

# Helping Babies Breathe

## Facilitator Flip Chart

Second Edition



**Helping Babies Breathe**<sup>®</sup>  
THE GOLDEN MINUTE<sup>®</sup>

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN<sup>™</sup>



# What the facilitator needs to know and do

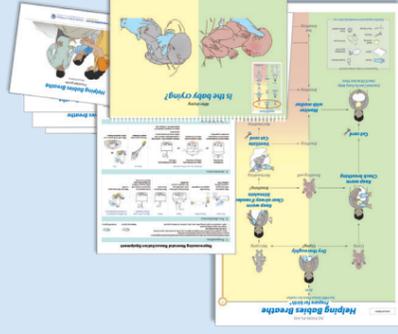
## BEFORE - DURING - AFTER the workshop

Use this section to prepare yourself as a facilitator and guide the development of a Helping Babies Breathe program before, during, and after the workshop. As a facilitator, you are essential to achieving the goal of having at least one person skilled and equipped to help a baby breathe at every birth. This workshop can be the first step towards improving care for mothers and babies.

### BEFORE

#### Begin planning for a Helping Babies Breathe course with local leaders well in advance

- Visit [hbs.aap.org](https://hbs.aap.org) to get the Facilitator Toolkit with a workshop planning checklist, order equipment, print materials and find other useful resources.



#### Prepare yourself as a facilitator



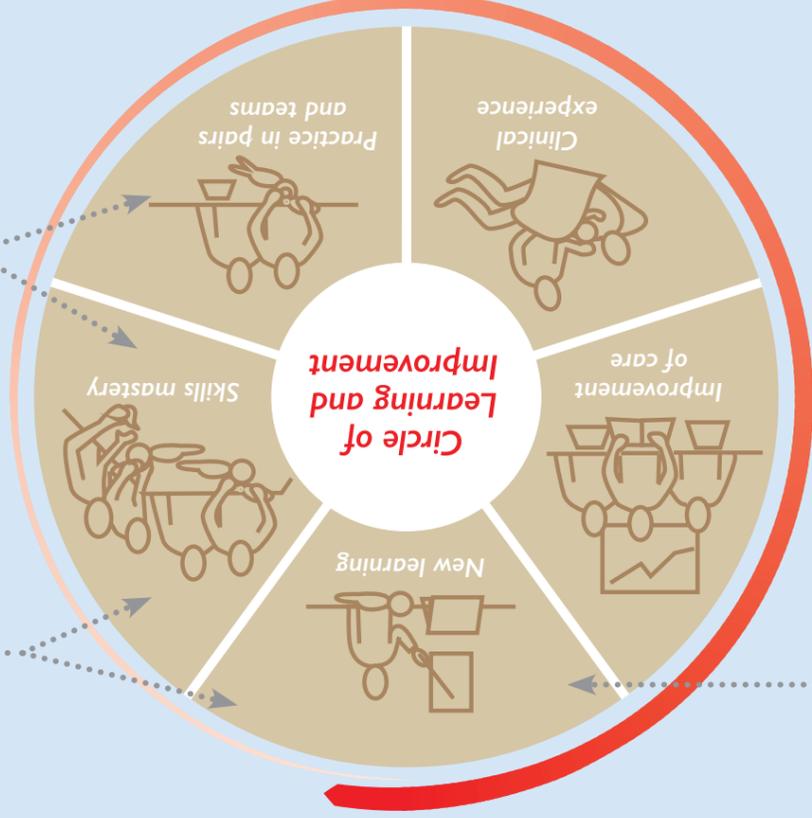
- Review the Provider Guide.
- Read the Background and Educational advice sections so that you can answer questions and get teaching tips.
- Plan how you will actively involve participants on each page of the Flip Chart.
- Arrange the space to facilitate learning with 1 facilitator for every 6 participants.

Resources:

- Workshop planning checklist
- Sample workshop agendas
- Facilitator videos at [hbs.aap.org](https://hbs.aap.org)

### DURING

#### Circle of Learning and Improvement



#### Engage every participant in discussion and practice in pairs

- As you Present and demonstrate, involve participants by asking questions (What? Why? How?)
- Spend more time on practice than on talking and use the exercises to assure mastery of skills. Helping Babies Breathe is a hands-on and active course.
- During practice in pairs, encourage self-reflection, feedback, and review of actions to improve performance (debriefing).
- Always emphasize communication between mother and provider, and also between providers.
- Use group discussion questions to identify ways to overcome barriers and put skills into practice in the facility.
- Review how to disinfect, test, and store equipment.

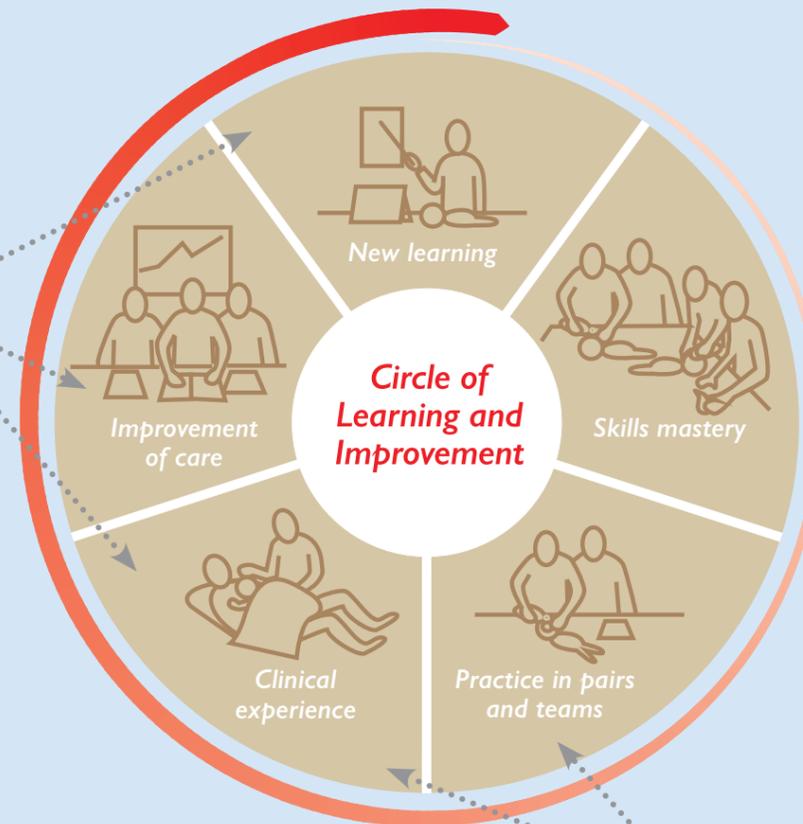
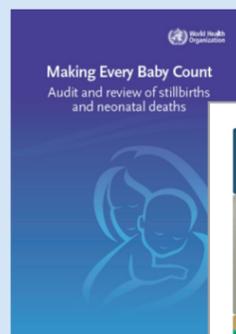
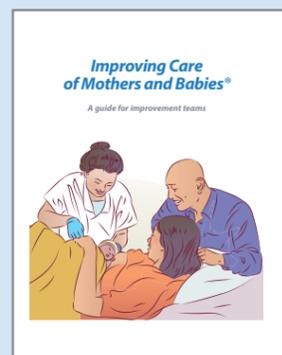
#### Evaluate knowledge and skills

- Evaluate the participants in a way that encourages further learning.
- Use the Knowledge Check as a pre-test and post-test.
- Ask participants to "Show how you would help a baby breathe with a bag and mask" as a simple skills pre-test.
- Use the Bag and mask skill check, OSCE A and OSCE B to evaluate learning at the end of the course and continue practice after the course.

## AFTER

### Identify and support leaders and clinical champions in health facilities who promote ongoing practice and improvement of care

- Provide support and encouragement to a champion in the facility who leads ongoing practice.
- Encourage providers to continue the use of self-reflection, feedback, and review of their actions during practice and after helping a baby breathe.
- Help establish a system for case reviews.
- Promote collaboration with the local health system to collect data, carry out improvement activities, and share experiences among facilities.
- Register the workshop at [hbs.aap.org](https://hbs.aap.org) and share experiences.
- Resources at [hbs.aap.org](https://hbs.aap.org)
  - Combined maternal and neonatal practice scenarios
  - Reprocessing guidelines for basic neonatal resuscitation equipment
  - Improvement Guide: improving the care of mothers and babies
  - Links to additional Helping Babies Survive and Helping Mothers Survive programs and other resources



## DURING

### Help participants commit to making a difference

- Saving newborns lives after Helping Babies Breathe training requires ongoing low-dose high frequency refresher practice with pairs and teams of providers in the facility in order to change clinical care.
- Reflect with the participants on
  - What are you going to do differently?
  - What will you no longer do?
  - How are you going to make these changes happen?
- Develop a plan for routine practice, self-reflection, review of actions (debriefing), and case reviews/audits after helping a baby breathe.
- Help participants plan a change that will improve care in the facility.
- Resources:
  - Questions to improve care and What to monitor in the Provider Guide

#### To improve care in your facility

- Who is responsible for having equipment disinfected and available for every birth?
- How can a second skilled person be available to help in an emergency?

#### What to monitor

- Is equipment to help a baby breathe available at all births?

## Start with a story

Have each participant place one hand on the simulator or mannequin.

Say to the participants, "Close your eyes and imagine that a baby is born. The baby is not breathing. There is no one to help the baby. (Pause) The baby dies."

Pause to allow the participants to reflect with their eyes closed. With their eyes still closed, say, "Imagine that another baby is born. The baby is not breathing. You are there to help the baby. You rub him dry, keep him warm, and help him breathe with a bag and mask. The baby begins to cry." (Imitate a baby crying.)

"At every birth, there must be a skilled person to assess the baby and help the baby who is not breathing well."

## Explain and demonstrate

How to make a difference

- Be present and prepared to help a baby who does not breathe
- By one minute after birth - The Golden Minute - a baby should be breathing well or you should be providing ventilation**
- Promote cleanliness, warmth, breastfeeding for all babies

How to use the materials

- Action Plan
- Facilitator Flip Chart
- Provider Guide
- Neonatal simulator or mannequin for practice in pairs

## Facilitate practice

Ask participants to practice in pairs

Use a neonatal simulator or mannequin to show crying, breathing, heart rate

## Check yourself (page 7)

Review with learners their answers to the **Check yourself** questions in the **Provider Guide**.

When should a skilled person be present at a birth?

- If problems occur
- At every birth

Which babies benefit from a skilled birth attendant?

- Only babies who need help to breathe
- All babies

**As a skilled birth attendant,  
you make the difference**



### Background

Understanding the major causes of newborn death in the region helps participants appreciate how they can make a difference for all babies, not just those who need help to breathe. Be familiar with local statistics or invite a local health leader to participate in the opening of the workshop.

### Educational advice

Begin with a story to show how Helping Babies Breathe can really save lives. Invite participants to share their experiences. Relate these experiences to what will be discussed in the workshop.

Introduce the Action Plan, Flip Chart, and Provider Guide. Point out the colors of the zones, which are repeated in the background color of the Flip Chart and

Provider Guide illustrations. Point out The Golden Minute. The illustrations of the Flip Chart match those in the Provider Guide. Each step in the Action Plan is presented on the Facilitator Flip Chart. A red circle indicates the step being considered.

Organize learners into pairs for cooperative learning within small groups. This helps build teamwork and skills for providing feedback. Such cooperative learning will continue during practice after the workshop.

Demonstrate the basic functions of the neonatal simulator or mannequin and have the pairs of participants practice crying, breathing, and heart rate.

***As a skilled birth attendant,  
you make the difference***



*Ask a participant to point out the action step “Prepare for birth” and the equipment and supplies needed to help a baby breathe*

## Explain and demonstrate

### Preparation for a birth

- Identify a helper and review the emergency plan with the mother
  - Communication
  - Transportation
- Prepare the area for delivery
  - Warm, well-lighted, clean
- Wash hands (Provider Guide page 52)

- Prepare an area for ventilation and check equipment
  - Assemble disinfected equipment and supplies
  - Test the ventilation bag, mask and suction device (Provider Guide page 47)
  - Prepare a uterotonic for the mother

## Facilitate practice

### Ask participants to practice in pairs

- Identify a helper and review the emergency plan
- Prepare the area for delivery
- Wash hands
- Prepare an area for ventilation

- Assemble disinfected equipment and supplies
- Test the ventilation bag, mask, and suction device
- Prepare a uterotonic for the mother

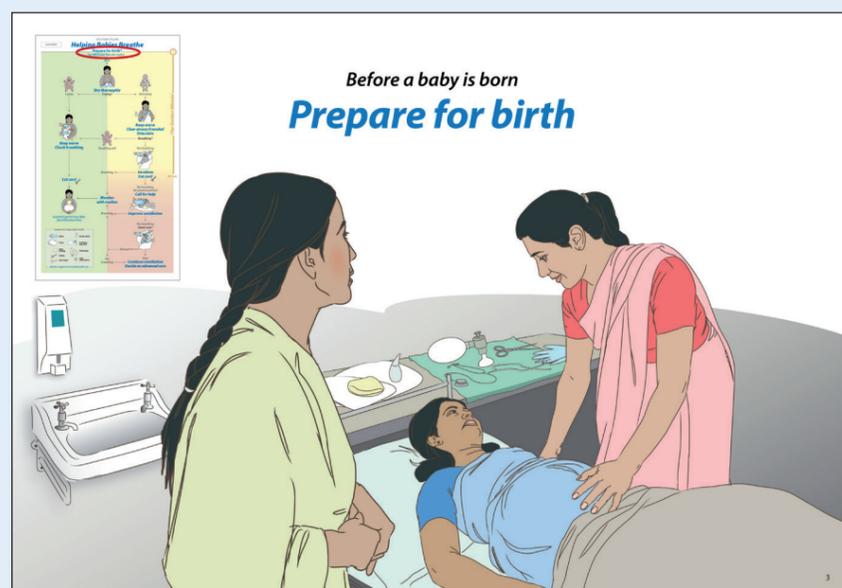
## Check yourself (page 9)

*What important tasks can a helper do during a birth?*

- Place a cold cloth on the baby's forehead
- Call for help or assist if problems arise

*When should you wash your hands?*

- When they look dirty
- Before and after caring for a mother or a baby



## Background

**Identify a helper and review the emergency plan.** Emergency planning should be part of every birth plan and every health system. The mother's birth companion can call for help as directed and remain with the mother and baby after birth. A second skilled birth attendant can assist as needed – for example, giving a uterotonic to the mother, cutting the cord, evaluating the heart rate, or seeking advice from a higher level facility.

**Prepare the area for delivery.** Eliminate drafts from fans, air conditioners, or open windows and doors. Warm the birthing room to 23-25°C.

**Wash hands.** Everyone who attends a delivery, including the mother, father, and birth companion, must wash their hands. Follow the pictures on page 52 of the Provider Guide to practice. Clean gloves also help prevent infection and protect the birth attendant from blood and body fluids. Review the regional procedures for personal protection.

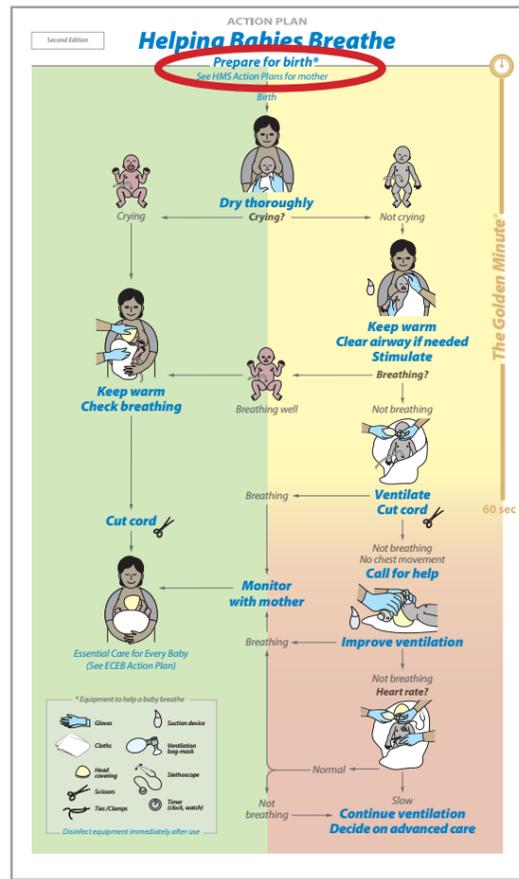
**Prepare an area for ventilation and check equipment.** The area for ventilation should be warm, dry, flat, and safe, without risk for falls or other injury. Use a warm cloth to cover and protect the baby from cool surfaces.

Follow the steps on page 22b of the Facilitator Flip Chart to check the bag, mask, and suction device. Prepare the uterotonic, such as oxytocin or misoprostol, before birth (see *Helping Mothers Survive*).

## Educational advice

**Demonstrate each of the skills in the role of the birth attendant.** Invite participants to role play the birth companion, the helper, and the mother. Model how to communicate with them. Ask questions to review the emergency plan. Clearly define the role of the helper. Show the steps to prepare the area for delivery. Lead everyone in handwashing and testing of their equipment.

**Ask participants to practice how they will carry out each step of preparation where they work.** Who will be the helper? What are the means of communication and transportation? Where will ventilation be provided? Who is responsible to have disinfected, working equipment and supplies ready for use at every birth?



Before a baby is born  
**Prepare for birth**



## Exercise: Preparation for a birth (Provider Guide pages 10-11)



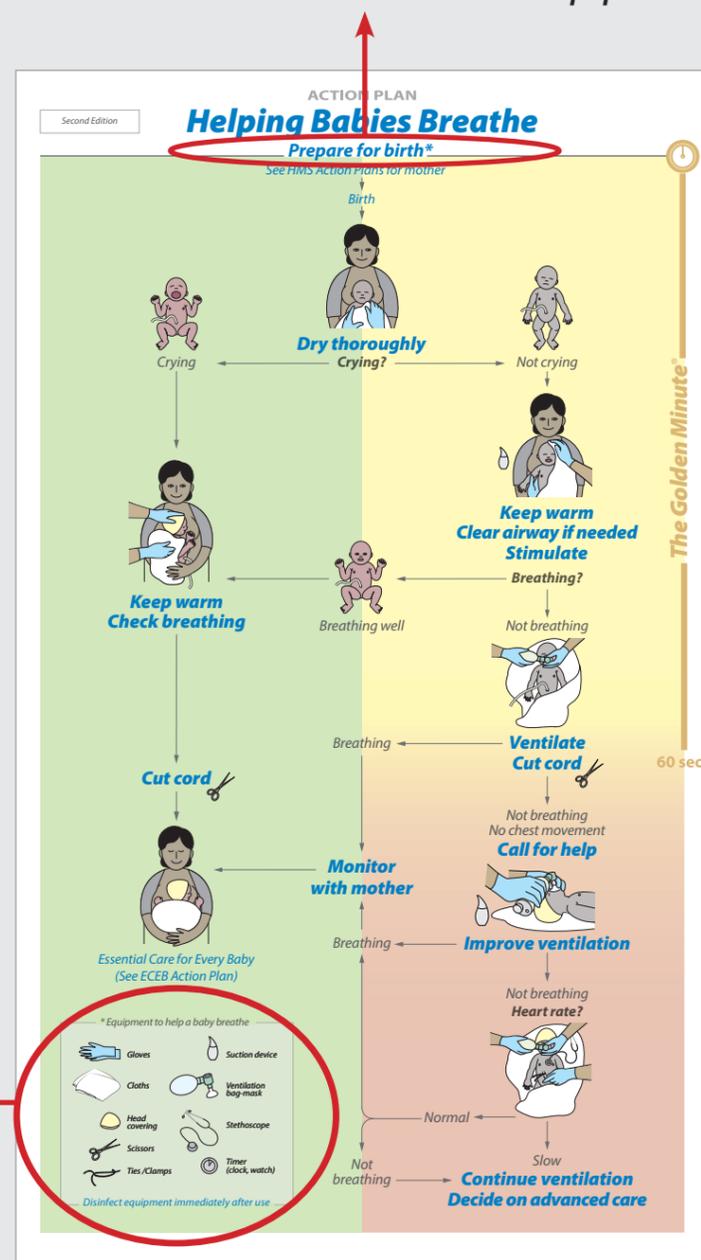
Identify helper and review emergency plan

Prepare the area for delivery

Wash hands

Prepare an area for ventilation and check equipment

The facilitators will demonstrate how to prepare for a birth. Participants will work in pairs to practice the checklist. One person takes the role of the birth attendant. The other person takes the role of the mother. Begin by introducing yourself. Then communicate with the mother and helper while preparing for a birth. Participants give one another feedback, switch roles and repeat the exercise.



### Checklist

- Identify a helper and review the emergency plan  
.....
- Prepare the area for delivery  
.....
- Wash hands  
.....
- Prepare an area for ventilation  
.....
- Assemble disinfected equipment and supplies  
.....
- Test the ventilation bag, mask and suction device  
.....
- Prepare a uterotonic for the mother  
.....

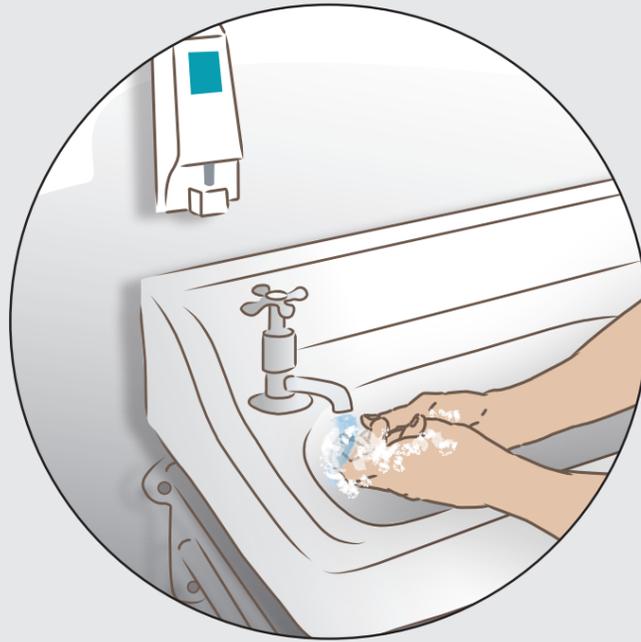
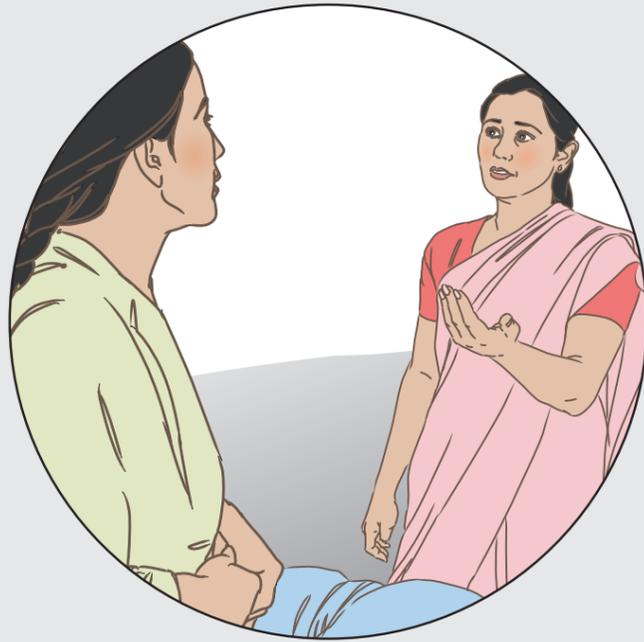
### Educational advice

- In a small group of learners (no more than 6 persons with 1 facilitator)**
- Demonstrate preparation for birth and communication with the mother and a helper.
  - Have participants practice the checklist in pairs and give one another **feedback**.
  - **First, the participant in the role of the birth attendant reflects on his or her own performance of a skill.**
  - **Next, the participant in the role of helper or mother gives any helpful comments to improve performance.**
  - **The facilitator may ask questions to help participants reflect on their performance.**
  - Answer questions and encourage correct actions during the exercise.
  - Share feedback with the whole group after the exercise.
  - Review the group discussion questions.

### Group discussion

- At the end of the exercise, ask participants to answer these questions in the small group. Encourage them to think about how they will put the skills learned into practice. Make note of other questions that participants ask and their answers.
1. What is the emergency plan where you work?
  2. What could a helper do during a birth? How do you prepare the helper?
  3. How will you prepare the area for delivery and the area for ventilation where you work?
  4. Is there a source of clean water or alcohol-based hand cleaner where you work?
  5. How will you have disinfected working equipment and supplies ready for use at every birth?

## *Exercise: Preparation for a birth*



Ask a participant to point out the action step “Dry thoroughly”

## Explain and demonstrate

### Drying

- Helps keep the baby warm
- Stimulates breathing

### At birth, dry thoroughly

- Place a cloth on mother’s abdomen
- Position the baby on the cloth
- Dry by gently rubbing with the cloth
- Remove the wet cloth
- Place the baby skin-to-skin with mother
- Cover with a dry cloth

### Note time of birth

## Facilitate practice

### Ask participants to practice in pairs

- Dry thoroughly
- Remove the wet cloth
- Place the baby skin-to-skin
- Cover with a dry cloth
- Note the time of birth

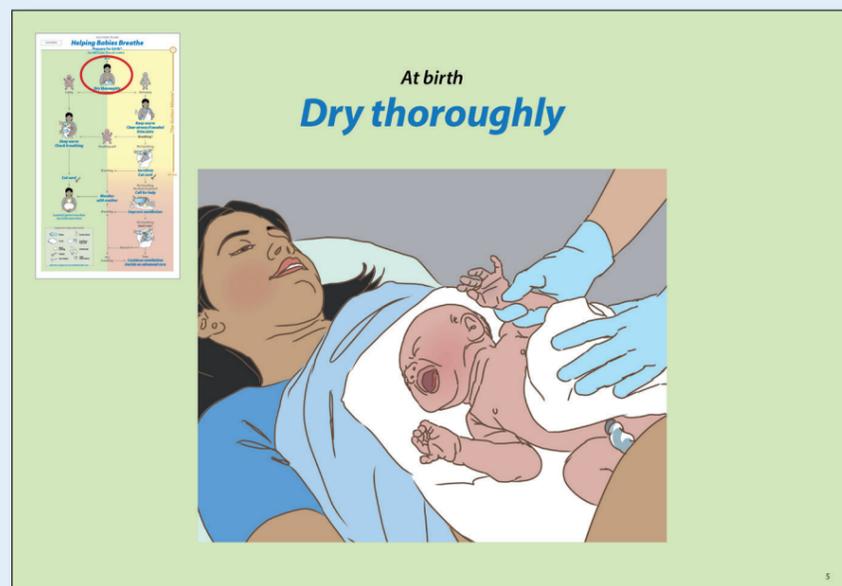
## Check yourself (page 13)

A baby is placed on a cloth beside the mother without drying. What happens?

- The baby can become cold
- The baby will stay warm

When should you dry the baby?

- After giving a uterotonic to the mother
- Immediately after birth



### Background

**A wet baby can easily become cold.** A cold baby can have difficulty breathing. Drying thoroughly involves gently rubbing the body, arms and legs, and head. Blotting or patting a baby dry does not stimulate breathing.

In the past, babies with meconium in the amniotic fluid who were not crying had their airway suctioned before drying and stimulation. It is unclear this practice benefits babies and it may interfere with breathing. International guidelines recommend that babies with meconium in the amniotic fluid do not receive suctioning before drying.

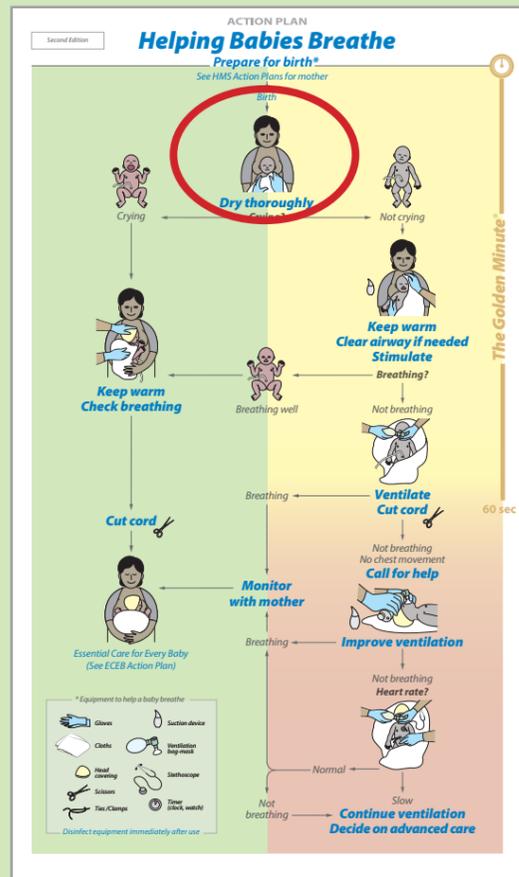
**Note the time of birth to enter it later in the clinical record.** The time of birth also begins The Golden Minute.

### Educational advice

Demonstrate how to dry a baby by inviting a participant to play the role of the mother. Place a cloth on mother’s abdomen and dry the baby by rubbing vigorously but gently. Emphasize that rubbing the large area of the back provides strong stimulation to breathe. Contrast this method with patting dry or simply wrapping. Ask participants to describe the benefits of the correct method.

Emphasize removing the wet cloth and replacing it with a dry one to cover the baby in skin-to-skin contact. To show how a wet cloth can make a baby cold, place a cloth wet with water on a participant’s skin.

Ask participants to practice in pairs. One person takes the role of the birth attendant. The other takes the role of the mother and provides the response of the baby. Encourage participants to give feedback to one another with words or with responses of the baby. Ask them to show that the baby who is dried thoroughly begins to cry.



# At birth

## Dry thoroughly



*Ask a participant to point out the evaluation question "Crying?" and the decisions "Crying" or "Not crying"*

## Explain and demonstrate

**Rapid assessment after drying at birth is the best way to know if a baby needs help to breathe.**

### Most babies cry at birth

- Crying means a baby is breathing well
- Demonstrate a baby crying/not crying

**A baby who does not cry or is breathing shallowly, gasping, or not breathing at all needs immediate help to breathe**

- About 1 in 10 babies needs help to breathe
- Without help, a baby may die or experience serious brain damage
- Quick action will help a baby start breathing sooner



## Facilitate practice

### Ask participants to practice in pairs

Use a neonatal simulator or mannequin to show crying/not crying

## Check yourself (page 15)

*A baby is not crying after thorough drying. He is limp.*

*What should you do?*

- Give routine care
- Provide help to breathe

*A baby cries after birth and then breathes quietly and regularly. What should you do?*

- Give routine care
- Provide help to breathe

### Background

**A skilled person should be present at every delivery.** Problems during the pregnancy, labor, or delivery predict some - but not all - babies who need help to breathe.

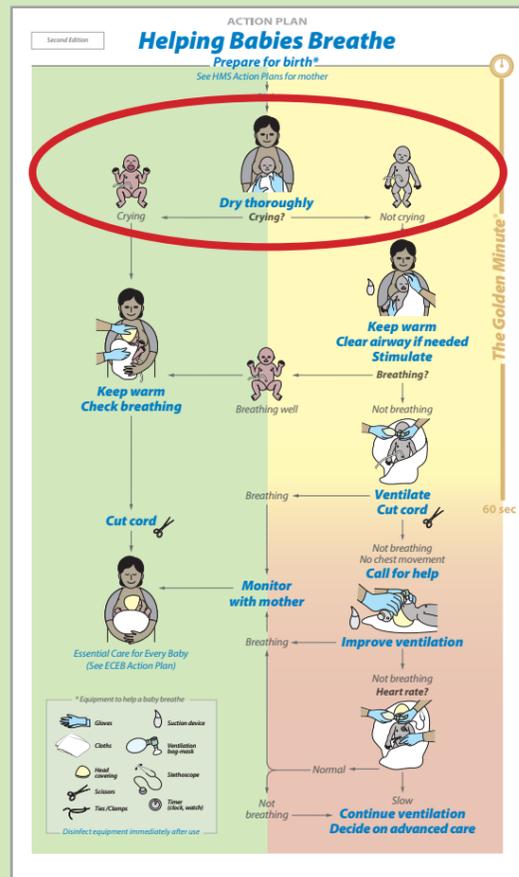
**In rare cases, a newborn baby does not cry but does breathe quietly and regularly.** This baby may be healthy, but stimulating breathing will not harm a quietly breathing baby.

### Educational advice

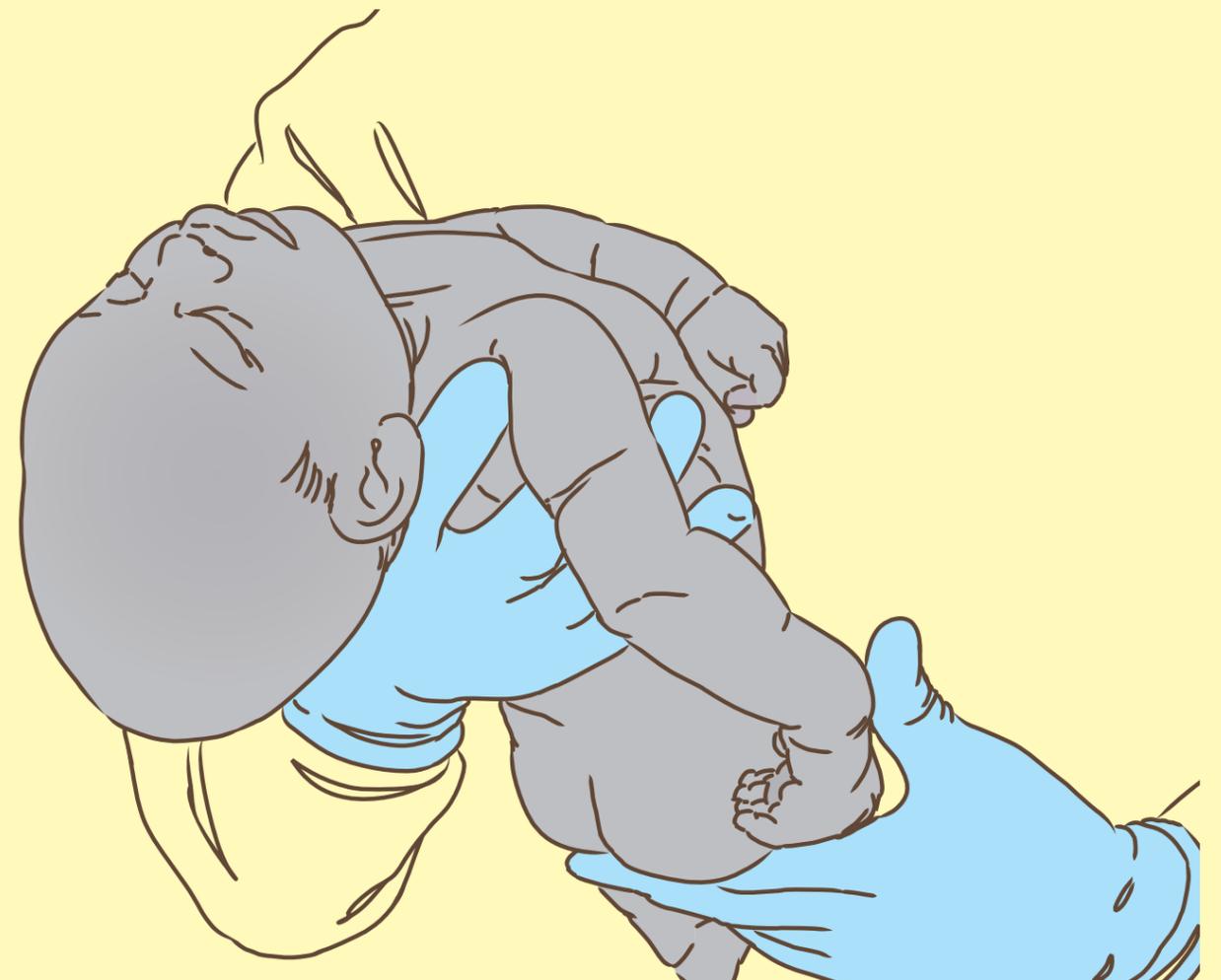
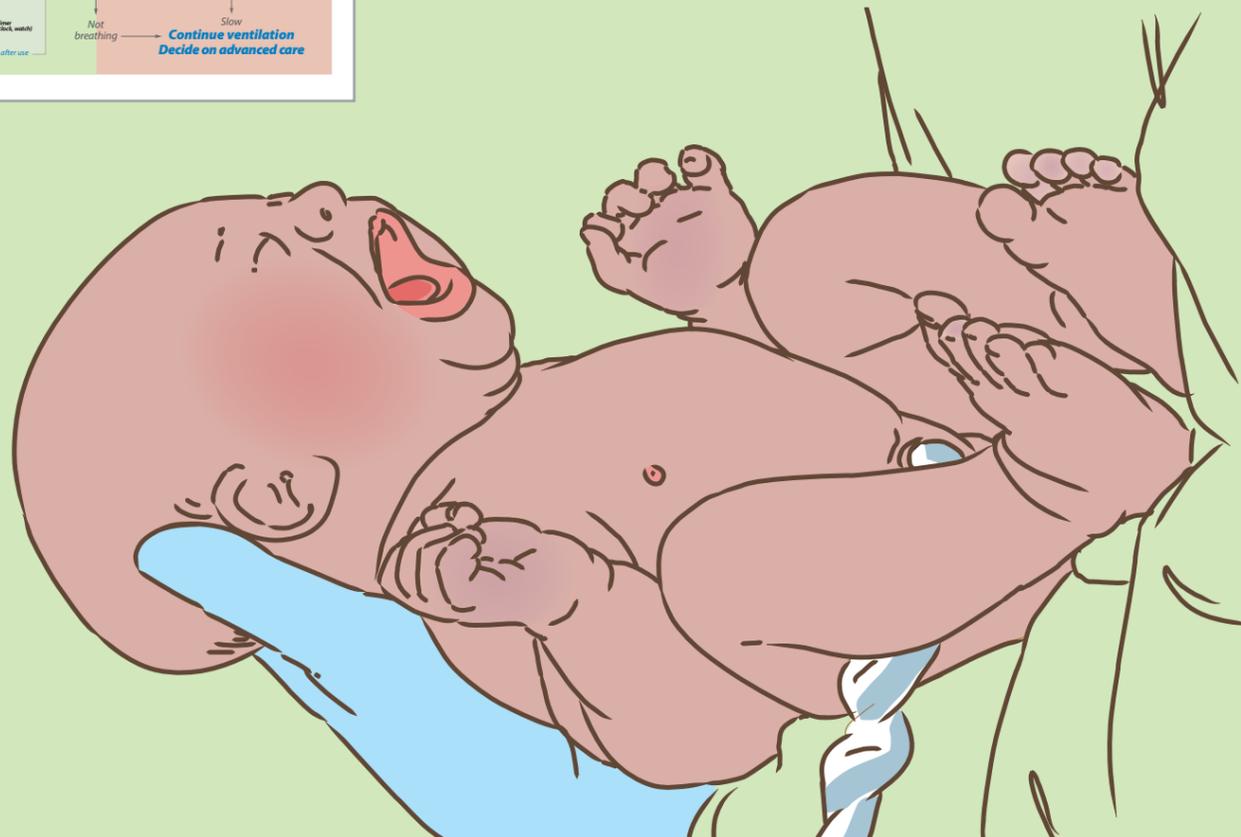
Use the illustrations to contrast the features of a baby who is crying with one who is not crying. Ask participants to describe the color, tone, position of the arms and legs, hands, and mouth.

Emphasize the importance of recognizing the baby who needs help to breathe in order to act quickly.

Encourage participants to work in pairs to become familiar with the mannequin or neonatal simulator. The participant playing the role of the mother will give information to the birth attendant by operating the simulator. The participant playing the role of the birth attendant assesses the responses of the neonatal simulator or mannequin to decide what steps to take next.



After drying  
**Is the baby crying?**



*Ask a participant to point out the action steps in routine care*

## Explain and demonstrate

**The baby who is crying can receive routine care.**

### Keep warm

- Position skin-to-skin with the neck slightly extended
- Cover head and body

### Check breathing

- Listen, look at or feel movement of chest

Demonstrate quiet and regular breathing

## Facilitate practice

**Ask the participants to practice in pairs**

- Position the baby skin-to-skin and cover with a dry cloth and a head covering
- Check breathing

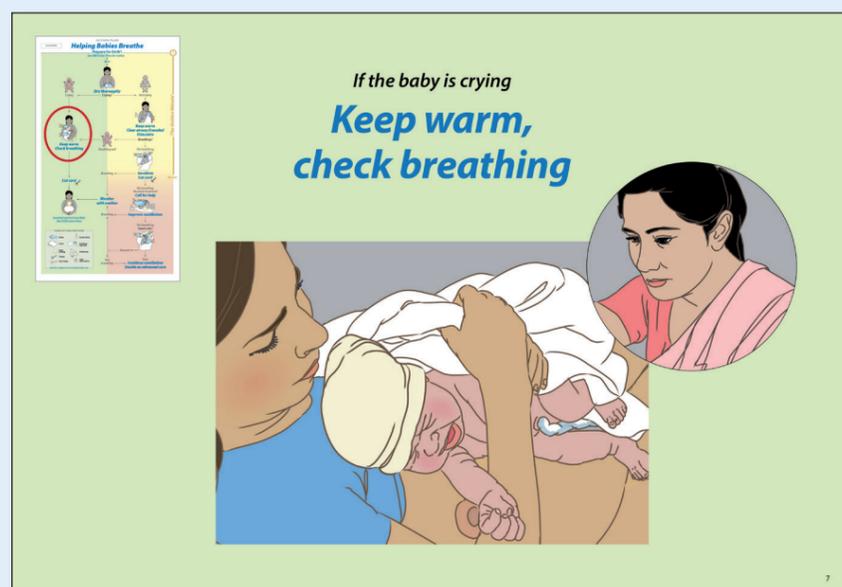
## Check yourself (page 17)

*What can you do to encourage breastfeeding?*

- Keep baby skin-to-skin with mother
- Separate mother and baby after birth

*How can you keep a baby warm after birth?*

- Give a warm bath
- Position the baby skin-to-skin with mother, cover with a dry cloth and a head covering



### Background

**Keep warm.** Placing the baby skin-to-skin with mother gives the baby a source of heat. Skin-to-skin contact can help a baby breathe well. Being close to mother encourages early breastfeeding.

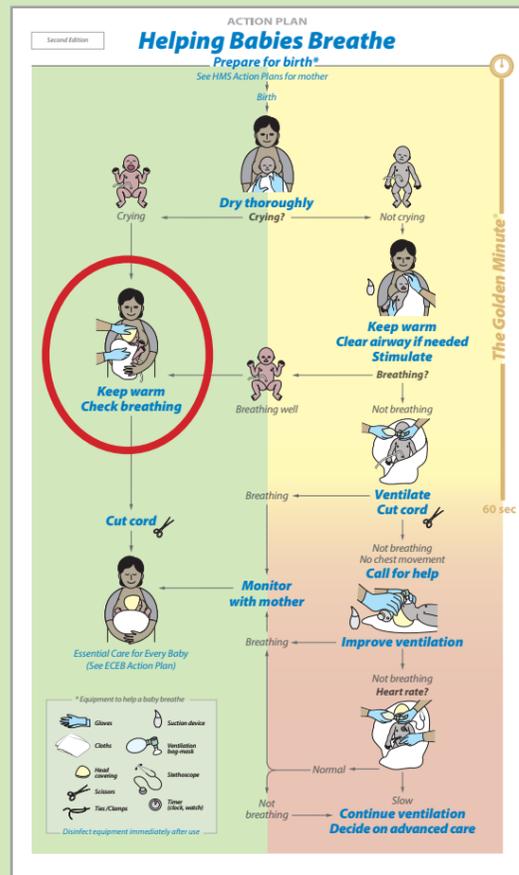
**Check breathing.** Most babies who cry at birth continue to breathe well. Some babies may have large amounts of fluid in the mouth and nose. Positioning these babies on their side may help the fluid drain. A baby's neck should be slightly extended – not flexed or hyperextended. The nose should not be blocked by mother's skin or clothing.

Mother and baby should not be left alone during the first hours after birth. A birth companion should remain with mother and baby when a health worker is not present.

### Educational advice

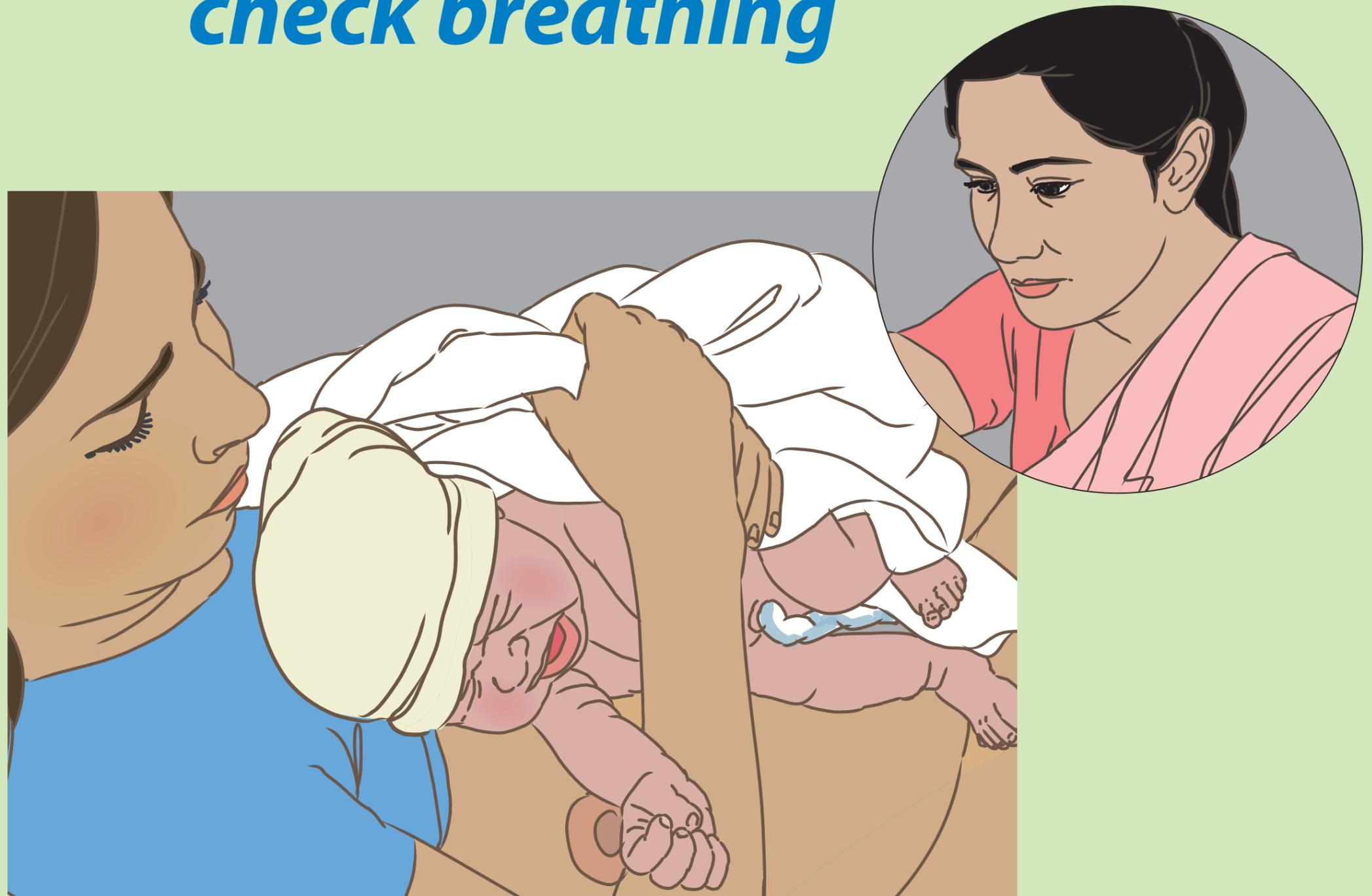
Emphasize that checking breathing means looking at, listening to, and sometimes feeling the baby's breathing.

In the minutes before clamping or tying and cutting the umbilical cord, the birth attendant can give a uterotonic such as oxytocin to prevent bleeding and monitor the mother. Active management of the third stage of labor may occur while the birth attendant is also checking the baby (see **Helping Mothers Survive**).



If the baby is crying

# Keep warm, check breathing



*Ask a participant to point out the action step “Cut cord” and the step continuing to essential newborn care*

## Explain and demonstrate

**Wait 1 - 3 minutes to clamp or tie and cut the cord so the baby receives blood from the placenta.**

### Cut the cord

- Wear clean gloves
- Place clamps or ties around the cord at 2 and 5 fingerbreadths from the abdomen
- Cut between the clamps or ties with disinfected scissors or blade
- Leave the cut end of the cord open to air to dry

**Position skin-to-skin on mother’s chest to encourage breastfeeding.**

Continue with essential newborn care, identify the baby, and complete the birth record.

## Facilitate practice

**Ask participants to practice in pairs**

- Clamp or tie and cut the umbilical cord using locally available supplies
- Position the baby to encourage breastfeeding
- Communicate with the mother

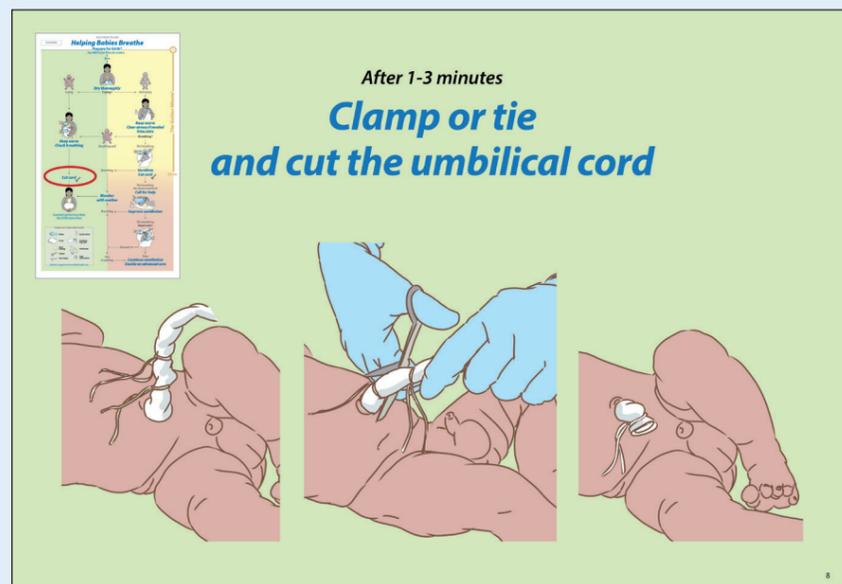
## Check yourself (page 19)

*How long should you wait to clamp or tie and cut the umbilical cord of a crying baby?*

- Clamp or tie and cut the cord immediately
- Wait 1 to 3 minutes to clamp or tie and cut the cord

*What actions help prevent infection of the umbilical cord?*

- Good hand washing, wearing clean gloves, cutting with sterile scissors
- Covering the cord to keep it moist



## Background

**Timing of clamping or tying and cutting the cord may vary.** Timing of clamping or tying and cutting the cord depends on the condition of the baby and the mother during the third stage of labor. Maternal bleeding or moving the baby to the area for ventilation may require earlier clamping or tying and cutting of the umbilical cord.

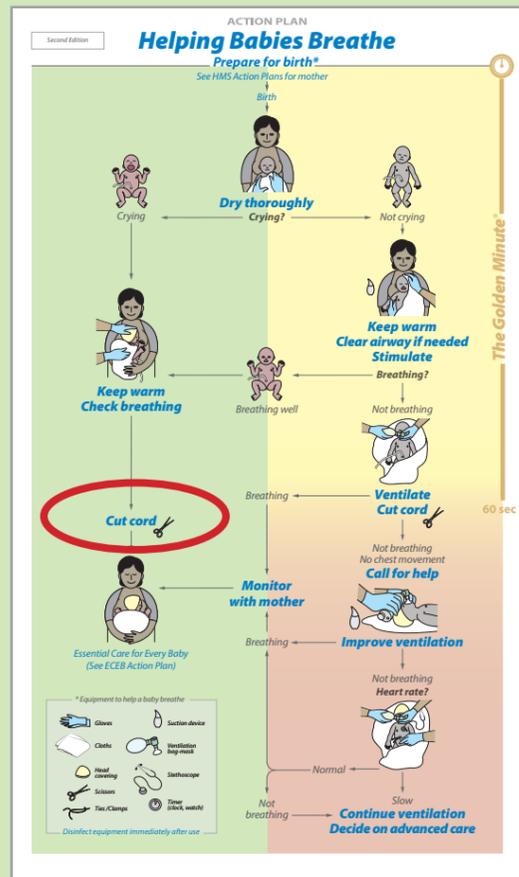
**Cleanliness is important to help prevent infection when clamping or tying and cutting the cord.** Infection of the umbilical cord can lead to serious infection. Everything used to clamp or tie and cut the cord should be sterile or highly disinfected. Follow the guidelines for clean delivery used in your region. In some regions, antiseptic solutions may be applied to the cord.

## Educational advice

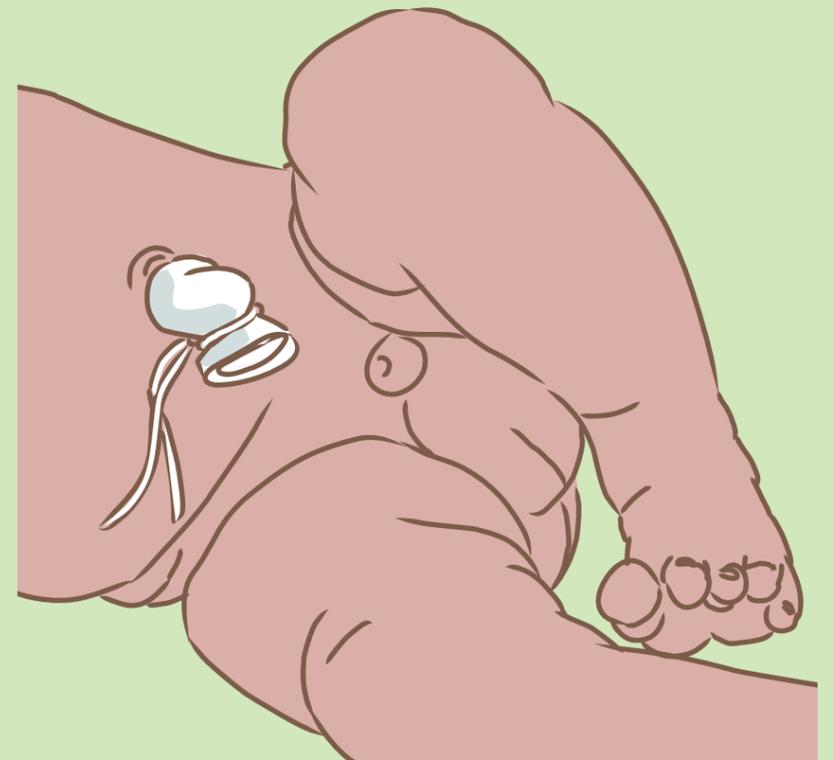
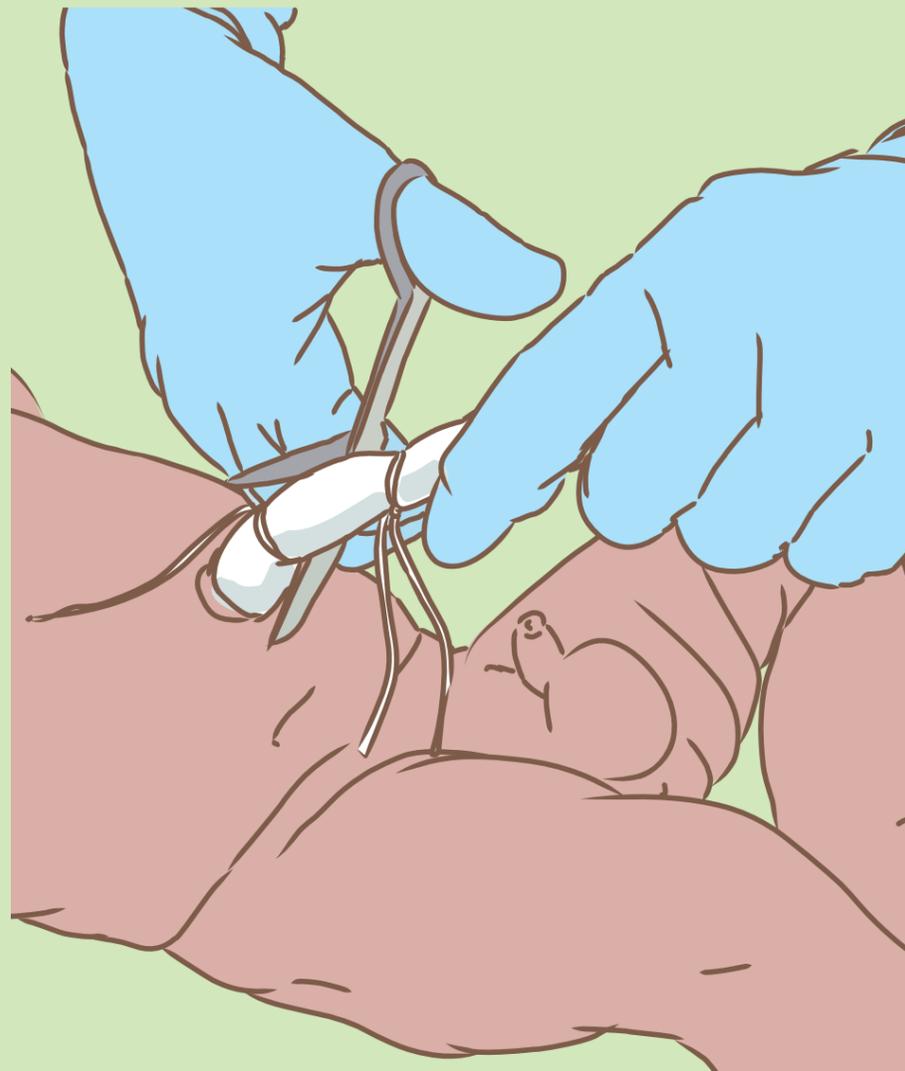
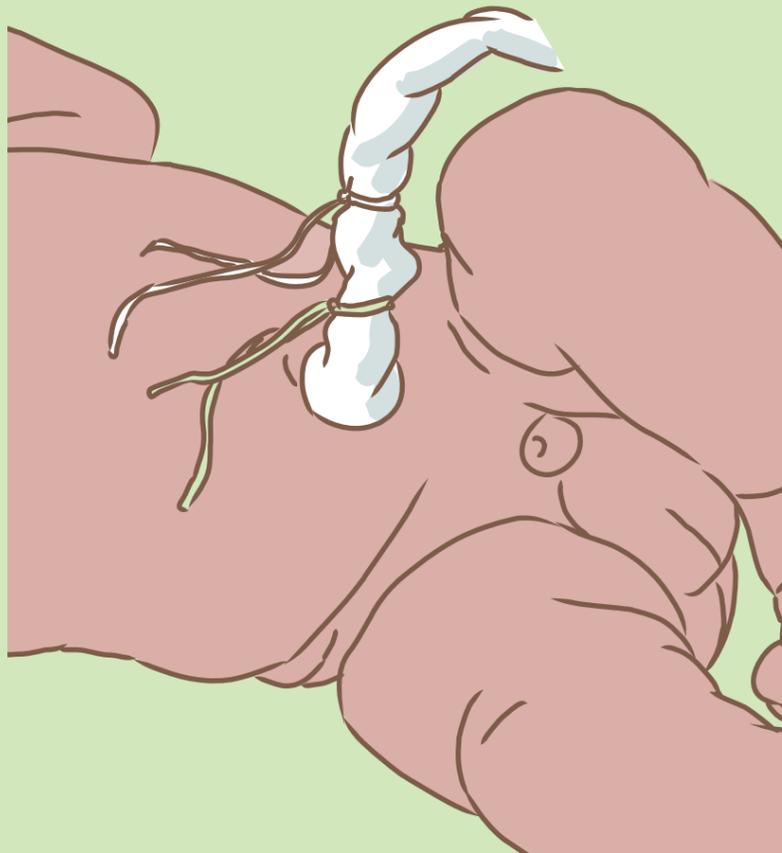
**The equipment and technique to clamp or tie and cut the cord differ from one area to another.** Have available the supplies that are used locally to clamp or tie and cut the cord. Demonstrate the local technique using devices that will not damage the neonatal simulator or mannequin. For example, hair pins or clips can be used to simulate cord clamps. Plastic knives can be used to simulate scalpels.

Emphasize ways to prevent infection: clean gloves (wash or change gloves or remove the first pair if double-gloved), clean clamp or tie, sterile or highly disinfected blade or scissors, putting nothing on the cord (unless antiseptic solutions are used).

Ask participants to discuss how they identify babies in their facility. Discuss what information should be recorded immediately after birth.



After 1-3 minutes  
**Clamp or tie  
and cut the umbilical cord**

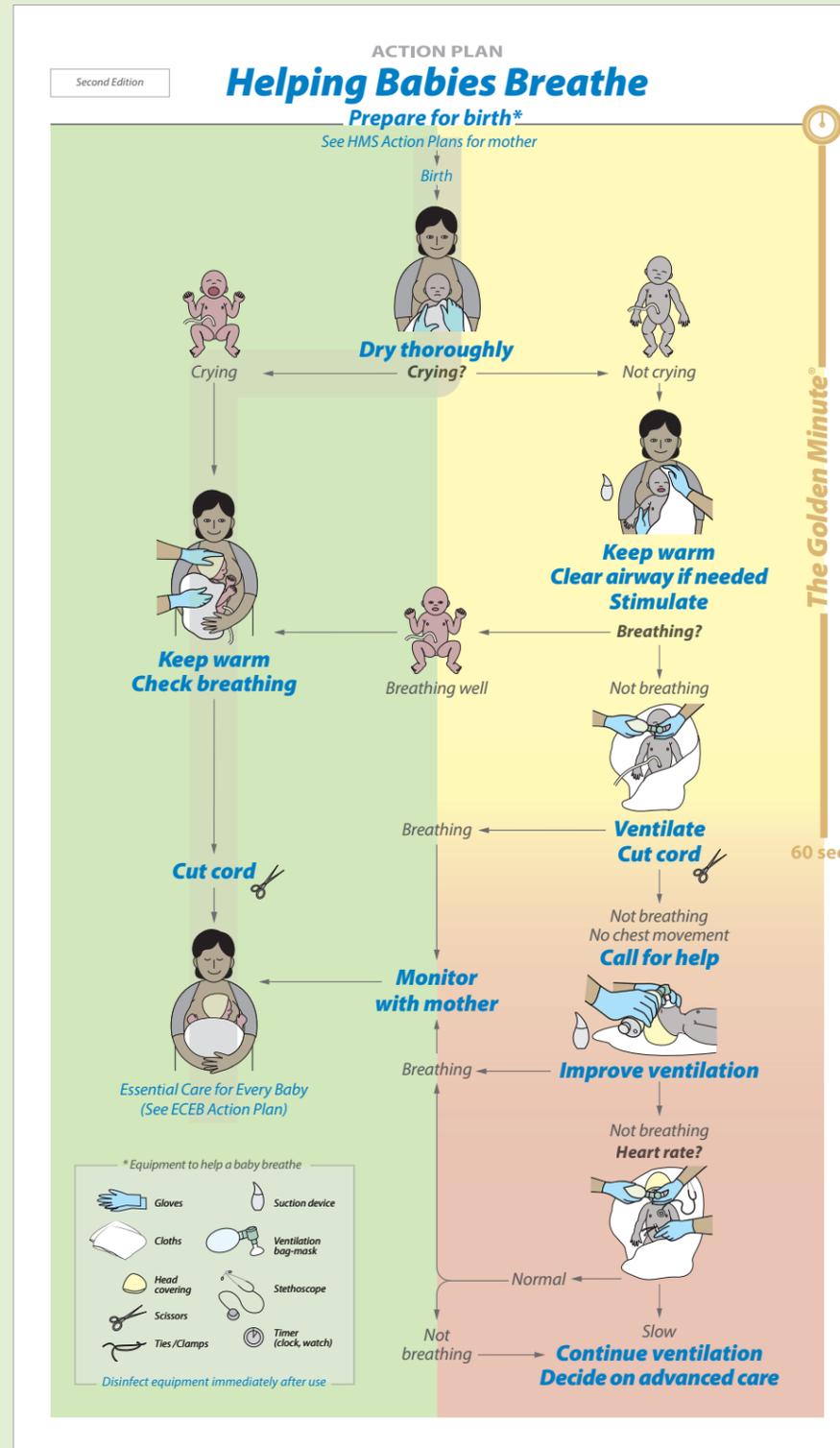


## Exercise: Routine care (pages 20-21)

The facilitators will demonstrate routine care and the baby's responses.

Participants will work in pairs with the mannequin to practice the checklist. One person takes the role of the birth attendant. The other person takes the role of the mother and gives the response of the baby. The birth attendant communicates with the mother while providing routine care.

Participants give one another feedback, switch roles and repeat the exercise.



## Checklist

- Dry thoroughly
- .....
- Recognize crying
- .....
- Keep warm
- .....
- Check breathing
- .....
- Clamp or tie and cut the umbilical cord
- .....
- Position on mother's chest to encourage breastfeeding
- .....
- Continue with essential newborn care, identify the baby, and complete the birth record
- .....

## Educational advice

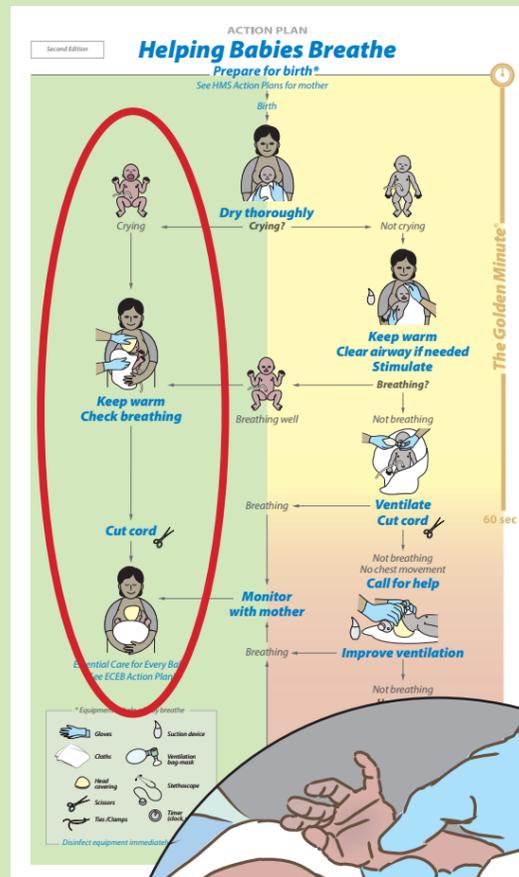
### In a small group of participants (no more than 6 persons with 1 facilitator)

- Demonstrate routine care and communication with mother.
- Have participants practice the checklist in pairs and give one another feedback.
- Answer questions and encourage correct actions during the exercise.
- Share feedback with the whole group after the exercise.
- Review the group discussion questions.

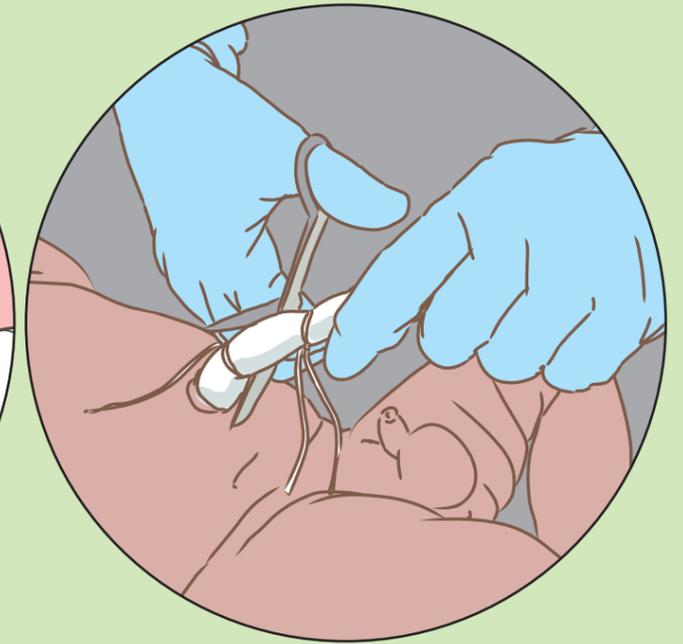
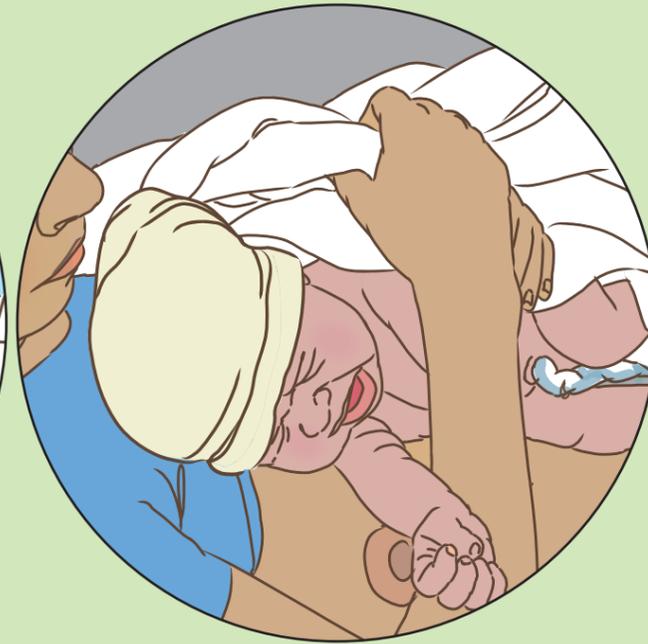
## Group discussion

At the end of the exercise, ask participants to answer these questions in the small group. Encourage them to think about how they will put the skills learned into practice. Make note of other questions that participants ask and their answers.

1. Where will you place a baby receiving routine care immediately after birth? In your experience, do mothers routinely practice skin-to-skin care?
2. How can you protect mother and baby from infection during and after birth?
3. Who cares for the baby if the mother has a problem after birth?



# Exercise: Routine care



**Ask a participant to point out**  
*The Golden Minute*

## Explain and demonstrate

**Begin The Golden Minute with a breath-holding exercise.**

Ask participants to stand and breathe deeply. Then ask them to hold their breath for 1 minute. Call out the time every 15 seconds. Ask participants to be seated if they need to take a breath before one minute.

*“By one minute a baby should be breathing or receiving ventilation.”*

**If the baby is not crying, help the baby breathe in The Golden Minute.**

### Keep warm

- Keep the baby skin-to-skin
- Cover the head (helper may assist)

### Clear the airway if needed

- Position the head slightly extended
  - Remove secretions from the airway if they are blocking the mouth or nose
- OR
- if there is meconium in the amniotic fluid

**Suctioning too long, too vigorously, too deeply, or too often can cause injury, slow heart rate and prevent breathing.**

### Stimulate breathing

- Rub the back 2 or 3 times

## Facilitate practice

**Ask the participants to practice in pairs**

- Keep warm
- Clear the airway - position the head, remove secretions if needed
- Stimulate breathing

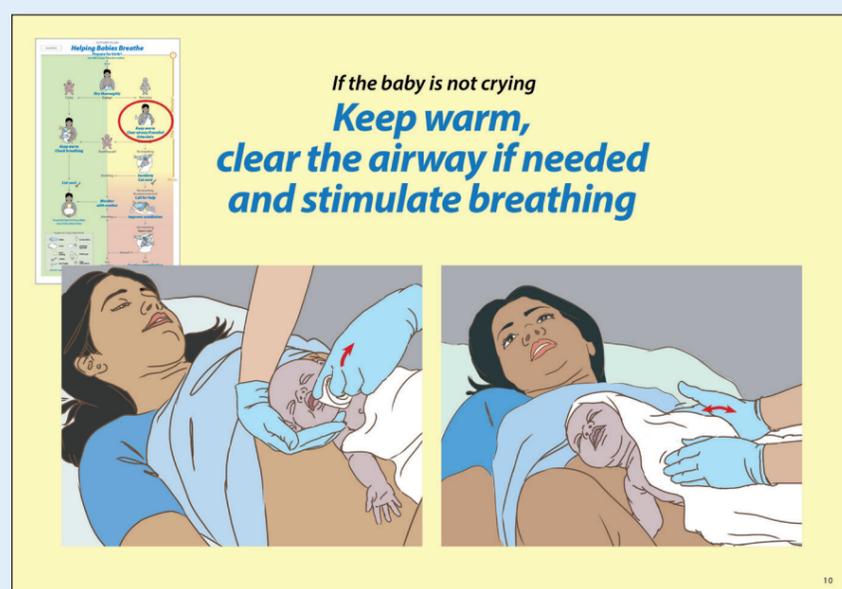
## Check yourself (page 23)

*Which babies need clearing of the airway with a suction device?*

- Babies who have secretions blocking the mouth or nose
- All babies who are not crying

*Suctioning several times or suctioning deeply can*

- Stimulate a baby's breathing
- Keep a baby from breathing



## Background

**Clearing the airway can cause harm if done unnecessarily or not done gently.** Suction only if there are secretions blocking the nose or mouth or if there is meconium in the amniotic fluid. Suctioning too deeply can bruise or tear the back of the throat. Suctioning or wiping too hard can injure the lining of the mouth. In both cases, the baby may not breastfeed well. Suctioning repeatedly or too long can keep a baby from breathing or cause a baby to have difficulty breathing.

**The device used to clear the airway differs from one area to another.** Each device has advantages and disadvantages. Any device can introduce infection if it is not disinfected before re-use. Otherwise, the device must be discarded (page 26b).

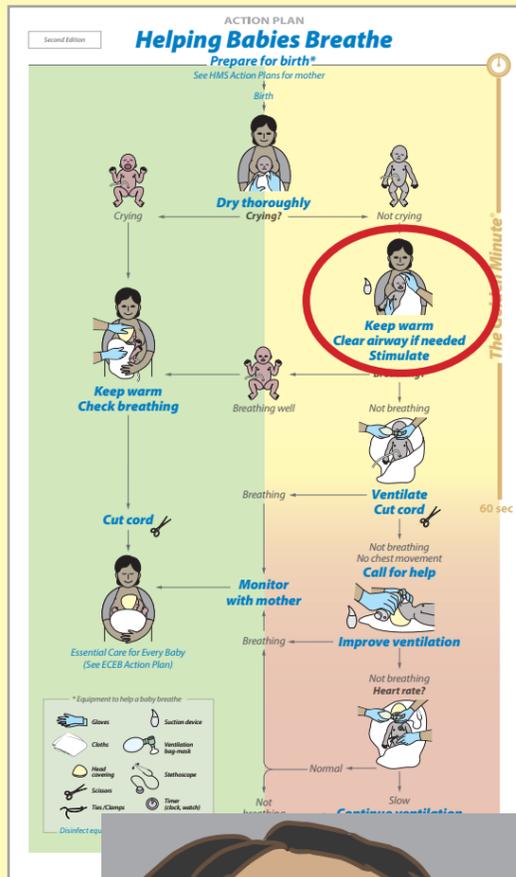
**Some forms of stimulation can harm babies and should never be used.** Harmful methods include slapping the back, squeezing the ribs, forcing the thighs onto the abdomen, dilating the anus, using hot/cold water, and shaking or holding the baby upside down. Help participants evaluate other methods of stimulation that may be in use.

**Stimulation can help a baby begin to breathe, even after drying. Prolonged suctioning or stimulation are unlikely to be effective, may cause harm, and will delay ventilation.** If a baby is not breathing well or crying after clearing the airway and brief stimulation, the baby needs ventilation with bag and mask. More stimulation alone is unlikely to be effective. Prolonged stimulation only wastes time while the baby is becoming sicker. Stimulation can be given to improve and sustain spontaneous breathing during and after ventilation with bag and mask.

## Educational advice

Emphasize that there are two ways to clear the airway- first by positioning the head and second by removing secretions that are blocking the airway. Stimulation by rubbing the back is a separate step from drying.

Use suction devices available locally to demonstrate the skill. Discuss their advantages and disadvantages. Help participants use the bulb suction device correctly by transferring water from one container to another.



If the baby is not crying

**Keep warm,  
 clear the airway if needed  
 and stimulate breathing**



Ask a participant to point out the evaluation question “Breathing?” and decisions “Breathing well” or “Not breathing”

## Explain and demonstrate

### A baby who is breathing well

- Crying
- OR
- Breathing quietly and regularly

### A baby who is not breathing well

- Gasping
- OR
- Not breathing at all

Babies with shallow, irregular, slow or noisy breathing or chest indrawing need continued monitoring.

## Facilitate practice

### Ask participants to practice in pairs

Use a neonatal simulator or mannequin to show

- Crying
- Breathing quietly and regularly
- Gasping
- Not breathing at all

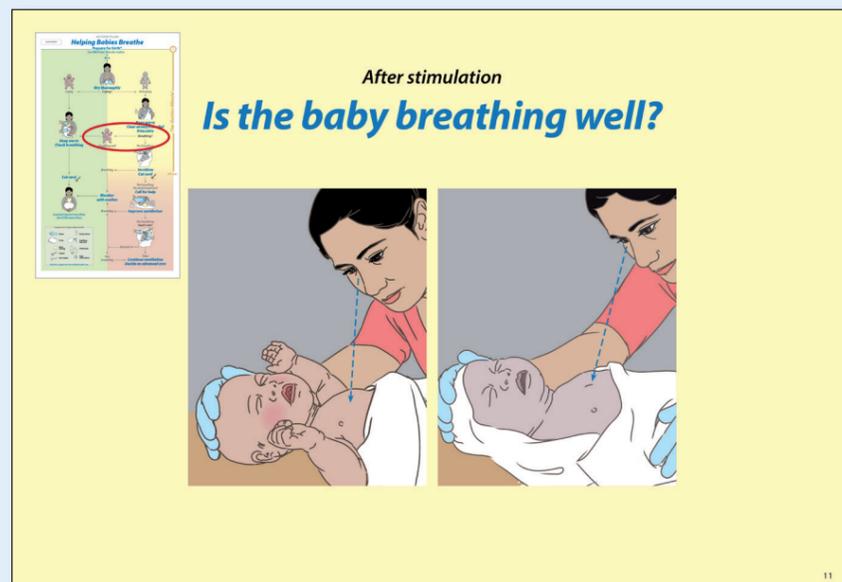
## Check yourself (page 25)

A baby is not breathing well after drying and rubbing the back. There are no visible secretions. What should you do?

- Suction the airway and give more stimulation
- Ventilate with bag and mask

Which baby is breathing well?

- A baby who is breathing quietly and regularly
- A baby who takes one deep breath followed by a long pause



### Background

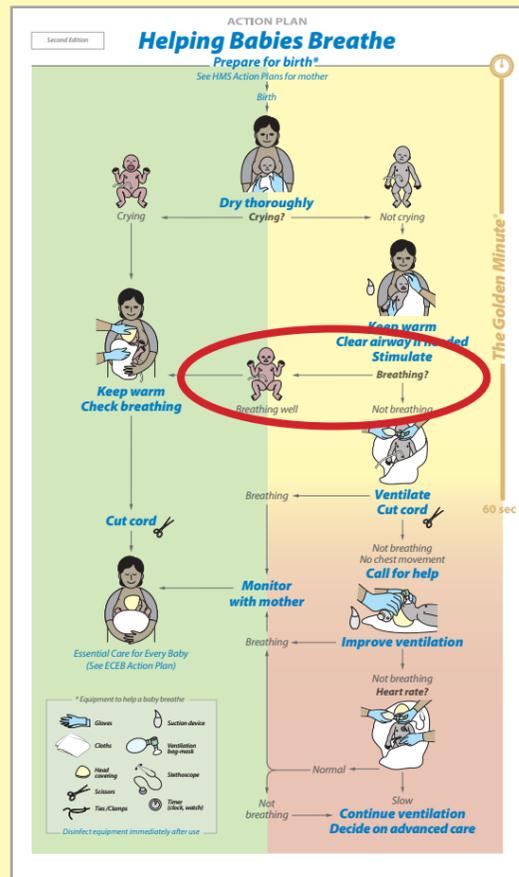
Some babies will require close monitoring to determine if they need more help to breathe. Some babies who breathe abnormally will improve and begin to breathe normally. Others will need more help to breathe.

If a baby is not breathing well after clearing the airway and stimulation, the baby needs ventilation with bag and mask. Prolonged evaluation only delays needed action.

### Educational advice

Demonstrate different patterns of breathing with the simulator or your own breathing: crying, breathing quietly and regularly, gasping, not breathing.

Ask participants to practice producing and identifying these patterns of breathing that will be the basis for deciding on the next action step.



After stimulation

**Is the baby breathing well?**



# Exercise: The Golden Minute® – clear the airway if needed and stimulate breathing

(Pages 26-27)

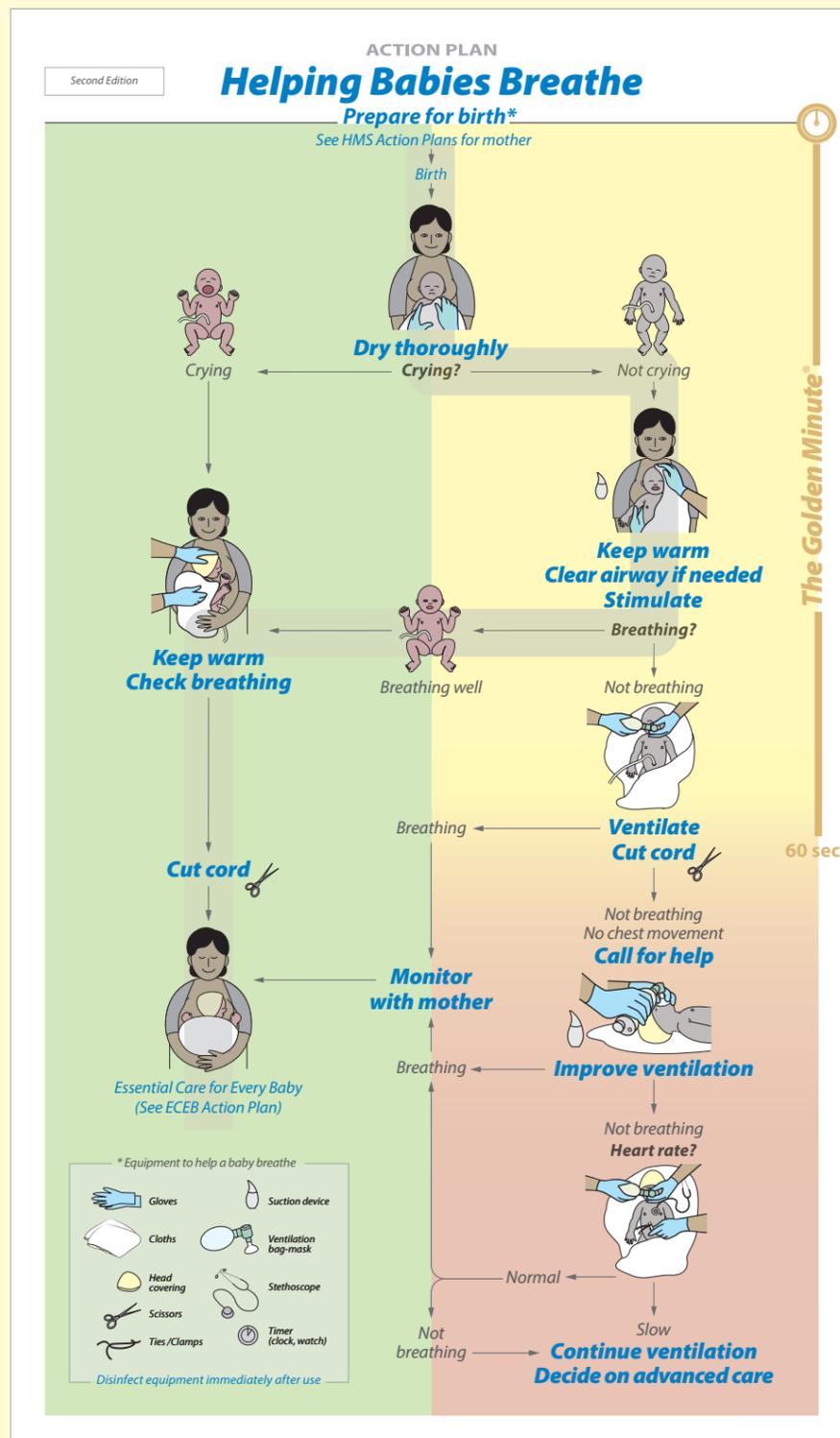
The facilitators will demonstrate clearing the airway and stimulating breathing during The Golden Minute and the baby's responses.

Participants will work in pairs with the mannequin to practice the checklist. One person takes the role of the birth attendant. The other person takes the role of the mother and gives the response of the baby. The birth attendant communicates with the mother.

Participants review their actions, give one another feedback, switch roles and repeat the exercise.

Participants should be prepared to care for a baby with

- meconium in the amniotic fluid
- secretions blocking the nose or mouth
- no secretions



## Checklist

- Dry thoroughly
- .....
- Recognize not crying
- .....
- Keep warm
- .....
- Clear airway if needed
- .....
- Stimulate breathing
- .....
- Recognize breathing well
- .....
- Check breathing
- .....
- Clamp or tie and cut the umbilical cord
- .....
- Position on mother's chest to encourage breastfeeding
- .....
- Continue with essential newborn care, identify the baby, complete the birth record, and review your actions
- .....

## Educational advice

In a small group of participants (no more than 6 persons with 1 facilitator)

- Demonstrate The Golden Minute – clear airway and stimulate breathing and communication with mother and a helper.
- Have participants practice the checklist in pairs and give one another feedback.
- Answer questions and encourage correct actions during the exercise.
- Ask participants to review their actions (**debrief**) after helping a baby breathe.

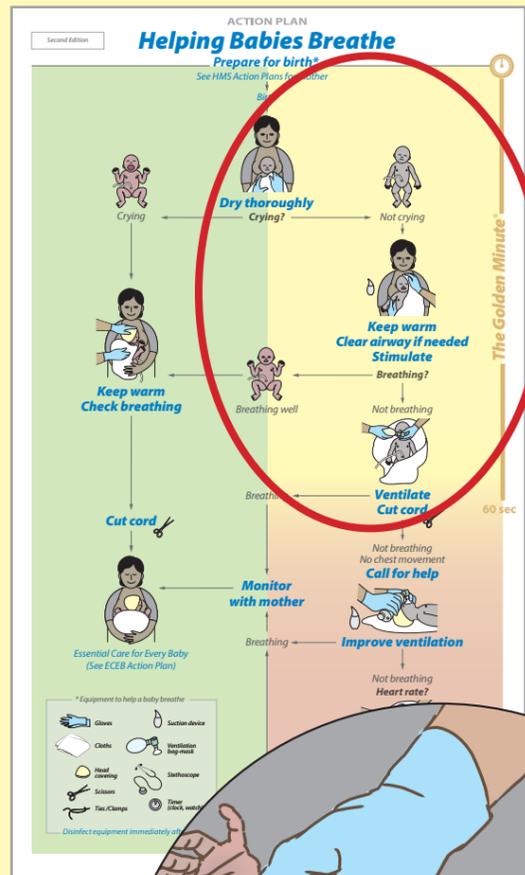
- What happened at the birth?
- Did you follow the Action Plan?
- What went well and what could have gone better?
- What did you learn?
- What will you do differently next time?

- Share feedback with the whole group after the exercise.
- Review the group discussion questions.

## Group discussion

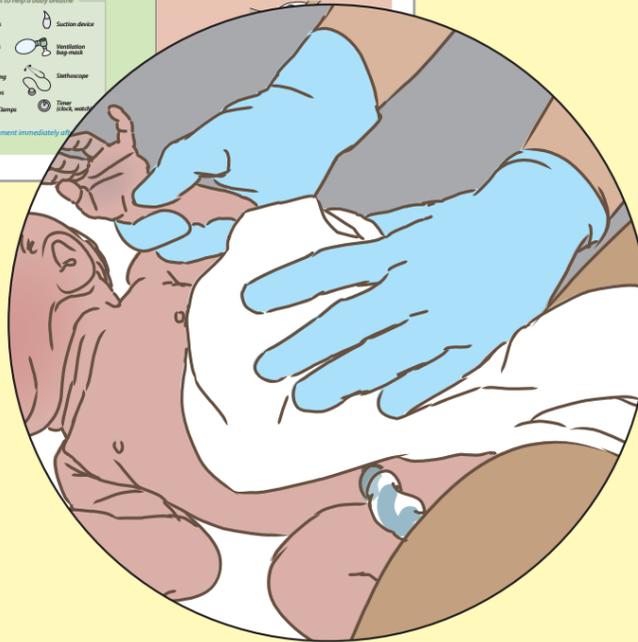
At the end of the exercise, ask participants to answer these questions in the small group. Encourage them to think about how they will put the skills learned into practice. Make note of other questions that participants ask and their answers.

1. How do you clear secretions blocking a baby's nose and mouth? What are the advantages and disadvantages of this method?
2. Do all babies have their mouth and nose suctioned? Is this useful or harmful?
3. Drying and rubbing the back are methods to stimulate breathing. Are other methods used in your region? Are these methods useful or harmful or neither?



# Exercise: The Golden Minute

– clear the airway if needed and stimulate breathing



60 sec

Ask a participant to point out the action step “Ventilate-Cut cord”

## Explain and demonstrate

**Ventilation with bag and mask is the most effective way to help the baby who is not breathing or is gasping.**

### Begin to ventilate

- Follow your facility’s routine for when to clamp or tie and cut the cord
- Place the baby on the area for ventilation
  - Beside the mother if the cord is not cut
  - A separate area if the cord is cut
- Stand at the baby’s head
- Check that the mask size is correct

## Facilitate practice

### Ask participants to practice in pairs

- Decide when to clamp or tie and cut the cord
- Place the baby on the area for ventilation
- Stand at the baby’s head
- Check that the mask size is correct

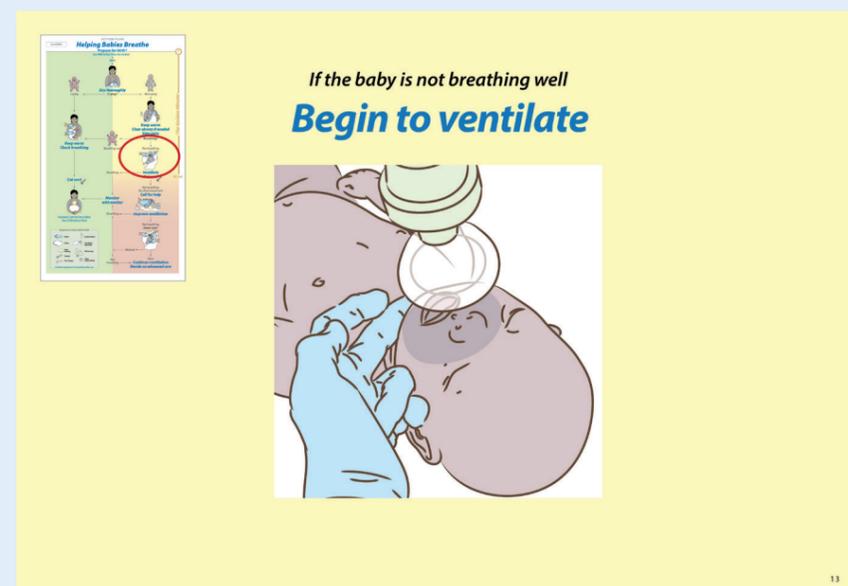
## Check yourself (page 29)

### How do you select the correct mask?

- Select the mask that covers the chin, mouth, and nose, but not the eyes
- Select the mask that covers the chin, mouth, nose, and the eyes

### Where will you place the baby for ventilation?

- In a crib to protect from cold
- On a flat, warm, dry surface



## Background

**During The Golden Minute the most important steps to help a baby breathe are performed.** Clearing the airway and stimulation help many babies breathe well. Ventilation is the most effective way to help the baby who has not responded to clearing the airway and stimulation. Ventilation carries air into the lungs. It starts the changes in the body that are necessary so the baby can begin to breathe.

**Within The Golden Minute the baby should be breathing well or receiving ventilation.** Delay in starting ventilation will mean that a baby needs ventilation longer before beginning to breathe. Delay in ventilation may cause serious brain damage.

**Each facility should decide on a routine for when to clamp or tie and cut the cord. The best time to cut the cord of the baby who needs ventilation is not known. It is known that babies who do not breathe or receive ventilation by one minute are more likely to die. Cutting the cord should not delay ventilation.** In some cases, clamping or tying and cutting the cord will occur after ventilation has begun. A second skilled person may clamp or tie and cut the cord. Clamping is often faster than tying.

**The area for ventilation depends on where an appropriate space is available and whether the cord is cut before or after ventilation begins.**

**Assembling equipment and supplies and checking the bag and mask should be part of preparation for every birth.** It is too late to look for equipment when a baby is not breathing.

**Checking the mask size is important to form a tight seal on the face and keep the airway open during ventilation.**

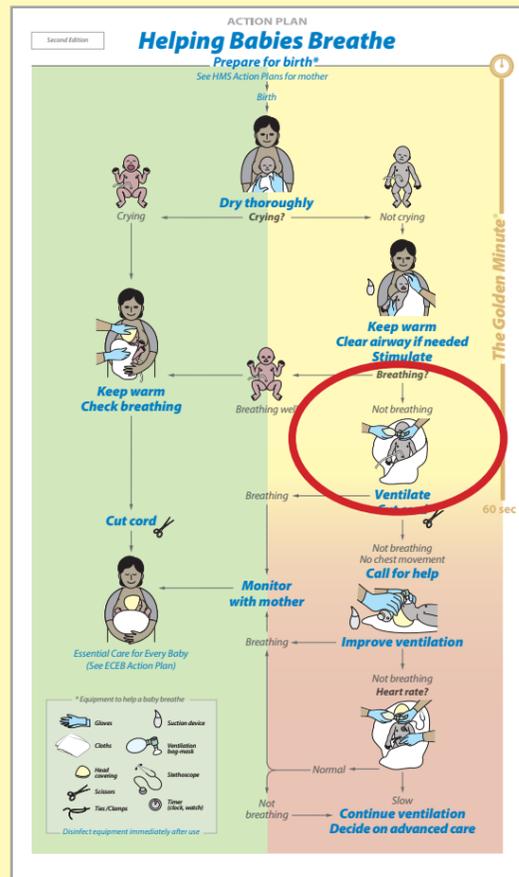
- If the mask is too large, it will not make a good seal.
- If the mask is too small, it can block the mouth and nose.

A mask with a round or pointed shape may be used. When using a pointed mask, the pointed part fits over the nose and the round part fits over the chin. Masks with cushioned or flexible rims follow the shape of the face and form a seal more easily.

## Educational advice

Discuss how participants will decide when to clamp or tie and cut the cord and where to ventilate a baby in their facility. Practice the order of steps they will use. Show how incorrect position can make ventilation ineffective.

Demonstrate how a mask that is too large will not make a seal. Show how a mask that is too small can block the airway. Use masks that are available in the facility to show that torn or incomplete masks will not make a seal.



If the baby is not breathing well  
**Begin to ventilate**



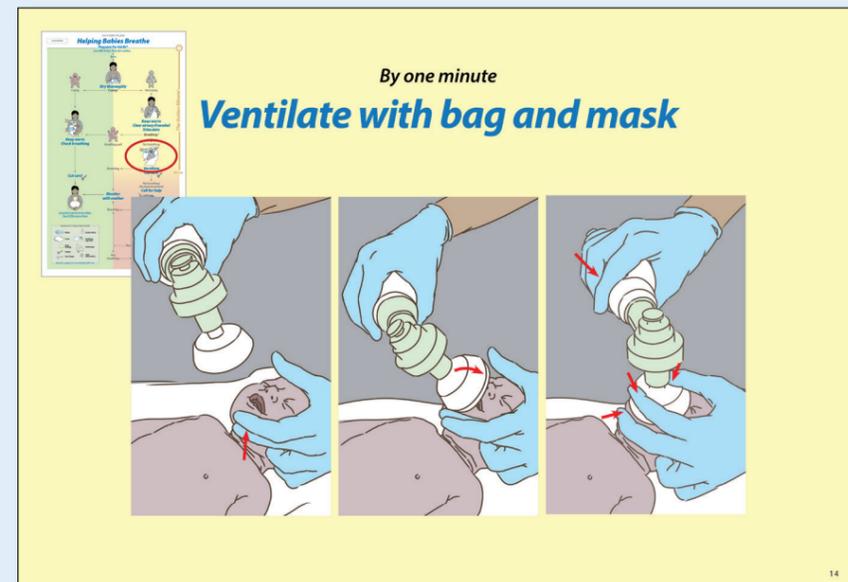
Ask a participant to point out the action step “Ventilate”

## Explain and demonstrate

### Ventilate with bag and mask

- Position the head slightly extended
- Apply the mask to the face
- Make a tight seal between the mask and face
- Squeeze the bag to produce gentle movement of the chest
- Give 40 ventilation breaths per minute

If the chest is moving with each ventilation breath, continue ventilation for 60 seconds or until the baby begins to breathe.



## Facilitate practice

### Ask participants to practice in pairs

- Position the head
- Apply the mask to the face
- Make a tight seal
- Squeeze the bag to produce gentle movement of the chest
- Give 40 ventilation breaths in one minute

### Develop with the learners a method to set the correct tempo for ventilation.

## Check yourself (page 31)

What allows you to move air into a baby's lungs during ventilation?

- A flexed position of the head
- A good seal between the mask and the face

To help keep the baby's airway open, you should position the head

- Slightly extended
- Hyperextended

## Background

The amount of air delivered with each ventilation breath from a bag and mask depends on 3 factors:

- The amount of air that leaks between the mask and face
- How hard and how long you squeeze the bag
- The set point of the pop-off (pressure-release) valve

Deliver enough air to move the chest as if the baby is taking a normal breath. Too little air means the baby may not improve. Too much air may damage the lungs.

**A ventilation device may or may not have a pop-off valve.** If a ventilation bag has a pop-off valve, know the set-point at which air escapes. This valve limits the amount of air sent to the lungs – even when you squeeze the bag very hard. Closing the valve makes it possible to give a larger breath. A very large breath can rupture the baby's lungs.

## Educational advice

There are 3 steps in placing the mask for ventilation. The 2 most important and difficult steps in ventilation are correct head position and making a tight seal. Ask participants to experiment with correct and incorrect position of the head. Note the change in chest movement. Help each person find the hand

position that forms a tight seal between the mask and face.

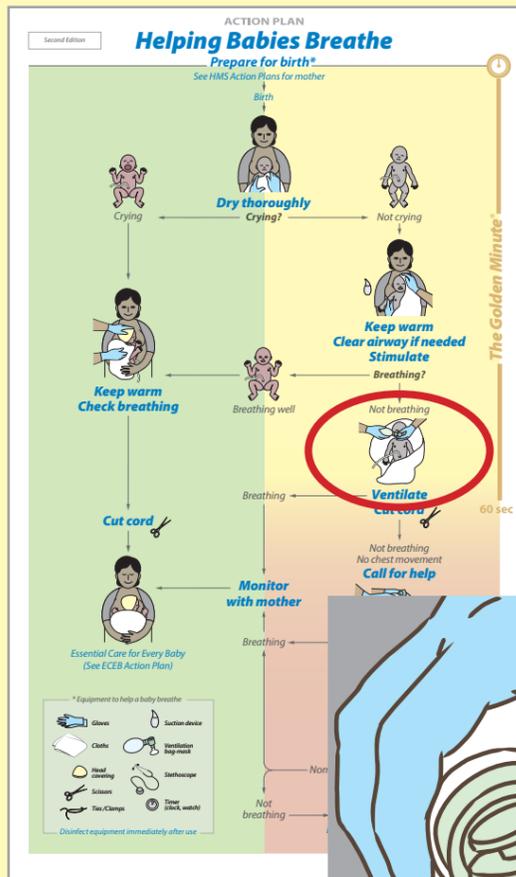
- Two-point method: The tips of the thumb and first finger push down on the mask
- Encircling method: The thumb and the first finger form the letter “c” around the top of the mask

Show how holding the mask by the rim deforms the mask and creates a leak.

Make sure that each participant can maintain good head position with proper chin support. Pushing down on the mask without lifting up on the chin and jaw can flex the head and block the airway. Participants should practice until they can move the chest gently each time they give a ventilation. Help participants find leaks by feeling where the air escapes against their hand.

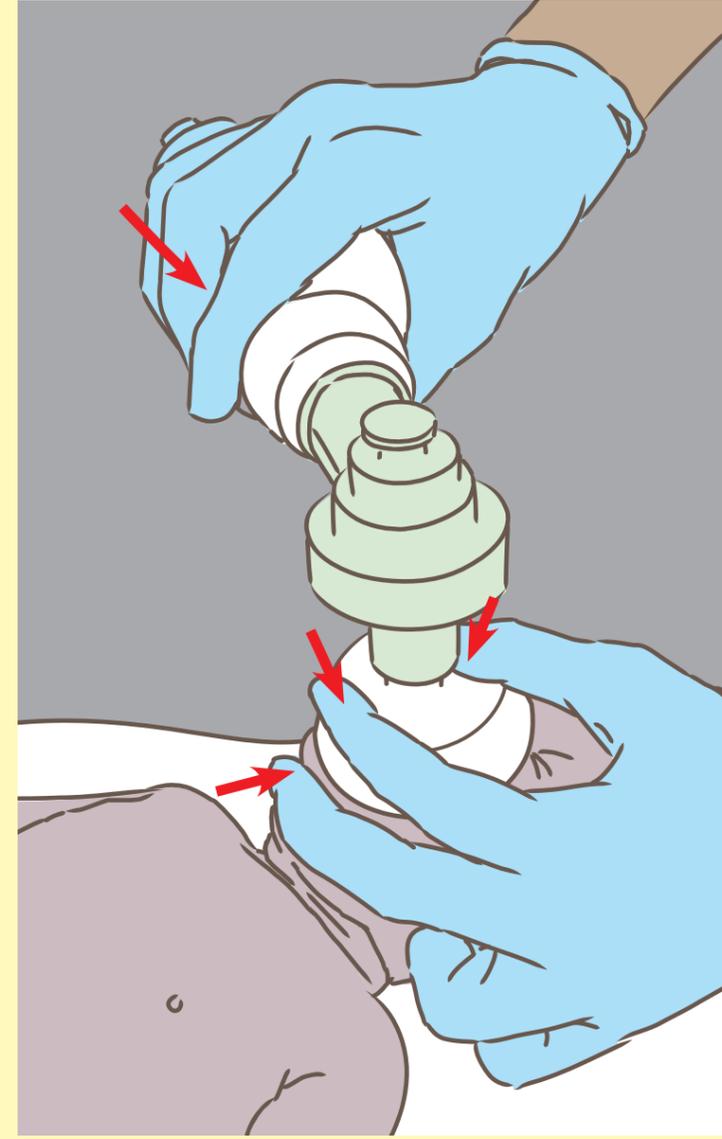
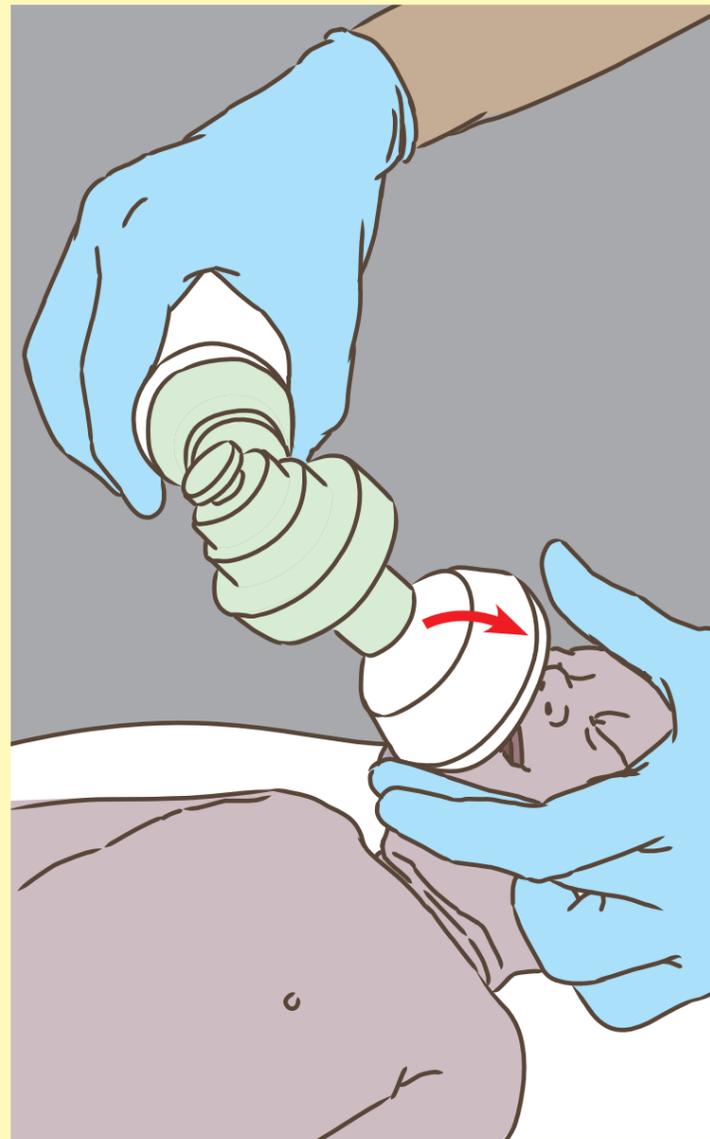
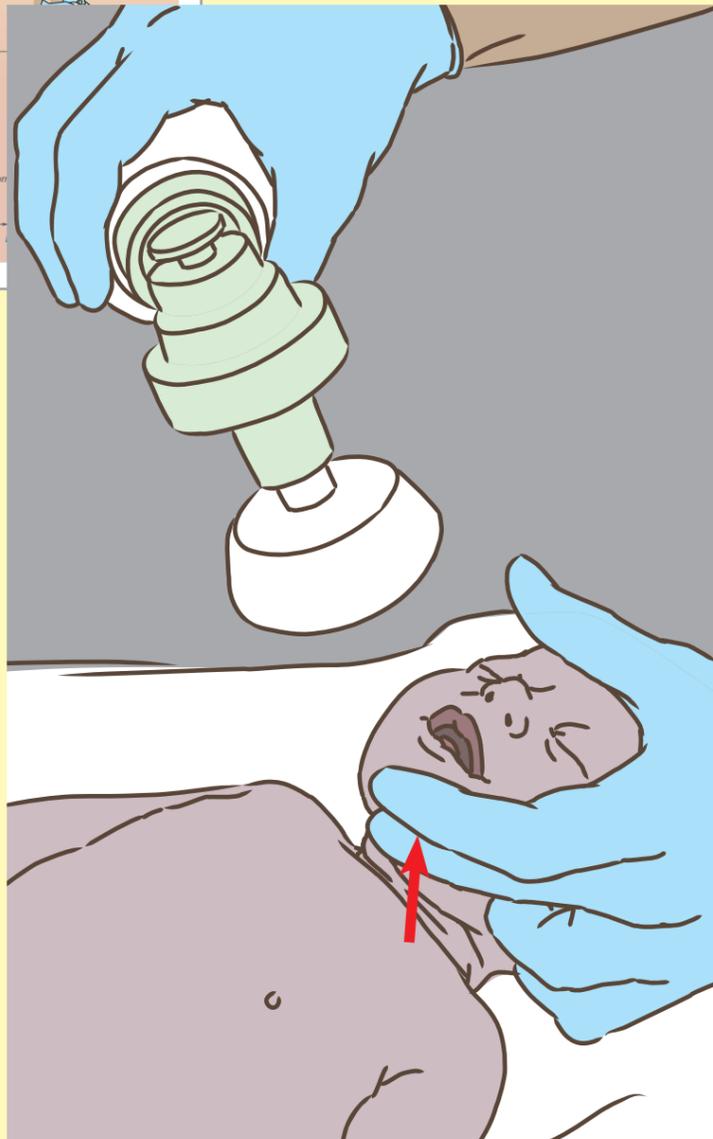
**Ask participants to ventilate for a full minute. A sand timer or timer on a cell phone is a convenient way to measure a minute. Watch for smooth flow of air from the bag into the baby, not jerky breaths. Help participants ventilate at the correct tempo.** There must be time for air to move out of the lungs between breaths. A rate between 30 and 50 breaths per minute is acceptable when trying to give 40 breaths per minute.

- Count aloud “1...2...3...1...2...3” and give a breath on “1”.
  - Use a timer or watch to set the tempo.
  - Ask participants to think of a phrase or a rhythm from a well-known song or dance that helps them keep a tempo of 40 breaths per minute.
- Encourage participants to help one another master the skill of ventilation.



By one minute

# Ventilate with bag and mask



**Ask a participant to point out**  
“Not breathing - No chest movement”

## Explain and demonstrate

### If the chest is not moving immediately

- Reapply the mask
- Reposition the head

### If the chest is moving well, continue to ventilate for one minute OR until the baby begins to breathe

- Crying OR
  - Breathing quietly and regularly
- Stop ventilation and monitor with mother.

### If the baby is not crying or breathing well the baby may be

- Gaspings
  - Not breathing at all
- Continue ventilation with good chest movement.

### OR the baby may be

- Taking fast, irregular, or shallow breaths
  - Grunting with chest wall indrawing
- Monitor with mother and provide more help to breathe if needed.

Demonstrate each type of breathing.

## Facilitate practice

### Ask participants to practice in pairs

- Evaluate chest movement
- Improve chest movement by reapplying the mask and repositioning the head

- Use a neonatal simulator or mannequin to show
  - Crying or breathing well
  - Gaspings or breathing abnormally
- Ventilate for one minute at 40 ventilations per minute with good chest movement

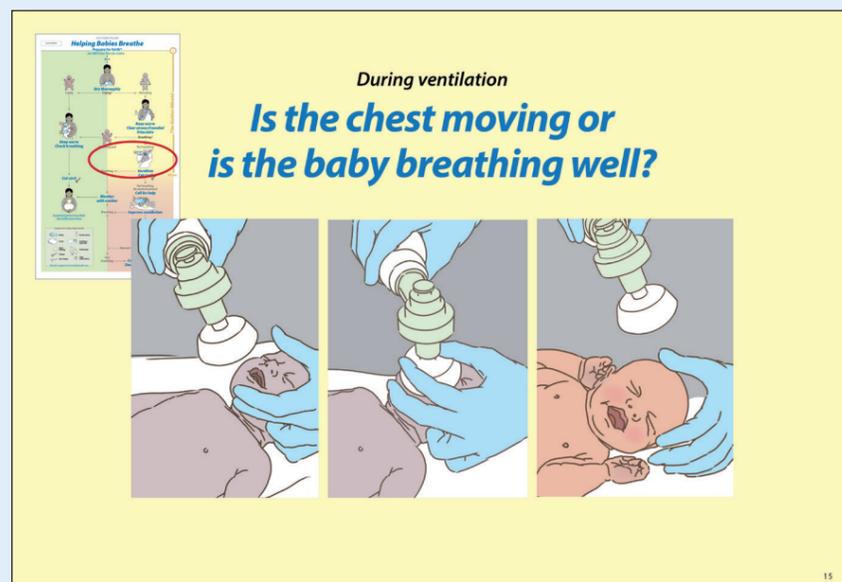
## Check yourself (page 33)

*A baby who is not breathing is receiving ventilation with bag and mask. The chest is moving gently with ventilation. What should you do?*

- Stop ventilation to see if the baby breathes
- Continue ventilation

*A baby begins to breathe well after 30 seconds of ventilation with bag and mask. What should you do?*

- Monitor the baby closely with the mother
- Provide routine care only



## Background

**Improvement in a baby's condition with ventilation may occur rapidly or slowly.** A baby may begin breathing after only a few ventilations. When the baby improves more slowly, you will need to look for other signs.

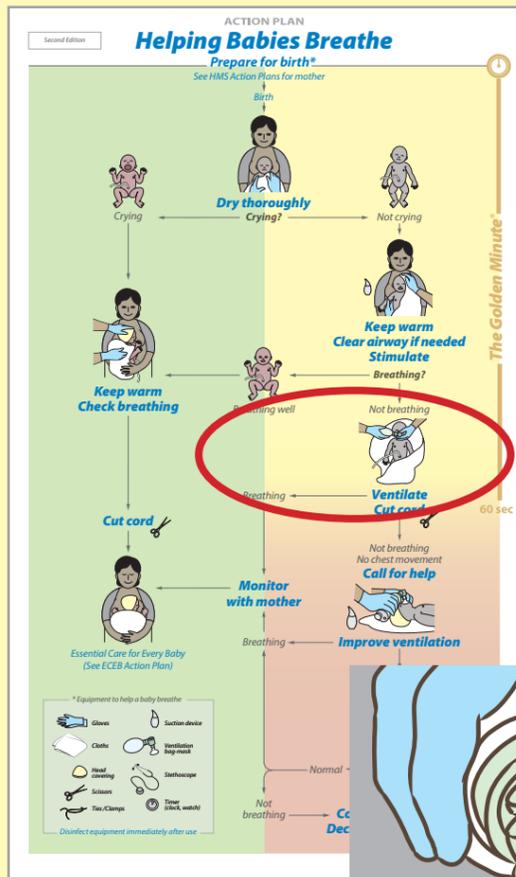
- The earliest sign that the lungs are being expanded with air is a rapid rise in the baby's heart rate. This cannot be seen. It requires feeling the umbilical cord pulse or listening to the heart rate with a stethoscope.
- Next, a baby will show improvement in color and muscle tone. The color will become pink. The baby will move and no longer be floppy.
- Finally, a baby's own breathing will begin.

## Educational advice

Demonstrate a variety of breathing patterns. Ask participants to identify fast, slow, shallow, and irregular breathing. Demonstrate grunting using your own voice and describe chest wall indrawing using the mannequin or simulator. Videos of abnormal breathing may be found at [www.globalhealthmedia.org](http://www.globalhealthmedia.org).

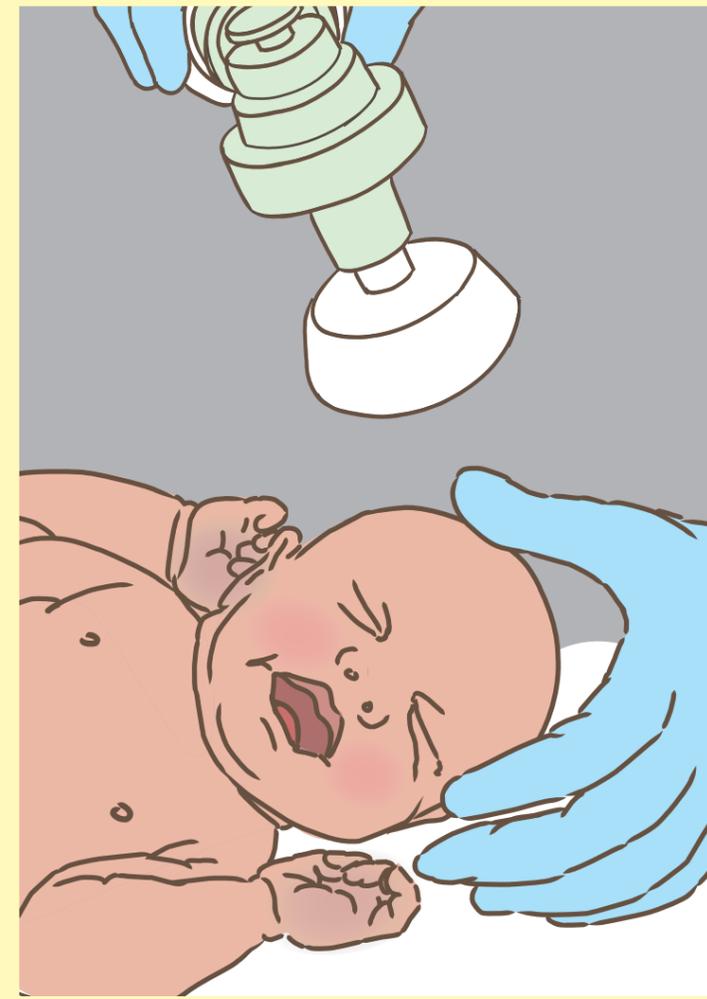
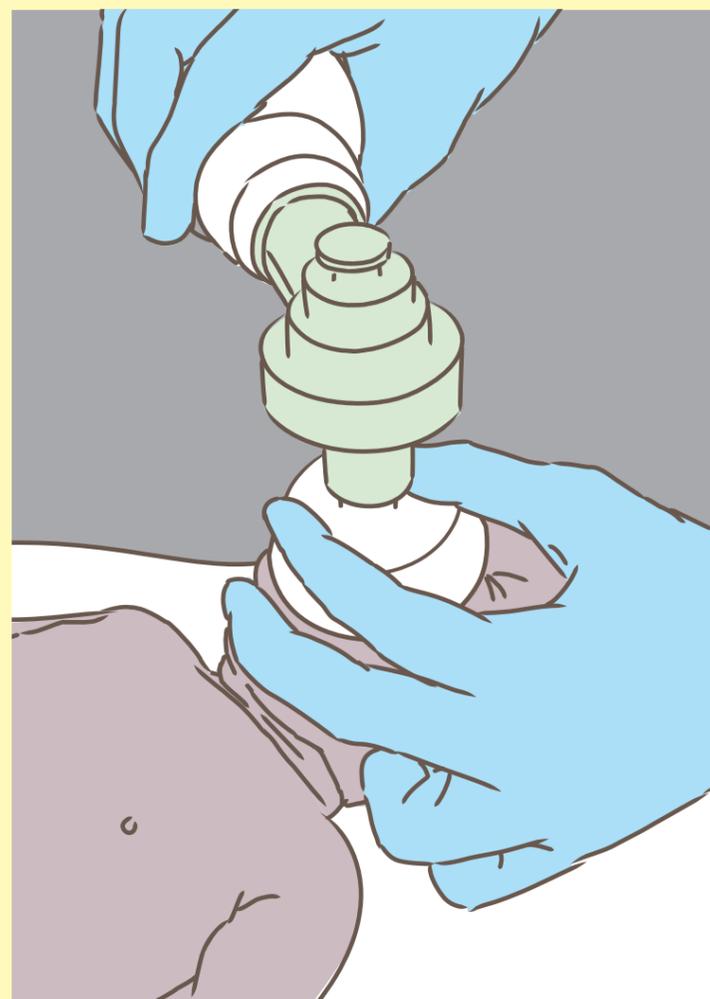
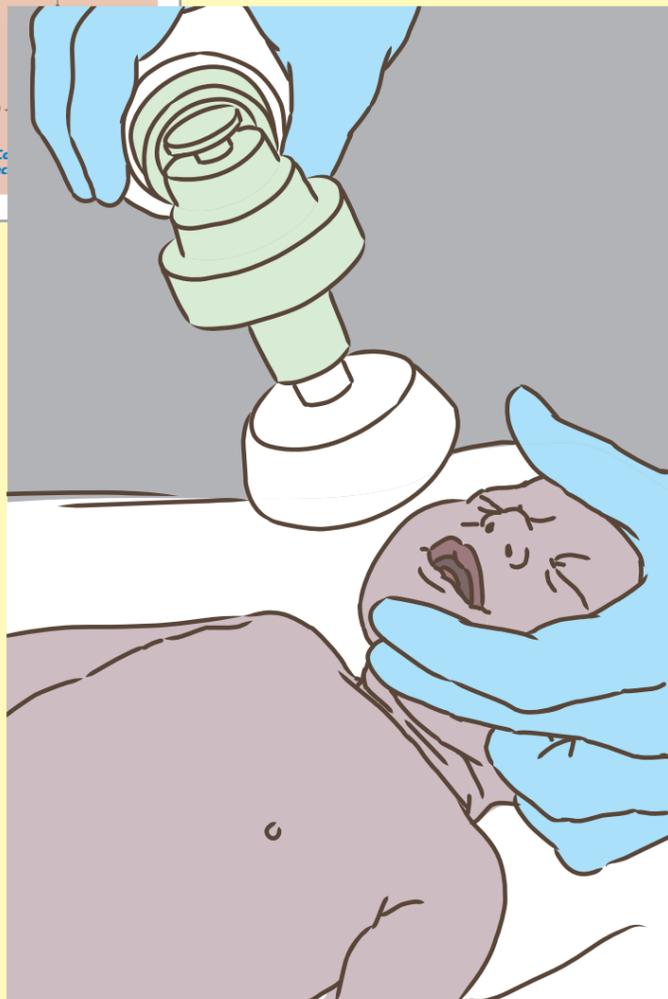
Emphasize the importance of watching chest movement with each breath. Demonstrate how to quickly reapply the mask and reposition the head simultaneously. These two actions address the two most common causes of the chest not moving.

Emphasize that if the baby is not breathing, the birth attendant should continue to ventilate. Ventilation does not stop until the baby breathes.



During ventilation

**Is the chest moving or is the baby breathing well?**



## Exercise: The Golden Minute - ventilation (pages 34-35)

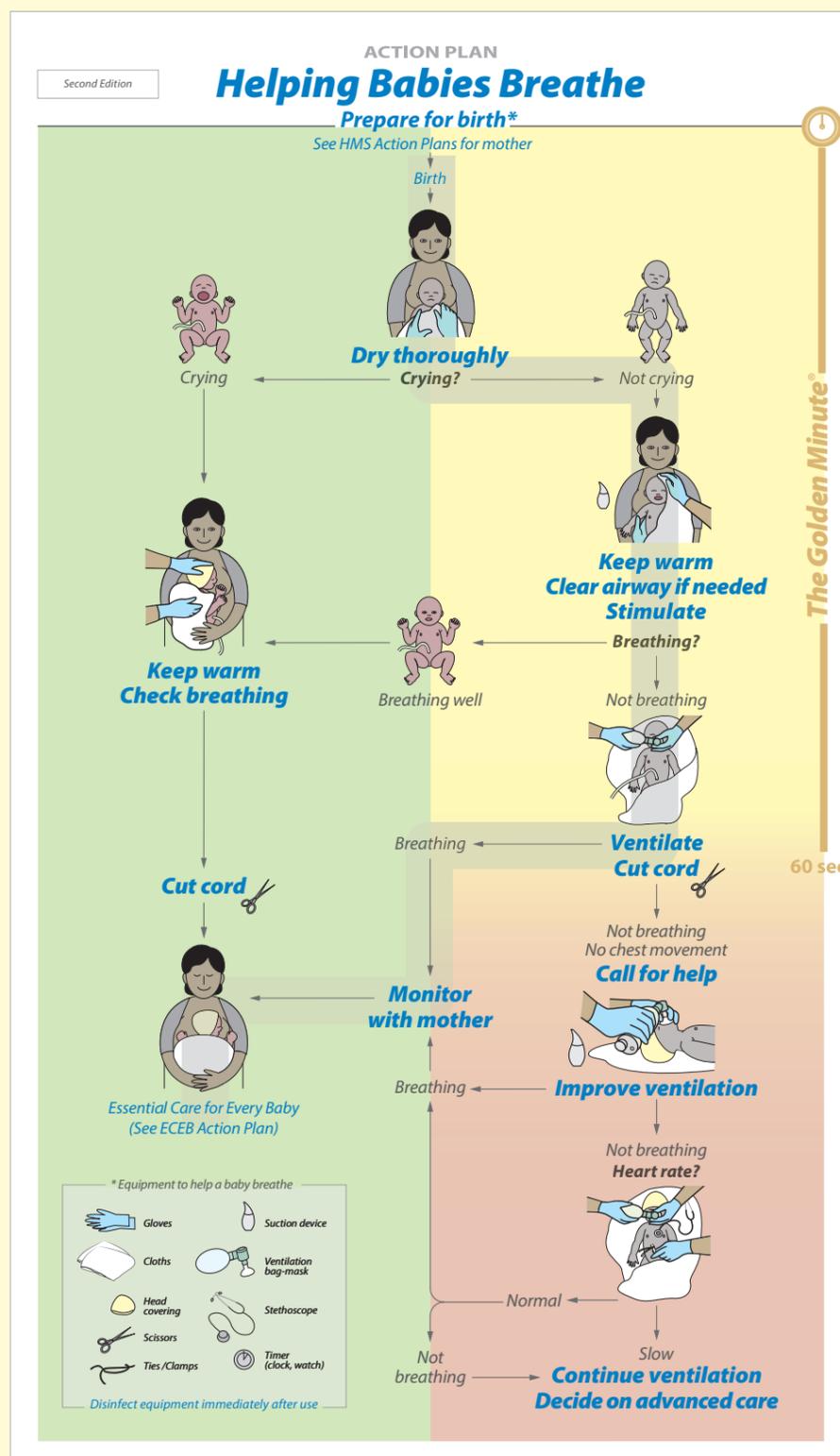
The facilitators will demonstrate The Golden Minute and the baby's responses.

Participants will work in pairs with the mannequin to practice the checklist. One person takes the role of the birth attendant. The other person gives the response of the baby and acts as the mother and a helper when needed. The birth attendant communicates with the helper and the mother.

Participants review their actions, give one another feedback, switch roles and repeat the exercise.

Participants should be prepared to care for a baby who

- does not breathe after clearing the airway and stimulating
- does not have good chest movement with ventilation
- breathes after brief ventilation



### Checklist

- Dry thoroughly
- .....
- Recognize not crying
- .....
- Keep warm, clear airway if needed
- .....
- Stimulate breathing
- .....
- Recognize not breathing
- .....
- Follow routine for when to clamp or tie and cut the umbilical cord
- .....
- Move to area for ventilation, stand at head, check mask size
- .....
- Ventilate (by 1 minute)
- .....
- Recognize chest moving/not moving
- .....
- Recognize breathing well
- .....
- Monitor with mother
- .....
- Continue with essential newborn care, identify the baby, complete the birth record, and review your actions
- .....

### Educational advice

In a small group of participants (no more than 6 persons with 1 facilitator)

- Demonstrate The Golden Minute – ventilation and communication with mother and a helper.
- Have participants practice the checklist in pairs and give one another feedback.
- Answer questions and encourage correct actions during the exercise.
- Ask participants to review their actions (**debrief**) after ventilation.

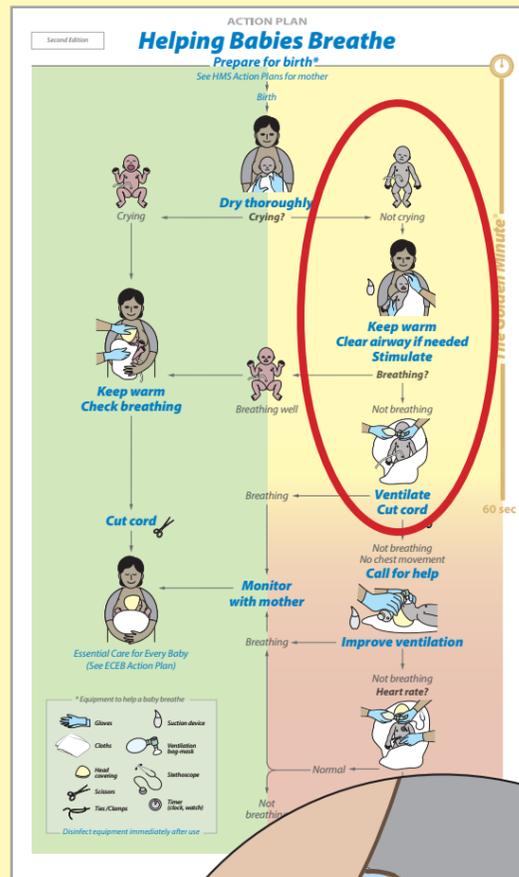
- **What happened at the birth?**
- **Did you follow the Action Plan?**
- **What went well and what could have gone better?**
- **What did you learn?**
- **What will you do differently next time?**

- Share feedback with the whole group after the exercise.
- Review the group discussion questions.

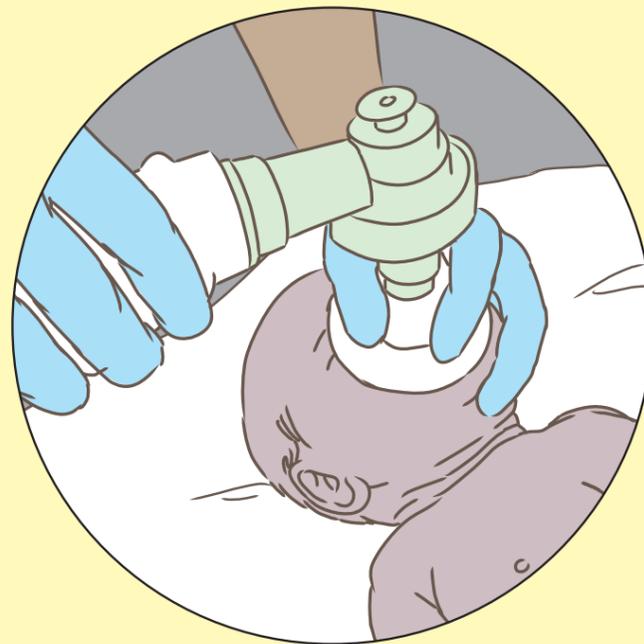
### Group discussion

At the end of the exercise, ask participants to answer these questions in the small group. Encourage them to think about how they will put the skills learned into practice. Make note of other questions that participants ask and their answers.

1. Where will you place a baby who needs ventilation with bag and mask? How will you keep the baby warm?
2. What is your facility's routine for when to clamp or tie and cut the cord of the baby who needs ventilation? How will you avoid delay in beginning ventilation?



# Exercise: The Golden Minute - ventilation



60 sec

Ask a participant to point out the action steps "Call for help" and "Improve ventilation"

## Explain and demonstrate

If the baby is not breathing, continue ventilation.

### Call for help

Ask for a skilled helper, if available

Improve ventilation if the chest is not moving

- Reapply mask
- Reposition head
- Clear mouth and nose of secretions
- Open mouth slightly
- Squeeze the bag harder

Cut the cord if not already done.

## Facilitate practice

Ask participants to practice in pairs

- Call for help
- Improve ventilation
  - Reapply mask
  - Reposition head
  - Clear mouth and nose of secretions
  - Open mouth slightly
  - Squeeze the bag harder

## Check yourself (page 37)

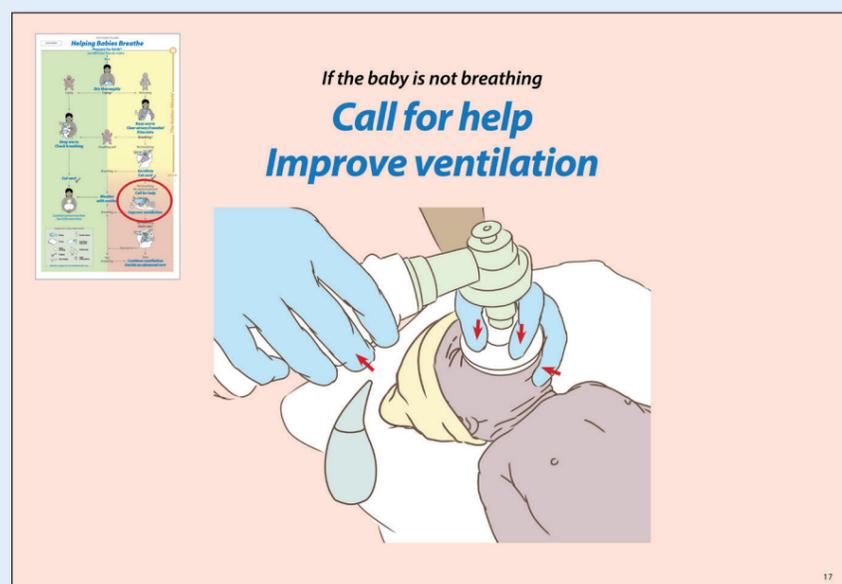
A baby's chest does not move with ventilation.

What should you do?

- Suction the airway and stimulate the baby
- Reapply the mask to the face and reposition the head with the neck slightly extended

A baby does not breathe after several ventilation breaths with bag and mask. What should you do?

- Suction the airway and stimulate the baby
- Call for help and continue ventilation



### Background

Reapplying the mask and repositioning the head often improve chest movement.

- Reapply the mask when you hear or feel air escaping around the mask.
- Extend the neck slightly. Keep the head in correct position by lifting the chin and jaw up and forward while pressing down on the mask. If these steps do not improve chest movement, continue on to the next steps.

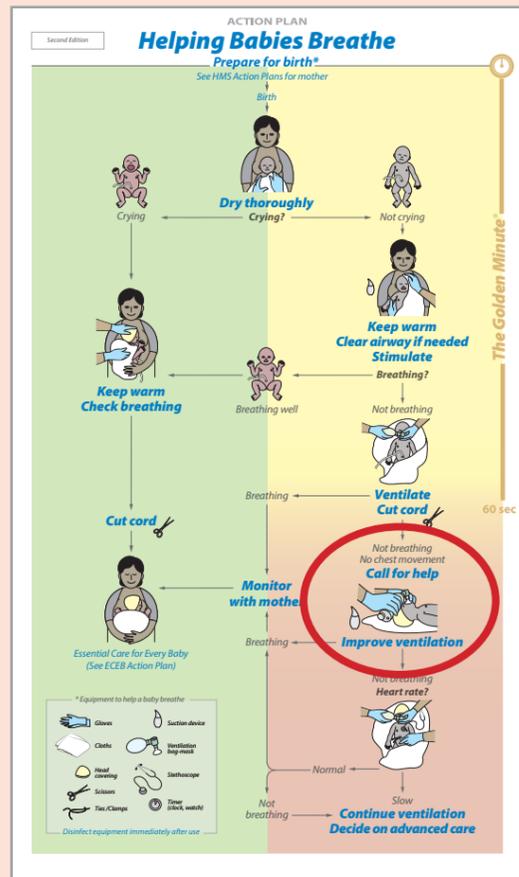
**Clearing the mouth and nose of secretions and opening the mouth slightly can easily be combined.** Remove secretions and open the mouth slightly before reapplying the mask. Suction only if the first two steps do not result in chest movement. Opening the mouth and lifting the jaw up and forward help prevent the tongue from blocking the airway. If the chest still is not moving, continue on to the final step.

**Squeezing the bag harder increases the amount of air that enters the lungs.** Squeeze the bag harder to give a larger ventilation breath. If the ventilation bag has a pop-off valve and even more air is needed, close the valve and ventilate again with caution. Look carefully at the chest movement. Decrease the amount of air entering the lungs if the chest moves too much.

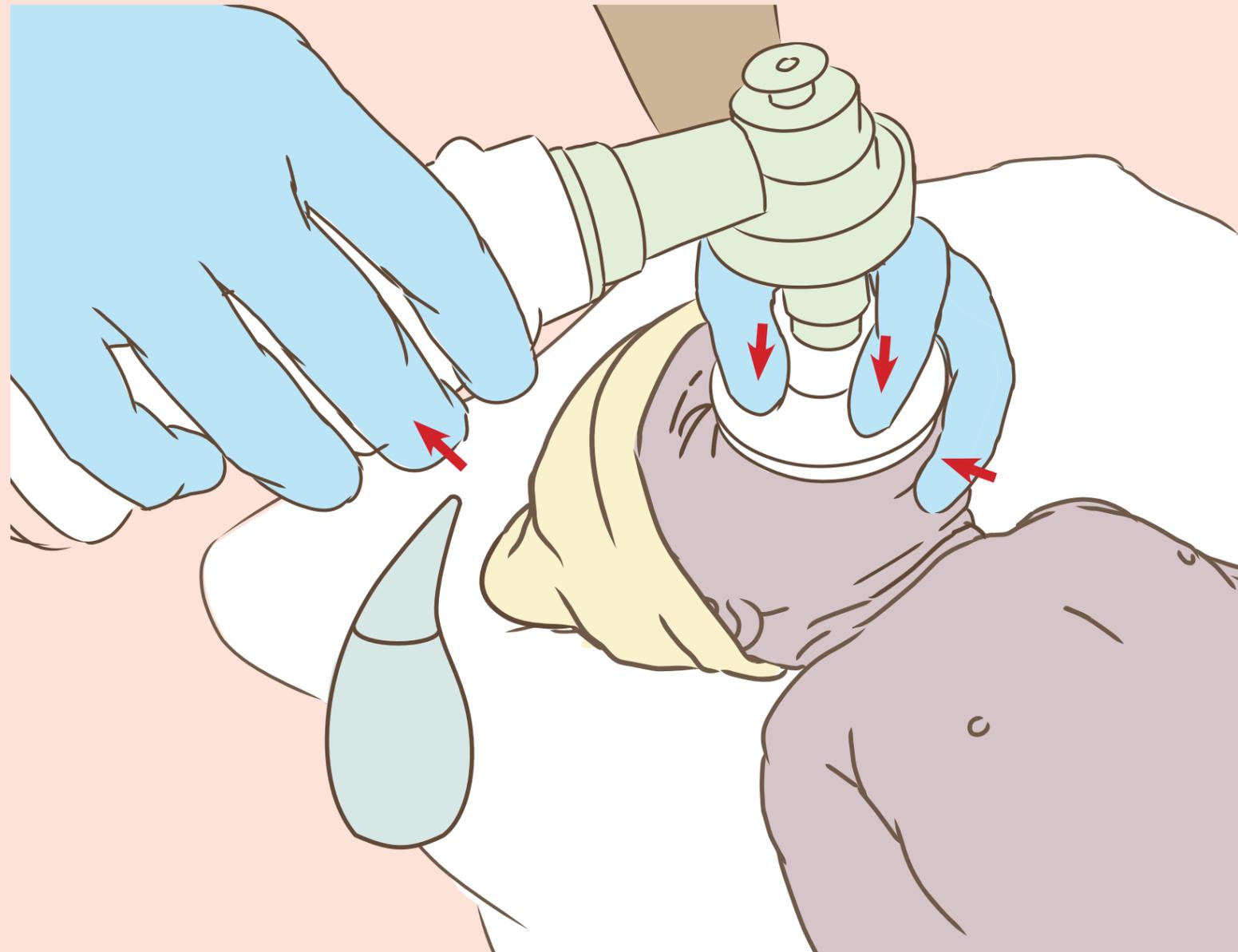
### Educational advice

Show participants how to prevent chest movement with the neonatal simulator. Squeeze the ventilation bulb hard and hold it. Point out that the chest no longer moves well with each ventilation breath. Placing a finger on the neck of the simulator also prevents chest movement. Also demonstrate excessive movement of the chest.

Emphasize the five steps to improve ventilation. Ask participants to develop their own way to remember these steps.



If the baby is not breathing  
**Call for help**  
**Improve ventilation**



Ask a participant to point out the evaluation question "Heart rate?"

## Explain and demonstrate

### Evaluate heart rate after 1 minute to decide if ventilation is adequate

- Feel the umbilical cord pulse  
OR
- Listen to the heartbeat with a stethoscope
  
- Decide quickly if the heart rate is normal or slow
  - Normal > 100 beats per minute
  - Slow < 100 beats per minute

## Facilitate practice

### Ask participants to practice in pairs

- Feel the umbilical cord pulse
- Listen to the heartbeat with a stethoscope
- Decide quickly if the heart rate is normal or slow

## Check yourself (page 39)

You are breathing for a baby with bag and mask.

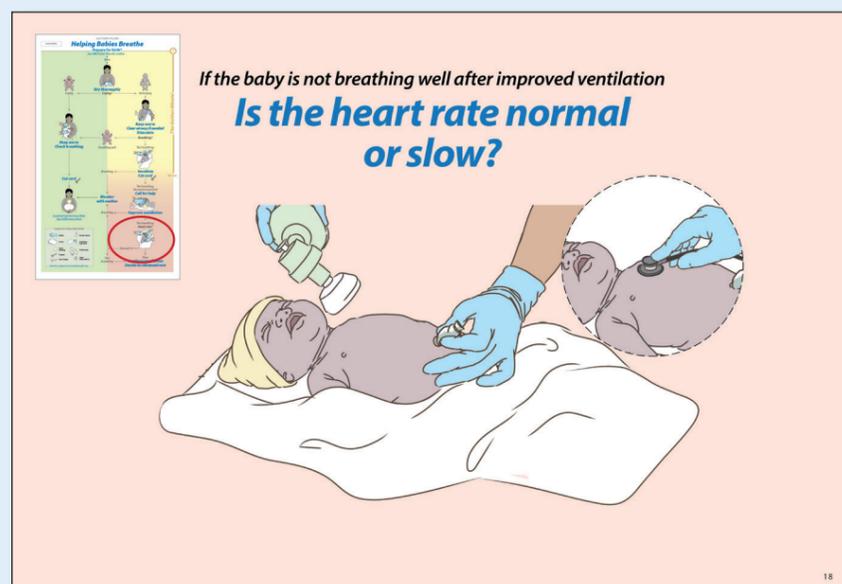
When should you check the heart rate?

- After every 10 breaths with the ventilation bag
- After 1 minute of ventilation

You feel the umbilical cord to count the heart rate.

You cannot feel any pulsations. What should you do next?

- Listen for the heartbeat with a stethoscope
- Do nothing more, the baby is dead



## Background

**The normal heart rate of a baby is faster than an adult heart rate.**

A slow heart rate often means that not enough air is entering the lungs. Heart rate usually rises quickly when the chest begins to move well. This normally happens before the baby begins to breathe. It is important that the heart rate is normal and the baby is breathing before ventilation is stopped.

**Ventilation should continue for one minute before heart rate is checked. A skilled helper can check the heart rate so that ventilation can continue uninterrupted.**

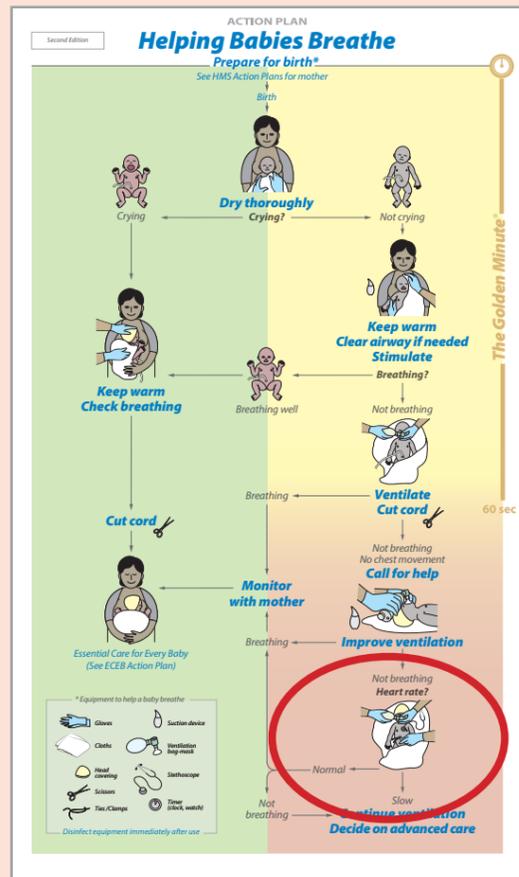
**It is important to ventilate first and take steps to improve ventilation if heart rate remains low.** Chest compressions are given for adults who are not breathing and have a slow heart rate or no heart rate. Chest compressions can interfere with ventilation in babies. If advanced care is available, chest compressions may be provided when improved ventilation does not result in a rise in heart rate. With babies, ventilation comes first.

## Educational advice

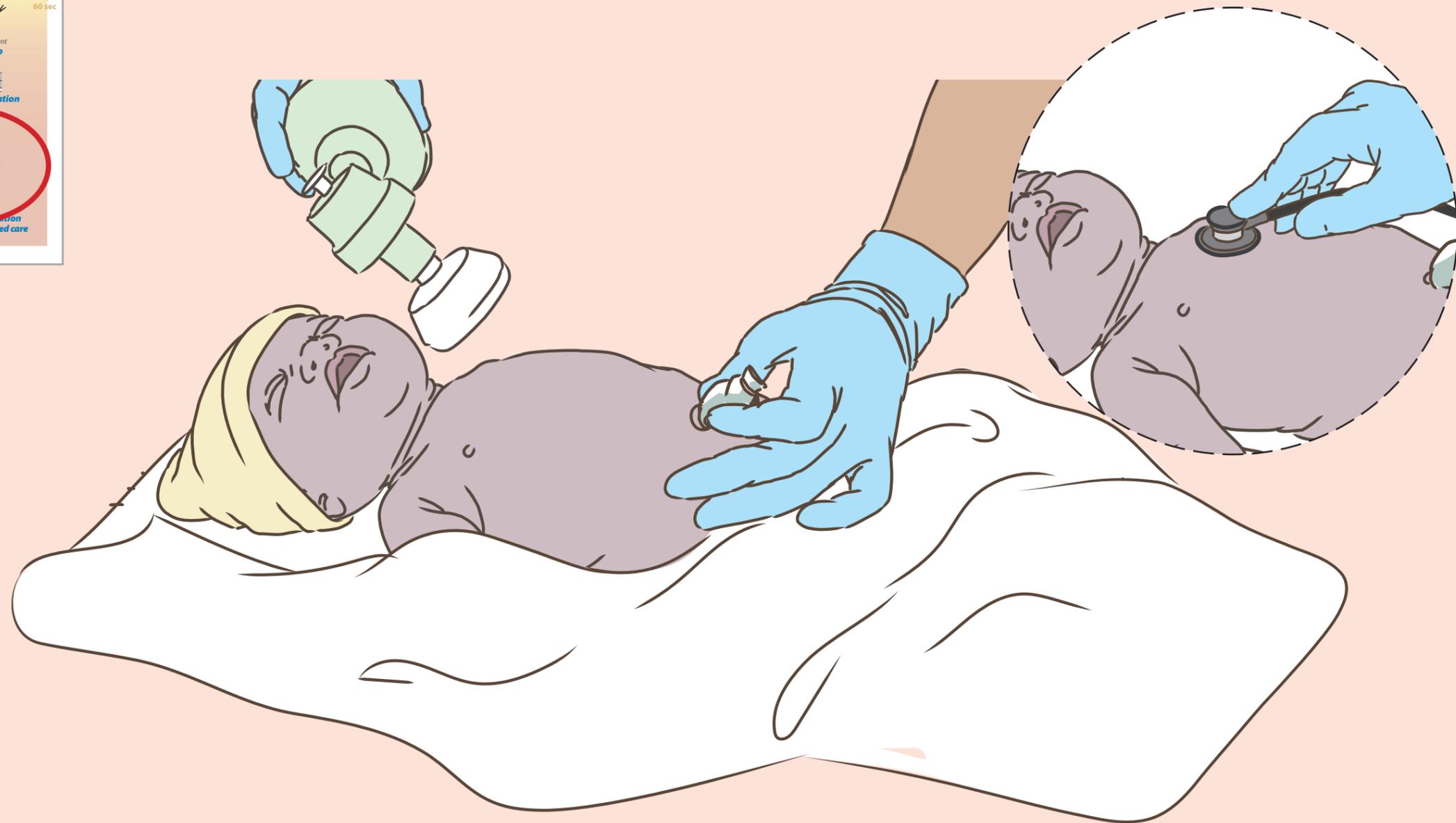
Demonstrate normal and slow heart rate with the newborn simulator or mannequin. Operate the controls of the simulator so they cannot be seen by the person who is evaluating the heart rate. If using a mannequin, tap out the heart rate on the body or the table.

Help learners quickly recognize a normal and slow heart rate.

- Participants can count their own pulse at rest to feel a slow heart rate.
- Ask participants to think of a well-known song or dance with about 100 beats per minute. Tap out that tempo to show a normal heart rate or use a metronome.
- Have learners suggest their own method to help classify the heart rate as normal or slow.



If the baby is not breathing well after improved ventilation  
**Is the heart rate normal  
 or slow?**



**Ask a participant to point out the decisions "Normal" and "Slow" heart rate**

## Explain and demonstrate

### If the heart rate is normal and the baby is not breathing or is gasping

- Continue ventilation
- Re-evaluate breathing continuously and check heart rate every 3-5 minutes
- Seek consultation to decide on advanced care

### If the heart rate is slow

- Improve and continue ventilation
- Re-evaluate breathing continuously and check heart rate every 3-5 minutes
- Seek consultation to decide on advanced care

### If the heart rate is slow or the baby does not breathe after 20 minutes

- Discuss with parents
- Consider stopping ventilation

### If there is no heart rate and no breathing at 10 minutes

OR

### When maceration is recognized

Stop ventilation

### A baby who has never had a heart rate and never breathed after birth is stillborn.

## Facilitate practice

### Ask participants to practice in pairs

- Decide what care is needed for
  - Heart rate normal, baby begins to breathe - close monitoring
  - Heart rate normal, baby not breathing - continue ventilation, seek consultation to decide on advanced care
  - Heart rate slow, baby not breathing - improve and continue ventilation, seek consultation to decide on advanced care, consider stopping ventilation after 20 minutes

- No heart rate, no breathing after 10 minutes of ventilation - stop ventilation
- Seek consultation to decide on advanced care
- Communicate with the family and receiving facility

## Check yourself (page 41)

*A baby has received ventilation for 3 minutes.*

*The heart rate is checked and is slow. What should you do?*

- Stop ventilation
- Take steps to improve ventilation and assess that the chest is moving

*After 10 minutes of ventilation with good chest movement, the baby is not breathing and there is no heart rate (no cord pulse, no heartbeat by stethoscope).*

*What should you do?*

- Stop ventilation, the baby is dead
- Continue ventilation for another 10 minutes

*If the baby is not breathing well*

**Continue ventilation, evaluate heart rate and breathing to decide on advanced care**

## Background

**During ventilation, continuously evaluate for breathing and recheck heart rate every 3-5 minutes. A skilled helper can watch chest movement and monitor heart rate more frequently.**

**Sometimes ventilation is so effective that a baby does not feel the need to breathe.** Slowly decrease the ventilation rate, while keeping the baby pink with a normal heart rate. If the baby still does not breathe, continue ventilation and seek specialty consultation or referral.

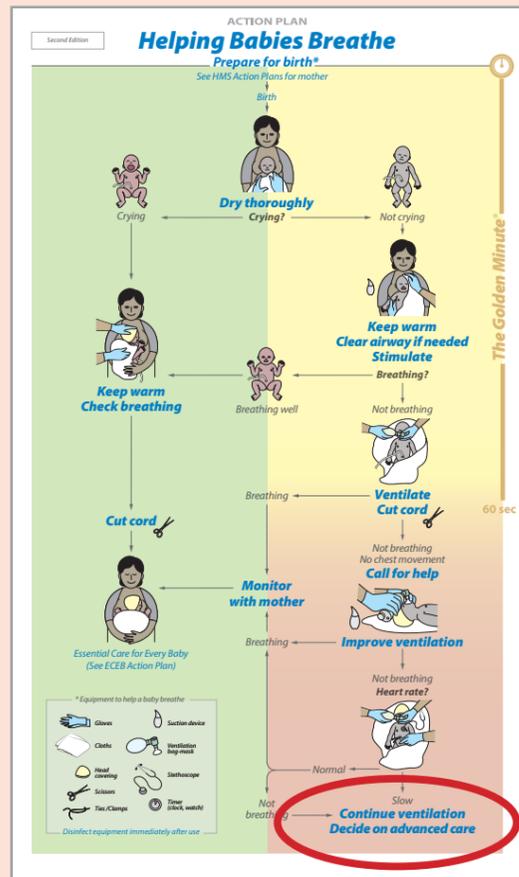
**Many babies who require ventilation will recover well and be healthy. Babies who need 5 minutes or more of ventilation need continued monitoring.** Difficulty breathing or slow heart rate after ventilation is stopped means that a baby needs continued ventilation and specialty consultation or referral. The baby may need continued care on a ventilator, supplemental oxygen, and/or more advanced care.

## Educational advice

Demonstrate how to organize a consultation about advanced care:

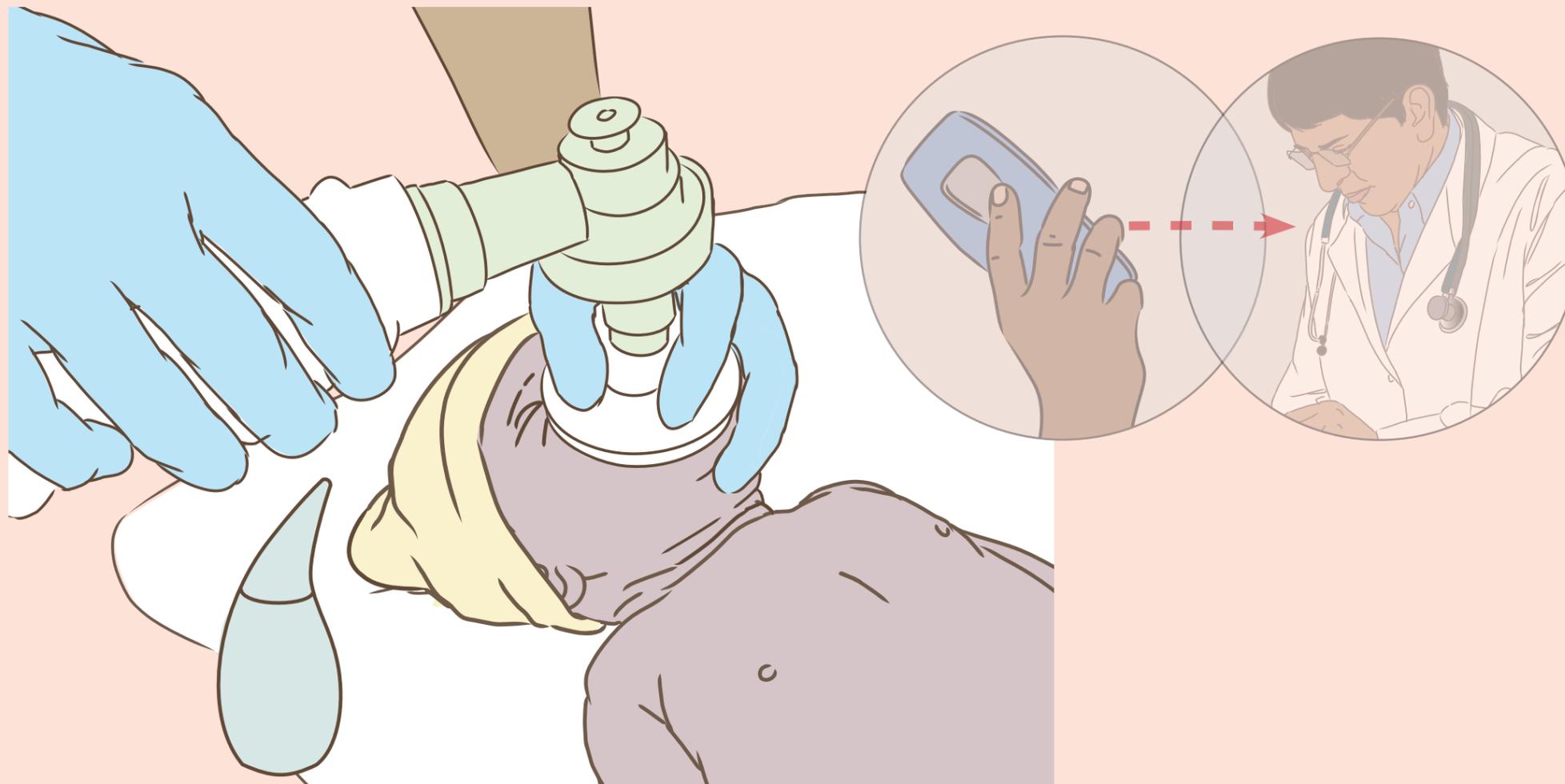
- Situation: identify the main problem (not breathing/not breathing well, slow heart rate)
- Background: describe any complications of pregnancy, time of birth, actions to help the baby breathe and responses of the baby
- Assessment: current examination findings and support being given
- Reponse: discussion of appropriate ongoing care, need for referral, and location for advanced care

Emphasize the importance of communication with the family and receiving facility when a baby is referred for advanced care. Ask participants to discuss how the birth record can be used to document care.



If the baby is not breathing well

# Continue ventilation, evaluate heart rate and breathing to decide on advanced care



*Ask a participant to point out the action step “Monitor with mother”*

## Explain and demonstrate

### A baby who received ventilation needs continued monitoring

- breathing
- heart rate
- color
- temperature

### If a baby needed help to breathe

- Prolong skin-to-skin care
- Continue with immediate essential newborn care
- Make a note of care provided in the clinical record (Provider Guide page 49)

### If referral is needed, transport mother and baby together

- Continue skin-to-skin care
- Monitor the baby
- Communicate with the receiving facility
- Consider alternative methods of feeding

### Support the family

- Communicate in a way appropriate for the culture and religion

### Prepare for the next time a baby needs help to breathe

- Review the actions taken with other team members (debrief)
- Disinfect the equipment used (Provider Guide page 47)
- Store the equipment in a place where it will stay clean and available for use

## Facilitate practice

### Ask the participants to practice in pairs

Communicate with a mother whose baby needs advanced care.

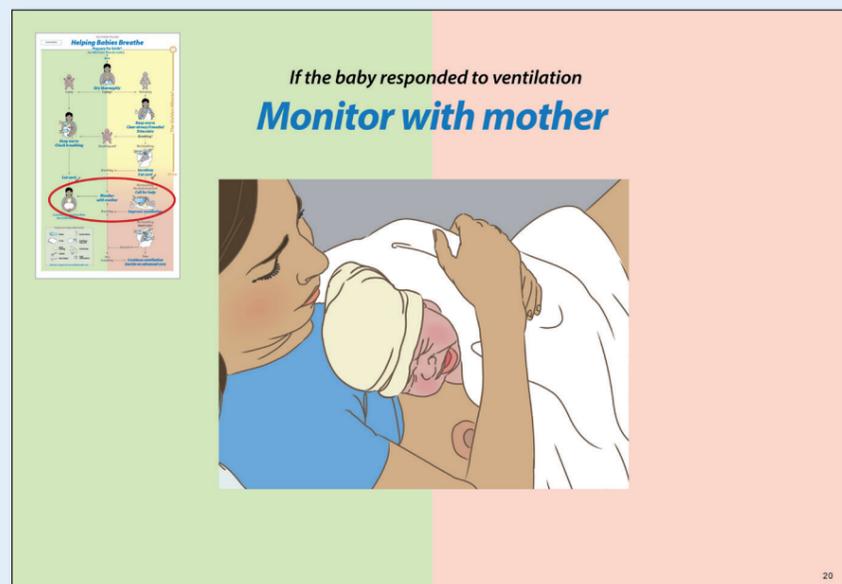
## Check yourself (page 43)

*A baby needed ventilation with bag and mask. She is breathing fast. What should you do?*

- Leave mother and baby alone to rest
- Explain the baby's condition, record the care provided, and continue to monitor with mother to decide on advanced care

*A baby will be taken to the district hospital with breathing difficulty. How should you advise the mother?*

- Advise her not to travel for at least a week
- Advise her to go with her baby if possible



## Background

**A baby who received ventilation may need only routine essential newborn care or may need referral for advanced care.** All babies who received ventilation need monitoring of breathing, heart rate, color and temperature and may benefit from prolonged skin-to-skin care. They also should be weighed, examined, and provided appropriate eye and cord care and vitamin K to prevent disease (see *Essential Care for Every Baby*).

After helping a baby breathe, it is important to prepare for the next birth. Disinfect equipment immediately after use to be available for the next baby. Immediate cleaning is also easier and more effective than when it is delayed.

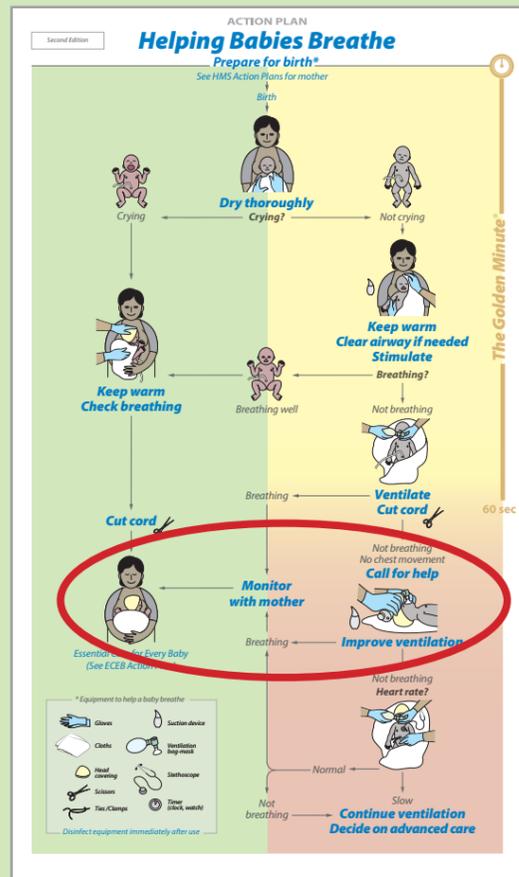
**Note the care provided in the birth record to help plan further care or accompany a referral.**

## Educational advice

Emphasize communication with the mother. As the provider monitors breathing, heart rate, color, and temperature, he or she can also tell the mother whether these are normal or abnormal. Encourage participants in the role of the mother to ask questions families commonly have about help to breathe after birth. Explore with participants religious and cultural behaviors in their region around illness and death. Be prepared to give mother advice on breast care and family planning.

Have available the birth record used locally. Compare the information collected with the sample birth record (Provider Guide page 49) to identify missing or extra items.

Obtain the local policies and procedures relating to disinfection and storage of equipment used for ventilation.



If the baby responded to ventilation  
**Monitor with mother**



## Exercise: Continued ventilation with normal or slow heart rate (pages 44-45)

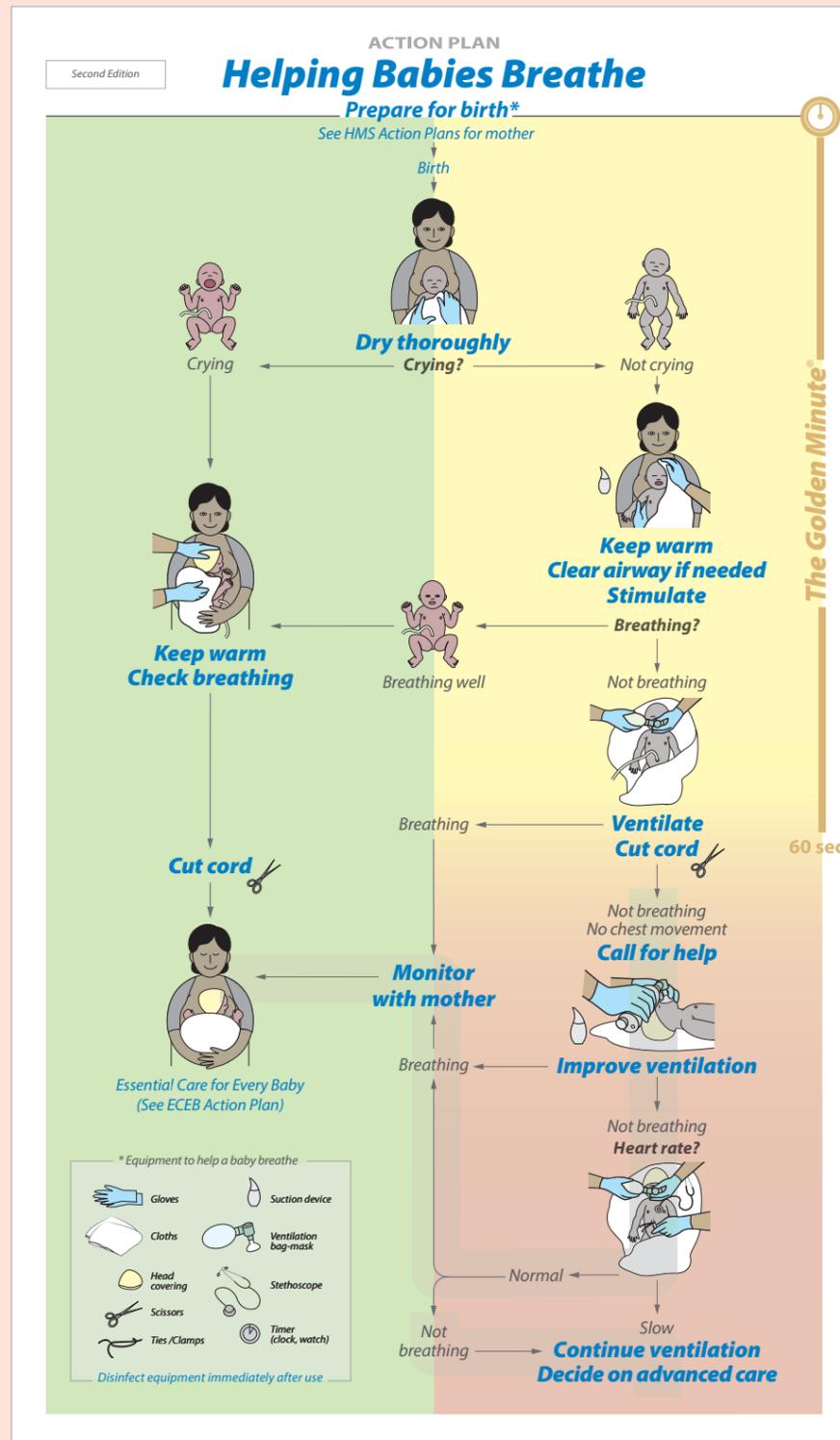
The facilitators will demonstrate continued ventilation with normal or slow heart rate.

Participants will work in pairs with the mannequin to practice the checklist. One person takes the role of the birth attendant. The other person gives the response of the baby and acts as the mother and a helper when needed. The birth attendant communicates with the helper and the mother.

Participants review their actions, give one another feedback, switch roles and repeat the exercise.

Participants should be prepared to care for a baby who

- has no chest movement
- has a normal OR slow heart rate and breathes OR does not breathe



### Checklist

- Recognize not breathing and chest not moving
- .....
- Call for help  
Cut the cord if not already done
- .....
- Continue and improve ventilation
- .....
- Recognize not breathing
- .....
- Recognize normal OR slow heart rate
- .....
- Recognize breathing OR not breathing
- .....
- If breathing and normal heart rate, monitor with mother OR  
if not breathing or slow heart rate continue ventilation and decide on advanced care
- .....
- Communicate with mother and family
- .....
- Continue with essential newborn care, identify the baby, complete the birth record, and review your actions
- .....
- Disinfect equipment
- .....

### Background and educational advice

In a small group of participants (no more than 6 persons with 1 facilitator)

- Demonstrate continued ventilation with normal or slow heart rate and communication with mother and a helper. Show four different scenarios:
  - Heart rate normal, baby begins to breathe-close monitoring
  - Heart rate normal, baby not breathing-continue ventilation, seek consultation to decide on advanced care
  - Heart rate slow, baby not breathing- improve and continue ventilation, seek consultation to decide on advanced care, consider stopping ventilation after 20 minutes
  - No heart rate, no breathing after 10 minutes of ventilation- stop ventilation
- Answer questions and encourage correct actions during the exercise.
- Have participants practice the checklist in pairs, give one another feedback and review their actions (debrief).

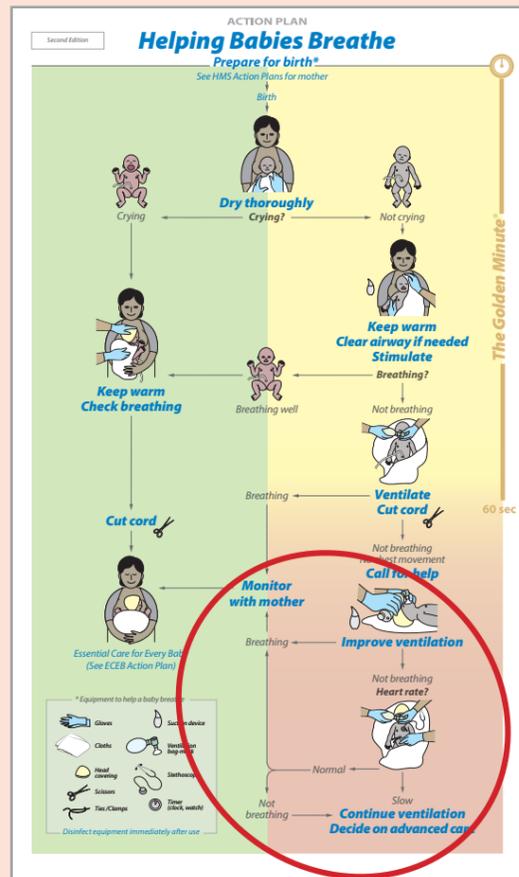
- What happened at the birth?
- Did you follow the Action Plan?
- What went well and what could have gone better?
- What did you learn ?
- What will you do differently next time?

- Share feedback with the whole group after the exercise.
- Review the group discussion questions.

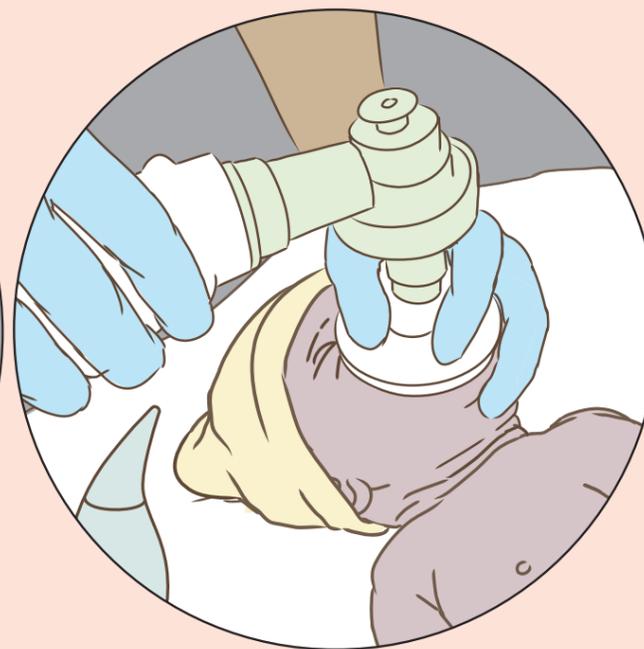
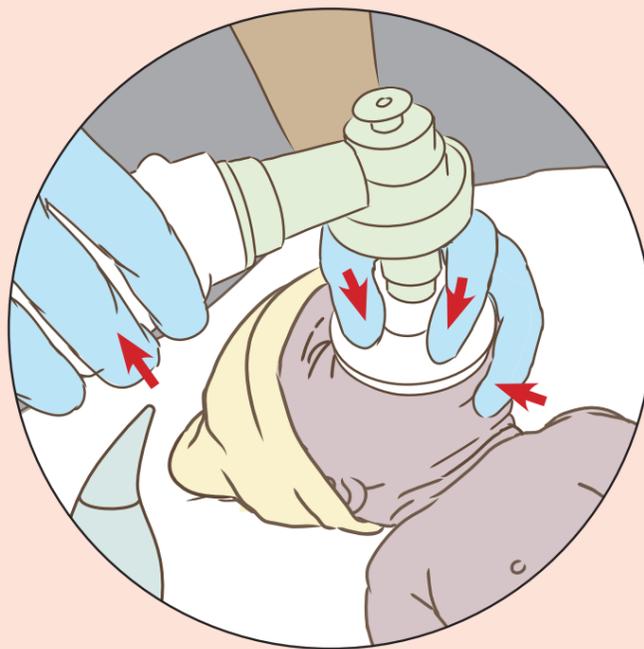
### Group discussion

At the end of the exercise, ask participants to answer these questions in the small group. Encourage them to think about how they will put the skills learned into practice. Make note of other questions that participants ask and their answers.

1. How can you give ventilation and evaluate the baby if there is not a second skilled person at a delivery?
2. If a baby needs continued ventilation for longer than several minutes, where will that baby receive care?
3. What are the reasons you would transfer a baby?
4. What are the challenges of communicating with the family of a baby who is ill or who died?



# Exercise: Continued ventilation with normal or slow heart rate



# Disinfecting and testing equipment after every use\*

## To disinfect

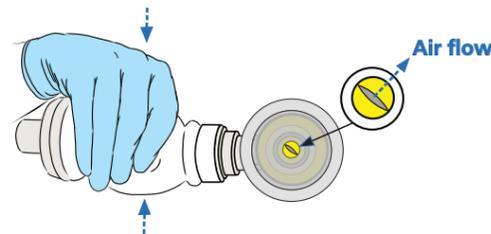
- **Wipe (immediate pre-cleaning):** While wearing gloves, wipe the outside of the ventilation bag and mask with a gauze soaked in 0.5% chlorine solution. Also wipe the outside of a bulb suction device. If the suction device cannot be opened for cleaning inside, discard it after use.
- **Disassemble:** Take apart the devices completely.
- **Clean:** Wash in warm soapy water to remove visible blood, secretions, and other contaminated matter.
- **Sterilize or high-level disinfect:** Sterilize all parts by autoclaving or high-level disinfect parts by boiling or steaming for 20 minutes or submersion in an appropriate chemical disinfectant. Rinse in boiled water after chemical disinfection.
- **Dry:** Allow all parts to dry completely before reassembly.
- **Reassemble:** Inspect all pieces for cleanliness and damage. Put together the pieces of the ventilation bag and mask and suction device.

\* *Reprocessing Guidelines for Basic Neonatal Resuscitation Equipment in Resource-Limited Settings, available at [www.path.org/publications/detail.php?i=2601](http://www.path.org/publications/detail.php?i=2601) and at <http://hbs.aap.org>*

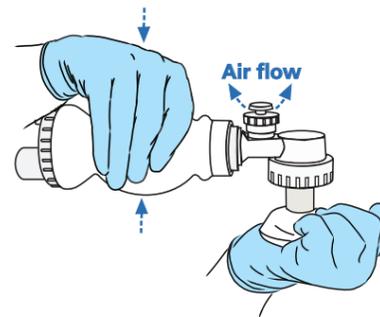
## To test

### Ventilation bag and mask

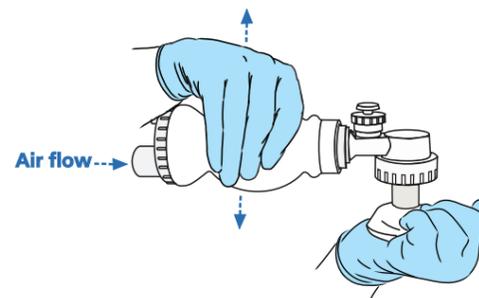
- Put the mask on the ventilation bag. Squeeze the bag and look for the valve in the patient outlet to open as you squeeze. This shows the device is ready to deliver air to a patient.



- Seal the mask tightly to the palm of your hand and squeeze hard enough to open the pressure release valve. Listen for the sound of air escaping. This shows that air which cannot be delivered safely to the baby will escape through the pressure relief valve.

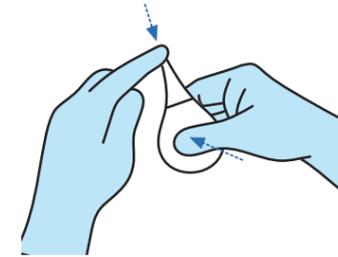


- Maintain the tight seal and check that the bag re-inflates after each squeeze. This shows that fresh air will enter the bag through the inlet valve.



### Suction device

- Squeeze the bottom portion of the suction device and hold the squeeze. Block the opening of the tip against the palm of your hand and release the squeeze. The suction device should not expand until the tip is unblocked.



## To ensure equipment is ready for use at all times

- **Repair or replace any equipment that is damaged or does not function.** Correct a problem when it occurs.
- **Store disinfected equipment in a protected, safe place where it can be accessed easily.** Store in a closed metal or plastic container that has been high-level disinfected. Keep all equipment together where it will be used.
- **Dispose of contaminated supplies and handle contaminated linen properly.** Restock with clean supplies and linen.

## Knowledge check

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

1. **What should you do in The Golden Minute?**
  - a. Bathe the baby
  - b. Deliver the placenta
  - c. Evaluate the heart rate
  - d. Help a baby breathe if necessary
2. **To prepare for a birth**
  - a. You identify a helper and review the emergency plan
  - b. You ask everyone but the mother to leave the area
  - c. You prepare equipment only when you need it
  - d. You do not need a helper
3. **To prepare the area for delivery**
  - a. Open all the doors and windows to get fresh air
  - b. Darken the room
  - c. Make sure the area is clean, warm, and well-lighted
  - d. Keep the room temperature cold
4. **What should you do to keep the baby warm?**
  - a. Open all the windows
  - b. Give the baby a bath after birth
  - c. Place hot water bottles next to the baby's skin
  - d. Place the baby skin-to-skin with mother
5. **What should you do to keep the baby clean?**
  - a. Wash your hands before touching the baby and help mother wash her hands before breastfeeding
  - b. Reuse the suction device before cleaning
  - c. Keep the umbilical cord tightly covered
  - d. Do not touch the baby
6. **Which baby can receive routine care after birth?**
  - a. A baby who is not breathing
  - b. A baby who is gasping
  - c. A baby who is crying and/or breathing well
  - d. A baby who is limp
7. **Routine care for a healthy baby at birth includes**
  - a. Drying, removing the wet cloth, and bathing the baby
  - b. Drying, removing the wet cloth, and positioning the baby skin-to-skin
  - c. Bathing and putting clean clothes on the baby
  - d. Drying and wrapping the baby in the wet cloth
8. **When should the umbilical cord be clamped or tied and cut during routine care?**
  - a. After the placenta is delivered
  - b. Around 1-3 minutes after birth
  - c. Immediately after the baby is born
  - d. Before a baby has cried
9. **A baby is quiet, limp and not breathing at birth. What should you do?**
  - a. Dry the baby thoroughly
  - b. Shake the baby
  - c. Throw cold water on the face
  - d. Hold the baby upside down
10. **A newborn baby is quiet, limp and not crying. The baby does not respond to steps to stimulate breathing. What should you do next?**
  - a. Slap the baby's back
  - b. Hold the baby upside down
  - c. Squeeze the baby's ribs
  - d. Begin ventilation
11. **In which situation should a baby be suctioned?**
  - a. When a baby is crying at birth
  - b. When a baby is crying but there is meconium in the amniotic fluid
  - c. When you see secretions blocking the mouth and nose
  - d. Before drying the baby
12. **Suctioning a baby unnecessarily or frequently can**
  - a. Cause a baby to stop breathing
  - b. Make a baby start coughing and breathing
  - c. Stimulate a baby to cry
  - d. Increase the baby's heart rate
13. **Which of the following statements about ventilation with bag and mask is TRUE?**
  - a. The mask should cover the eyes
  - b. Air should escape between the mask and face
  - c. Squeeze the bag to produce gentle movement of the chest
  - d. Squeeze the bag to give 80 to 100 breaths per minute
14. **A baby's chest is not moving with bag and mask ventilation. What should you do?**
  - a. Stop ventilation
  - b. Reapply the mask to get a better seal
  - c. Slap the baby's back
  - d. Give medicine to the baby
15. **You can stop ventilation if**
  - a. A baby is blue and limp
  - b. A baby's heart rate is slow
  - c. A baby's heart rate is normal and the chest is not moving
  - d. A baby's heart rate is normal and the baby is breathing or crying
16. **A newborn baby's heart rate should be:**
  - a. Faster than your heart rate
  - b. Slower than your heart rate
  - c. Checked before drying the baby
  - d. Checked only when the baby is crying
17. **A baby who received ventilation**
  - a. Needs continued observation with mother
  - b. Cannot be fed
  - c. Always needs advanced care
  - d. Should immediately receive antibiotics
18. **When should the bag and mask and suction device be disinfected?**
  - a. After every use
  - b. Only when they appear dirty
  - c. Weekly
  - d. Once a month

## Bag and mask ventilation – skill check

Complete this evaluation with participants before they attempt the OSCE evaluations.

- Read aloud the following instructions
- Use the comments below the numbered steps to score the performance  
Note the number of steps done correctly on the first attempt
- Give feedback to the participant
- Repeat the evaluation until all steps are done correctly

"You are attending the delivery of a term infant. You have prepared for the birth and tested the bag, mask, and suction device. You have dried and stimulated the baby, but the baby is not breathing. Show me how you will provide ventilation."

|  | Done                     | Not done                 |
|--|--------------------------|--------------------------|
| <b>1. Begin to ventilate with bag and mask</b>   |                          |                          |
| Place the baby on the area for ventilation.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Stand at the baby's head.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Check that the mask size is correct.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>2. Ventilate with bag and mask</b>  |                          |                          |
| Position the head slightly extended.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Apply the mask to the face.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Make a tight seal between the mask and the face.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Squeeze the bag to produce gentle movement of the chest.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>3. Continue ventilation (for 1 minute)</b>  |                          |                          |
| Ventilate to produce gentle movement of the chest with each ventilation breath.....                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| Ventilate at 40 breaths/minute (30-50 breaths/minute acceptable).....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Prompt: "The baby's chest has stopped moving with ventilation. Show me what you would do to improve ventilation."</b> |                          |                          |
| <b>4. Improve ventilation</b>  |                          |                          |
| Reapply mask.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Reposition head.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Clear mouth and nose of secretions.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Open the mouth.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Squeeze the bag harder.....  | <input type="checkbox"/> | <input type="checkbox"/> |

**Score on first attempt \_\_\_\_\_ of 14**

**All steps done correctly \_\_\_\_\_ (facilitator initials)**

### Knowledge check – Answer key

1. d; 2. a; 3. c; 4. d; 5. a; 6. c; 7. b; 8. b; 9. a; 10. d;  
11. c; 12. a; 13. c; 14. b; 15. d; 16. a; 17. a; 18. a

**Objective Structured Clinical Evaluations (OSCEs)** can be used to determine whether participants have learned the essential steps to help a baby breathe. They can be used to verify that a participant knows enough to pass the course, or also as an exercise repeated regularly for practice. Most importantly, each completed evaluation should be used as an opportunity for the participant to review and learn.

Read the case scenario aloud to the participant. Provide the prompts shown in red. Indicate the baby's response to the participant's actions using the neonatal simulator or words if using a mannequin. For example, when the participants evaluate crying, show that the baby is not crying with a simulator. Say that the baby is not crying if using a mannequin. As you observe the participant, tick  the boxes "Done" or "Not Done" for each activity. Apart from giving these prompts, keep silent during the evaluation. After participants complete the OSCE, ask the 5 questions written below OSCE A. These questions will help the participants reflect on what actions they took and what they can do better the next time. Participants who can recognize their own mistakes will better remember the right steps to take the next time. Comment on the participant's performance only at the end of the case, after he/she has answered these 5 questions.

## OSCE A--Evaluation A

**Instructions to the facilitator: Read the below instructions for the case scenario.**

"I am going to read a role play case. Please listen carefully, and then show me the actions you would take. I will indicate the baby's responses, but I will provide no other feedback until the end of the case."

"You are called to assist the delivery of a term baby. There are no complications in the pregnancy. The baby will be born in less than 10 minutes. Introduce yourself and prepare for the birth and care of the baby."

|   | <b>Done</b>                | <b>Not Done</b>          |
|---|----------------------------|--------------------------|
| Identifies a helper and reviews an emergency plan .....                                   | <input type="checkbox"/>   | <input type="checkbox"/> |
| Prepares the area for delivery (warm, well-lighted, clean) .....                          | <input type="checkbox"/>   | <input type="checkbox"/> |
| Washes hands .....  | <input type="checkbox"/>   | <input type="checkbox"/> |
| Prepares an area for ventilation and checks function of bag, mask and suction device..... | <input type="checkbox"/> * | <input type="checkbox"/> |

**Prompt: After 5-7 minutes give baby to participant and say, "There is meconium in the amniotic fluid. The baby is delivered onto the mother's abdomen. Show how you will care for the baby."**

|                         |                            |                          |
|-------------------------|----------------------------|--------------------------|
| Dries thoroughly .....  | <input type="checkbox"/> * | <input type="checkbox"/> |
| Removes wet cloth ..... | <input type="checkbox"/>   | <input type="checkbox"/> |

**Prompt: Show the baby is not crying. "There is meconium blocking the mouth."**

|                                    |                          |                          |
|------------------------------------|--------------------------|--------------------------|
| Recognizes baby is not crying..... | <input type="checkbox"/> | <input type="checkbox"/> |
|------------------------------------|--------------------------|--------------------------|

|  |                            |                          |
|--|----------------------------|--------------------------|
| Positions head and clears airway.....          | <input type="checkbox"/>   | <input type="checkbox"/> |
| Stimulates breathing by rubbing the back ..... | <input type="checkbox"/> * | <input type="checkbox"/> |

**Prompt: Show the baby is breathing well (cries)**

|  |                          |                          |
|--|--------------------------|--------------------------|
| Recognizes baby is crying and breathing well.....                      | <input type="checkbox"/> | <input type="checkbox"/> |
| Clamps or ties and cuts the cord.....                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| Positions skin-to-skin on mother's chest and puts on the head covering |                          |                          |
| Communicates with mother.....  | <input type="checkbox"/> | <input type="checkbox"/> |

**Use the questions below to help the participant reflect on his or her own performance and then provide feedback.**

1. What happened at the birth?
2. Did you follow the Action Plan?
3. What went well and what could have gone better?
4. What did you learn?
5. What will you do differently next time?

### SCORING:

Successful completion requires a total score of 9 correct of 12 and "Done" must be ticked for the boxes marked with \*.

Number Done Correctly ..... Facilitator initials .....

## OSCE B--Evaluation B

**Instructions to the facilitator: Read the below instructions for the case scenario.**

"I am going to read a role play case. Please listen carefully, and then show me the actions you would take. I will indicate the baby's responses, but I will provide no other feedback until the end of the case."

"You are called to assist at the birth of 34 week (7-1/2 months) gestation baby. You have identified a helper, prepared an area for ventilation, washed your hands, and checked your equipment. The baby is born, and the amniotic fluid is clear. Show how you will care for the baby."

|                         | <b>Done</b>              | <b>Not Done</b>          |
|-------------------------|--------------------------|--------------------------|
| Dries thoroughly.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Removes wet cloth. .... | <input type="checkbox"/> | <input type="checkbox"/> |

**Prompt: Show the baby is not crying. "You do not see or hear secretions in the baby's mouth or nose."**

|  |                            |                          |
|--|----------------------------|--------------------------|
| Recognizes baby is not crying.....             | <input type="checkbox"/>   | <input type="checkbox"/> |
| Stimulates breathing by rubbing the back ..... | <input type="checkbox"/> * | <input type="checkbox"/> |

**Prompt: Show the baby is not breathing.**

|  |                          |                          |
|--|--------------------------|--------------------------|
| Recognizes baby is not breathing ..... | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

|   |                            |                          |
|---|----------------------------|--------------------------|
| Cuts cord and moves to area for ventilation OR positions by mother for ventilation..... | <input type="checkbox"/>   | <input type="checkbox"/> |
| Ventilates with bag and mask within The Golden Minute (at ____seconds) .....            | <input type="checkbox"/>   | <input type="checkbox"/> |
| <b>Achieves a firm seal as demonstrated by chest movement</b> .....                     | <input type="checkbox"/> * | <input type="checkbox"/> |
| Time of effective ventilation (chest moving gently at ____ seconds)                     |                            |                          |
| <b>Ventilates at 40 breaths/minute (30-50 acceptable)</b> .....                         | <input type="checkbox"/> * | <input type="checkbox"/> |

|   |                            |                          |
|---|----------------------------|--------------------------|
| <b>Evaluates for breathing or chest movement.</b> ..... | <input type="checkbox"/> * | <input type="checkbox"/> |
|---|----------------------------|--------------------------|

**Prompt: Show the baby is not breathing.**

|  |                          |                          |
|--|--------------------------|--------------------------|
| Recognizes baby is not breathing. .... | <input type="checkbox"/> | <input type="checkbox"/> |
| Calls for help .....                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Continues ventilation .....            | <input type="checkbox"/> | <input type="checkbox"/> |

**Prompt: Show the chest is not moving.**

**After one or more steps to improve ventilation, say "The chest is moving now."**

|  |                            |                          |
|--|----------------------------|--------------------------|
| Reapplies mask .....                                     | <input type="checkbox"/> * | <input type="checkbox"/> |
| Repositions head.....                                    | <input type="checkbox"/> * | <input type="checkbox"/> |
| Clears secretions from the mouth and nose as needed..... | <input type="checkbox"/>   | <input type="checkbox"/> |
| Opens mouth slightly.....                                | <input type="checkbox"/>   | <input type="checkbox"/> |
| Squeezes bag harder .....                                | <input type="checkbox"/>   | <input type="checkbox"/> |

**Prompt: Show the baby is not breathing; heart rate is normal.**

|   |                          |                          |
|---|--------------------------|--------------------------|
| Recognizes baby is not breathing but heart rate is normal. .... | <input type="checkbox"/> | <input type="checkbox"/> |
| Continues ventilation.....                                      | <input type="checkbox"/> | <input type="checkbox"/> |

**Prompt: (After 3 minutes ) Show the heart rate is 120 per minute and the baby is breathing.**

|   |                          |                          |
|---|--------------------------|--------------------------|
| Recognizes baby is breathing and heart rate is normal.....                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Stops ventilation .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Provides close observation for the baby and communicates with the mother..... | <input type="checkbox"/> | <input type="checkbox"/> |

**Use the questions below to help the participant reflect on his or her own performance and then provide feedback.**

1. What happened at the birth?
2. Did you follow the Action Plan?
3. What went well and what could have gone better?
4. What did you learn?
5. What will you do differently next time?

### SCORING:

Successful completion requires a total score of 17 correct of 23 and "Done" must be ticked for the boxes marked with \*.

Number Done Correctly ..... Facilitator initials .....

## Commit to making a difference and improve care in your facility

In the Provider Guide, each step of the Action Plan has a blue box with questions **To improve care in your facility** and suggestions of **What to monitor**. A list of these questions has been compiled here to help participants to think about the most common outcomes they can monitor and improve in their facility.

### During the skill practice for Commit to making a difference

- point out the questions to improve care and what to monitor in the Provider guide
- use the questions to help facilitate the discussion of differences between what is recommended and what is currently being done
- use the suggestions of “what to monitor” to guide data collection on the process and outcome of care

| Provider Guide page | To improve care in your facility   | What to monitor   |
|---------------------|--|---|
| 7                   | How will new birth attendants be trained to help babies breathe?<br>How will birth attendants maintain and improve their skills?   | Have all birth attendants in the facility been trained to help babies breathe?  |
| 9                   | Who is responsible for having equipment disinfected and viable for every birth? How can a second skilled person be available to help in an emergency?  | Is equipment to help a baby breathe available at all births?  |
| 13                  | Who is responsible for providing cloths to dry and cover the baby?   | Are all babies dried thoroughly at birth?   |
| 15                  | Is every baby evaluated at birth to decide what care the baby needs?   | Is a trained person who can help a baby breathe present at all births?<br>How often are babies not crying after thorough drying?  |
| 17                  | What are the reasons that some babies do not receive skin-to-skin care after birth? Who checks the baby's breathing and helps mother initiate breastfeeding?                                   | Do all babies receive skin-to-skin care at birth?<br>Do all babies initiate breastfeeding in the first hour after birth?  |
| 19                  | Are all supplies and equipment that touch the cord disinfected?  | Do all babies have cord clamping delayed for 1-3 minutes?<br>How often does bleeding occur after clamping or tying and cutting the cord?  |
| 23                  | How do you remove secretions from the airway?<br>If a suction device is used, is it disinfected before being used again?   | How often do babies require suctioning of secretions from the airway?<br>How often do babies who are crying (routine care) receive unnecessary suctioning of the airway?                                |
| 25                  | How long does it take to evaluate if a baby is breathing well?   | How often do babies who are not crying after drying begin to breathe after clearing of the airway (if needed) and stimulation?  |
| 29                  | Who will provide ventilation to a baby? What roles do nurses, midwives, and doctors take?  | Does ventilation begin by one minute after birth for all babies who are not yet breathing?  |
| 31                  | What is the most difficult part of providing ventilation with bag and mask?  | How often is ventilation given with the correct rate of 40 breaths per minute?  |
| 33                  | What do you do if the baby does not breathe quickly with ventilation? Who monitors the baby who has received ventilation with bag and mask? Where does the care of mother and baby take place? | How often do babies not crying or breathing well after stimulation begin to breathe with less than 1 minute of bag and mask ventilation?  |
| 37                  | What are the most common problems when providing ventilation with bag and mask? What are the most common reasons the chest does not move well during ventilation?                              | How often do babies who are receiving ventilation require prolonged ventilation (> 1 minute) before they begin breathing on their own?<br>How often do babies require the steps to improve ventilation? |
| 39                  | Who is available to evaluate heart rate while a baby is receiving ventilation? Is there good teamwork and communication when a baby needs continued ventilation?                               | How often is a second skilled helper available to check heart rate during ventilation?  |
| 41                  | What problems do babies experience after receiving ventilation?<br>What resources are available to care for a baby who requires continued ventilation?   | How often do babies who require ventilation with bag and mask need advanced care?<br>How often are babies classified as fresh stillbirths?<br>How often are babies classified as macerated stillbirths? |
| 43                  | What challenges do you face when transporting a baby and mother to advanced care? Are there policies and procedures for disinfection, storage, and availability of clean equipment?            | Do all babies have a record of the care received at birth?<br>Do all babies have their status recorded when they leave the facility (live, dead, referred for advanced care)?                           |

## Explain and demonstrate

Improving care saves lives. Knowing the right care to give is not always enough to save babies' lives - that knowledge must be put into practice.

Completing a workshop in *Helping Babies Breathe* is just the first step in improving the quality of care you give.

After the course, commit to making a difference by:

- (1) Identifying areas that need improvement
- (2) Creating a system for ongoing practice and review of cases
- (3) Making changes that will improve care

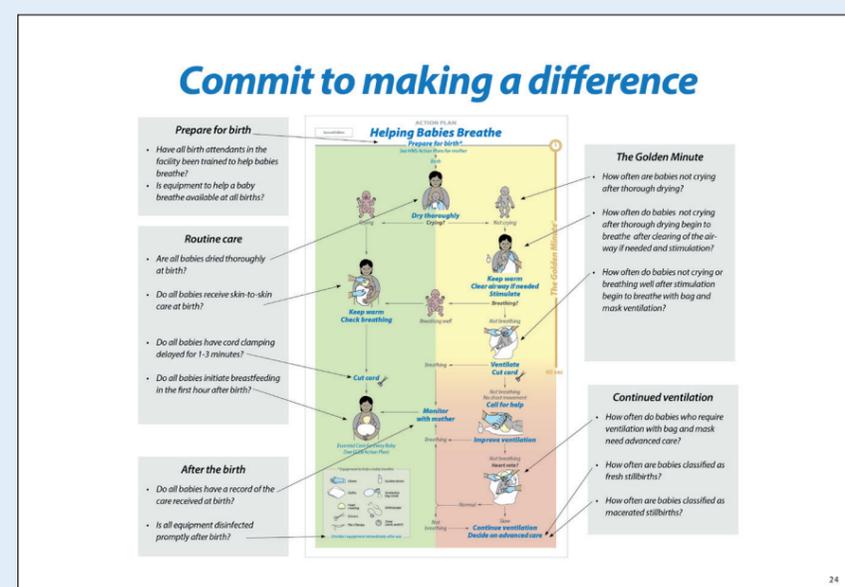
## Invite discussion

1. What are you going to do differently?
2. What will you no longer do?
3. How are you going to make these changes happen?

## Facilitate practice

Ask the participants to

1. Review the Action Plan as a guide to the best care at birth.
2. Review the *Questions to improve care* and *What to monitor* in the Provider Guide.
3. Determine differences in what is recommended and what is currently done at their facility.
4. Identify some areas for further practice and improvement of care.



## Educational advice

Help providers recognize that the workshop is only the first step toward improving care for mothers and babies. When the participants return to their regular duties, there is an opportunity to improve care. Help participants commit to making a difference and develop a plan for the actions they will take to improve care in their facility.

Ask participants to discuss the differences between what they learned in the course and what they do in their facility. Lead the group through the *Invite discussion* questions to identify some of these differences. Write down the group's answers on a poster that the participants can keep and hang up in their facility. You may also ask the participants to sign the poster to show their commitment to change.

Use the *Facilitate Practice* exercise to show the participants how the course materials can help identify areas for improvement. The Action Plan shown here

highlights some key actions and outcomes to monitor. Point out the *Questions to improve care* and *What to monitor* in the blue boxes in the Provider Guide. Ask the participants what differences they see between what is recommended and what is currently being done at their facility. Discussing these differences in care and possible changes can be important steps leading to improved care in the facility.

Invite a local health authority to be present for this discussion. Ask about the local or regional authority's goals for quality improvement. Matching these goals to those of the participants will help everyone work together to improve care.

# Commit to making a difference

## Prepare for birth

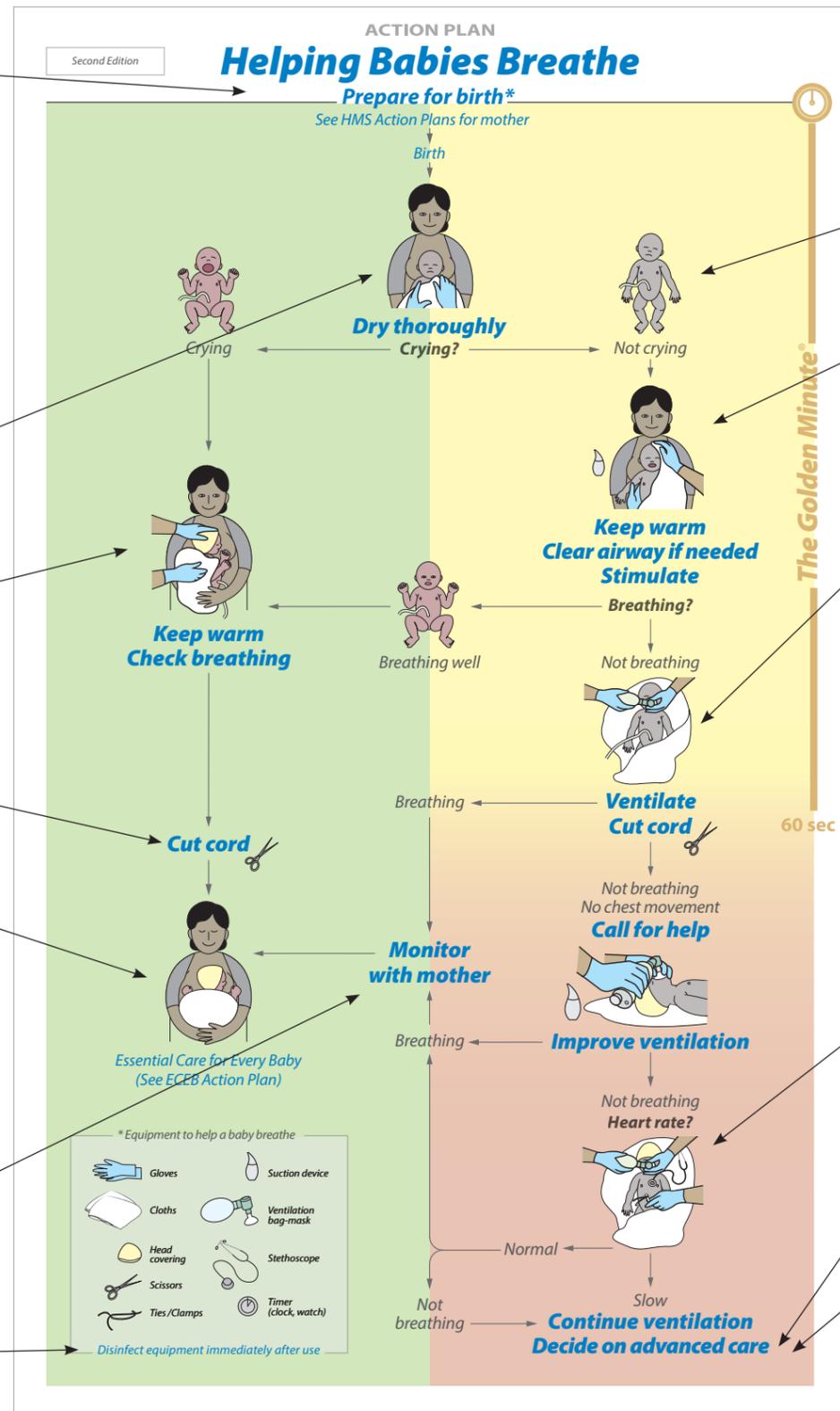
- Have all birth attendants in the facility been trained to help babies breathe?
- Is equipment to help a baby breathe available at all births?

## Routine care

- Are all babies dried thoroughly at birth?
- Do all babies receive skin-to-skin care at birth?
- Do all babies have cord clamping delayed for 1-3 minutes?
- Do all babies initiate breastfeeding in the first hour after birth?

## After the birth

- Do all babies have a record of the care received at birth?
- Is all equipment disinfected promptly after birth?



## The Golden Minute

- How often are babies not crying after thorough drying?
- How often do babies not crying after thorough drying begin to breathe after clearing of the airway if needed and stimulation?
- How often do babies not crying or breathing well after stimulation begin to breathe with bag and mask ventilation?

## Continued ventilation

- How often do babies who require ventilation with bag and mask need advanced care?
- How often are babies classified as fresh stillbirths?
- How often are babies classified as macerated stillbirths?

## Explain and demonstrate

Providers with the skills to help every baby breathe improve the health of babies and the quality of care.

A provider who has mastered the Action Plan will perform the necessary actions for every baby and maintain those skills.

A provider will master the Action Plan by:

- (1) Participating in ongoing practice
- (2) Reviewing the steps taken after helping a baby breathe
- (3) Using case reviews and audits to identify areas that need improvement

## Invite discussion

Ask the participants to answer the following questions to organize a system for ongoing practice and case review:

1. What skills need continuing practice? How will frequent skills practice become a routine?
2. How and when will providers review a resuscitation after helping a baby breathe?
3. How will routine case reviews or audits be organized to improve care?

## Facilitate practice

Ask participants to

- Recall a real case where the care at birth did not go well
- Describe the case from their experience and trace the corresponding path through the Action Plan
- Discuss how they can improve the care if a similar situation should occur again

**Master the Action Plan**

**Helping Babies Breathe**  
Prepare for birth\*  
The Golden Minute™

**Trace six cases**

|                              | 1  | 2  | 3  | 4  | 5  | 6  |
|------------------------------|--|--|--|--|--|--|
| Dry thoroughly               | Dry thoroughly   | Dry thoroughly   | Dry thoroughly   | Dry thoroughly   | Dry thoroughly   | Dry thoroughly   |
| Crying                       | Not crying   | Not crying   | Not crying   | Not crying   | Not crying   | Not crying   |
| Keep warm<br>Check breathing | Keep warm<br>Clear airway if needed<br>Stimulate breathing | Keep warm<br>Clear airway if needed<br>Stimulate breathing | Keep warm<br>Clear airway if needed<br>Stimulate breathing     | Keep warm<br>Clear airway if needed<br>Stimulate breathing     | Keep warm<br>Clear airway if needed<br>Stimulate breathing     | Keep warm<br>Clear airway if needed<br>Stimulate breathing     |
| Breathing well               | Breathing well   | Not breathing  | Not breathing  | Not breathing  | Not breathing  | Not breathing  |
| Cut cord<br>Routine care     | Cut cord<br>Routine care                                   | Ventilate<br>Cut cord                                      | Ventilate<br>Cut cord  | Ventilate<br>Cut cord  | Ventilate<br>Cut cord  | Ventilate<br>Cut cord  |
|                              |  | Breathing well<br>Monitor with mother                      | Not breathing<br>Call for help<br>Continue/improve ventilation |
|                              |  |  | Breathing<br>Monitor with mother                               | Not breathing<br>Continue ventilation                          | Not breathing<br>Continue ventilation                          | Not breathing<br>Continue ventilation                          |
|                              |  |  |  | Normal heart rate<br>OR<br>Normal heart rate<br>Breathing      | Normal heart rate<br>OR<br>Normal heart rate<br>Not breathing  | Slow heart rate<br>OR<br>Normal heart rate<br>Not breathing    |
|                              |  |  |  | Monitor with mother  | Continue ventilation   | Continue ventilation<br>Decide on advanced care                |

## Educational advice

When the participants leave the workshop, they should have a plan for a system of ongoing practice in place. Once participants leave the classroom, they will lose their skills unless they practice. Ongoing practice reinforces the importance of using new skills to care for babies and helps providers improve their skills, understanding, and confidence. Being able to perform the needed skills at every birth will improve the outcomes for babies.

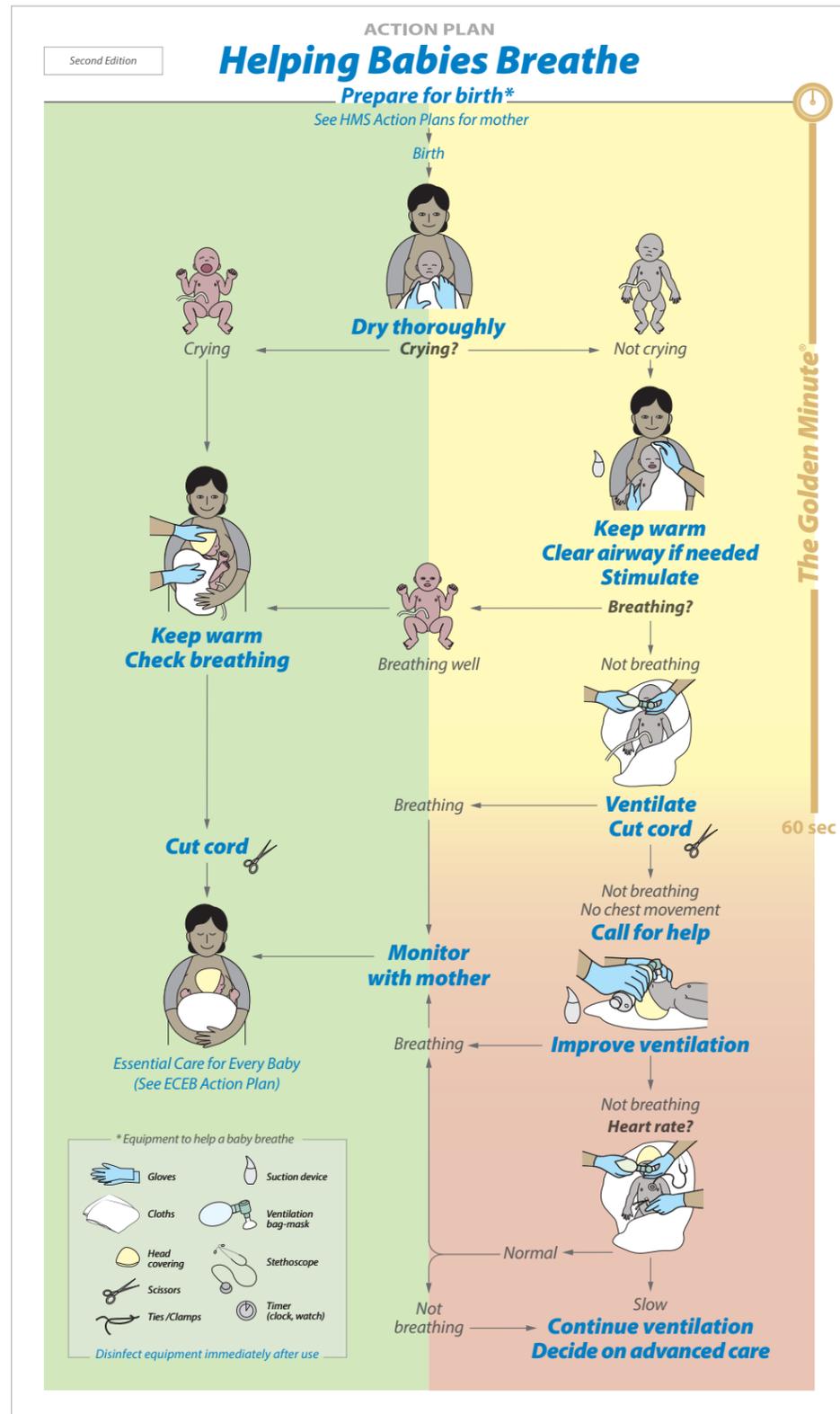
Use the *Invite discussion* questions to help the participants plan a system for ongoing practice. Show participants how they can practice the skills of bag and mask ventilation in a designated area of their workplace. A system of short but frequent practices (for example, 5 minutes at the start of every shift) can help participants retain and improve their skills. Discuss how the participants can use the *Practice key skills* sections and *Exercises* throughout the Provider Guide, the performance evaluations at the end of the course (OSCEs), or the *Trace six cases* graphic as case scenarios they can practice.

Participants may also practice the combined skills of caring for mother and baby in the first minutes after birth.

Encourage participants to work together and analyze cases in which babies needed help to breathe. Facilitate discussion of a real scenario or resuscitation that did not go well. Ask participants to describe the case using the *Trace six cases* graphic, and help all participants identify what needs to be done differently the next time.

Encourage participants to perform case reviews or audits of neonatal deaths, stillbirths, and other maternal and neonatal complications. Suggest that they include practice or a refresher on skills that need more work as part of these reviews. Emphasize how the conclusions of reviews or audits point out the changes needed to improve care.

# Master the Action Plan



## Trace six cases

| 1                            | 2                                   | 3                                   | 4   | 5   | 6   |
|------------------------------|-------------------------------------|-------------------------------------|---|---|---|
| Dry thoroughly               | Dry thoroughly                      | Dry thoroughly                      | Dry thoroughly                                | Dry thoroughly                                | Dry thoroughly                                  |
| Crying                       | Not crying                          | Not crying                          | Not crying                                    | Not crying                                    | Not crying                                      |
| Keep warm<br>Check breathing | Keep warm<br>Clear airway if needed | Keep warm<br>Clear airway if needed | Keep warm<br>Clear airway if needed           | Keep warm<br>Clear airway if needed           | Keep warm<br>Clear airway if needed             |
| Breathing well               | Breathing well                      | Not breathing                       | Not breathing                                 | Not breathing                                 | Not breathing                                   |
| Cut cord<br>Routine care     | Cut cord<br>Routine care            | Ventilate<br>Cut cord               | Ventilate<br>Cut cord                         | Ventilate<br>Cut cord                         | Ventilate<br>Cut cord                           |
|                              |                                     | Breathing well                      | Not breathing                                 | Not breathing                                 | Not breathing                                   |
|                              |                                     | Monitor with mother                 | Call for help<br>Continue/improve ventilation | Call for help<br>Continue/improve ventilation | Call for help<br>Continue/improve ventilation   |
|                              |                                     |                                     | Breathing                                     | Not breathing                                 | Not breathing                                   |
|                              |                                     |                                     | Monitor with mother                           | Continue ventilation                          | Continue ventilation                            |
|                              |                                     |                                     |   | Normal heart rate                             | Slow heart rate<br>OR<br>Normal heart rate      |
|                              |                                     |                                     |   | Breathing                                     | Not breathing                                   |
|                              |                                     |                                     |   | Monitor with mother                           | Continue ventilation<br>Decide on advanced care |

The Golden Minute®  
60 sec

## Explain and demonstrate

**A plan for improving care builds support and commitment for ongoing change.**

**Participants can use a plan to improve care to take action when they return to work at their facility.**

## Invite discussion

Assemble small groups from a single facility, or a group of similar facilities.

Ask each group write their answers to the following questions to plan for next steps on an area that needs improvement.

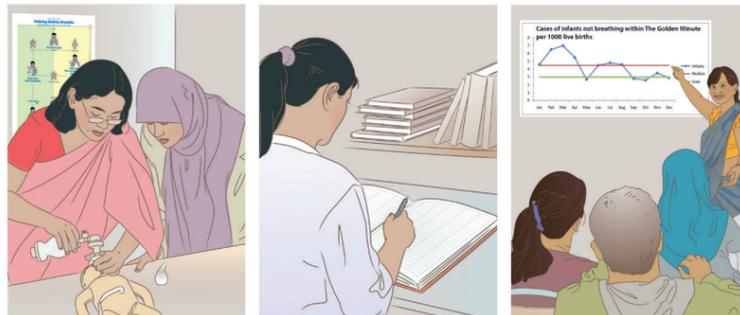
1. What do we want to make better?
2. Why haven't we done it until now?
3. What are we going to change?
4. How are we going to make the change?
5. How will we know the change is improving care?

## Facilitate practice

Ask participants to:

- Write down the answers to the *Invite discussion* questions.
- Review the information they record on each baby in their facility (delivery register, birth record, other records) and where they can find data on what they want to improve.
- Plan steps to make changes that can improve care.
- Plan how they would demonstrate the success of these changes.
- Present their plan to other workers in the facility or participants in the workshop.

### Make changes to improve care



### Educational advice

Help participants discuss and write down a plan for what they are going to do to improve care in their facility. Guide the participants to channel their excitement and energy from learning the new material into planning what they intend to change. An overall improvement plan will help turn commitment into action.

Group the participants by the facility where they work. Writing down the answers to the *Invite discussion* questions can be their plan for the next steps they will take in their facility. Encourage each group to choose one thing to make better.

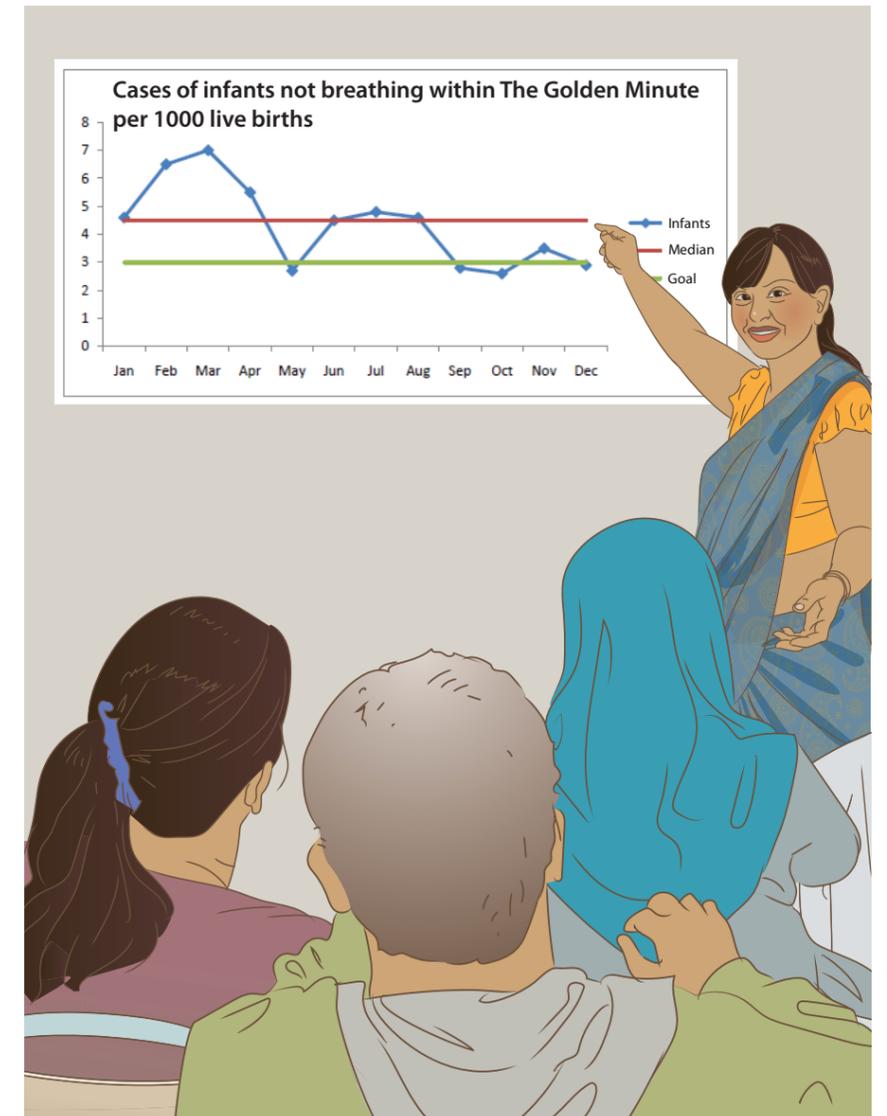
Ask the participants to discuss what information they collect about the area they want to improve. Collecting data gives health workers the power to show where gaps in care exist and whether outcomes are improving. Is the information collected reliably? Is it used? Is it valuable? Ask the participants to review a delivery register or newborn record from their facility and discuss what information is already being collected.

Encourage groups to identify some small changes that they can make when they return to work in their facility. Writing these down can serve as their promise to start with those small steps. The groups should decide who will do the different tasks to accomplish those changes. They may want to identify “champions” or leaders who will help make the changes happen. The groups should discuss what information will be needed to demonstrate the success of these changes.

Ask the groups to present their plan for improvement to the other participants in the workshop. They may get encouragement for their plan, or suggestions of other changes that have worked for other facilities.

Depending on the level of experience of the participants, you may choose to introduce additional quality improvement materials that can guide their long-term improvement efforts. **Improving Care of Mothers and Babies: a guide for improvement teams**—the quality improvement materials that accompany **Helping Mothers Survive** and **Helping Babies Survive**—may be useful or the local health authority may provide a curriculum for ongoing quality improvement.

# Make changes to improve care



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## Helping Babies Breathe® Facilitator Flip Chart

Second Edition

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