- Presenting part

Step #4 Management of Labor

Diagnosis of true labor

Determining that true labor has started is one of the most important aspects of the management of labor. Active labor is differentiated from latent or false labor when:

- The cervix has dilated > 3 cm.
- The rate of dilation is at least 1 cm/hour.
- The fetal descent has begun.
- A bag of forewater forms.

High-risk Symptoms and Signs during Birth that Necessitate Referral to the Hospital

- Gestation < 37 weeks
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- Blood pressure \geq 140/90 mmHg
- Abnormal fetal lie or presentation
- Abnormal fetal heart rate (< 120 bpm or > 160 bpm)
- Prolapse of the umbilical cord
- Progress of labor crosses the Alert Line of the partograph
- Delivery of the fetus delayed > 4 hours after the rupture of the membranes
- Meconium stained liquor

Management of the First Stage of Labor

Best Practices to Follow during the First Stage of Labor

Encourage movement and changes in position

- There is no evidence to support the encouragement of the supine position during the first stage of labor. The only exception is if the membranes have ruptured in the presence of a non-engaged fetal head.
- Encourage the woman to move and to choose the position she prefers.
- Encourage the woman to have a shower – the water is healing and relaxing.

Maintain hydration in labor

- Allow the woman to have plenty of nutritious fluids (lemon juice, tea with honey).

Implement infection control precautions

The risk of infection increases during labor and childbirth and therefore it is imperative that preventive practices are adopted in order to safeguard the woman and the neonate.

Provide for and ensure the "six cleans" for labor and childbirth:

- Clean hands
- Clean perineum
- Clean delivery surface
- Clean cord-cutting instrument
- Clean cord care (clean cord ties and cutting surface)
- Nothing unclean should be introduced into the vagina.

Provide supportive care to the woman and her family

Continuous empathetic and physical support during labor results in:

- Shorter labor less medication for pain management
- Fewer operative deliveries
- Fewer Apgar scores of < 7

All **mother** deserve supportive care during labor, delivery and postpartum. Many traditional societies use an individual who provides support throughout labor and childbirth. This individual, mother, a female friend or relative). Supportive care is important not just because it is "compassionate"; it improves outcomes by helping to prevent conditions such as dehydration and prolonged labor.

The family members as well as the birth companion can provide supportive care. Teach family members how to provide this care.

- **Massage** the woman's back and shoulders between contractions and hold her hand during contractions. This helps make the labor pains more tolerable.
- **Wipe the woman's face and neck** with a clean, cool, wet cloth. Labor is hard work.

- **Offer encouragement and comforting words.** Tell the woman that every contraction brings her closer to having the baby. She can do it. Labor will not last forever. Praise her for getting through the contractions.
- **Breathe with her during contractions.** Teach the woman how to inhale through her nose and exhale a long slow breath through her mouth while making a "shhhh" sound. She should use this breathing during each contraction. It helps her to relax and it distracts her during the labor pains. Breathe with her.

Manage labor using the partograph

Using the partograph encourages regular monitoring of both the mother's and fetus' condition. Proper use of the partograph guides in the early detection of prolonged or obstructed labor.

- Monitor uterine contractions (labor pains), their frequency and duration every 30 minutes.
- Check fetal heart sounds and rate every 30 minutes.
- Perform vaginal examination.
 - ▶ Clean hands are required and should be covered by disposable single-use gloves.
 - ▶ Ideally only one examination is needed to diagnose active labor.
 - ▶ Perform at a maximum frequency of once every two hours.
 - ▶ Check cervical dilation, descent of the head and status of the membranes. (If membranes are ruptured, check the color of the amniotic fluid. If it is meconium stained, this reflects fetal distress and the woman should be referred).

Provide pain management

Provide non-pharmacological methods of pain relief:

- Calm, gentle voice
- Relaxation techniques (deep breathing exercises and massage)
- Cool cloth to forehead
- Encouragement, reassurance and praise
- Assistance in voiding or changing positions

Practices that are not recommended

The following practices are **no longer recommended** for management of labor:

- Use of an enema: enemas are uncomfortable, can damage the bowel, and do not shorten labor or decrease neonatal infection or perinatal wound infection.
- Shaving of the pubic area: shaving does not reduce infection and, in fact, may increase the risk of infection or transmission of HIV or hepatitis to the fetus if the mother has open cuts on the perineum. Shaving may also lead to discomfort with the regrowth of hair.
- Restricted mobility during labor
- Restriction of fluids during labor
- Frequent vaginal examinations

- Guided expulsive efforts and/or sustained bearing-down efforts
- Fundal pressure
- Nursing the woman in the supine position

Management of the Second Stage of Labor

Diagnosis of the Onset of the Second Stage of Labor

- The woman feels an urge to bear down.
- The cervix is fully dilated.
- The membranes may rupture spontaneously.
- The presenting part descends into the pelvic cavity; this can be determined by abdominal examination.
- Duration of the second stage of labor is normally two hours in a primigravida and one hour in a multipara.

Best Practices to Follow during the Second Stage of Labor

Position

- The upright (sitting or semi-sitting) position is preferred in the second stage to help with the descent of the fetal head into the obstetric axis.

Bearing down

- Encourage spontaneous pushing, 3-5 times for a relatively brief duration (each 4-6 seconds) using a bearing-down effort with each contraction.

Fetal heart rate

- Check the fetal heart rate every five minutes.

Care of the perineum

Perineal care should be minimal to avoid excess damage. The most effective way to avoid perineal tearing is to provide a SLOW delivery of the fetal head. Ask the woman to pant, not push, as the head is crowning and delivering. Coach her to pant using supportive words (e.g., you're doing well, that's good, keep panting).

Episiotomy

- A reason for episiotomy is when there are signs of fetal distress (fetal heart rate < 120 bpm or meconium stained liquor) and the head is crowning.
- Episiotomy is not indicated because of insufficient progress of delivery alone (be patient – there is no urgency if there is no fetal distress); if the second stage of labor is prolonged, this necessitates referral, not an episiotomy.

Delivery of the newborn

- Immediately place the newborn directly on the mother's stomach, dry the newborn and cover it with a clean cotton blanket.

- Do not hurry to cut the cord.
- After clamping the cord, use a clean sterile blade to cut it.

Immediate care of the newborn

The vast majority of neonatal deaths occur right after delivery (from birth asphyxia, trauma or from care provided immediately after delivery, e.g., failure to maintain the temperature of the newborn). Immediate care of the newborn to prevent neonatal death must include the following:

- Provide warmth – put the newborn directly on the mother’s stomach, dry the newborn, cover with a dry cloth.
- Clear the upper airway, establish breathing.
- Wipe the newborn’s mouth and nose with a clean gauze pad.
- Rub the newborn’s back or flick the toes to stimulate respiration.
- If there are excessive secretions, use a clean sterile bulb syringe, suctioning the mouth first (starting with the sides), then the nose.
- Facilitate immediate breastfeeding (do not allow the family to take the newborn and give it anything other than breast milk).
- Clamp and cut the umbilical cord correctly, following correct infection control measures.

Practices that are not Recommended

The following practices are **no longer recommended** and can be harmful:

- Slapping the back or any other part of the newborn (causes trauma)
- Hanging the newborn upside down by it’s feet
- Squeezing the rib cage (can break ribs or puncture lungs)
- Forcing the thighs onto the abdomen
- Shaking the newborn (can cause brain damage)
- Using hot or cold compresses or baths

Management of the Third Stage of Labor

Active Management

Postpartum hemorrhage is the primary cause of maternal mortality according to the *ENMMS 2000*. Active management of the third stage compares favorably with physiological management because postpartum hemorrhage occurs less often and hemoglobin levels postpartum are higher. Active management includes:

- Controlled cord traction
- Uterine massage
- Oxytocin 10 IU given intramuscularly

- Delayed cord clamping until the pulsations stop. This is the physiological way of treating the cord and is not associated with adverse effects in normal deliveries.
- Use two sterile Kocher clamps to clamp the cord temporarily, and cut the cord between them to deliver the placenta.

Placental separation and controlled cord traction

Signs of placental separation are:

- Hardening of the uterus
- Lengthening of the cord
- Spurt of blood from the vagina

Following the signs of placental separation gently pull the cord until the placenta appears at the vulva. Grasp the placenta, and by using a gentle twisting motion pull it out. Check for the complete delivery of the placenta and the membranes (no missing cotyledons or membranes) AVOID putting hands inside the uterus as it is painful, it raises the possibility of infection, and it may cause rupture of the uterus.

- Perform uterine massage immediately after delivery of the placenta.
- Repair any perineal tears or episiotomy.

Referral to the Hospital in the Third Stage of Labor

Mother

Refer the mother for:

- Retained placenta (not delivered after half an hour of delivery of the newborn)
- Hemorrhage (insert an IV canula size 18, start a normal saline or Ringer's lactate crystalloid infusion at a fast drip, apply a vaginal pack, and perform bimanual compression)

Newborn

Refer the newborn if:

- Having difficulty breathing, blue, cold, smells bad, poor muscle tone (clear airways with a bulb syringe and maintain warmth during referral)

The birth attendant should accompany the woman and/or newborn and provide continuous monitoring during referral to the health facility.

Note: In rare circumstances when a newborn does not respond to tactile stimulation (no crying or spontaneous breathing) and clearing of the airways with a bulb syringe, refer to the hospital. But immediately initiate chest compressions using two finger tips over the sternum combined with gentle and careful mouth-to-mouth respirations (gentle puffs). Be careful as too much air pressure can burst the newborn's lungs and result in the death of the newborn. Wrap the newborn to keep warm during referral.

Management of the Fourth Stage of Labor

Observation and Management

The birth attendant should observe the woman and her neonate for AT LEAST the first two hours after delivery.

Mother

For the first two hours check and record every 30 minutes:

- Blood pressure
- Pulse
- Vaginal bleeding and firmness of the uterus

Perform uterine massage every 30 minutes. Teach the woman and her family how to perform uterine massage. Tell them to rub from her navel down in a circular motion, and that the abdomen should feel like a big orange.

Newborn

If the newborn is a healthy color, warm, has good muscle tone and is breathing well, keep it with the mother and encourage breastfeeding. Supporting and facilitating the bonding process and immediate and exclusive breastfeeding should be the priority during the first hour or two postpartum. There is no urgency to put in the eye drops or care for the cord.

Referral to the Hospital in the Fourth Stage of Labor

Mother

Refer the mother for:

- Hemorrhage (insert an IV canula size 18, start a normal saline or Ringer's lactate crystalloid infusion at a fast drip, apply a vaginal pack, and perform bimanual compression)
- Tachycardia (pulse > 100 bpm)
- Hypotension (BP < 90/60 mmHg)
- Temperature > 38°C

Newborn

Refer the newborn if:

- Having difficulty breathing, blue, cold, smells bad, poor muscle tone (clear airways with a bulb syringe and maintain warmth during referral)

The birth attendant should accompany the woman and/or newborn and provide continuous monitoring during referral to the health facility.

Postpartum Care and Counseling

Introduction

The birth attendant should continue to be an important source of information and support after the birth. He/she can be of great comfort during the postpartum period when mothers have questions or problems. The nurse/midwife will continue to check in on the mother, infant and family for a usual time frame of six weeks, although some midwives will continue to get calls for a much longer time. Some families and midwives form lasting friendships based on the joy and trust they shared at birth.

Before the birth attendant leaves the home it is important to provide both postpartum care and postpartum counseling.

Postpartum Care

Perform a quick checkup of the mother

- Ensure there is no excessive vaginal bleeding.
- Measure the blood pressure
- Ensure that the uterus is firm.
- Give one vitamin A capsule (100,000 IU)

Perform a quick basic assessment of the newborn

Wash hands with clean water and soap before touching the newborn, and then do the following:

- Ensure the newborn is breathing without difficulty.
 - ▶ Look for the rise and fall of the chest and abdomen.
 - ▶ Listen for exhaled air and feel for the exhaled air flow at the mouth.
 - ▶ If there are retractions of the intercostal muscles or grunting, refer the newborn to a hospital.
- Ensure the newborn has a pink color. If cyanosed, refer to a hospital.
- Ensure the newborn does not feel cold.
- Check for the absence of obvious congenital malformations (spina bifida, abdominal wall defects or abnormal limbs).
- Look for signs of prematurity in the newborn: lack of foot creases, lack of body fat, small size and/or weight < 2,500 grams, and extensive dark hair on back, arms and shoulders.
- Assess the presence of good muscle tone, the presence of a strong cry, and that the newborn grasps the birth attendant's finger.
- Weigh the newborn and record the weight using the portable scale in the birth kit.
- If the newborn is crying, healthy in color and warm to the touch wrap the newborn in his/her clothes, covering the head with a cap.

Cord care

- Use a sterile blade or scalpel for cutting the cord. The cord must be tightly clamped before cutting.
- The length of the umbilical stump after cutting is usually 2-3 cm from the abdominal wall.
- Wipe the umbilical stump with a piece of sterile gauze with alcohol 70% from the tip downwards.

Eye care

- Chlamydial trachomatis and other infections of the newborn's eyes are endemic in Egypt. It is recommended to use eye prophylaxis in the form of Chloramphenicol eye drops 0.5%, one drop in each eye three times per day for three days.

Breastfeeding

- Observe breastfeeding to ensure correct positioning of the mother and newborn and correct attachment. See pages 302-303.

Waste disposal

- **Placenta:** it is recommended to bury the placenta in the soil at least 50 cm below the surface. **DO NOT THROW THE PLACENTA IN THE NILE RIVER.**
- **Used syringe, soiled swabs or cotton:** put these in a plastic bag, close tightly, take to a place away from the home and burn.
- **Used needles and the trocar of the cannula:** put inside a small plastic or hard cardboard box and take back to the health care facility for proper disposal.
- **Soiled towels and bed sheets:** advise washing them separately.

Record keeping

Record the details of the current delivery in the *Woman's Health Card*.

Postpartum Counseling

Ensure that the woman and her family are aware of the maternal and neonatal danger signs and the importance of seeking immediate medical care if they arise.

Maternal danger symptoms and signs

- Vaginal bleeding: excessive in amount (passage of blood clots or continuous flow of blood), or change in the color of blood to bright red
- Severe headache, blurring of vision, severe epigastric pain or convulsions
- Fever or malodorous vaginal discharge
- Painful calf muscle
- Abdomen very tender when pressed (different from normal cramping of the uterus postpartum when breastfeeding)
- Chest pain or dyspnea
- Fainting

Neonatal danger symptoms and signs

Teach parents the "handful of danger signs for newborns" and the importance of seeking immediate medical care if present:

- Fever or cold skin
- Rapid respiration (panting)
- Poor, weak sucking (inability to latch on to the nipple and breast-feed easily)
- Poor color (blue body) and/or poor muscle tone "lethargy" (does not grab finger, floppy)
- Weak and/or constant painful cry

Also call for medical advice if the newborn:

- Has convulsions or is continuously asleep
- Refuses feeding for two successive times
- Has delayed passage of stools or urine for more than 24 hours
- Has diarrhea or excessive vomiting
- Has abnormal color - pale, dusky or yellow
- Has an umbilical stump that is red, oozing pus or has a bad odor
- Has an eye/eyes that are swollen, sticky or draining pus or discharge

Wrapping

Teach the importance of wrapping the newborn and covering the head to control temperature. Wrap the newborn in his/her clothes, covering the head with a cap.

Breastfeeding

Encourage exclusive and frequent breastfeeding. Mothers who start to breast-feed immediately and exclusively have fewer problems with breastfeeding and generally exhibit more affectionate behavior towards their infants.

It is a common belief that colostrum is not enough for the newborn and that newborns need to be given water or other supplements in addition to breast milk. **COLOSTRUM IS ALL A NEWBORN NEEDS** and sucking on the breast stimulates milk production.

- Do NOT give the newborn anything but breast milk
- Water, sugar water, teas, fresh or powdered milk is **HARMFUL** to the newborn and can cause illness (e.g., diarrhea), decrease breast milk production and interfere with breastfeeding.
- Exclusive breastfeeding means that no food or drink other than breast milk is offered to the newborn for up to six months and that he/she is fed on demand, day or night, with no restriction on the length and frequency of breastfeeding.
- Keep the newborn and mother together, day and night.
- Put the newborn to the breast to feed whenever the newborn displays hunger cues (hand to mouth, movement, rooting, crying).

- Discuss with the woman and her family the importance of good nutrition during lactation.

Cord care

Teach the mother and her family how to take care of the umbilical stump:

- Keep the umbilical stump dry and exposed to air or loosely covered with clean clothes.
 - ▶ The diaper should be folded so that it does not touch the umbilical stump; stool and urine should not come in contact with the umbilical stump; do not cover the umbilical stump with bandages, or apply unclean substances.
 - ▶ Observe for the presence of redness, oozing pus or bleeding from the umbilical stump.
 - ▶ Keep the umbilical stump clean.
 - ▶ Apply alcohol 70% to the umbilical stump with each diaper change.

Bathing the newborn

Teach the mother and her family how to bathe the newborn. Bathing is not recommended earlier than 3-4 hours after delivery and then only when the newborn's temperature is stable.

Materials for bathing

- Soap and warm water
- Clean towels
- Basin
- Clean clothes
- Blanket

Method for bathing

- Wash your hands before starting the newborn's bath.
- Fill the basin with warm water.
- Remove the newborn's clothes and wrap him in a towel.
- Wash his eyes with a piece of cotton soaked with warm water. Start at the inner aspect of the eye and wipe toward the outer aspect.
- Clean his nares with a new piece of cotton soaked with warm water.
- Clean his external ears only with a new piece of cotton soaked with warm water.
- Hold the newborn on your left arm while supporting his head with your left hand. Start washing with soap and warm water, especially the area behind his ears and his neck. Wash his hair with warm water and baby shampoo if available.
- Wash the front and the back of his chest and trunk using your hands or a soft sponge soaked with soap and water.
- If the cord has fallen off, put the lower half of the newborn in the basin and wash him with soap and water. If the cord has not fallen off, clean the lower half of the newborn with your hands or with a soft sponge soaked with water.

- Take the newborn out from the basin and put him on a dry towel and begin drying the newborn. Start with the newborn's head and move down his body.
- Use zinc oxide cream to protect the diaper area from any inflammation before putting on the diaper.
- Dress the newborn including a cap, wrap him in a blanket and put him on his side.

Points to remember

- Bathing should be performed before feeding.
- The room should be warm.
- Avoid air currents.
- Close windows and doors firmly.
- Care should be taken during the bath to minimize heat loss.
- Warm water alone is sufficient for bathing, but sometimes mild soap can also be used.
- Never leave the newborn alone in the water.

Further Postpartum Visits

- Encourage the mother and family to have the newborn checked by a doctor within two days after the delivery. Advise the mother to bring the newborn for a congenital hypothyroidism screening within the first week.
- Orient the mother about the postpartum care visits that will be carried out on days 1, 4, and 7, and with the care that will be provided during these visits. Stress the importance of the day 40 visit to the clinic (see Chapter 10 Postpartum Care; and Postpartum Care Tables pp.281-283).

Family Planning

- Discuss with the woman and her husband the importance of family planning, and review the most suitable methods they can use (see Chapter 10 Postpartum Care).