

Helping Babies Survive
Essential Care for Small Babies

Facilitator Flip Chart



Helping Babies Survive

JULY 2015

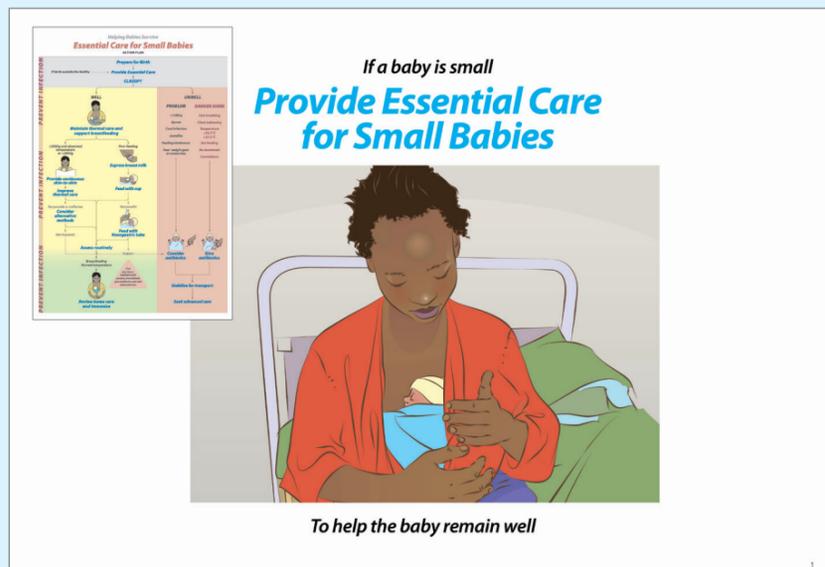
Provide Essential Care for Small Babies

Begin with a story

Ask participants to close their eyes and place one hand on a small baby simulator, manikin or doll.

“A baby is born six weeks early, weighs 1800 grams. She breathes well but does not breastfeed. The mother wraps the baby in a cloth, but the next morning finds her cold to touch. When you arrive, the baby is not breathing; she has died” (Pause)

“Another baby is born six weeks early, weighs 1800 grams. She breathes well but does not breastfeed. You show the mother how to provide skin-to-skin care. You teach the mother to express breast milk and feed with a cup. After several days the baby is breastfeeding well and her mother is ready to continue skin-to-skin care at home.” (Ask participants to open their eyes.)



Explain and demonstrate

Many small babies will remain well and thrive with proper care and basic support.

The well small baby is one who

- Weighs between 1500 and 2500 grams
- Breathes well
- Maintains a normal temperature with thermal care
- Feeds by breast, cup, or nasogastric tube
- Gains weight
- Does not have a **Danger Sign**

You can help small babies remain well by

- **Preventing common complications**
 - Breathing problems
 - Low temperature
 - Inadequate feeding
 - Infection
- **Recognizing and responding to problems promptly**
 - **Assess** the baby and mother routinely.
 - **Decide** if findings are normal or abnormal.
 - **Act** to continue current care, change care, or refer for advanced care.

Invite discussion

1. What is your experience in caring for small babies?
2. How do you meet the needs of small babies, their mothers, and families in your facility?

Facilitate practice

Ask participants to work in groups of six to identify the following steps on the Action Plan:

Steps that keep a small baby well and support

- Breathing
- Warmth
- Feeding
- Preventing infection

Steps that recognize and respond to problems or

Danger Signs

- Classify
- Assess

Background

Essential Care for Small Babies focuses on care of the well small baby. One in every 5 to 10 babies is small at birth. Small babies have a higher risk of dying.

With proper attention, many small babies can avoid the need for advanced care at birth. Simple steps to support warmth and feeding and avoiding infection can prevent problems in the first days and weeks after birth. Small babies and their mothers may benefit from care in a separate area if possible.

Care of the well small baby requires a cycle of assessment (evaluation), decision-making, and action that continues throughout the baby's stay in the facility. Support of the baby's special needs starts at birth and will often be required after discharge. Preparing the family to care for their baby, and to prevent and recognize problems begins upon admission to the facility.

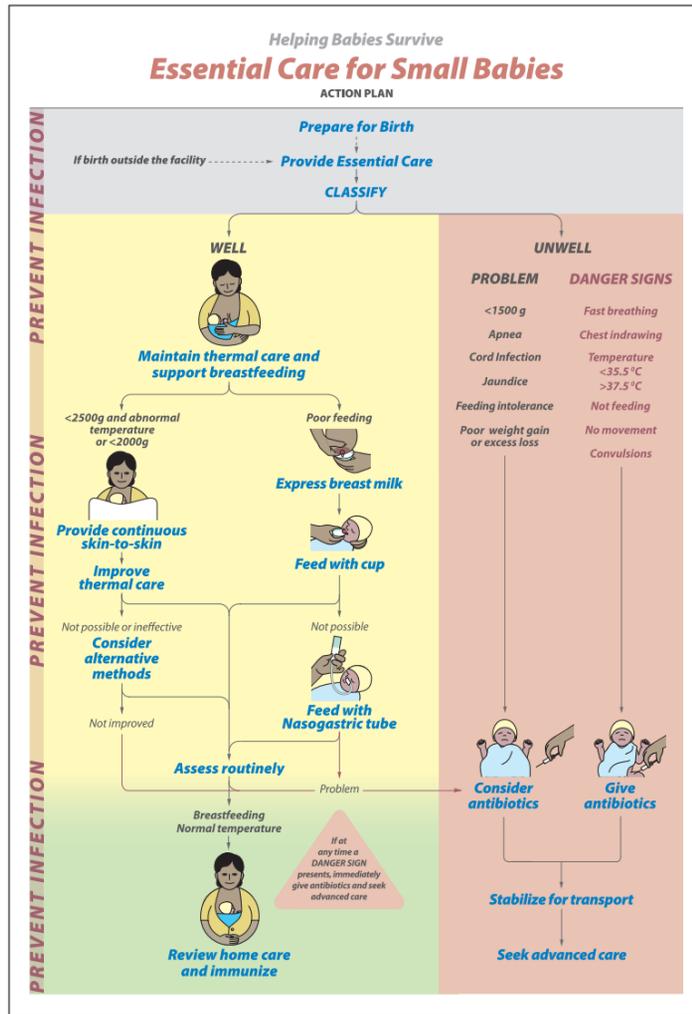
Educational advice

Invite participants to react to the story by sharing their own experiences.

Organize participants into groups of six per facilitator. Participants will work in groups of 2 or 3 for skills practice and cooperative learning.

Introduce Essential Care for Small Babies to your group by having participants point out sections of the Action Plan. Explain that the course uses this organization to teach steps of small baby care. Orient participants to the Provider Guide. Explain that they can follow each step with the Provider Guide and refer to the Action Plan on the back cover.

Emphasize that participants will practice skills and learn how to prepare mothers and families to care for their babies in order to help them remain well and thrive. Discuss the importance of classifying and routinely assessing the baby.



If a baby is small

Provide Essential Care for Small Babies



To help the baby remain well

When a baby is expected to be small

Prepare for birth

Explain and demonstrate

Prepare for care of a small baby as soon as the pregnant woman enters the facility.

Review the assessment of the pregnant woman.

- Concerns for preterm labor, bleeding, pre-eclampsia or infection
- Estimated gestation and size
- Medications given (antenatal corticosteroids or antibiotics)

Arrange referral or prepare for the birth.

- Refer if care needed for mother or baby can not be provided.
- Prepare for birth if delivery will occur very soon.

When preparing for birth of a small baby, take special steps to support breathing and temperature as well as prevent infection.

- Have a skilled helper present.
- Decide where advanced care will be provided.
- Provide extra warmth at delivery.
- Wash hands and assemble clean equipment.
- Prepare an area near mother for helping the baby to breathe.
- Select an appropriate size mask and check the ventilation bag
- Discuss special needs of small babies with the family, including skin-to-skin care.

Invite discussion

1. Which mothers deliver in your facility and which are referred?
2. What problems have you seen with care at birth of small babies?

Facilitate practice

Ask participants to work in pairs or groups of 3 to play the roles of the mother, the provider caring for the mother, and a skilled helper. Enact the following scenario:

A woman arrives at your facility with ruptured membranes. She says her baby is not due for 2 months. The woman will deliver very soon.

- Review the woman's assessment with her provider and your helper.
- Prepare for birth of a small baby.
- Communicate with the family.

Change roles and repeat practice.



Background

Often the birth of a small baby can be predicted. Health workers caring for the mother and those who will care for the baby must communicate and plan to prevent problems.

Review the prenatal assessment. Bleeding, pre-eclampsia, preterm labor or infection can result in delivery of a small or premature baby.

Plan for transfer or prepare for birth. Antenatal estimate of gestational age will help determine where mother and baby should receive care. Outcomes for very premature babies are better if the pregnant woman is transferred to a specialized center for delivery where antenatal steroids can be safely used. A skilled helper or additional care provider including a physician may be needed at delivery. The appropriate referral center for a small sick baby should be identified before it is needed.

Both mother and baby may need additional attention immediately after birth. Provide extra warmth by warming the room to 25°C. Gather warm blankets, towels and a head covering. Prepare the mother for skin-to-skin care. Everyone present at delivery should wash hands before and after handling equipment and providing care to a mother or baby.

Anticipate the need to help the baby breathe. Small babies are at higher risk for breathing difficulty because of prematurity and complications during labor. Dry the baby, position the head, clear the airway as necessary and stimulate breathing in the first minute after birth to help prevent apnea while waiting to cut the cord. Avoid prolonged suctioning and aggressive stimulation. Small babies benefit from delayed cord clamping. Consider preparing an area at mother's side where bag mask ventilation can begin within one minute while the umbilical cord is still intact.

Educational advice

Review preparation for birth with a skilled helper. Communicate steps with the mother. The person playing the role of the mother should ask questions a mother might ask.

Demonstrate the appropriate fit of a mask using both small and term masks on a manikin or doll.

Materials for practice

- Alcohol-based hand cleaner or soap
- Small baby simulator, manikin or doll
- Head covering
- Extra blankets
- Small and term masks

When a baby is recognized to be small
Provide essential newborn care

Explain and demonstrate

Provide the steps of essential newborn care with special attention to warmth and breathing to keep the small baby well.

Continue skin-to-skin care

- Keep mother and baby together after birth to *prevent* heat loss.
- Uncover only the areas needed for care.
- Check temperature by feeling the foot or forehead every 15 minutes until temperature is measured with a thermometer.
- If skin feels cool at any time, measure temperature immediately.

Monitor breathing

- Rapid breathing (>60/min) and chest indrawing are seen more frequently with small babies.
- Check breathing every 15 minutes until first complete exam.

Initiate breastfeeding

- Help the mother recognize the signs of readiness to feed and the proper position of the baby at the breast.

Provide care with minimal interruption of skin-to-skin care, including steps to

- **Prevent disease:**
Eye care, cord care, and vitamin K
- **Assess:**
Temperature, exam, and weight while covered with a warm blanket

Infants born outside the facility should be provided all the above steps of essential newborn care.

Invite discussion

1. When and how often is the temperature of a small baby measured?
2. What care do small babies receive if they are born outside a health facility? What happens to these babies if they develop problems?

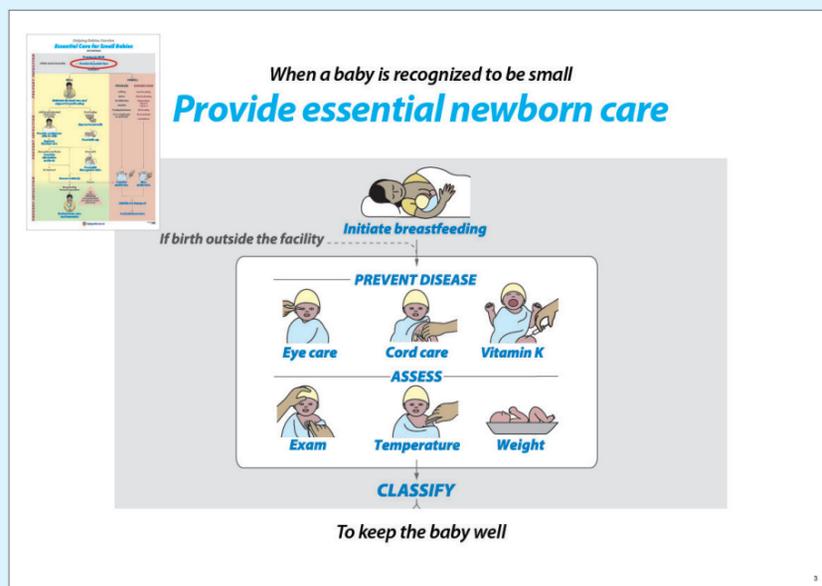
Facilitate practice

Ask participants to work in pairs or groups of 3 to play the roles of the mother and the provider caring for the baby.

Demonstrate how to provide the steps of essential newborn care while communicating with the mother and minimizing interruption of skin-to-skin care.

- Provide eye care, cord care and vitamin K.
- Measure temperature and examine.
- Weigh the baby.

Change roles and repeat practice.



Background

The small baby needs all the steps of essential newborn care to **prevent** problems and **recognize** them promptly. Observation of early feeding attempts and findings on the initial assessment (weight, temperature and exam) will also help the provider plan how to **support** the special needs of a small baby. Actions to **prevent** infection and bleeding are especially important in small and preterm babies. The steps to prevent disease and assess a baby can occur in any order, however all steps should occur with attention to keeping a baby warm. Weight may be needed prior to vitamin K for the smallest babies to confirm appropriate dose (as 0.5 mg for babies <1500 grams).

Small babies may be either term or preterm. Knowing if a baby is term or preterm helps to accurately interpret breathing, feeding and activity. A small baby who shows fast breathing or severe chest wall indrawing in the first minutes of life is likely to need advanced care. A preterm baby who does not breastfeed or who has decreased movement may be showing signs of prematurity and not a **Danger Sign** (see Classify page 4b).

Gestational age can be estimated from the mother's last menstrual period, expected date of delivery, or other obstetric estimates. The physical exam may also show signs of poor growth during pregnancy or prematurity.

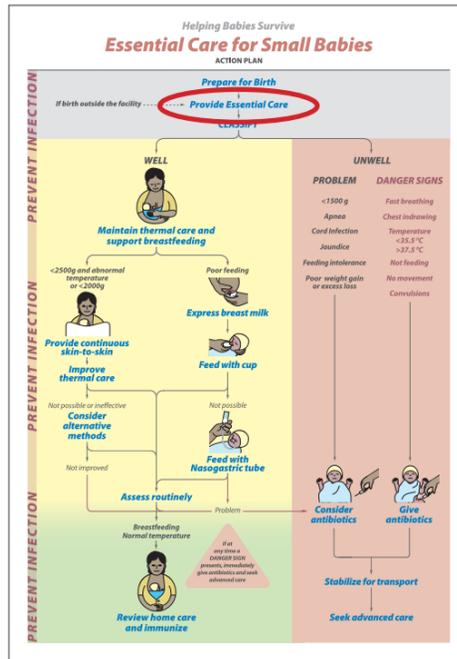
	PHYSICAL EXAM FEATURES OF	
	Term-poor growth	Preterm
Foot	Length ≥ 8 cm Creases all over sole	Length < 8 cm Few creases on sole
Ear	Good recoil	Thin, slow recoil
Skin	Opaque, loose, with folds	Thin, translucent, heavy vernix
Genitalia	Testes in scrotum, wrinkled Labia closed	Testes high, scrotum smooth Labia open

Educational advice

Ensure that participants practice providing the steps of essential newborn care with minimal interruption to skin-to-skin care and added attention to keeping the small baby warm. Review regional guidelines for administration of vitamin K, eye and cord care.

Materials for practice

- Small baby simulator, manikin or doll
- Head covering and blanket
- Scale and cloth or blanket to cover
- Syringe (no needle) to simulate eye care and vitamin K

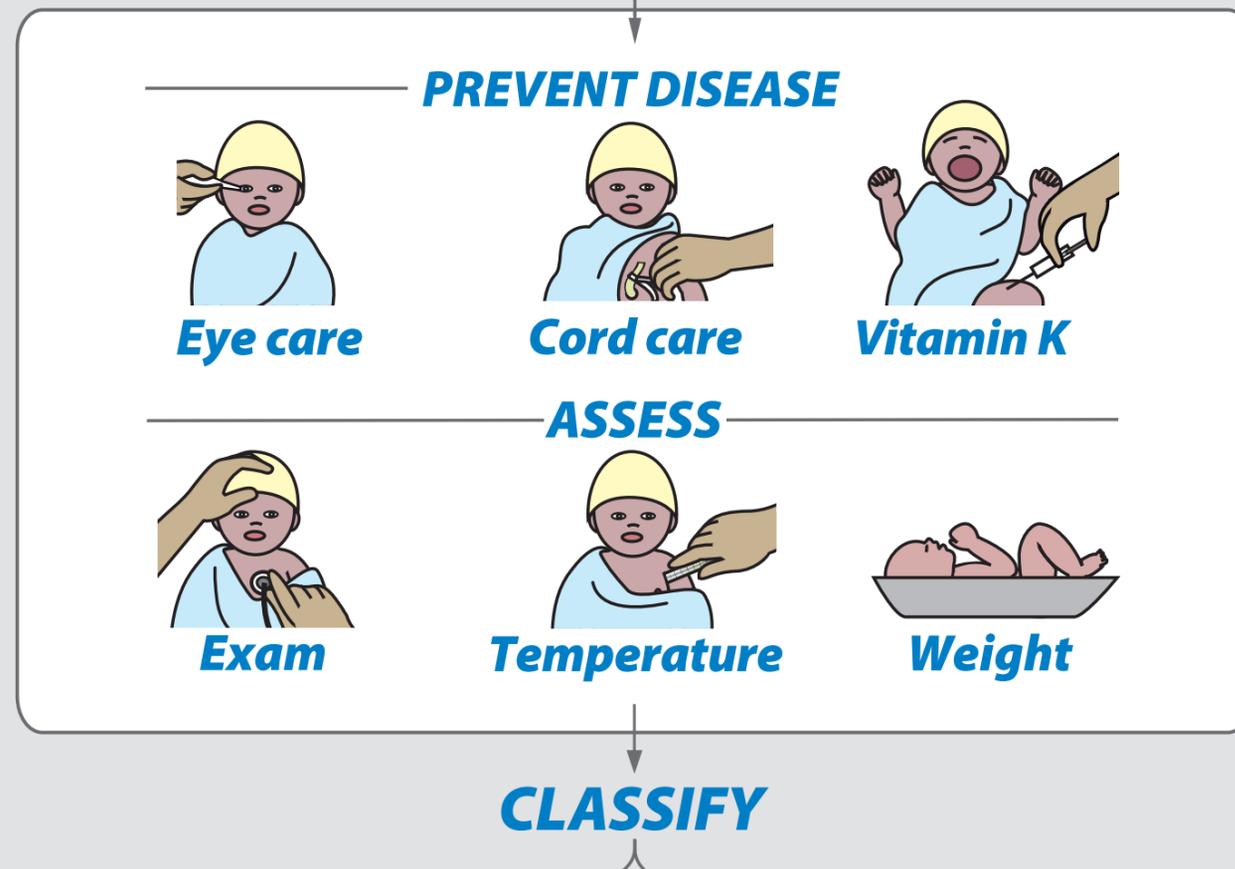


When a baby is recognized to be small Provide essential newborn care



Initiate breastfeeding

If birth outside the facility



To keep the baby well

By 90 minutes

Classify a small baby

Explain and demonstrate

Classify a small baby by 90 minutes to determine further care. Classification is based on the baby's weight, temperature, and exam.

The WELL small baby

- Weighs between 1500 and 2500 grams *and*
- Maintains a normal temperature with thermal care *and*
- Breathes well

The UNWELL small baby

- Weighs less than 1500 grams *or*
- Develops a problem *or*
- Has a **Danger Sign**:
 - Fast breathing or severe chest indrawing
 - Temperature $<35.5^{\circ}\text{C}$ or $>37.5^{\circ}\text{C}$
 - No movement
 - Convulsions

Classification may be delayed up to 4 hours if a small baby has

- Fast breathing or chest indrawing that is improving
- Temperature $<36.5^{\circ}\text{C}$ that rises within one hour of improved thermal care
- Poor feeding due to lack of energy or difficulty with coordination to breastfeed

These babies require careful assessment for other signs of illness.

All small babies require ongoing routine assessment as they are at risk of developing problems.

Invite discussion

1. Who classifies babies to plan their care in your facility?
2. How would you care for a small baby who cannot be classified by 90 minutes because the baby has breathing problems that are improving or abnormal temperature?

Facilitate practice

Ask participants to work in pairs to discuss one of the following babies and share classification with the group.

- A term baby with a birth weight of 2400 grams who has a temperature of 35.4°C , is breathing 80 breaths per minute, and does not initiate breastfeeding
- A preterm baby with a birth weight of 1750 grams who has a temperature of 36.7°C and does not initiate breastfeeding
- A baby with a birth weight of 1800 grams who has a temperature of 36.3°C which rises after one hour of improved skin-to-skin care

By 90 minutes

Classify a small baby



To determine further care

Background

Classify babies as soon as possible to determine further care. Babies who weigh between 2000 and 2500 grams may need extra support. Babies less than 1500 grams are almost always preterm and often will need special care such as intravenous fluids. They should be referred as soon as possible to a higher level of care.

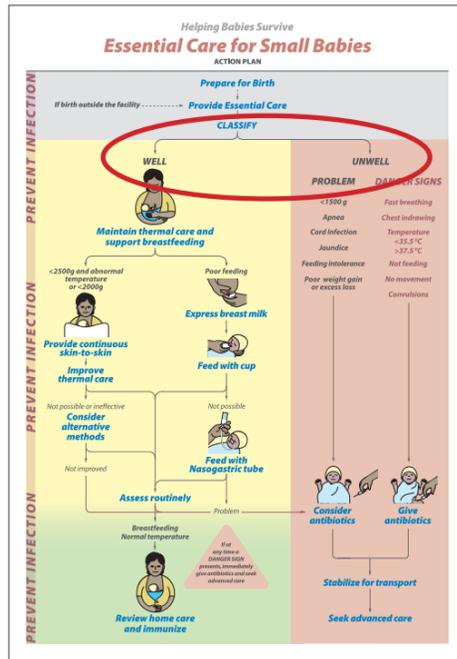
Danger Signs can be caused by infection or other serious conditions and indicate that a baby may die. The small baby should be assessed for **Danger Signs** in the first 90 minutes and routinely while in the facility. A baby with a **Danger Sign** needs urgent antibiotic treatment and advanced care. Fast breathing (>60 breaths per minute) and severe chest indrawing (spaces between, above or below the ribs indent with every breath) can be due to pneumonia or serious infections. Babies with breathing problems may also have blue color of the skin and inside the mouth, indicating they do not have enough oxygen. A temperature $<35.5^{\circ}\text{C}$ and $>37.5^{\circ}\text{C}$ or a temperature between 35.5°C and 36.5°C that does not rise with warming can be signs of infection.

Antibiotics should be initiated efficiently if **Danger Signs** are present. Local guidelines may also recommend antibiotic prophylaxis for a neonate with risk factors of infection (rupture of membranes >18 hours; maternal fever $>38.0^{\circ}\text{C}$ during delivery or labor; or foul smelling / purulent amniotic fluid).

Not feeding must be carefully interpreted in small babies as well small preterm babies often will not take feeds from the breast initially. Although preterm babies have lower muscle tone and are less active, no movement or convulsions may be due to infection or low blood sugar and should lead to referral.

Educational advice

Make sure participants understand the concept of well and unwell. Emphasize that a well small baby can become unwell.



By 90 minutes

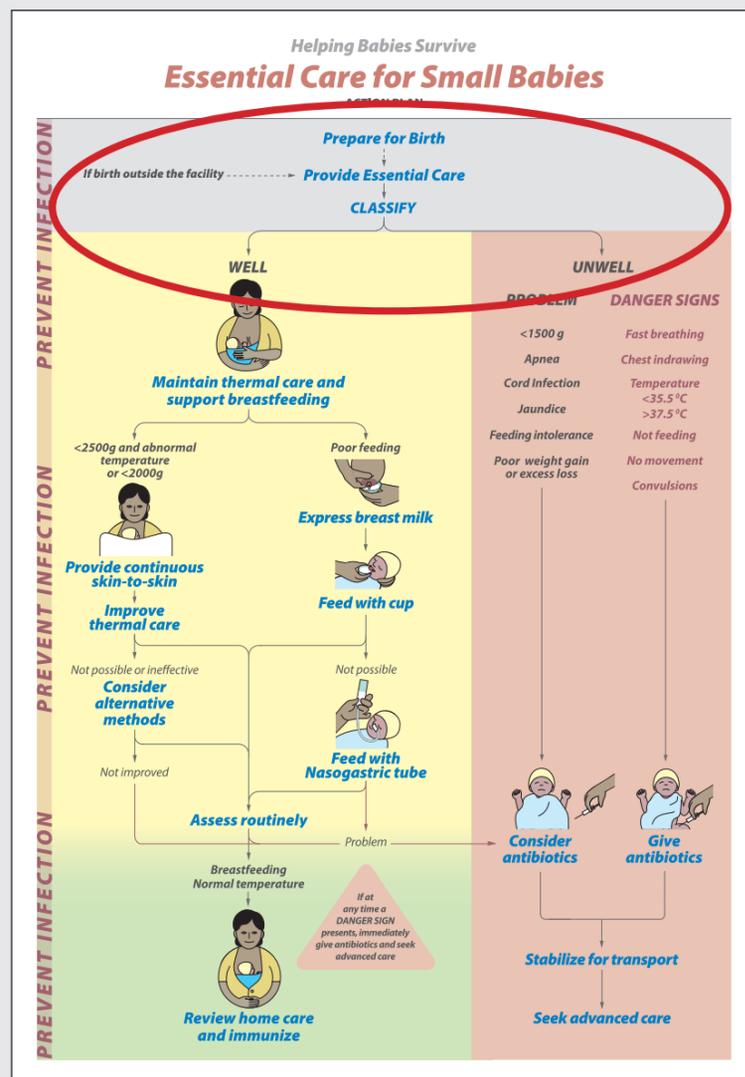
Classify a small baby



To determine further care

Exercise: Essential care at birth and classification

In pairs or groups of 3, have participants practice skills and communication related to providing essential newborn care and classifying the small baby. One person should play the role of the provider and one the mother. Change roles and repeat the exercise.



SCENARIO 1

A mother has given birth to a small baby. The baby cried at birth and was placed skin-to-skin on the mother's chest.

Show what you would do for this small baby in the first 90 minutes after birth. Work in pairs to play the role of the mother and the provider.

- Communicate with the mother
Explain to the mother the steps that you will provide to keep the small baby healthy.
- Continue skin-to-skin care
Show the mother how to keep the baby skin-to-skin for warmth.
- Monitor breathing
Describe fast breathing and severe chest indrawing for the mother.
- Initiate breastfeeding
Encourage mother to attempt breastfeeding baby.

Prevent disease

- Eye care
- Cord care
- Vitamin K

Assess

- Exam
- Temperature
- Weight

In any order

SCENARIO 2

The baby weighs 1600 grams and has a temperature of 36.7°C during skin-to-skin care. The baby is pink and is breathing comfortably. State what assessments you will use to classify the baby and whether the baby is well or unwell.

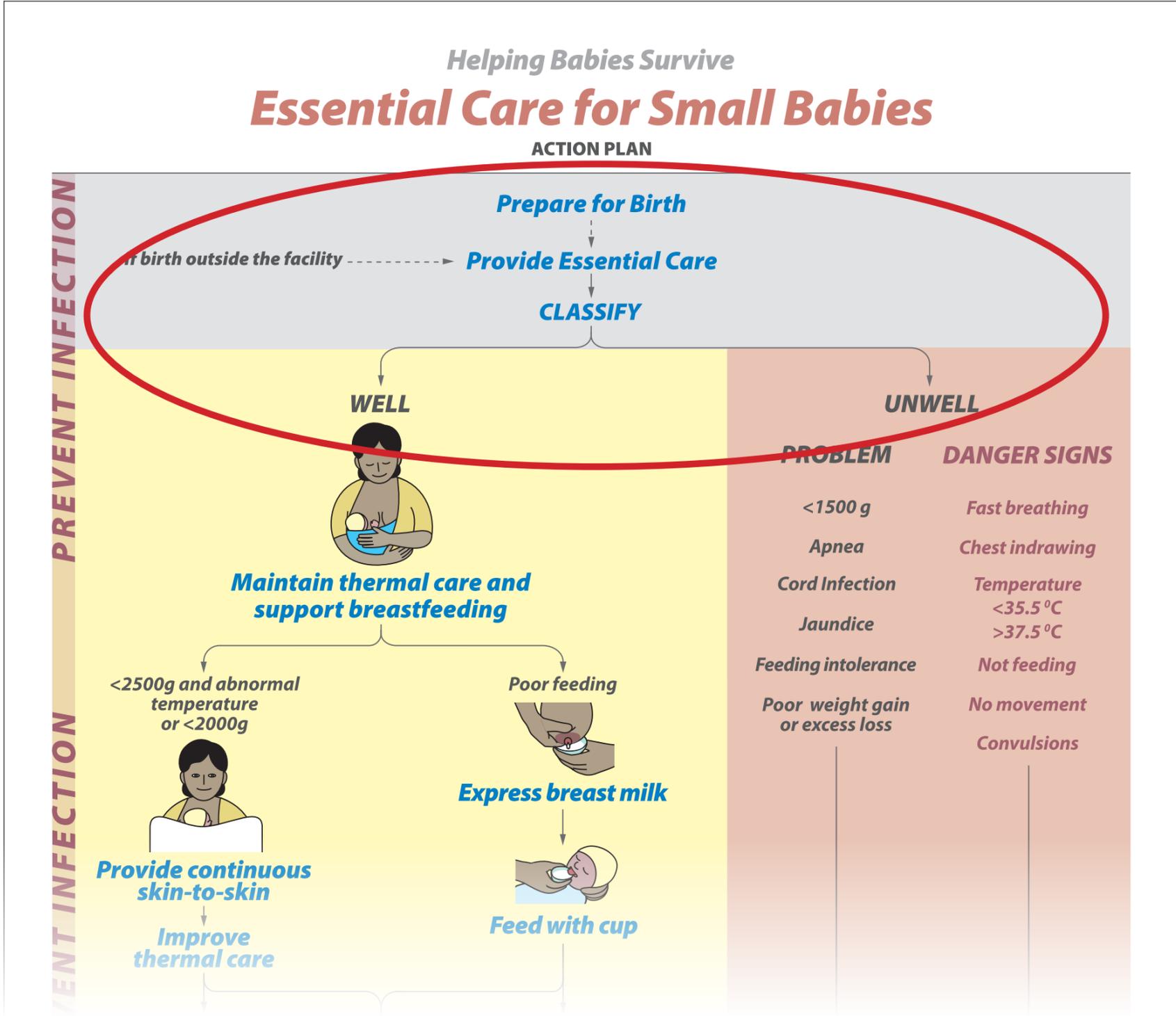
- Weight (between 1500 and 2500g)
- Breathing well
- Normal temperature with skin-to-skin care
- No **Danger Sign** present
- Classify as well small baby

Materials for Practice

- Alcohol-based hand cleaner or soap
- Small baby simulator, manikin or doll
- Head covering, diaper and socks
- Extra blankets
- Thermometer
- Syringe to simulate eye care and vitamin K
- Scale (if available)

Exercise:

Essential care at birth and classification



If a baby is small and well
Maintain thermal care

Explain and demonstrate

All small babies need attention to basic thermal care to prevent them from becoming cold.

Assist mothers to provide skin-to-skin care for small babies in the first 24 hours after birth.

- Dry the baby thoroughly at birth, cover the head, and place the baby skin-to-skin.
- Keep mother and baby together for care and examination.
- Put on a diaper and dry head covering.
- Place the baby upright on the chest between the breasts.
- Position the baby with arms and legs flexed, head turned.
- Secure snugly with a cloth or binder pulled up to the ear to support the head.
- Close mother's garment over the binder.

Check temperature by feeling the forehead or the foot at feedings (every 3-4 hours).

Measure temperature with a thermometer

- Whenever the baby feels cold or hot
- At least twice in the first 24 hours
 - Within 90 minutes after birth
 - When in a stable thermal environment
- Once a day while in the facility

Wrap the baby and follow routines to prevent heat loss when no longer using skin-to-skin care.

- Cover the head and put on socks.
- Dress the baby in an extra layer of clothes.
- Wrap the baby snugly.
- Change wet diapers promptly and remove wet clothes or blankets.
- Do not bathe a small baby; clean by wiping with a wet cloth as needed after 24 hours.

Invite discussion

1. How often and why do small babies become cold in your facility?
2. How do you teach mothers the importance of thermal care and gain their support to check a baby's temperature?

Facilitate practice

Combine practice with continuous skin-to-skin care on page 7b.



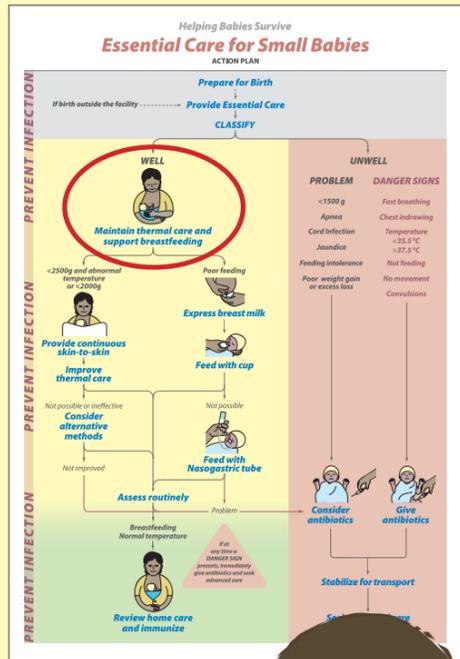
Background

Small babies, especially those with birth weights <2000 grams, can have low body temperature even when they have no other medical problems because their ability to maintain normal temperature is limited.

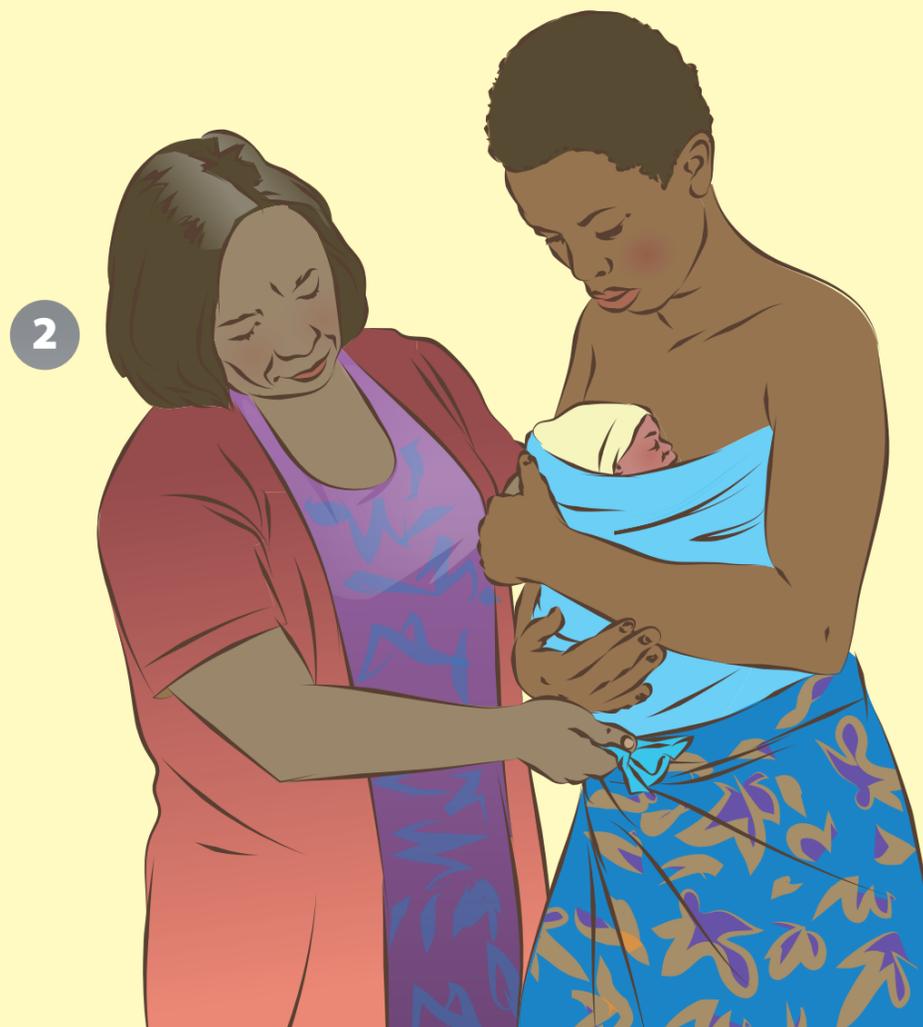
Some babies from 2000 - 2500 grams may have difficulty maintaining their body temperature with clothing and wraps alone. They can often maintain normal temperature when provided with skin-to-skin care during the first 24 hours.

Skin-to-skin care also promotes frequent breastfeeding and bonding between the mother and baby. During continuous skin-to-skin care, the mother can stand, walk and move about freely. Other family members can also provide continuous skin-to-skin care.

Small babies can become cold during a bath. A baby does not require a bath. Babies can be cleaned without immersing in water by uncovering and washing one part of the baby at a time. This will prevent babies from getting cold.



If a baby is small and well
Maintain thermal care



To prevent the baby from becoming cold

If a baby is cold or a well baby is less than 2000 grams
Provide continuous skin-to-skin care

Explain and demonstrate

Continuous skin-to-skin care is the preferred method to maintain normal temperature of babies less than 2000 grams and any baby who is cold despite wrapping.

Continuous (>20 hours per day) skin-to-skin care can be provided

- To well small babies including those fed by cup or nasogastric tube
- By the mother or a family member
- During most activities including sleep

When mother must temporarily interrupt skin-to-skin care

- Encourage a family member to place the baby skin-to-skin *or*
- Wrap the baby snugly

Support and counsel the mother to

- Develop confidence in positioning and caring for her baby skin-to-skin
- Assess her baby
- Engage in self-care
- Receive help from family members

Assess a baby during continuous skin-to-skin care and teach the mother to observe and report concerns about

- **A**ctivity – normal vs low or convulsions
- **B**reathing - comfortable vs fast, chest indrawing or pauses > 20 seconds (apnea)
- **C**olor – pink vs blue, pale, or yellow
- **T**emperature – normal versus hot or cold

Invite discussion

1. Are small babies provided continuous skin-to-skin care in your facility?
2. What can you do to help mothers provide continuous skin-to-skin care in your facility?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

Assist mother in positioning her baby skin-to-skin.

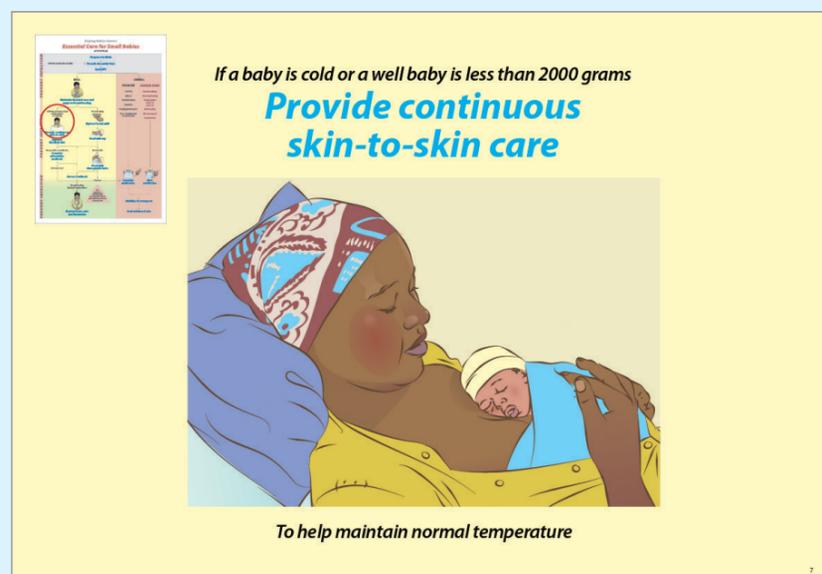
Teach mother to observe

- **A**ctivity
- **B**reathing
- **C**olor
- **T**emperature

Show mother how to record feedings and wet or dirty diapers on a simple form.

Ask mother if she has questions about the baby's care.

Change roles and repeat practice.



Background

Continuous skin-to-skin care is part of Kangaroo Mother Care, which also includes exclusive breastfeeding, parental empowerment, a supportive physical and administrative structure in the facility, early discharge and comprehensive outpatient follow-up.

Skin-to-skin care is safe and effective in keeping babies warm. Alternative heat sources (incubator and warmers) can overheat babies. Skin-to-skin care can reduce apnea and irregular breathing in preterm babies as the mother's activity stimulates the baby. Additional benefits for the baby include improved sleep, less crying and improved tolerance to pain. Finally, skin-to-skin care may result in improved development and weight gain and reduce the risk of infection.

A baby should be kept skin-to-skin at all times except when cleaning and changing diapers or when the mother is attending to personal needs including expression of breast milk. During these times, other family members can provide care or the baby can be wrapped and cared for in a warm place. Mothers can safely sleep in a supported half-sitting position while providing skin-to-skin care. Nurses should be readily available to the mother and baby while the baby is receiving continuous skin-to-skin care.

Small babies are at higher risk for apnea (periods > 20 seconds when a baby stops breathing). With apnea, babies may have bluish discoloration around the lips and/or a

low heart rate. Apnea may respond to gentle touch or rubbing of a limb or the back, or pausing feeding. Recurrent apnea may be a sign of infection and should result in referral for advanced care.

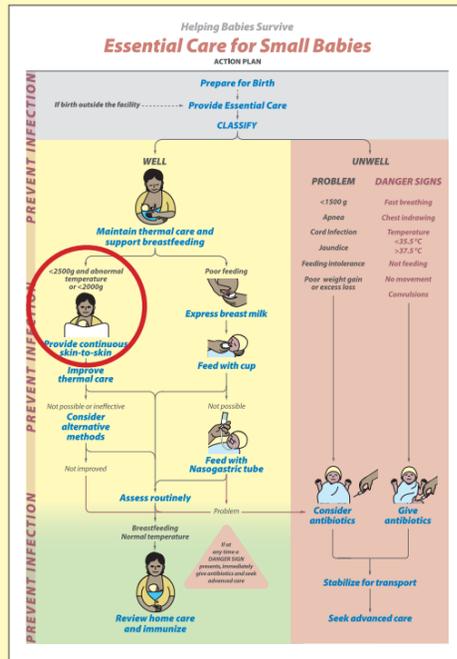
Mothers must be willing and supported to provide continuous skin-to-skin care. Most mothers find satisfaction in nurturing and giving life-sustaining care to their babies. To support mothers in providing continuous skin-to-skin care, a facility should provide a place for mothers to sleep, bathe and have access to a toilet with some measure of privacy. Family involvement should be welcomed and fathers, grandparents and other adult family members should be included in teaching about the care of a small baby.

Educational advice

Encourage participants who are playing the role of mother to raise common concerns they have heard.

Materials for practice

- Small baby simulator, manikin or doll
- Cloth or binder for skin-to-skin care
- Head covering, diaper and socks
- Mother's Observation Form (Provider Guide, page 58)



If a baby is cold or a well baby is less than 2000 grams

Provide continuous skin-to-skin care



To help maintain normal temperature

If baby's temperature is low
Improve thermal care

Explain and Demonstrate

If a baby's temperature is low with skin-to-skin contact, improve the thermal environment for skin-to-skin care.

Improve continuous skin-to-skin care by

- Removing wet clothes and changing diaper
- Adding hat, socks and mittens for the baby
- Covering mother and baby with extra blankets
- Minimizing interruptions in skin-to-skin contact
- Improving the thermal environment of the room
 - Raising the temperature
 - Reducing movement of air
 - Removing or covering cold surfaces

Recheck temperature in 1 hour

If skin-to-skin care is not possible or the baby cannot maintain normal temperature, consider an alternative method of warming.

- Radiant warmers, incubators, heated cots or heat-producing wraps should only be used when skin-to-skin care is ineffective or not possible.
- Misuse and malfunction of warming devices can result in dangerously low or high temperature.
- Warming devices increase risk of infection when used to care for more than one baby or not properly cleaned and stored.

Only trained providers should use alternative warming devices.

Overheating a baby can cause dehydration, apnea, brain injury, and death.

Invite discussion

1. How and when do you measure a small baby's temperature?
2. What do you do in your facility if a baby's temperature is low?

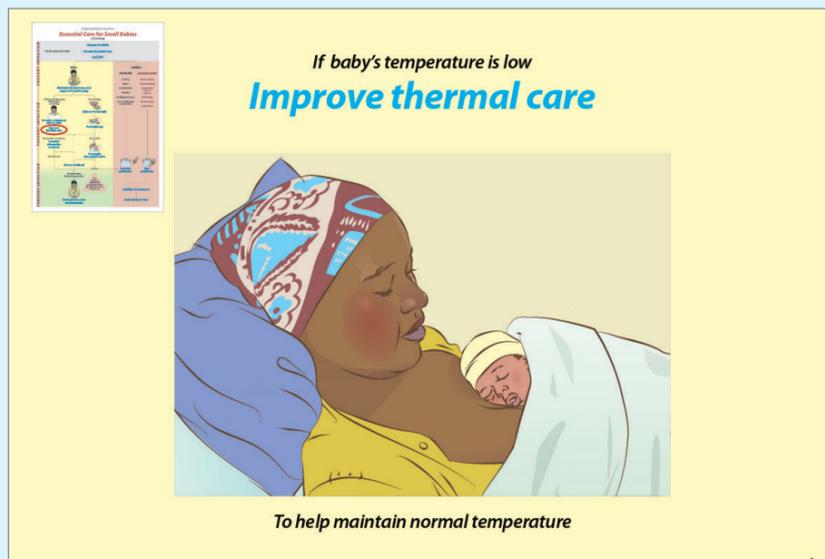
Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

A baby has a low temperature despite skin-to-skin care.

- Identify the possible causes of low temperature with skin-to-skin care.
- Describe the steps to improve thermal care.

If your facility uses incubators or radiant warmers, refer to the Provider Guide (pages 56-68) for proper use and skills practice.



Background

The most effective and reliable way to maintain normal temperature for a small baby is skin-to-skin care. If a baby is cold, make sure that skin-to-skin care is being provided in a warm environment and without unnecessary interruption before using an alternative warming method. Assess the baby carefully for changes in condition and **Danger Signs**.

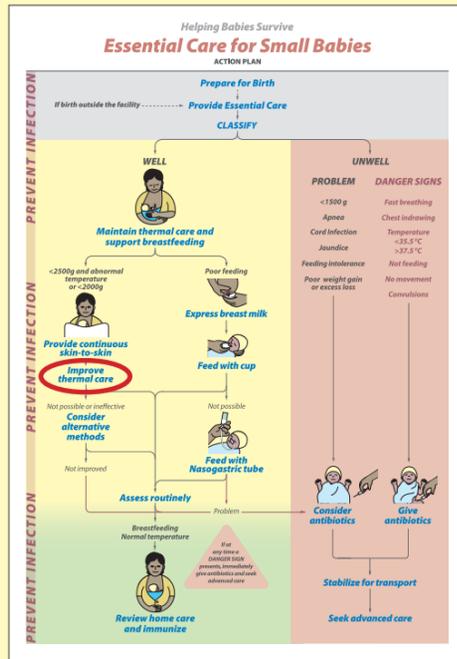
There are many ways to provide additional warmth to small babies. If continuous skin-to-skin care is not possible, select an alternative warming method that is proven to be both effective and safe. The use of warming devices requires more frequent monitoring of temperature because low and high temperatures occur more often and can be dangerous. Alternative warming methods can cause serious overheating and death. For this reason, only trained providers should use alternative warming devices.

Educational advice

Ask participants to perform the exercise as a dialogue with the provider asking mother questions about possible causes of low temperature during skin-to-skin care. The participant playing the mother can raise common issues. Discuss how the temperature of a room in the facility can be safely increased.

Materials for practice

- Small baby simulator or mannequin or doll
- Blanket
- Head covering, diaper and socks
- Thermometer
- Pen and paper



If baby's temperature is low
Improve thermal care



To help maintain normal temperature

Exercise: Thermal care



Maintain thermal care

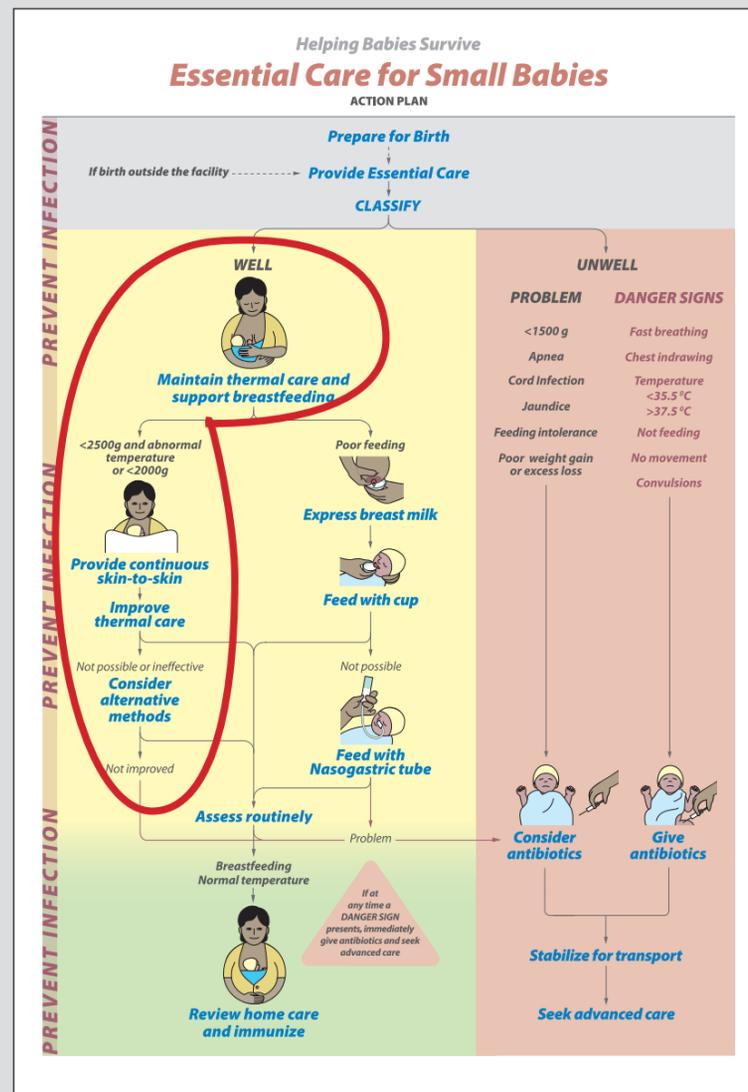


Provide continuous skin-to-skin care



Improve thermal care

Ask participants to practice in pairs the skills and communication related to keeping a small baby warm using the resources available in their facility. One person should play the role of the provider and one the mother. Change roles and repeat the exercise. Scenario 2 can be modified to use a warmer or incubator.



SCENARIO 1

A 1600 gram baby is receiving continuous skin-to-skin care. Mother states that baby is active and feeding well but his body feels cool to touch.

Show what steps you will take for this baby.

- Measure temperature with thermometer (Baby has temperature of 36.0°C)
- Change wet diaper and remove wet clothes.
- Confirm or add head covering, socks, and mittens for baby.
- Cover mother and baby with an extra blanket.
- Minimize interruptions of skin-to-skin contact.
- Reduce exposure to cold air or cold surfaces.
Communicate with mother steps being used to improve thermal care.
- Recheck temperature within an hour. (Baby has temperature of 36.5°C.)

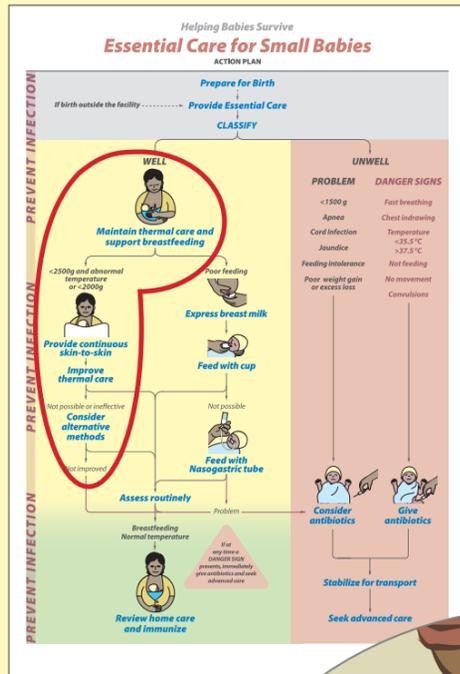
SCENARIO 2

If the baby's temperature rose only to 36.3°C, describe what you would do next.

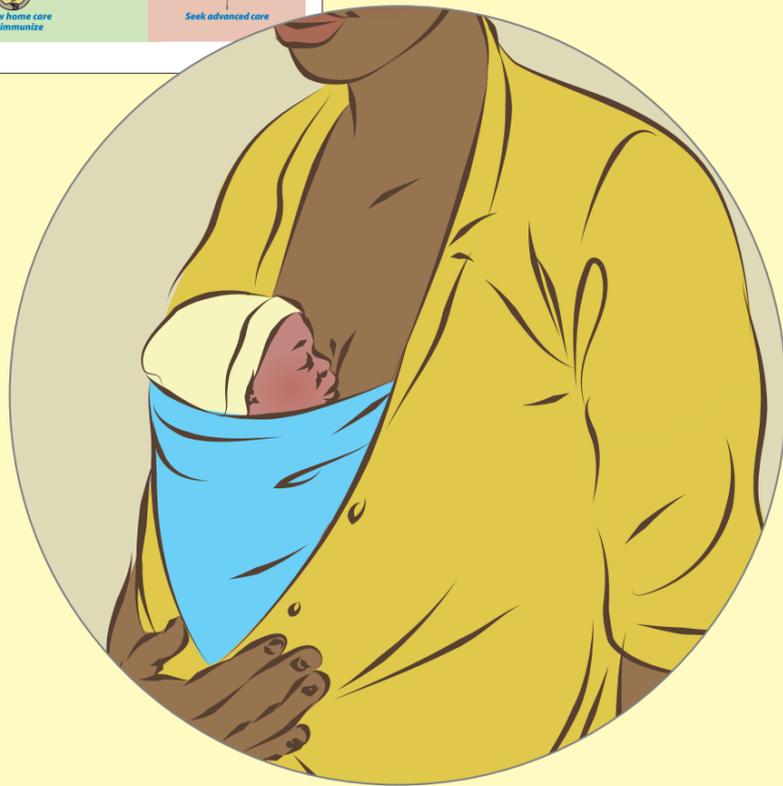
- Consider an alternative method of warming.
- Discuss and plan with a provider skilled in using a radiant warmer or incubator.

Materials for Practice

- Blanket
- Mittens
- Head covering, diaper and socks
- Thermometer
- Diaper



Exercise: Thermal care



Maintain thermal care



Provide continuous skin-to-skin care



Improve thermal care

If a baby is small
Support breastfeeding

Explain and demonstrate

Breast milk is the best food for small babies. Small babies may not have the skills or strength to feed at the breast initially. Mothers attempting to breastfeed a small baby require extra support and encouragement.

Support the special needs of a small baby who is attempting breastfeeding with

- Nipple stimulation prior to feeding
- Added attention to positioning and supporting head
- Early licking and practice at breast
- Manual expression of breast milk onto the nipple
- Awakening baby when changing to opposite breast

Evaluate the baby's effectiveness at breastfeeding

- Wakes and shows feeding readiness cues.

- Latches, sucks steadily with pauses, and swallows audibly.
- Feeds without choking, turning blue or pale.
- Mother reports breast softening.

A baby who is adequately fed

- Breastfeeds for at least 10 minutes per side.
- Sleeps comfortably between feedings every 2-3 hours.
- Has 6-8 wet diapers a day.
- Loses no more than 10% of birth weight.

If a baby cannot breastfeed effectively, support mother's breast milk production and use an alternative feeding method as needed.

- Teach mother to express breast milk every 3 hours (flipchart page 11b).
- Encourage time at breast during skin-to-skin care and reassess readiness to breastfeed daily.
- Ensure mother has adequate nutrition, increased fluid intake and care for medical problems.

Invite discussion

1. Who helps mothers and babies with breastfeeding?
2. How do you help when there are problems breastfeeding a small baby?

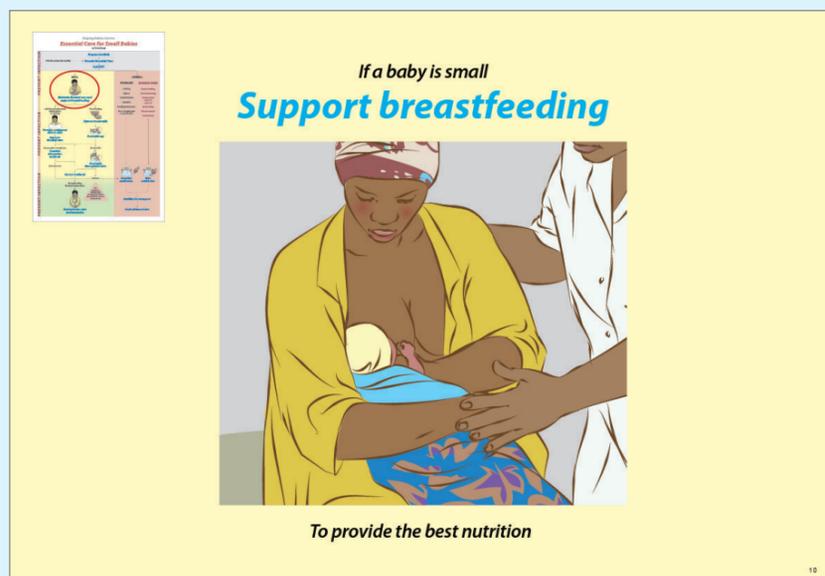
Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider. Enact the following scenario:

A 2000 gram baby is 3 days old and breastfeeding. Weight today is 1700 grams.

- Evaluate the baby's effectiveness at breastfeeding.
- Determine if the baby is breastfeeding adequately.

Change roles and repeat practice.



Background

Breast milk is easy to digest and contains antibodies that protect against infection. Colostrum, produced during the first days after birth, contains large amounts of antibodies and should be fed to the baby even if volumes are small.

Some small babies will not have the skills needed to effectively breastfeed at birth. Assess each small baby for ability to latch, suck, and swallow. Signs of **good attachment** include mouth wide open, lower lip turned downward, chin touching breast, and most of the dark part of the breast in the mouth. **Poor attachment** occurs when only the nipple is in the mouth or the baby is pulling on the nipple. Swallowing may not be audible for the first 3-4 days. Even with good technique, many babies will need a combination of breast, cup, or nasogastric tube feeds. Weight loss up to 10% in the first 10 days can be normal, however more than 3% weight loss per day is a problem.

Assessment of early breastfeeding adequacy can be difficult as urine output may be low and weight loss is expected. A change in stool color and consistency from tarry black to seedy yellow-green by day 4 to 5 suggests adequate early breastfeeding.

Inadequate early breastfeeding puts small babies at risk of low blood sugar as they have limited energy stores.

Small babies may also tire easily and should not be pushed to feed longer than 30 minutes. To ensure adequate intake by breast, babies should be watched to determine if actively feeding with regular suck for adequate duration.

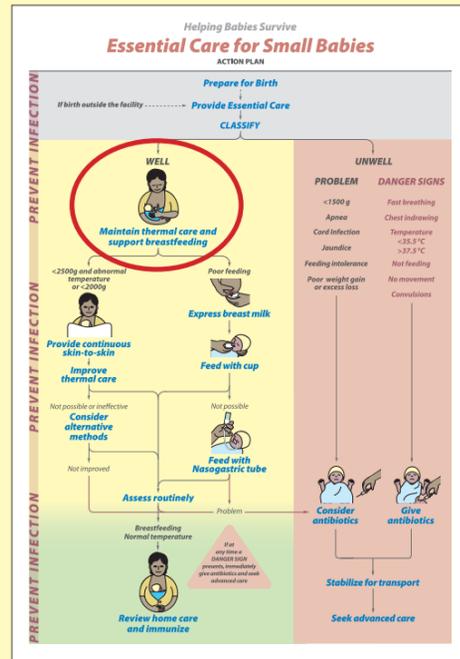
Mothers of small babies need special support in their efforts to breastfeed. Patience and encouragement will help mothers succeed, as some small babies need weeks to develop adequate breastfeeding skills.

Educational advice

Evaluation of effectiveness and adequacy of early breastfeeding requires following the baby's daily weight, wet diapers and stools. If possible, providers should watch a mother breastfeed and discuss observations.

Materials for practice:

- Small baby simulator, manikin or doll
- Breast model (if available)



If a baby is small Support breastfeeding



To provide the best nutrition

If a baby cannot feed directly from the breast

Express breast milk

Explain and demonstrate

A mother should express breast milk for a baby who cannot feed directly from the breast.

Teach a mother to express breast milk

- Wash hands with soap and water.
- Sit comfortably.
- Hold a clean container under nipple.
- Place thumb above and first finger below and behind the dark portion of the breast.
- Support the breast with other fingers.
- Press the breast gently towards the chest wall.
- Compress the breast between the thumb and finger. Avoid sliding the thumb and finger on the skin of the breast.
- Rotate the position of the thumb/finger around the breast with each compression.
- Express breast until milk drips, then express the other breast.

- Alternate between breasts 5-6 times (20 – 30 minutes).
- Consider nipple stimulation, massage of breasts and use of warm compresses prior to or during expression to improve milk flow.

Express milk at the times when a baby would normally feed (at least 8 times during a 24 hour period).

Expressed milk should be

- Stored in a clean, covered container
- Kept in the coolest place possible for up to 6 hours
- Discarded after 6 hours unless refrigerated (can be used up to 24 hours if refrigerated)

Closely assess the volume of expressed milk, as it may not be adequate for a small baby in the first few days.

Invite discussion

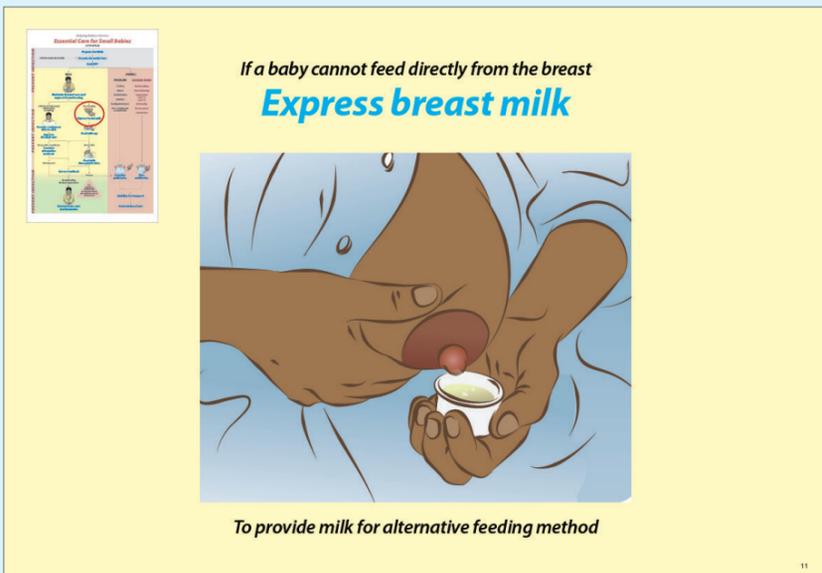
1. How can you help mothers who have problems expressing breast milk?
2. Where do mothers store expressed milk in your facility?
3. Are breast pumps ever used in place of manual expression?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

- Follow the sequence of steps to express breast milk.
- Give guidance to the mother while assisting her.
- Correctly store the breast milk.

Change roles and repeat practice.



If a baby cannot feed directly from the breast
Express breast milk

To provide milk for alternative feeding method

Background

Mothers need early support to express milk for babies who are unable to feed from the breast. Mothers may also express milk to help the baby latch onto the nipple or relieve breast engorgement.

To maintain supply, milk should be expressed every 2-4 hours throughout the day and at night. Breast milk may be produced in small amounts initially, but production typically increases after 2-3 days.

Mothers should have a comfortable place to express milk with privacy as needed. Mothers should clean their hands with soap and water prior to expression. Rotating the compressions around the breast will help the breast to empty. Collect breast milk in a clean container with a lid if it is to be stored. Use freshly expressed milk whenever possible. When available, breast pumps can also be used to express milk.

If breast milk is not available or insufficient, formula is preferred to animal milk or water. If formula must be used, add the correct amount of powder into measured sterile/

boiled water in a clean container to reduce the risk of infection. Cool the formula (test a drop on the forearm) before feeding. Local practices may include the use of donor milk. Modified cows milk should not be used unless approved by the local health authority.

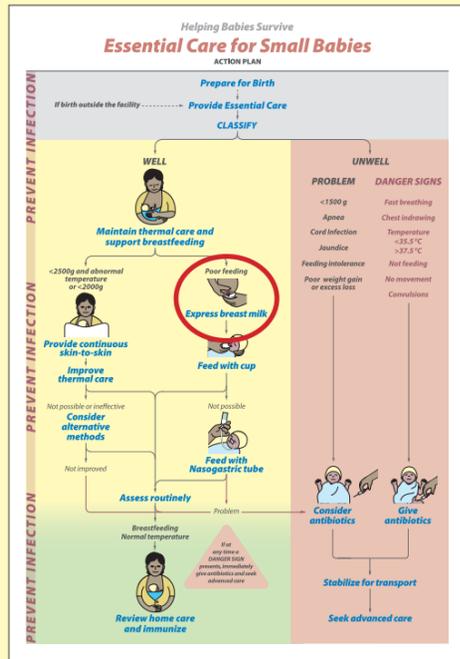
Educational advice

If available, use a model of a breast to show hand positioning and movement. Assemble examples of collection containers for breast milk that are available locally. Have providers select the most appropriate containers for storage and indicate how they would clean the container.

If possible, arrange for a mother who is breastfeeding to demonstrate breast milk expression.

Materials for practice:

- Breast model (if available)
- Collection container with lid



If a baby cannot feed directly from the breast
Express breast milk



To provide milk for alternative feeding method

If a baby cannot feed directly from the breast

Feed by cup

Explain and demonstrate

Cup feeding should be used for babies who are able to swallow but not able to feed adequately from the breast.

When using an alternative method to feed with breast milk

- Feed according to baby's cues every 2-4 hours.
- Give at least 8 feedings per day. The baby should be awake and alert.
- Measure the amount to be fed into a container (flipchart page 14b).
- Place a small amount of milk in the cup or spoon.
- Position the baby semi-upright.
- Rest the cup lightly on the baby's lower lip touching the outer, upper lip.
- Tip the cup so milk reaches the baby's lips.
- Allow the baby to lick the milk. To avoid choking, do not pour milk into the mouth.

- Allow the baby to take small amounts frequently.
- Continue feeding for up to 30 minutes. The baby is finished when the mouth closes, and the baby no longer appears interested.
- Burp the baby after feeding.

A baby who is able to cup feed will

- Take the full desired amount.
- Not cough, choke or turn blue with feeding.
- Be awake and able to feed every 2-4 hours.

Cup feedings may be combined with breastfeeding or nasogastric tube feeding.

- Assess the baby's readiness to breastfeed daily.
- The baby who cannot cup feed adequately will need nasogastric tube feeding.

Invite discussion

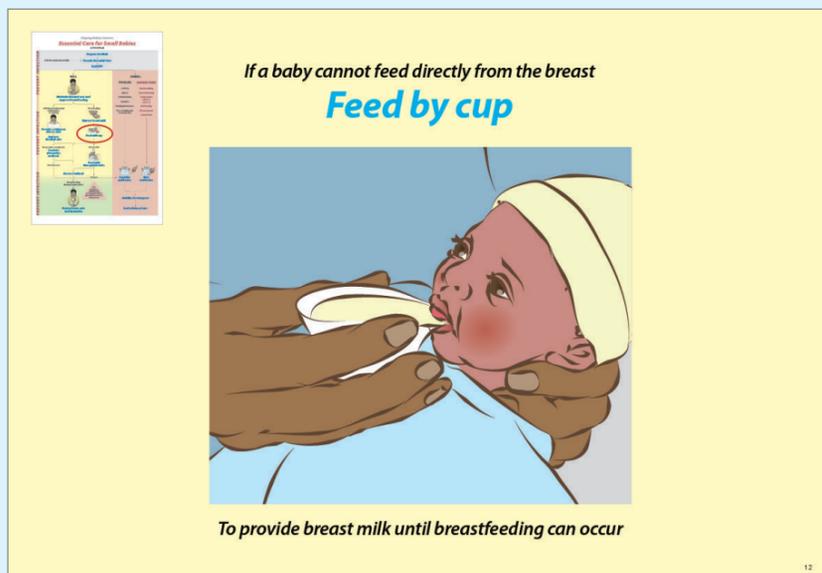
1. Who decides when a baby needs cup or spoon feeding if breastfeeding is not possible?
2. Who feeds the baby when breastfeeding is not possible?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

- Demonstrate the steps of feeding while explaining them to the mother.
- Assess the baby's ability to take cup or spoon feedings.

Change roles and repeat practice.



Background

Some small babies may be able to swallow but cannot suck effectively, or they may suck effectively for a brief period but tire before an adequate volume has been taken. These babies may benefit from being fed expressed milk with a cup or paladai. The baby is ready to feed when awake, looking around, with mouth open or licking. Allow the baby to lick the milk directly rather than pouring milk into the mouth, which may cause the baby to choke.

When teaching cup feeding, providers should first show mother the steps and then watch the mother provide a feeding. Both feedback and encouragement will help mothers become competent and confident to feed the baby with a cup.

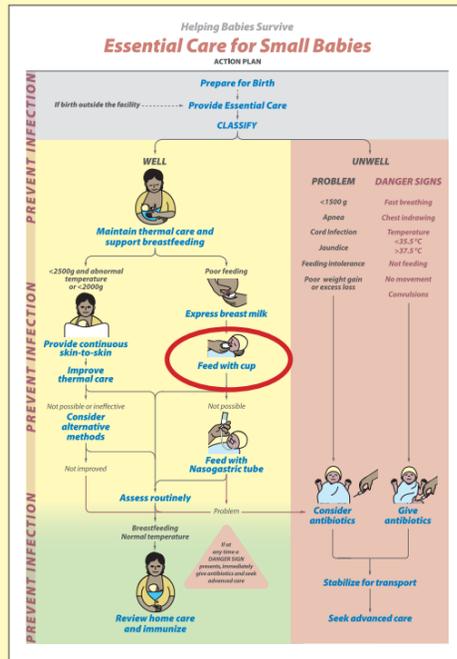
Educational advice

Use a manikin, doll, or simulator and water to simulate breast milk during practice. Do not pour water into manikins not designed to demonstrate feeding.

If possible, arrange for a demonstration of cup feeding a baby. Water should never be used to feed a baby.

Materials for practice:

- Small baby simulator, manikin or doll
- Cup or paladai
- Collection container
- Water to simulate breast milk
- Measuring container



If a baby cannot feed directly from the breast
Feed by cup



To provide breast milk until breastfeeding can occur

If a baby cannot feed enough by mouth
Insert a nasogastric tube

Explain and demonstrate

Nasogastric tube feeding should be used for a baby who cannot feed well by mouth and

- Is unable to swallow without choking *or*
- Has early inadequate intake by breast or cup with low urine output (<6 wet diapers a day) *or*
- Cannot take enough breast milk by breast or cup to grow properly

To insert a nasogastric tube

- Wash hands.
- Select correct size tube (5 or 6 French).
- Measure length of tube to be inserted from tip of nose to earlobe to half way between tip of breast bone and umbilicus.
- Put a mark on tube at measured length.
- Lubricate the tube with expressed milk.

- Insert the tube gently through nostril to the mark.
- Confirm proper placement of the tube:
 - Inject 2 mL of air while listening for the sound of air entering the stomach *and*
 - Withdraw air from the stomach and look for small amounts of gastric fluid
- Tape tube to the skin close to the nose.
- Note depth of insertion using mark on tube and record in chart.

To remove a nasogastric tube

- Pinch the tube closed and withdraw rapidly.
- Have a suction device available to remove milk or secretions in the throat.

Invite discussion

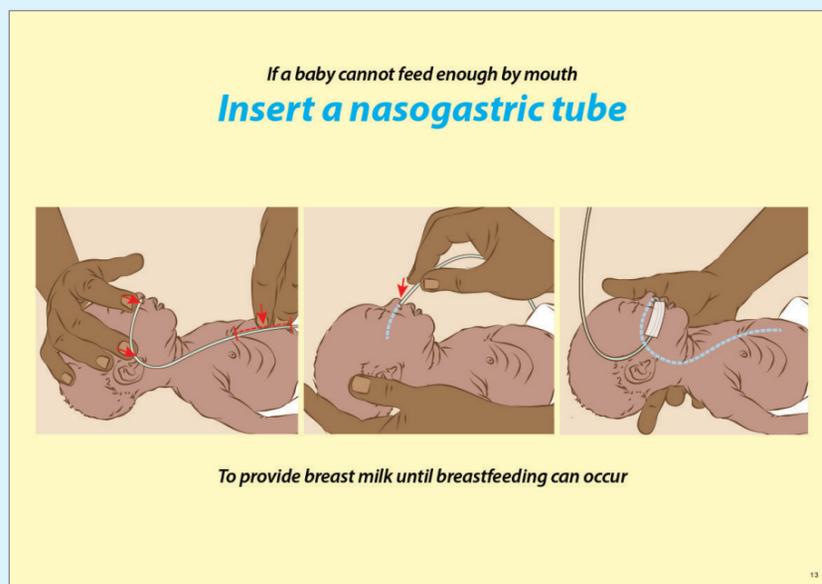
1. Does your facility have nasogastric tubes appropriate for feeding small babies? Are nasogastric tubes reused?
2. What problems might occur with insertion of a nasogastric tube?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

- Select, measure, lubricate and insert the nasogastric tube.
- Confirm proper placement of the tube and secure it.
- Remove the tube safely.

Change roles and repeat practice.



Background

The decision to insert a nasogastric tube may occur when a small baby cannot feed by mouth or when a baby cannot take enough milk by mouth to grow adequately and avoid dehydration. Orogastric tubes are measured the same way as nasogastric tubes. However, these tubes may be more difficult to keep secured and can interfere with progress to oral feeding.

The most serious complication of inserting a nasogastric tube is placing it in the baby's airway by mistake. Listening for tube placement and/or testing for gastric contents (pink on litmus paper) should be performed after every placement. If fluid or mucus is not obtained from the stomach or the baby has breathing problems, remove the tube. While there may be some resistance during insertion, a nasogastric tube should never be inserted forcibly. Avoid injury by adding appropriate tape for the skin and removing with care.

Prior to each feed, the mark on the tube should be checked to make sure the tube has not moved. Ideally, placement should be checked by withdrawing gastric contents before each feeding. When in doubt, remove and reinsert the tube.

Five or 6 French tubes are used for small babies. A larger tube may be difficult to pass, result in damage to nares, or deliver a feed too quickly.

Larger tubes may be necessary to remove air and stomach contents from a baby with feeding intolerance.

Tubes are usually changed every 7 days but silicone tubes can be left in place longer. Alternating between nostrils is recommended. Nasogastric tubes usually have multiple holes near the end of the tube so they do not block easily. If obstructed, inject 2mL of air or clean water (while still in place) or replace the tube.

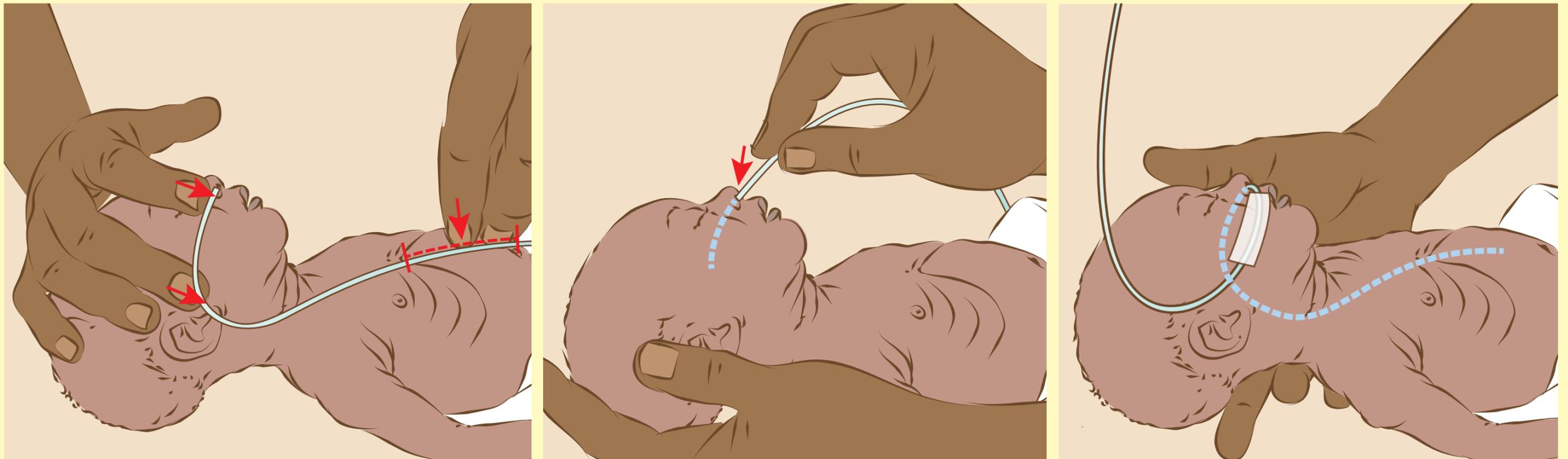
Educational advice

Wash hands and use clean technique when handling the tube and supplies.

Materials for Practice:

- Small baby simulator, manikin or doll
- Clean nasogastric tube (5 or 6 French)
- Tape (to mark and secure tube)
- 20 mL syringe
- Stethoscope

If a baby cannot feed enough by mouth
Insert a nasogastric tube



To provide breast milk until breastfeeding can occur

Provide appropriate volume of breast milk

Explain and demonstrate

Feeding volume is determined by the age and weight of a baby. Begin nasogastric feedings at low volumes, increase gradually, and adjust volumes for amounts taken by mouth. Evaluate tolerance with every feeding to identify problems promptly.

Determine the volume of a feeding:

- 2.0 - 2.5 kg start at 15 mL per feeding every 3 hours, increase 5 mL per feeding daily to 40+ mL
- 1.75 - 2.0 kg start at 10 mL per feeding every 3 hours, increase 5 mL per feeding daily to 35+ mL
- 1.5 - 1.75 kg start at 8 mL per feeding every 3 hours, increase 4 mL per feeding daily to 32+ mL

Once on full volume feedings, add 2 mL per feeding for every 100 grams gained above birth weight.

Small babies may require 160-180 mL/kg daily to gain weight adequately.

Evaluate feeding adequacy.

Babies receiving an adequate volume of milk

- May lose up to 10% of weight in first 10 days
- Gain 15 grams/kg daily after early weight loss
- Show steady weight gain on a growth chart

Feeding intolerance that requires advanced care includes

- Repeated vomiting (especially if bile-stained)
- Distended abdomen or tenderness
- Bloody stools

Invite discussion

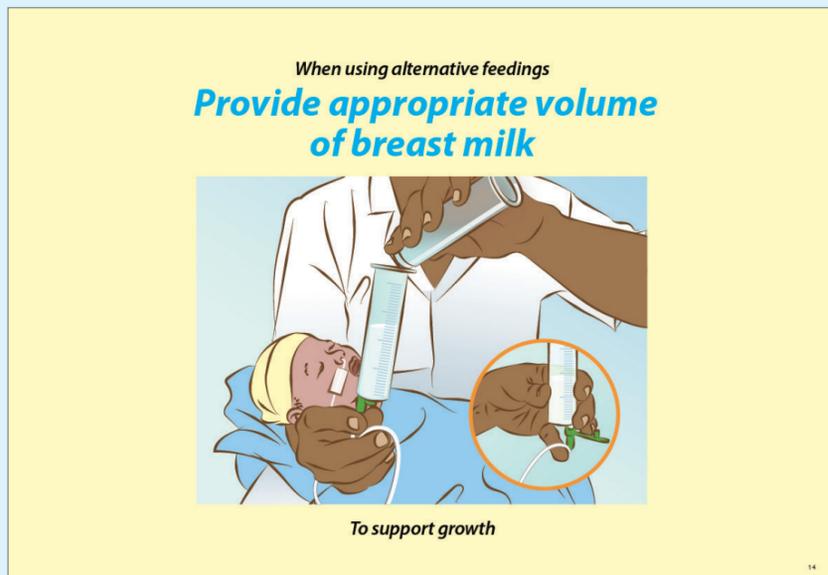
1. In your facility, who decides the volume of milk to be fed by nasogastric tube?
2. How is adequate growth determined?
Are growth charts available and used?

Facilitate practice

Ask participants to work in pairs to

- Determine the amount of milk for one feeding:
 - 1.6 kg birthweight baby on day 2
 - Same baby on day 4 (current weight 1.48 kg)
 - Same baby on day 10 (current weight 1.7 kg)
- Determine if daily weight change is acceptable for a baby born at 2 kg:
 - On day 1,2,3,4: 2000, 1980, 1970, 1960 g
 - On day 8,9,10,11: 2000, 2070, 2070, 2090 g
 - On day 14,15,16,17: 2180, 2200, 2220, 2230 g

Discuss as a group.



Background

Adequate feeding volumes are critical for a baby who is receiving alternative feeding by cup or nasogastric tube. Gradually increase volumes over the first week based on the baby's weight and age in days. Birth weight should be used for calculations until the baby gains above it. Continue to adjust volumes beyond the first week to account for intake by mouth and support growth. This may require 160-180 mL/kg/day.

Suggested Feeding Volumes in mL per feeding								
Birth Weight (kg)	Frequency of feeding	Day 1 Day of birth	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
2.0 - 2.5 kg	every 3 h	15	20	25	30	35	40	40+
1.75 - 2.0 kg	every 3 h	10	15	20	25	30	35	35+
1.5 - 1.75 kg	every 3 h	8	12	16	20	24	28	32+

A baby normally loses up to 10% body weight after birth. After the first 10 days, babies should no longer lose weight. Babies should gain 15 grams/kg body weight each day. As daily weights may vary, it is better to evaluate weight gain over 3-5 days. Even if a baby receives adequate fluid for hydration, weight may not increase as it should. This may be most easily seen by regularly plotting the baby's weight on a growth chart. Lack of appropriate weight gain for a small or preterm baby may indicate the need for more breast milk. Babies who still do not gain weight may need special supplementation of breast milk or intravenous nutrition.

Babies <1500 grams birth weight or babies who do not tolerate feedings will require care in a center that can administer intravenous fluids. Spitting up in a well appearing baby with a soft abdomen can be normal. However, feeding intolerance with vomiting, distension or bloody stools needs advanced care and possible evaluation by a surgeon.

Nutritional supplements: Review national guidelines for the use of nutritional supplements. Many guidelines support the administration of 400 IU vitamin D orally each day until 6 months after the expected date of delivery. Small and preterm babies are also often given 3 mg/kg/day of elemental iron orally from 2 weeks after birth until 6 months of age. Vitamins, certain medications and occasionally nutritional supplements may be given by tube. Medications can be mixed with a small amount of breast milk or given directly.

Educational advice

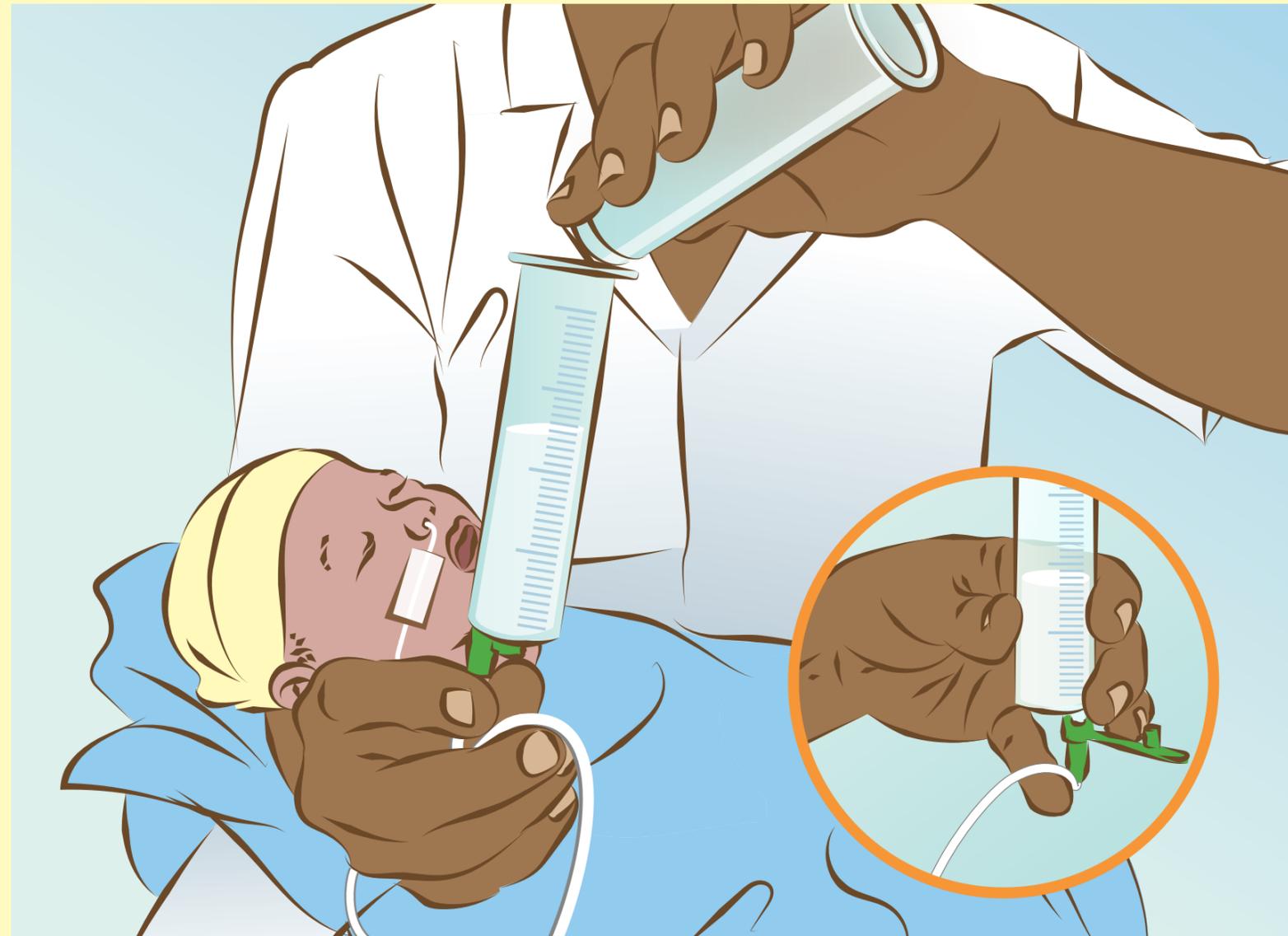
Ask participants to calculate or determine from the chart the correct volume of feeding for the babies described. Ask participants to evaluate the growth of each one of the babies. Discuss the calculations and evaluation of weight change as a group. Consider plotting weight on a growth chart if available.

Materials for Practice:

- Table to calculate desired milk volume (page 68)
- Pen and paper
- Growth chart (if available)

When using alternative feedings

Provide appropriate volume of breast milk



To support growth

If a baby cannot feed enough by mouth

Give breast milk by nasogastric tube

Explain and demonstrate

Feeding with a nasogastric tube requires close attention to the baby. In some facilities, mothers may learn to administer feedings.

- Measure the amount to be fed into a container (page 14b).
- Confirm tube is secured and the mark on the tube is visible at the edge of the nose.
- Hold the baby semi-upright, preferably skin-to-skin or in the lap.
- Open the nasogastric tube and attach an empty syringe of the correct size (without plunger).
- Pinch off the tube and pour milk into syringe.
- Hold syringe 20cm above the baby and release pinch to allow milk to flow into the stomach.

- If flow does not start
 - Gently insert syringe plunger but do not push or
 - Cover top of the syringe barrel with thumb and release
- Remove syringe and recap tube when finished.

If baby spits up or chokes, slow the feed by

- lowering syringe and/or
- gently pinching tube

Each feed should take about 10-15 minutes.

When combining nasogastric tube feedings with cup or breastfeeding, adjust for the volume taken by cup or approximate intake at breast.

Invite discussion

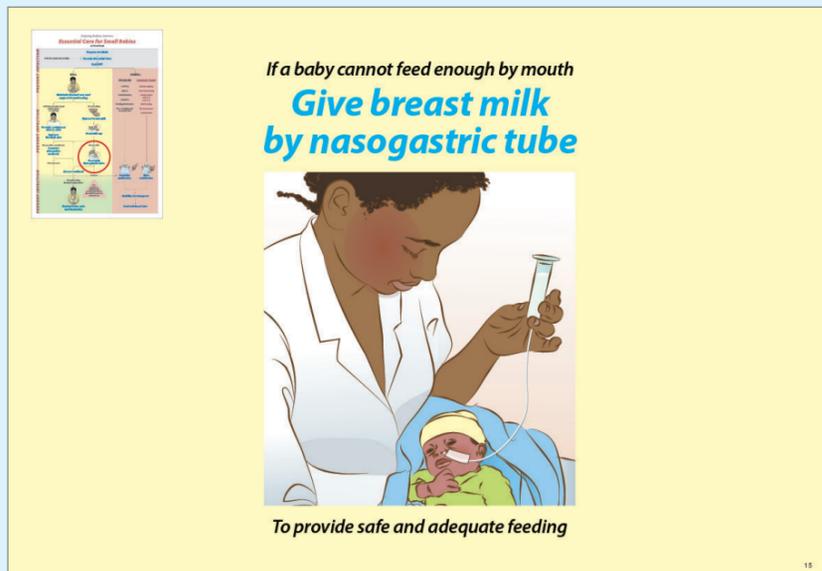
What problems occur while feeding a baby by nasogastric tube?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and the provider.

- Explain to the mother the steps as you administer a feed.
- Discuss feeding tolerance with mother.
- Demonstrate adjusting the flow of milk.

Change roles and repeat practice.



If a baby cannot feed enough by mouth

Give breast milk by nasogastric tube

To provide safe and adequate feeding

Background

Feeding with a nasogastric tube requires close attention to the baby and adjustment of feedings as needed. If the baby spits up or chokes during feeding, stop and assess the baby. Recheck the mark on the nasogastric tube to make sure it has not moved. Consider slowing the rate of feeding or reducing the volume if a baby spits up with every feeding.

Both providers and mothers may learn the methods of feeding with a nasogastric tube. Providers should first show mothers the steps and then watch her provide a feeding. A mother should hold the baby in breastfeeding position when giving nasogastric feeds.

When teaching nasogastric tube feeding, both feedback and encouragement will help mothers become competent and confident with administering feeds.

When a baby is receiving nasogastric tube feedings, evaluate the baby's readiness to feed by cup or breast each day. Early attempts may not result in measurable intake.

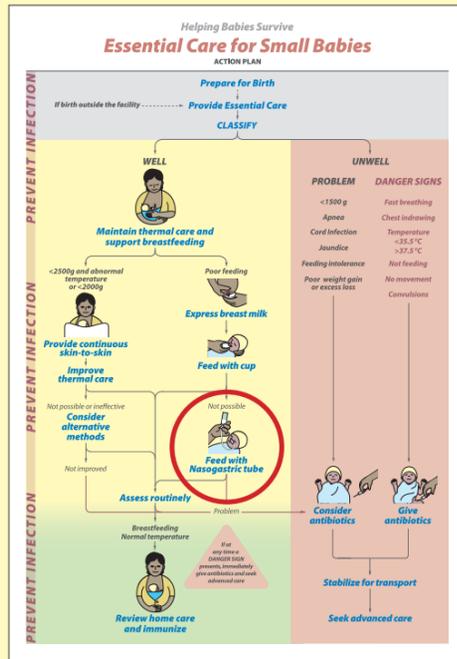
A baby may move directly from nasogastric feedings to breastfeeding or first to cup feeding. Experienced providers can help decide on the proper combination of feedings for each baby. They can help mothers judge when feeding volume can be adjusted after breastfeeding or when breastfeeding has been adequate and a nasogastric feeding is not needed. As the number of breastfeeds without supplementation increases, monitor signs of tiring and weight gain to help decide when to remove the nasogastric tube.

Educational advice

Use water to simulate milk. Measure out water and pour into a syringe for administration to a simulator or into a container.

Materials for Practice:

- Small baby simulator to administer nasogastric feed
- Syringe(s) and nasogastric tube
- Water to simulate milk
- Container to receive liquid if simulator not available



If a baby cannot feed enough by mouth
**Give breast milk
by nasogastric tube**



To provide safe and adequate feeding

Assess breastfeeding readiness

Explain and demonstrate

Small babies using alternative feeding methods should gradually transition to breastfeeding.

Assess the signs of readiness for breastfeeding each day.

- Awakening or stirring before feedings
- Rooting, opening mouth, licking at feeding time
- Crying or demanding at feeding time

Choking or blue color with breastfeeding suggests a baby is not yet ready.

When transitioning to breastfeeding

- Limit time at breast if the baby tires.
- Provide supplemental feeding by nasogastric tube based on estimated intake at breast.
- Withhold supplement if the baby sucks actively during a breastfeeding of adequate duration.
- Gradually increase breastfeeding without supplementation.
- Remove nasogastric tube when taking the majority of feedings by mouth.
- Confirm that weight gain continues with breastfeeding alone.

Invite discussion

1. Who assesses if a baby is ready to transition to breast feeds?
2. How frequently is a baby's readiness to breastfeed assessed?

Facilitate practice

Ask participants to work in pairs to discuss feeding of the following babies.

- 7-day-old baby who awakens, licks and breastfeeds for a total of 2-3 minutes
- 10-day-old baby who awakens, licks and breastfeeds for a total of 10 minutes
- 8-day-old baby who licks but chokes and turns blue with attempt to breastfeed

When using alternative methods
Assess breastfeeding readiness



To support transition to breastfeeding

Background

Feeding the small baby requires continuous adjustment based on performance and maturation. Coordination of sucking, swallowing, and breathing typically occurs around 34 weeks, but the timing varies and gestational dates are often unknown. For this reason, all small babies should be assessed daily for feeding readiness. Babies can begin breastfeeding when coordinated suck, swallow and breathing are present. Small babies are unlikely to demand feeds in the same way as term babies. Even stirring and changes in sleep state may be considered cues for readiness to feed.

To facilitate future breastfeeding, maintain skin-to-skin contact close to the breast during nasogastric feeds. Suckling at the breast should be encouraged even if the baby does not yet have coordinated feeding skills. Suckling supports mother's milk production and develops the baby's feeding skills.

Early attempts may not result in measurable intake. Babies may tire with early attempts at feeding or risk aspiration. If there are concerns for choking or blue

episodes with breastfeeding, consider waiting several days before attempting breastfeeding again. Attempts to orally feed a baby with immature suck and swallow could result in aspiration of milk and should be approached with caution.

When early feeding is initiated, mother should alternate breasts to decrease risk of mastitis.

When a baby begins to demonstrate successful attempts at feeding, supplementation by nasogastric tube should be decreased to account for the intake by breast. Volumes obtained during breastfeeding are estimated based on time at breast and efficacy of feed.

Educational advice

If possible, providers should observe a baby and mother as they transition to breastfeeding.

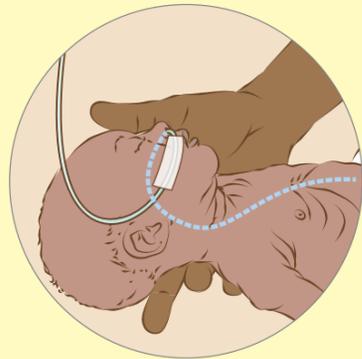
When using alternative methods

Assess breastfeeding readiness



To support transition to breastfeeding

Exercise: Feeding



Insert a nasogastric tube

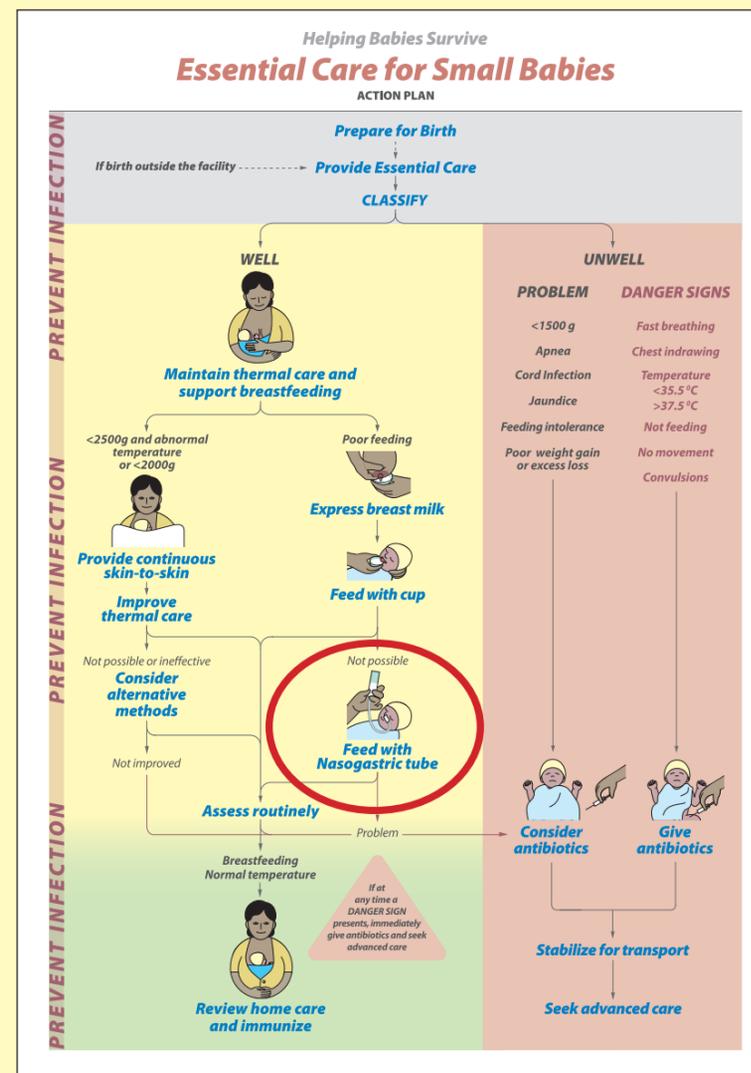


Provide appropriate volume of breastmilk



Give breast milk by nasogastric tube

In pairs or groups of 3, have participants practice skills and communication related to nasogastric feeding. One person should play the role of the provider and one the mother. Change roles and repeat the exercise.



SCENARIO 1

A baby is born at 1600 grams and is currently 12 hours old. You have assessed the feeding skills and the baby cannot feed by breast or cup. You have helped the mother to express and collect breast milk.

PART I

Place a nasogastric tube:

- Communicate with the mother and explain need for nasogastric feedings
- Wash hands
- Select correct size tube
- Measure length of tube to be inserted and mark tube
- Lubricate tube with expressed breast milk
- Insert tube
- Confirm proper placement
- Tape tube on face

PART II

The nasogastric tube has been correctly inserted. Now explain to the mother the steps in giving a feeding and have her practice the following:

- Measure amount to be fed into a container
- Confirm tube secured with mark at the nose
- Check position of tube before each feed
- Position the baby correctly
- Open the nasogastric tube and attach an empty syringe
- Pinch the tube and pour milk into syringe

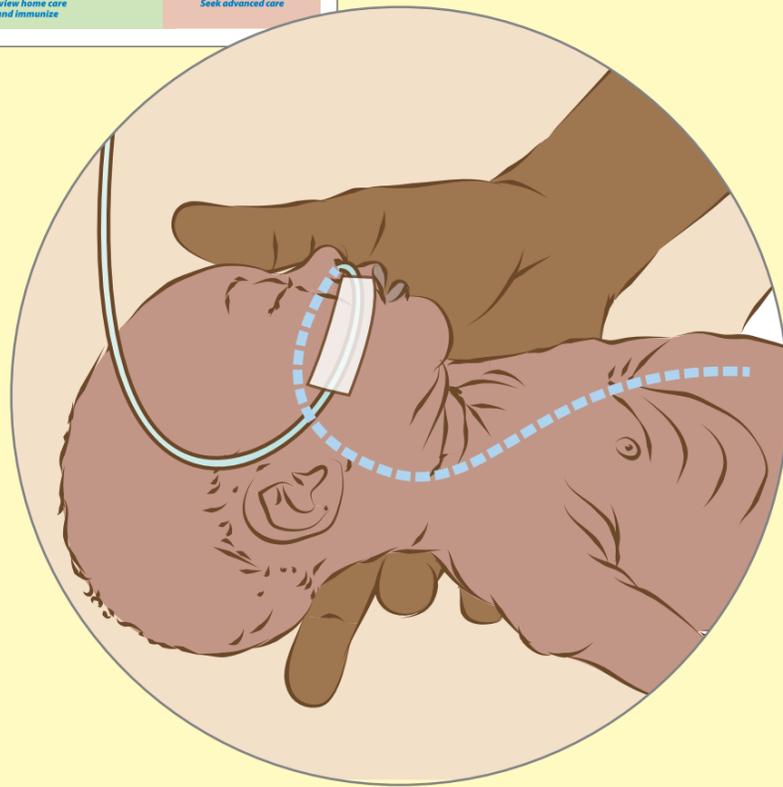
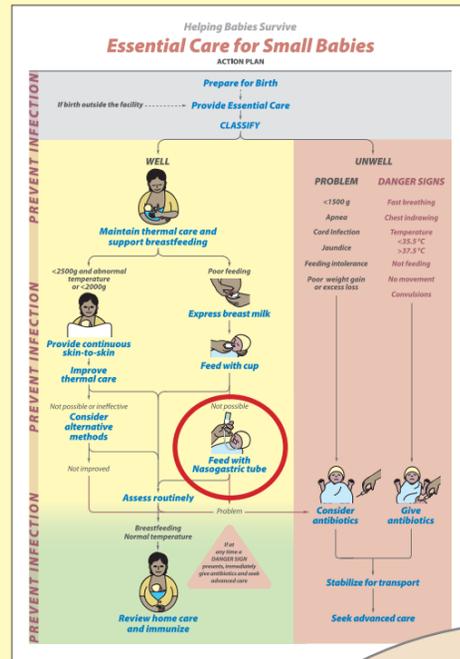
Administer a feeding:

- Hold the syringe 20 cm above the baby
- Release pinch to allow milk to flow
- Monitor the baby for choking or spitting up and adjust flow if needed
- Cap the tube

Materials for Practice:

- Alcohol-based hand cleaner or soap
- Small baby manikin, doll, or simulator
- Clean nasogastric tube (5-6 French)
- Tape (to mark and secure tube)
- 20 mL syringe
- Stethoscope
- Water to simulate milk
- Container to collect liquid

Exercise: Feeding



Insert a nasogastric tube



Provide appropriate volume of breast milk



Give breast milk by nasogastric tube

Assess routinely

Explain and demonstrate

Routine assessment of small babies determines further care and detects conditions that require change in care or referral.

The condition of small babies can change quickly. Prompt recognition and response to problems can be life-saving.

Assess a baby at least once per shift.

- Discuss mother's observations (activity, breathing, color, temperature)
- Perform a limited physical exam
- Review
 - Temperature
 - Weight
 - Intake (frequency, volume, tolerance)
 - Output (wet diapers, stools)

Decide if the baby is well or unwell

Well:
Desired progress

Act

Continue care
Adjust volume of feedings as needed

Uncertain:
Change from previous
Not clearly normal

Change support
Assess more frequently

**Unwell:
Problem or
Danger Sign**

Seek advanced care

Invite discussion

1. How do you document your assessment of a baby?
2. How do you communicate a baby's condition to your colleagues on the next shift?

Facilitate practice

Ask participants to work in groups of 3 to play the role of the mother, a provider and a colleague who is assuming care of the baby.

A 6-day-old baby whose mother has no concerns, shows normal activity and color, temperature 36.7°C and weight 1680 grams, a loss of 150 grams from birth. The baby is taking 24 mL of breast milk every 3 hours and had 6 wet diapers and 3 stools in the previous day.

- Assess the baby, decide on the significance of the findings, and decide whether to continue or change care.
- Communicate your assessment to your colleague.

Change roles and repeat practice.



When providing care to a small baby
Assess routinely

To help determine if a baby is well or needs advanced care

Background

Anticipate the problems of small babies and be prepared to respond quickly and effectively. By detecting **Danger Signs**, feeding intolerance, apnea, or other problems early, health workers can provide life-saving care. Regular assessment can also identify needed changes in care to keep a baby well and thriving.

Assessment of a small baby ideally should take place on every shift. Assessment should bring together the observations of the mother and providers. Document findings and notes in the baby's record for every assessment. Accurate records and communication of assessments help detect changes rapidly. Each time a baby is assessed, a decision should be made that baby is well, requires closer attention, or is unwell and requires advanced care.

Changes in temperature not in the danger zone, change in physical signs from baseline, feeding intolerance, and poor growth that starts improving with additional attention to feedings all require closer monitoring. Weight gain can be affected by temperature of the baby, intake, tolerance of feeds and other problems. Document any interventions and the baby's response.

Small babies are especially vulnerable to several problems. Jaundice in small babies, especially premature babies, requires treatment earlier than in term babies to prevent

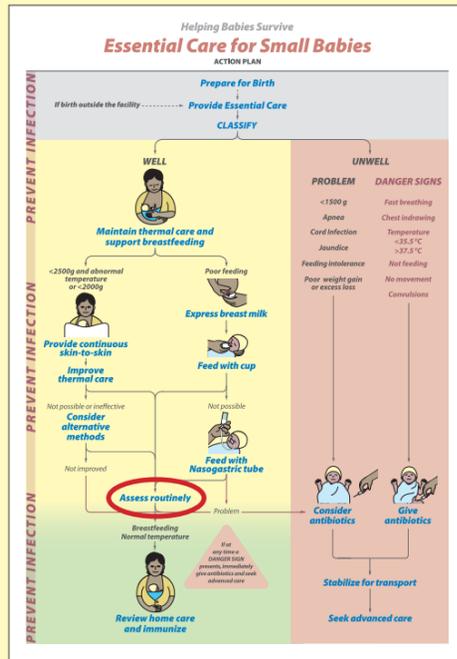
brain injury. Apnea that recurs can be treated with daily oral caffeine and may be a reason to seek advanced care and electronic monitoring. If caffeine is not available, theophylline may be considered. Apnea in the first days of life or in an older, previously stable baby can be a sign of infection. Redness, swelling or pus around the umbilical cord may signal infection before **Danger Signs** occur. Severe feeding intolerance may accompany infection or be a sign of a problem with the intestines.

Educational advice

Emphasize that assessment is a cycle of evaluation, decision, and action. Ask participants to review the steps in assessment, decide if the baby is well or unwell, and make a plan of action based on the findings. For a well baby it may include increasing volume of feedings. Participants should document the assessment in the patient record and communicate it to their colleagues.

Use the example provided as a template to develop other case scenarios for babies with uncertain findings, problems, or **Danger Signs**.

Materials for practice
Pen and Newborn Assessment Form



When providing care to a small baby

Assess routinely



To help determine if a baby is well or needs advanced care

When a baby needs advance care
Stabilize for transport

Explain and demonstrate

Prompt referral, stabilization before transport and care by a trained team improve outcomes.

Seek advanced care promptly for

- **Danger Signs**
- Problems
 - Weight < 1500 grams
 - Apnea
 - Cord infection
 - Jaundice
 - Feeding intolerance
 - Poor weight gain

Stabilize by

- Supporting breathing as needed (oxygen if available)
- Continuing skin-to-skin care (or safe alternative)
- Providing fluids and nutrition (nasogastric feeds or intravenous fluids if unable to feed)

- Giving antibiotics if indicated
- Placing nasogastric tube for distended abdomen

Communicate with the family.

- Explain the baby's condition.
- Encourage parents to see and touch the baby.

Communicate with the receiving facility.

- Explain the baby's condition.
- Discuss stabilization.
- Agree on transport plan (appropriate vehicle, equipment, persons).
- Discuss options for lodging/care for mother.
- Prepare a referral note.

Invite discussion

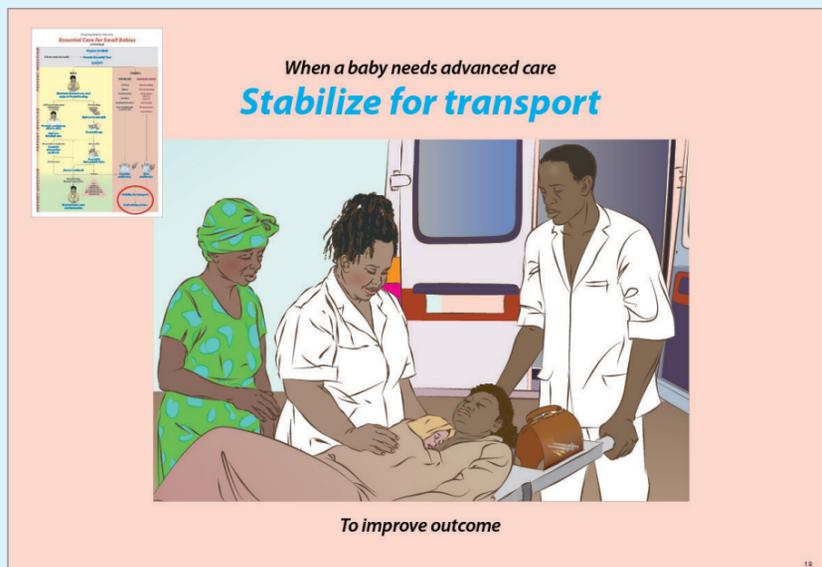
1. Does your facility have guidelines for transport?
2. Who accompanies sick babies in transport from your community?

Facilitate practice

Ask participants to work in pairs to discuss the following babies.

Use local guidelines to decide which of the following babies would be appropriate for transport. Share with the larger group your plan for stabilization and what to include in a referral note.

- A 2-hour-old 1600 gram baby who has developed grunting and chest wall indrawing.
- A 2-week-old old birth weight 1700 gram baby who remains 200 grams below birth weight despite nasogastric feedings.
- A 2-week-old 2000 gram baby who has bile-stained vomiting and a distended abdomen.



Background

The small baby may need advanced care when a **Danger Signs** is present, or when special care is needed for other conditions.

Apnea may be a primary breathing problem or could reflect a number of other conditions including infection, low glucose or abnormal temperature. Consider advanced care if a baby has more than one episode of apnea. Apnea that does not respond to stimulation may improve with free-flow oxygen or may require ventilation with bag and mask. Cord infection which extends onto the abdomen or drain pus requires advanced care. Jaundice in the first 24 hours, jaundice that includes palm and soles at any time or jaundice lasting more than two weeks may need advanced care.

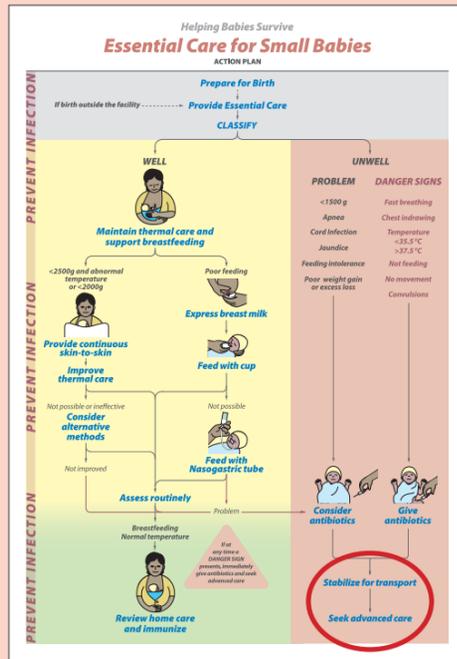
Timely recognition of problems and prompt referral, stabilization before transport, and care by a trained team with appropriate equipment during transport are three important ways to improve outcomes. Long delays in making the decision or arrangement to transfer often mean the baby will be more unstable and less likely to benefit from advanced care.

Stabilizing breathing (with oxygen if needed), maintaining warmth, and providing a source of fluids and nutrition are essential to prevent an unwell baby from become worse. Trained and equipped personnel can recognize and manage problems as they occur.

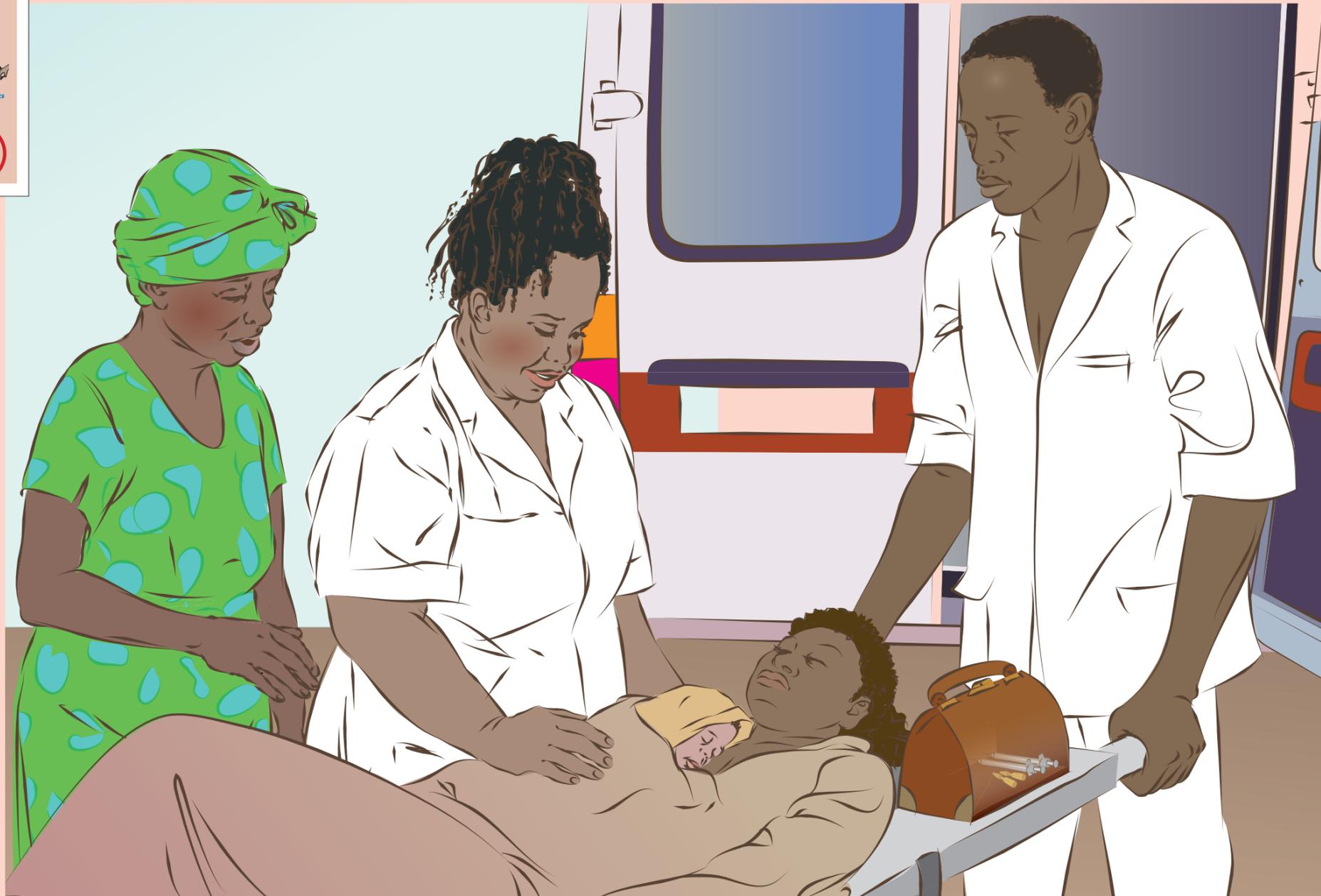
Management with transport may include monitoring the amount of oxygen given and the baby's oxygen level. A nasogastric tube may also be needed to remove air from a distended abdomen. Antibiotics should be initiated prior to transfer whenever there is a **Danger Sign** or concern for serious infection.

Educational advice

Obtain local guidelines for referral and review these with participants. Discuss which babies can reasonably be transported, what stabilization can be provided by their facility, and which will require support from a referral center. Determine how to contact the receiving specialty center to arrange transport of a baby and mother. In the small group, have each pair of providers lead discussion of a case. Review the referral form in the Provider Guide, page 60.



When a baby needs advanced care Stabilize for transport



To improve outcome

Review home care

Explain and demonstrate

Planning for successful discharge occurs throughout care in the facility. Small babies who are sent home too soon are at risk of becoming sick and failing to grow.

A baby is ready for discharge when

- Breathing is normal (no indrawing; rate < 60 breaths per minute, no apnea).
- Temperature is stable (36.5-37.5°C) in a normal environment.
- Weight gain is adequate over 3 consecutive days.
- Mother and baby have demonstrated successful breastfeeding or alternative method of feeding.
- Mother and family are confident they can care for the baby.
- Postnatal care is arranged for mother and baby
 - twice a week until 2000 grams and
 - once a week until 2500 grams

When caring for the baby at home

- Prevent infection with handwashing and clean surroundings
- Keep the baby warm
- Breastfeed every 2-4 hours
- Assess the baby for changes or **Danger Signs** and seek care if necessary
- Return to the clinic for weighing and immunizations

A family that is providing skin-to-skin care or alternative feedings at home will need special support from community health workers.

Invite discussion

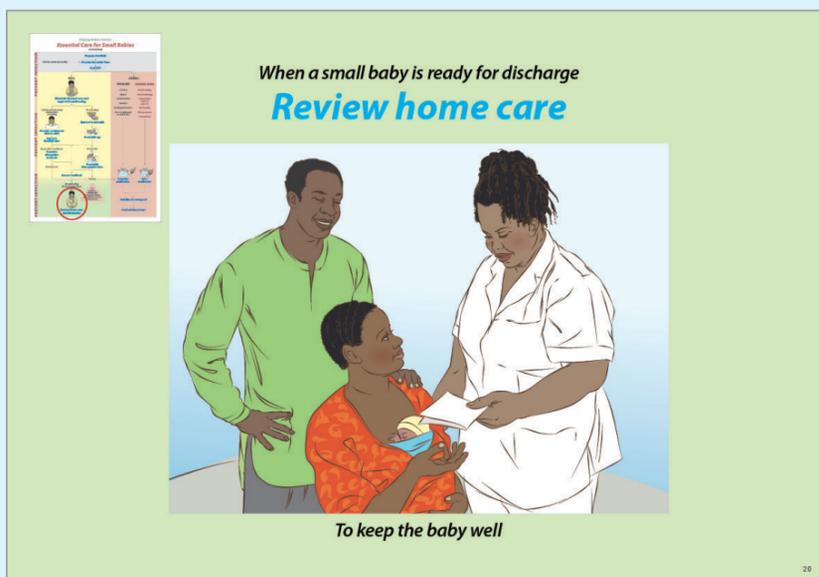
1. Who decides when a baby is ready for discharge?
2. How (where) can a baby be followed in your community?
3. Are there common practices for home care in your community? Are these harmful, beneficial or neutral?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and a provider.

- Counsel the mother for home care using the Parent Guide or local materials.

Change roles and repeat practice.



Background

When small babies have a stable temperature and effective feeding skills, they should be evaluated for possible discharge. Access to follow up may influence the timing of discharge as babies sent home weighing < 2500 grams will still require close monitoring. Small babies may need to remain in a facility.

When transitioning to home, small babies require special attention to warmth, feeding and hygiene and prompt attention to **Danger Signs**. Providers should remind mothers that skin-to-skin care can be continued by mother or other family members at home. Feeding may include gradual transition to more breastfeeding as a baby's skills and strength improve.

Weight gain should be closely monitored to assure that a baby is receiving appropriate nutrition. A baby discharged in the first week will likely not have established weight gain yet or may still be losing weight. Babies can lose up to 10% of their birth weight but should regain their birth weight in 7 to 14 days and then gain 15 grams/kg/day.

Families need to be aware of the importance of good hygiene. They should wash their hands every time they change diapers, feed the baby, or whenever their hands are soiled.

If mother lives in a malaria zone, both mother and baby should sleep under a treated bed net. When the baby starts sleeping alone, the baby should sleep on his or her back.

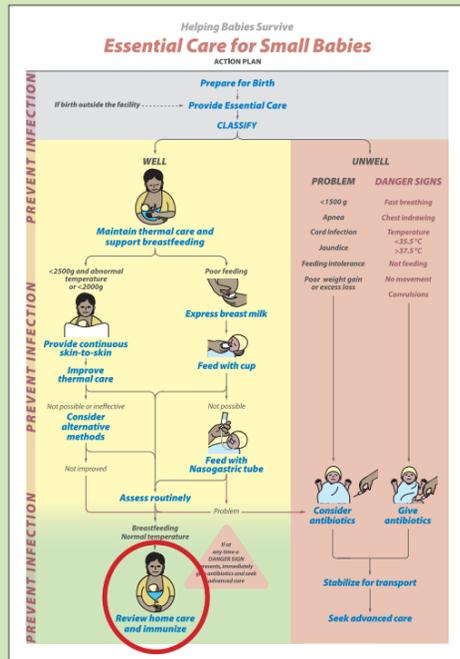
Parents should review **Danger Signs** with a provider before going home and discuss a plan for action if they have concerns. Follow up appointments should be arranged for weight check, evaluation for **Danger Signs**, immunizations and additional postnatal care. There should be a written record of follow up plans, weight at discharge, feedings at the time of discharge and any medications. There may be social worker or community health worker support available in some places to help with the transition of small babies to home.

Educational advice

Local materials may exist for counseling at discharge and follow up in the community. Use these materials or the Parent Guide at discharge.

Materials for practice:

- Parent Guide or local materials



When a small baby is ready for discharge

Review home care



To keep the baby well

When caring for a small baby
Prevent Infection

Explain and demonstrate

Proper hygiene and preventing infection begin when the pregnant woman enters the facility and continue after a baby is discharged home.

WASH HANDS at the 5 Moments for Hand Hygiene

When	Example
Before patient contact	Touching mother or baby
Before a clean task	Preparing milk or feeding
After patient contact	Examining a baby
After body fluid exposure risk	Changing a diaper
After contact with patient surroundings	Cleaning equipment between use

Create clean surroundings for the small baby by

- Supporting continuous skin-to-skin care
- Placing only one baby in an incubator or warmer
- Cleaning equipment and surfaces of the room
- Providing clean coverings for the baby
- Avoiding contact with sick persons
- Disposing of waste properly

Promote exclusive breastfeeding

- To give protective factors in breast milk
- To avoid contaminated liquids and containers

Begin immunization

- Before discharge of the small baby from the health facility

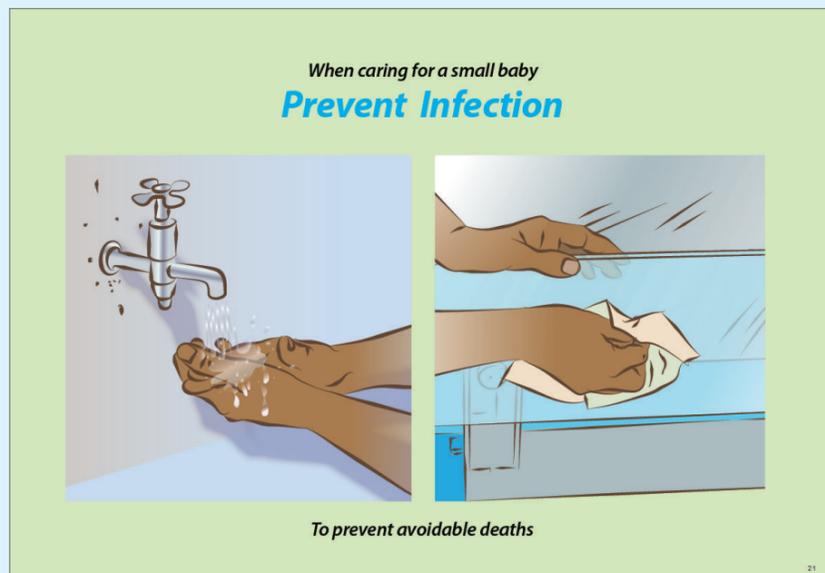
Invite discussion

1. How can you overcome the barriers to hand washing in your facility?
2. How can you change the behavior of people who do NOT wash their hands?
3. Who cleans equipment before and after use and how is it stored?

Facilitate practice

Ask participants to work in pairs to play the roles of the mother and provider.

- Teach a mother when and how to wash hands.
- Discuss hygiene and practices that reduce infection in the facility and at home.
- Discuss what immunizations are given in the first 6 months.



Background

Proper hygiene and preventing infection can reduce deaths of small babies, who are at higher risk of infection. Health facilities should have written guidelines for preventing infections. There should be systems in place to continuously track and decrease infections.

Proper hand washing before and after touching a baby can decrease infections. Wash hands with soap and water and dry with clean towels or use alcohol hand rub. All providers, parents or others who touch the baby should wash their hands. Posting reminders for hand washing can empower families to remind providers to wash hands. Providers should advocate for improved and easily accessible hand-washing facilities.

Care routines should promote hygiene and decrease cross contamination. Every piece of equipment used for the baby should have routine cleaning. Manufacturer's instructions should be followed and there should be a record and audit of the cleaning.

Staff or visitors who are sick should not come in contact with babies. Appropriate waste disposal protects both patients and staff. Exclusive breastfeeding and safe

handling of expressed breast milk reduce the risk of intestinal infection. Feeding formula or other foods may introduce contamination. Breast milk also provides antibodies which help prevent infection.

If routine immunization is deferred at the birth of a small baby, begin immunization prior to discharge. Response to BCG (Bacillus Calmette–Guérin vaccine for tuberculosis) may be delayed in small babies, but immunization still provides protection.

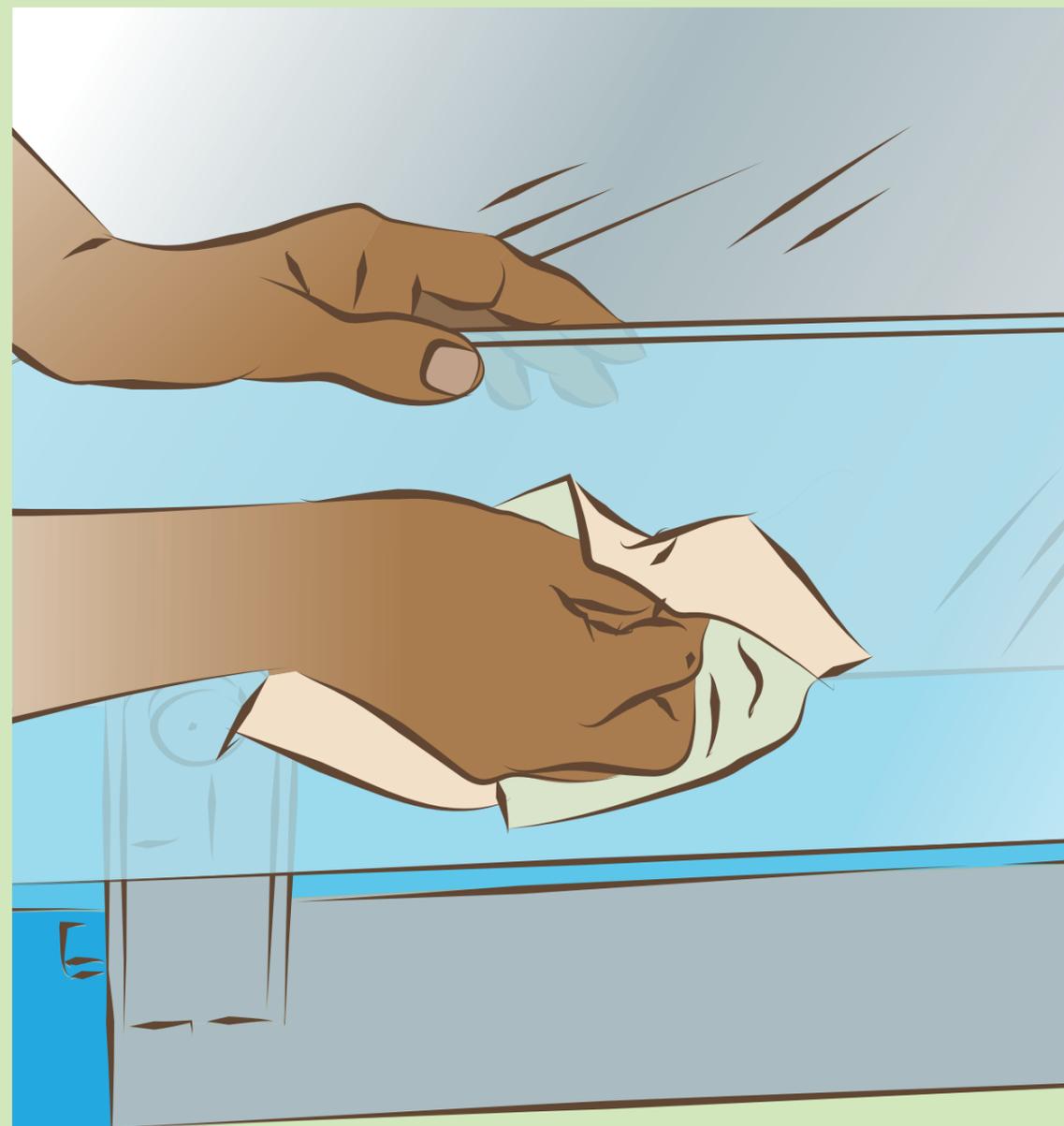
Educational advice

Review guidelines from the local health authority and your facility for infection prevention and immunization. Practice disassembling and reassembling bag and mask for cleaning if equipment is available.

Materials for practice:

- Soap and water
- Bag and mask (optional).

When caring for a small baby
Prevent Infection

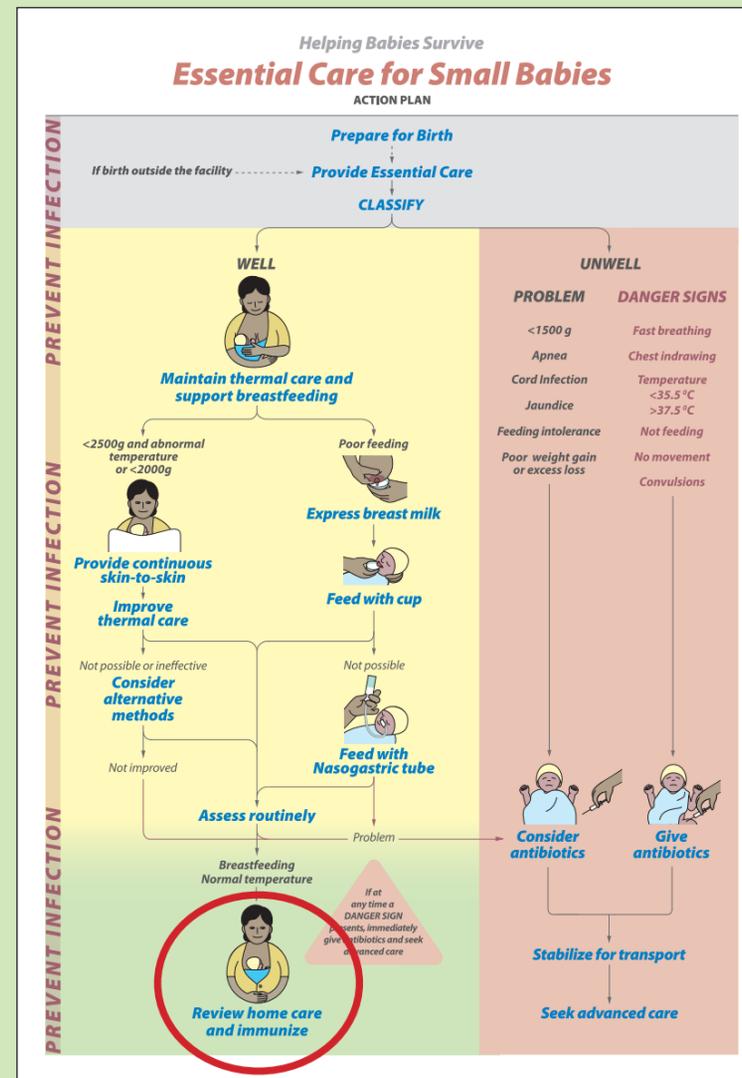


To prevent avoidable deaths

Exercise: Review home care



In pairs or groups of 3, have participants practice assessing whether a small baby is ready for discharge, and counseling the mother about discharge. One person should play the role of the provider and one the mother. Change roles and repeat the exercise.



Scenario:

A small baby born at 1600 grams is now 3 weeks old. He received nasogastric feeds and required continuous skin-to-skin care. He now weighs 1850 grams. He is breastfeeding well. You are doing your daily assessment of the mother and baby.

PART I

Assess this small baby and the mother to determine if the baby is ready for discharge.

- Physical exam shows baby is breathing normally (no chest indrawing, respiratory rate < 60/min, no apnea).
- Temperature is stable (36.5-37.5°C) wrapped in two blankets.
- Weight gain is adequate over 3 consecutive days.
- Mother has established successful breastfeeding (frequency, duration, wet diapers, stools).
- Mother has demonstrated confidence in caring for the baby.

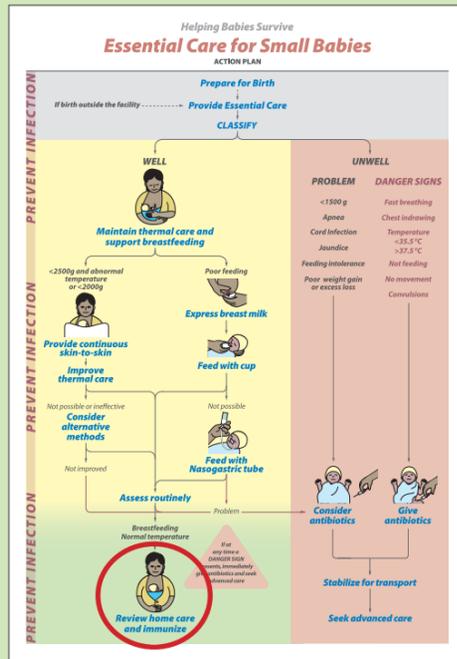
PART II

You determine that the baby is ready for discharge. Talk with the mother about the care her small baby will need after discharge and problems that could arise at home.

- Discuss how to prevent infection.
- Discuss how keep a baby warm.
- Encourage exclusive breastfeeding.
- Review how to assess the baby for changes, recognize and respond to **Danger Signs**.
- Discuss future immunization plans.
- Provide record of baby's discharge weight and physical exam to mother for follow-up.
- Schedule and document appropriate follow-up (postnatal) visits.

Materials for practice:

- Small baby simulator, manikin or doll
- Parent Guide



Exercise: Plan for home care



Review home care with the family

At the end of the workshop

Take steps to improve care

Explain and demonstrate

Improving care saves lives. Use your understanding of problems to help babies survive. Systematic improvement of care requires a team approach to identify problems, implement solutions, measure the effects of changes, and sustain the process of change.

Use the Action Plan to

- Identify the key parts of care that help a small baby survive.

Review the Provider Guide to

- Reflect on what you have learned, what you will do differently
- Identify opportunities for improvement (see “What to monitor” on each page of the Provider Guide).

In your own facility, take part in the process to improve care.

- Mobilize institutional support.
- Form an improvement team.
- Decide what to improve.
- Implement change to improve care.
- Measure the effect of change on quality of care.
- Continue the process of improvement.

Invite discussion

1. What is the value of information that you and other providers record about patients?
2. What roles can teams and individuals play in making change?
3. What resources may be needed to create a change?

Facilitate practice

Ask participants to work in groups of 6 to discuss how to improve care.

- Work together as a team.
- Study the available information.
- Decide what to improve and expected results.
- Identify causes of the problem and possible solutions.
- Describe how to make the selected change.
- Describe how to measure the effect of change.

At the end of the workshop

Take steps to improve care



to help small babies survive

Background

Essential Care for Small Babies emphasizes high quality care through maintenance of normal temperature, feeding that supports growth, hygiene/prevention of infection and recognition and response to **Danger Signs**. The desired outcomes of this care are a small baby who remains well and a family that can adequately assume the care of their own baby.

High quality care demands a continuous process of improvement. Routinely recorded data are valuable to show what needs improvement and to demonstrate the effect of change. Improvement teams are more successful in making change than individuals. Every provider has the responsibility and opportunity to contribute as a participant in improvement work or as a champion who can help organize the team to implement change.

Educational Advice

Prepare an example data set of newly born infants showing some infants with low body temperatures, such as:

- 2400 Grams, female, no temperature
- 1970 Grams, male, temperature 34.5°C
- 3400 Grams, male, temperature 35.4°C
- 2240 Grams, female, temperature 36.0°C
- 2100 Grams, male, no temperature
- 1990 Grams, female, temperature 34.2°C

Help participants calculate the percentage of babies who get cold and identify low temperature as a problem. Participants complete this skill practice by suggesting local causes and solutions of the problem, designing change, and describing follow up measures. Tools for improvement of care may be available through the regional health system.

Materials for Practice

- Dataset of babies' temperatures
- Paper
- Pen

At the end of the workshop

Take steps to improve care



to help small babies survive

Advice for course facilitators

1. Assemble the course materials

Assemble all educational materials, equipment and supplies to facilitate practice and exercises. Participants will be organized in groups of 6 per facilitator. Each group will need to refer to an Action Plan and a Facilitator Flip Chart. Each participant will need a Provider Guide and recording sheets for the Knowledge Check (multiple choice questions) and Objective Structured Clinical Evaluations (OSCE A and B). Each pair or group of 3 participants will work with a small baby simulator, manikin or doll and additional equipment. A premature newborn simulator is available for insertion of a nasogastric tube, and a breast model can be used for manual expression of milk.

2. Prepare yourself

Review the five sections of each Flip Chart page

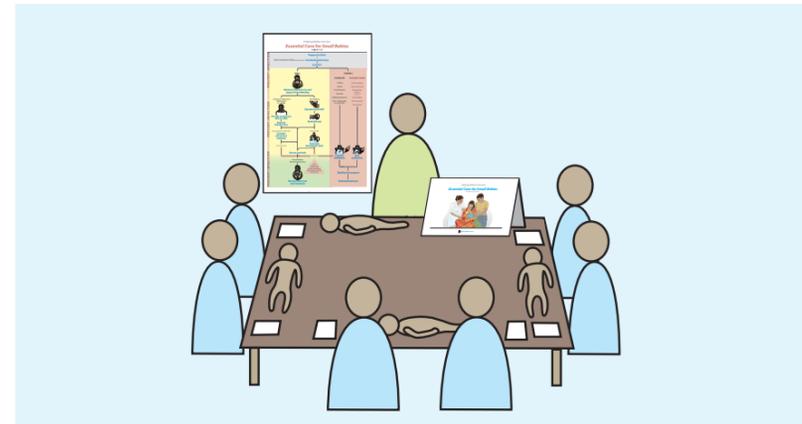
- Explain and demonstrate – key points that you will say and show to the learner.
- Invite discussion – suggested questions that will provoke discussion among the providers about the local context of care. These questions will also help participants identify changes to improve care.
- Facilitate practice – guidance about how providers should practice skills required for each action.
- Background – a brief summary of details about the action which will help you answer questions.
- Educational advice – advice that will assist you in creating the ideal learning experience. You will need to collect and familiarize yourself with national and facility guidelines for such practices as eye care, cord care, and immunizations.

Familiarize yourself with exercises and evaluations in the Flip Chart

- Four exercises combine a series of actions to help the learner integrate the steps of a particular aspect of care. They also focus on how to communicate with the mother and teach her some of the skills.
- The Knowledge Check can be given as both a pre- and post-course evaluation if desired.
- OSCE A and B evaluate knowledge, skills, and decision-making.

Review the four sections of each Provider Guide page

- Review Key Knowledge – a summary of important facts.
- Practice Key Skills - a section to guide practice during and after the workshop.
- What to monitor - some key indicators that can be used for data collection as part of efforts to improve quality of care.
- To improve care in your facility - some questions to stimulate ideas for change and improvement.



Review the first steps in improving care for mothers and babies

- Identify the key outcome indicators for small babies.
- Review potential process indicators for care of small babies.
- Obtain samples of the clinical information currently being collected at the facility. Participants may bring samples of recording forms or photos of newborn registers and reporting summaries.
- Identify one or two leaders or champions in the facility who will continue practice and coordinate efforts to improve care.

3. Prepare the space for learning

Arrange the classroom space so that all providers can view a poster-sized Action Plan and the learner side of the Flip Chart. Participants will ideally work in pairs with a small baby simulator, manikin or doll and a set of equipment and supplies; however, three participants may practice together as long as each learner performs the skill.

4. Engage the participants

Most classroom time should be spent on practice and group discussions. Encourage participants to share their experiences and help them practice correct techniques. Ask them to reflect on their own performance first. Provide positive feedback and offer constructive suggestions for improvement. Ask them what they have learned and what they would change in their practice.

5. Evaluate knowledge and skills

Ask each learner to complete the Knowledge Check (multiple choice questions) and then administer OSCE A and B individually. Every learner should successfully complete the OSCEs. Follow directions for prompts on the OSCE form. The number of correct items needed for successful completion is noted on each recording form.

6. Begin the process to improve care

Use the last page of the Flip Chart to introduce the ongoing activity of improvement of care. Describe how an improvement team will continue the process to improve care. Review samples of actual clinical information being collected at the facility as part of the exercise. As part of improvement activities, encourage providers to practice new skills or refresh their skills along with other colleagues by using the Practice Key Skills sections and exercises in the Provider Guide.

Master equipment list for course

- Action Plan (one for six participants)
- Flip Chart (one for six participants)
- Provider Guide (one for each participant)
- Parent Guide (one for each participant)
- Neonatal simulator, manikin or doll (optional)
- Small baby simulator, manikin or doll in which a nasogastric tube can be placed (at least one for three participants)
- Breast model (if available)
- Alcohol-based hand rub or soap and water
- Bag/mask device, small and premature masks (if available)
- Head covering, diaper and socks
- Extra blankets
- Scale (if available)
- Support binder for skin-to-skin care
- Thermometer
- Stethoscope
- Container to collect simulated breast milk
- Water to simulate breast milk
- Cup, or paladai for feeding
- Measuring container for collecting breast milk
- Clean nasogastric tube (5 or 6 French)
- 20 mL syringe
- Tape to secure nasogastric tube
- Table to calculate collected breast milk
- Growth chart (optional)
- Mother's Observation Form (in Provider Guide)
- Newborn Assessment Form (in Provider Guide)
- Newborn Referral Form (in Provider Guide)
- Pen and paper

Knowledge Check – Answer key

1-b	2-c	3-a	4-c	5-c	6-d	7-c	8-b	9-c	10-d
11-a	12-c	13-a	14-a	15-d	16-a	17-b	18-b	19-b	20-c
21-a	22-b	23-a	24-b	25-c	26-b	27-c	28-a	29-b	30-b

Essential Care for Small Babies - Knowledge check

Select the best answer to each question or statement
Circle the letter of the correct answer

- Which of the following statements correctly describes a well small baby?
 - Feeds by cup, stays warm with skin-to-skin care, has convulsions
 - Feeds by cup, stays warm with skin-to-skin care, weighs 1600 grams
 - Breastfeeds poorly, breathes at 100 times per minute, maintains temperature in an incubator
 - Feeds by cup, weighs 1200 grams, maintains temperature in an incubator
- Which of the following is an important step in the care of a small baby?
 - Teaching the mother to give a bath
 - Giving the small baby lots of time in the sunlight
 - Preventing infection by washing hands before touching the baby
 - Weighing the small baby five times a day
- Which of the following statements describes preparation for the birth of a small baby?
 - Identify a skilled helper, provide extra warmth in the area for delivery, anticipate need to help the baby breathe at birth.
 - Prepare an area for the baby's bath, check equipment, review emergency plan.
 - Wash hands, prepare herbs for babies first feeding.
 - Anticipate need to help baby breathe at birth, identify a skilled helper, prepare an area for the baby's bath.
- A 1700 gram baby has been placed skin-to-skin with the mother after birth. What other care should be provided in the first 90 minutes after birth?
 - Showing the baby to the extended family
 - Feeding the baby with a nasogastric tube
 - Monitoring breathing and measuring temperature
 - Bathing the baby
- At 90 minutes after birth, an 1800 gram baby is placed skin-to-skin with the mother and has a temperature of 36.7° C. What should you do to help maintain the baby's temperature?
 - Bathe the baby in warm water.
 - Place in direct sunlight.
 - Assist mother with continuous skin-to-skin care.
 - Place the baby on an open warmer set for high heat output.
- Shortly after birth, a small baby is classified based on the temperature, weight, and physical exam. The baby is 1400 grams, is breathing at 90 breaths per minute, and has a temperature of 35° C. What should you do?
 - Put the baby to the breast to assess breastfeeding.
 - Continue to watch for improvement.
 - Place a nasogastric tube to administer a feeding.
 - Arrange a transfer for advanced care.
- How many feedings should a small baby receive in a day?
 - Two to four
 - Five to six
 - Eight to twelve
 - Twenty-four
- Which of the following techniques can help a mother to support or improve a small baby's latch?
 - Wrapping the breasts in tight clothing between feedings
 - Supporting the head of the baby so he is positioned to take the nipple and surrounding area into an open mouth
 - Putting oils on the breast
 - Feeding first with a bottle until sucking is strong
- What is the skin temperature of a well small baby?
 - 35.0-35.5°C
 - 35.5-36.5°C
 - 36.5-37.5°C
 - 37.0-38.0°C
- Shortly after birth, the temperature of an 1800 gram baby is 36°C. After placing the baby skin-to-skin, the baby's temperature remains the same. Which of the following actions should be taken?
 - Place the baby in direct sunlight.
 - Place warm stones around the baby.
 - Bathe the baby in warm water.
 - Remove wet diaper and cover the mother and the baby with a blanket.
- A 1600 gram baby has been maintaining temperature with continuous skin-to-skin care. The baby will not breastfeed or cup feed and requires nasogastric feeding. What do you advise the mother about skin-to-skin care?
 - The mother can continue skin-to-skin care even while the baby is receiving nasogastric feedings.
 - The baby will need to be in an incubator while receiving nasogastric feeding.
 - The baby will need to be on a radiant warmer while receiving nasogastric feeding.
 - The mother must stop skin-to-skin care during nasogastric feeding.
- When a baby cannot feed directly from the breast after support is provided, what should you advise a mother to do next?
 - Give the baby formula.
 - Keep trying to breastfeed the baby.
 - Express her breast milk to feed to the baby by a safe, alternate feeding method.
 - Wait until the baby can feed directly from the breast.
- When a mother expresses her breast milk, how can it be stored safely?
 - In a covered container in a cool place for up to 6 hours
 - In an open container in a shaded area
 - In an open container in direct sunlight
 - In a covered container heated in warm water until used
- When breastfeeding is not effective, which of the following are safe and recommended alternate feeding methods for a small baby?
 - Attempt cup feedings and if not successful, insert a nasogastric tube.
 - Use a syringe to pour milk directly into the baby's mouth.
 - Dip finger or tongue depressor into milk and allow the baby to lick the milk.
 - Give bottle feedings and insert a nasogastric tube.
- Which of the following best describes a 3-day-old 1800 gram baby who needs nasogastric tube feeding?
 - The baby is breastfeeding 8-12 times per day.
 - The baby is gaining 15 grams/kilogram per day.
 - The baby shows feeding readiness cues every 2-4 hours.
 - The baby takes 5-10 mL by cup per feeding for 4 feedings.
- What is the proper length for nasogastric tube insertion?
 - From the tip of the nose to earlobe to half way between the tip of the breast bone and the umbilicus
 - From the mouth opening to the nipple to the umbilicus
 - From the earlobe to the umbilicus
 - From the tip of the nose to the chin to the bottom of the breast bone
- You have just inserted a nasogastric tube into a small baby who cannot breastfeed or receive cup feedings. Which of the following best describes a method for confirming proper placement of the nasogastric tube?
 - Measure the tube outside the nose.
 - Inject 2 mL of air while listening with a stethoscope for the sound of air entering the stomach.
 - Administer 5 mL of a feeding and then withdraw it back to see if it is mixed with gastric contents.
 - Evaluate the baby's breathing.
- What should a mother be taught to do before administering a nasogastric feeding?
 - Wash her hands and reinsert the nasogastric tube.
 - Wash her hands and confirm placement of the nasogastric tube by checking that the mark on the tube is at the edge of the nose.
 - Wash her hands and confirm placement of the nasogastric tube by checking that the mark on the tube is at the sternum.
 - Wash her hands and inject 10 mL of air into the tube.
- After initial weight loss, how much weight should a small baby gain each day?
 - 5 grams per kilogram per day on average
 - 15 grams per kilogram per day on average
 - 25 grams per kilogram per day on average
 - 30 grams per day on average
- On the day after birth, a 1600 gram baby cannot breastfeed or cup feed, and will be fed every three hours by a nasogastric tube. What volume should be administered for the baby's first feeding?
 - 1 mL
 - 5 mL
 - 12 mL
 - 25 mL
- A 1600 gram baby is fed by a nasogastric tube. After the initial day of feedings, what is the daily increase in the volume of each feeding?
 - 4 mL
 - 5 mL
 - 10 mL
 - 15 mL
- Which of the following indicates feeding intolerance and the need for advanced care?
 - Spitting up small amounts
 - Tense abdominal distension
 - Stooling 6-8 times per day
 - Crying before each feeding
- In a small baby being fed by an alternative method, how often should breastfeeding readiness be assessed?
 - At least once per day
 - At least once per week
 - At least once every two weeks
 - At least once per month
- A small baby is now 10 days old and has been fed by nasogastric tube since birth. During the first attempt to breast feed, he sucks actively, and swallowing sounds are heard. What should be done next to make the transition to breastfeeding?
 - Stop nasogastric feeding immediately, pull out the nasogastric tube, and breastfeed only.
 - Continue with nasogastric feeding, while gradually increasing the number of breastfeeding attempts per day.
 - Stop nasogastric feeding immediately and breastfeed only throughout the daytime.
 - Continue with nasogastric feeding, wait two days, and try breastfeeding again.
- A 1600 gram baby has been receiving nasogastric feeding for 10 days and now has started to feed at the breast. Which of the following is an indication that the baby is ready to receive all the feedings by breast?
 - Waking and crying in between feedings.
 - Choking during occasional feedings
 - Sucking and swallowing audibly for 10 minutes during each feeding
 - Weight gain of 5 grams per day when no nasogastric feedings are provided
- Small babies should be regularly assessed for:
 - Frequency and success at feeding, temperature, presence of hiccups
 - Activity, breathing, color, temperature and weight gain
 - Breathing problems, temperature, and white blood cell count
 - Frequency and success at feeding, cough, presence of convulsions
- A 2-day-old 1700 gram baby has a normal examination and breathing rate. How often should the baby be assessed for temperature, breathing and feeding tolerance?
 - Once per day
 - Every 2 to 3 hours
 - At least once per shift.
 - Only if the baby seems ill
- When should the mother or other providers wash their hands in order to protect a small baby?
 - Before touching the baby and before preparing a feeding
 - Before greeting the family
 - Before closing a window
 - Before leaving the hospital at the end of the day
- A small baby needs to be referred for advanced care to a hospital 1 hour away. What should you do to prepare the baby for transport?
 - Place a nasogastric tube so that mother can feed through the tube during transport.
 - Communicate with health providers at the receiving facility and the family, and prepare a referral note.
 - Bathe the baby to prevent infection.
 - Use a radiant warmer to warm the baby to 38°C so that the baby will maintain temperature during transport.
- Which of the following statements below describes a small baby who should be considered for discharge from the birth facility?
 - The mother has not demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and breathes 40 breaths per minute.
 - The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and the baby breathes 40 breaths per minute.
 - The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and the baby is breathing 80 breaths per minute.
 - The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 5 consecutive days, and the baby is under a radiant warmer.

ID: _____

OSCE A – Classify, Provide continuous skin-to-skin care and monitor

"I am going to read a role play case. Please show and tell me what you would do to take care of this small baby. I will only give indication about the baby's condition when you ask. No other feedback will be given until the end of the case."

"A 28-year-old mother has given birth to a 1700 gram baby. You have provided essential care, including cord care, vitamin K, and eye care. You perform your first assessment. You find that the baby is breathing well and the rest of the exam is normal; the temperature is 36.3°C. Tell me what information you will use, how you will classify the baby and what thermal care the baby will need."

Classify the small baby	Done	Not Done
Uses the weight, temperature and exam to classify the baby	<input type="checkbox"/>	<input type="checkbox"/>
Recognizes a well small baby	<input type="checkbox"/>	<input type="checkbox"/>
Plans to provide continuous skin-to-skin care	<input type="checkbox"/>	<input type="checkbox"/>

Prompt: This is a well small baby who will need continuous skin-to-skin care. Describe and show how you will help mother begin continuous skin-to-skin care.

Show the mother how to do skin-to-skin care	Done	Not Done
Explains to mother the steps and advantages of skin-to-skin care	<input type="checkbox"/>	<input type="checkbox"/>
Dresses baby with diaper, hat and socks (if available)	<input type="checkbox"/>	<input type="checkbox"/>
Places the baby upright on mother's skin between breasts.....	<input type="checkbox"/>	<input type="checkbox"/>
Positions baby with arms and legs flexed, head turned.....	<input type="checkbox"/>	<input type="checkbox"/>
Secures snugly with a cloth pulled up to the ear	<input type="checkbox"/>	<input type="checkbox"/>
Covers with a garment or closes mother's shirt.....	<input type="checkbox"/>	<input type="checkbox"/>

Prompt: The baby and mother are comfortable. Please demonstrate how you will monitor the baby and show the mother about how to monitor the baby while in skin-to-skin.

Monitors baby's activity, breathing, color, temperature	<input type="checkbox"/>	<input type="checkbox"/>
Advise mother how to monitor activity, breathing, color, temperature	<input type="checkbox"/>	<input type="checkbox"/>

SCORING:
Successful completion requires a total score of 9 of 12. Incompletely done items should be marked as "Not Done."

SCORE: _____ / 11

ID: _____

OSCE B – Feeding with a nasogastric tube and daily assessment

"I am going to read a role play case. Please show and tell me what you would do to take care of this small baby. I will only give indication about the baby's condition when you ask. No other feedback will be given until the end of the case."

"A 1700 gram baby is 8 hours old. The baby has a normal physical exam, and has been maintaining a temperature of 36.7°C with continuous skin-to-skin care. The baby did not latch well at the breast and did not tolerate cup feeding. Mother has successfully expressed 15mL of milk. Describe and show what you will do next to feed this small baby."

	Done	Not Done
Insert a nasogastric tube		
Communicates with the mother about need for nasogastric feeding	<input type="checkbox"/>	<input type="checkbox"/>
Washes hands	<input type="checkbox"/>	<input type="checkbox"/>
Measures depth tube should be inserted and marks tube.....	<input type="checkbox"/>	<input type="checkbox"/>
Lubricates tube with expressed breast milk.....	<input type="checkbox"/>	<input type="checkbox"/>
Inserts tube	<input type="checkbox"/>	<input type="checkbox"/>
Confirms proper placement.....	<input type="checkbox"/>	<input type="checkbox"/>
Tapes tube on face.....	<input type="checkbox"/>	<input type="checkbox"/>

Prompt: Show how you will feed breast milk with the nasogastric tube.

Feed with a nasogastric tube		
Determines amount of feeding baby requires (8 mL).....	<input type="checkbox"/>	<input type="checkbox"/>
Measures the amount to be fed	<input type="checkbox"/>	<input type="checkbox"/>
Connects syringe and transfers milk with tube pinched	<input type="checkbox"/>	<input type="checkbox"/>
Allows milk to slowly enter stomach.....	<input type="checkbox"/>	<input type="checkbox"/>
Removes syringe, recaps tube	<input type="checkbox"/>	<input type="checkbox"/>

Prompt: The baby is now five days old and you are doing your daily assessment. Tell me what you will assess and I will provide the findings. After completing your assessment please tell me your plan.

Describe a daily assessment		
Maternal concerns (<i>none</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
Physical assessment (<i>active, breathing well, pink, warm</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
Temperature (<i>36.7°C</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
Weight (<i>1550 grams</i>)	<input type="checkbox"/>	<input type="checkbox"/>
Intake (<i>nasogastric feeds 24 mL every 3 hours, good tolerance</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
Output (<i>7 wet diapers, 3 stools</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
Recognizes that the baby remains well.....	<input type="checkbox"/>	<input type="checkbox"/>
Advance feedings to 28 mL every 3 hours.....	<input type="checkbox"/>	<input type="checkbox"/>

SCORING:
Successful completion requires a total score of 16 of 20. Incompletely done items should be marked as "Not Done."

SCORE: _____ / 20

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Helping Babies Survive Essential Care for Small Babies Facilitator Flip Chart

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