World Health Organization

Essential Newborn Care Modular Course

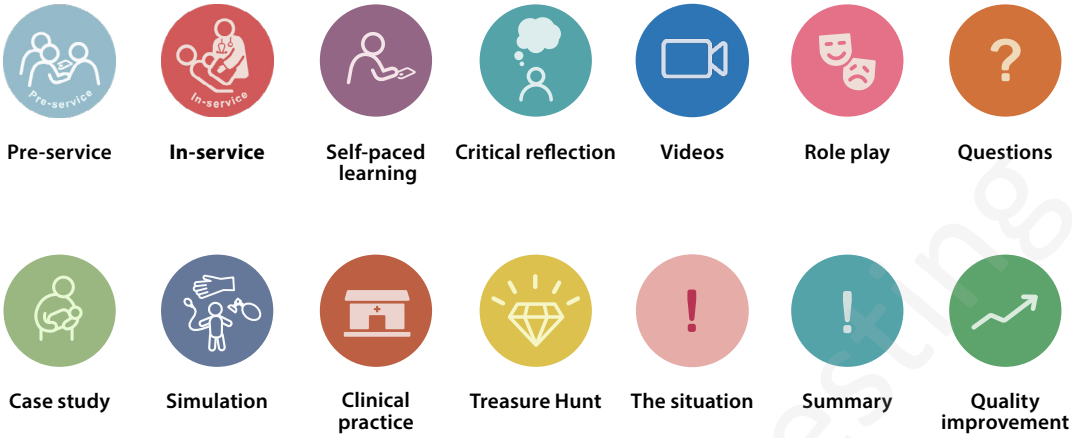
Second edition, interim version

Kangaroo mother care

Facilitator Notes

Draft version for field testing

Symbols



Review slides for this module and decide which slides you will use based on the learners' needs. The decision depends on assessments or a pre-test and whether learners are pre-service or in-service.

Hide slides that will not be used. Decide which sections will be carried out as self-paced learning and give clear instructions. The choice should be made in advance as it will influence the time needed for each section. Time for each section will also depend on learners' level (basic or intermediate).

If learners carry out exercises as self-paced learning, remember to quickly show answers and to answer any questions learners may have. To save time, consider using a parking lot or online forum.

Pre-service
Activities placed in a blue box are for pre-service learners only.

In-service
Activities placed in a red box are for in-service learners only.

Self-paced learning
Sections marked with the self-paced learning symbol can be carried out by learners in various ways:

- as preparation in advance for the module
- facilitated during face-to-face sessions
- for reinforcement after facilitated face to face session
- online (WHO Academy) as part of blended learning
- using linked applications (apps).

Session preparation

See equipment and materials checklist.

Review key reference materials:

- *Early essential newborn care: clinical practice pocket guide. WHO, 2014. pp. 60–69.*
- *Introducing and sustaining EENC in hospitals: kangaroo mother care for preterm and low-birthweight infants. WHO, 2018.*
- *Barriers and enablers of kangaroo mother care practice a systematic review. Plos One. 2015.*
- *Kangaroo Foundation*
- *Kangaroo mother care: a practical guide. WHO, 2003.*

Key materials for demonstrations and simulations

One set for facilitator and one set per group of 4 learners

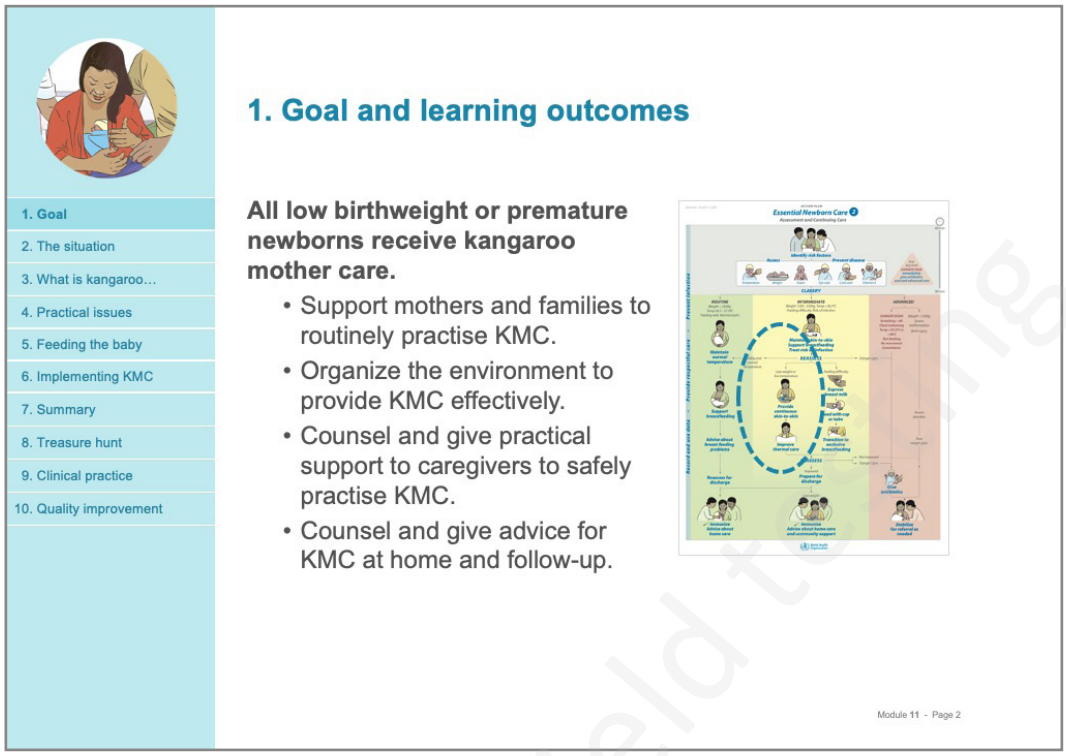
- Preterm mannequin or doll with legs that can be put into the frog position
- 1 set of front-opening baby's clothes including hat, socks and local small baby diaper
- 2 locally appropriate and available pieces of cloth or binders to secure the mannequin or doll
- Cup/spoon
- Model breasts.

Session length

The times shown are only indictive. Update prior to running the module, depending on learners' needs. *See time table.*

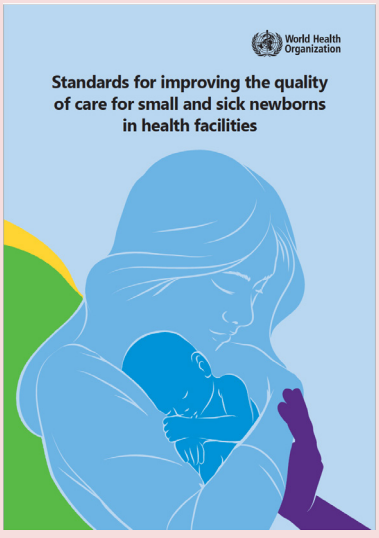
11. Kangaroo-mother care		
	Pre-service	**In-service**
Section	Duration (hr mins)	Duration (hr mins)
Goal and Situation	0:05	0:05
Simulation	0:00	0:15
What is KMC?	0:20	0:15
Practical issues	0:45	0:30
Feeding the baby	0:30	0:15
Implementing KMC	0:10	0:30
Treasure hunt	0:00	0:10
Clinical practice	1:30	1:00
Quality improvement	0:10	0:30
	3:30	**3:30**

1. Goal

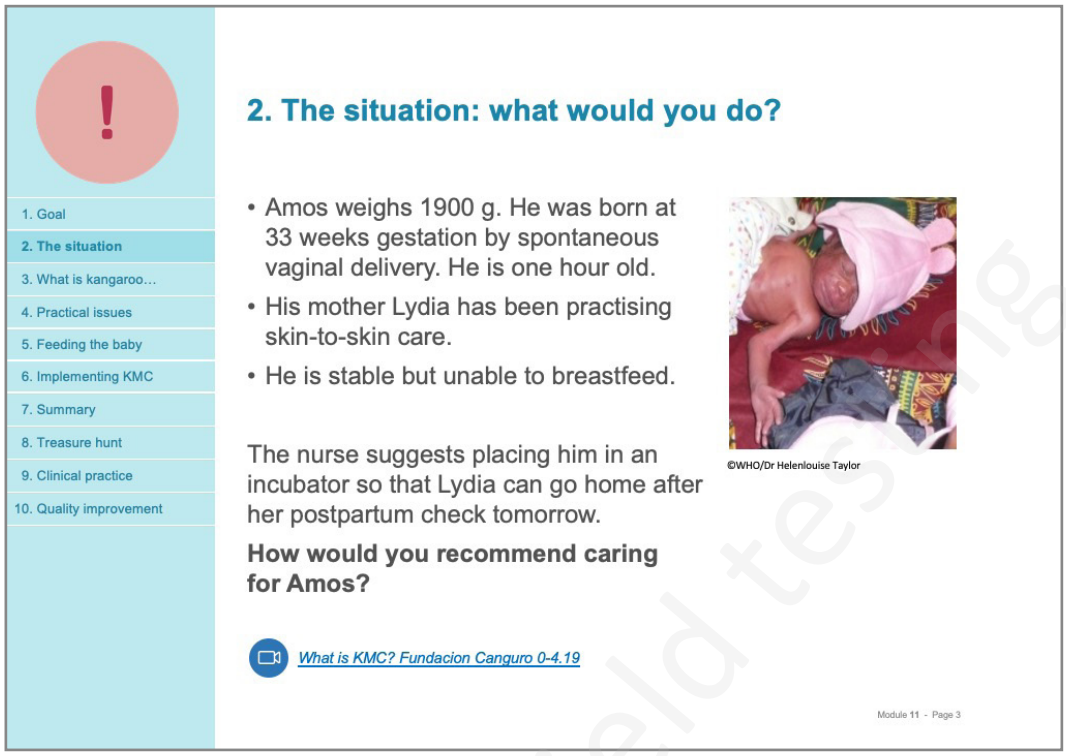


Go through slide.
Ask for and answer questions.

- **The goal of this module is aligned with** *WHO's 2020 Standards for improving quality of care for small and sick newborns in health facilities:*
  - **7.3:** All staff working in neonatal units of a health facility have the necessary knowledge, skills and attitudes to provide infection prevention and control, basic resuscitation, kangaroo mother care, safe feeding and medications and positive interaction with newborns and communication with carers.
  - **6.2:** All newborns born preterm or with a low birth weight receive kangaroo mother care as soon as possible after birth, and the parents are supported in its provision.
  - **4.5:** All carers receive appropriate counselling and health education about the current illness of the newborn, transition to kangaroo mother care follow-up, community care and continuous care, including early intervention and developmental follow-up.
  - **4.3:** All carers are enabled to participate actively in the newborn's care through family-centred care and kangaroo mother care, in decision-making, in exercising the right to informed consent and in making choices.



2. The situation



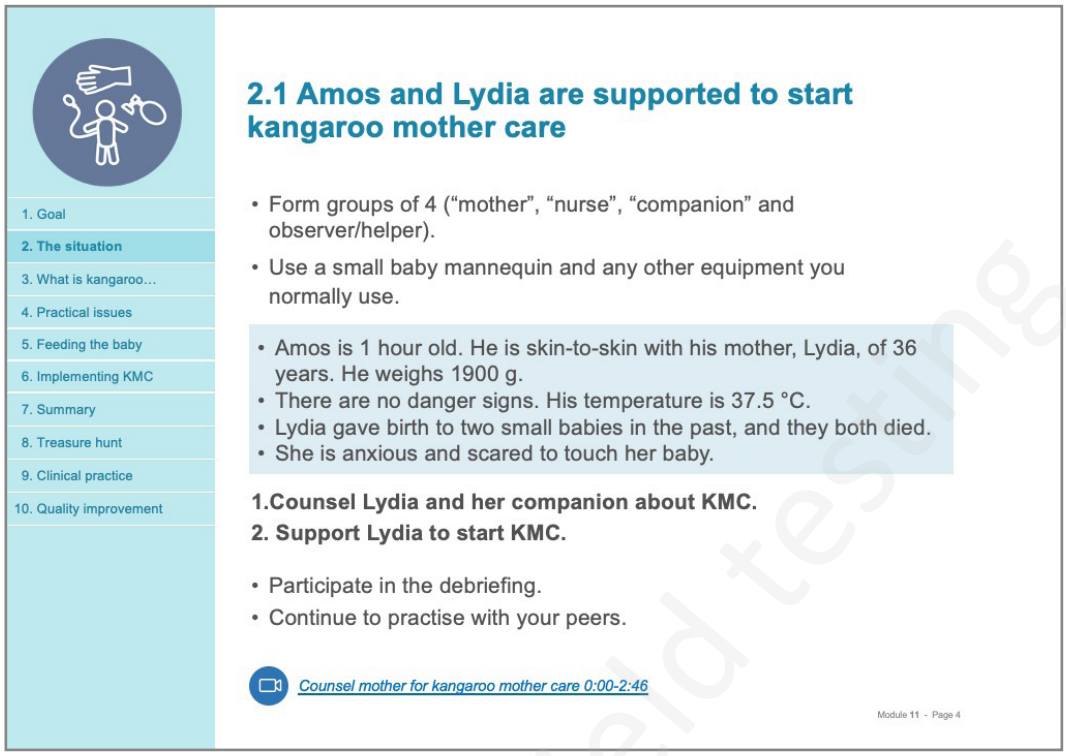
Ask

- **What would you do?**

Explain

- **WHO Global standards recommend kangaroo mother care**
  - *6.2: All newborns born preterm or with a low birth weight receive kangaroo mother care as soon as possible after birth, and the parents are supported in its provision.*
  - *3.6: Every newborn who requires referral is transferred in the kangaroo mother care position with their mother, when possible.*
- Routine care in many health facilities includes placing all small babies under a radiant warmer or in an incubator This can cause harm if it is not needed.
- Health workers need to be trained to clean and use thermal equipment safely for when they are prescribed by the clinician. Learners will learn and practise how to use, maintain and clean thermal equipment in the WHO Essential Care for Small and Newborns course.

- ***Kangaroo Mother Care Method***



Brief and debrief, following *Methodologies for facilitation*

Brief

Ensure that the following equipment is available for learners to use or for demonstrating to Lydia and companion.

- *Preterm baby hat, socks, diaper/cloth*
- *KMC binder or local wrap*
- *Cups and spoons for feeding demonstration*
- *Extra pillows to support Lydia or family member when giving KMC*
- *Large-size, open-front shirts for use when giving KMC*
- *Alcohol hand gel or soap and water for hand hygiene.*

Read scenario

Skills and performance

Learners demonstrate:

1. *Effective, respectful communication explaining clearly to the mother and her companion the what, why and how of KMC and answering any questions.*
2. *Supporting the mother to safely place her newborn in the kangaroo position so that she can move around freely.*

Debrief

- *Address any issues related to norms, behaviours or concerns about practices now, in this safe environment. Ask the questions below.*
  - *Were you sensitive to Lydia's anxieties and her loss?*
  - *Was communication respectful, ensuring privacy and using language that Lydia and her companion understood?*
  - *Did you ensure infection prevention?*

- *Was Amos held safely?*
- *Was the position of his head correct, protecting the airway?*

Demonstrate

- *Correct hand hygiene.*
- *Gently hold the baby with one hand placed behind the neck and on the back.*
- *When the baby is in an upright position, lightly support the lower part of the jaw with your thumb and fingers to prevent the head from slipping down and blocking the airway.*
- *Place the other hand under the baby's buttocks.*
- *The baby's head should be turned to one side and slightly extended. This slightly extended head position keeps the airway open and allows eye contact between the mother and baby.*

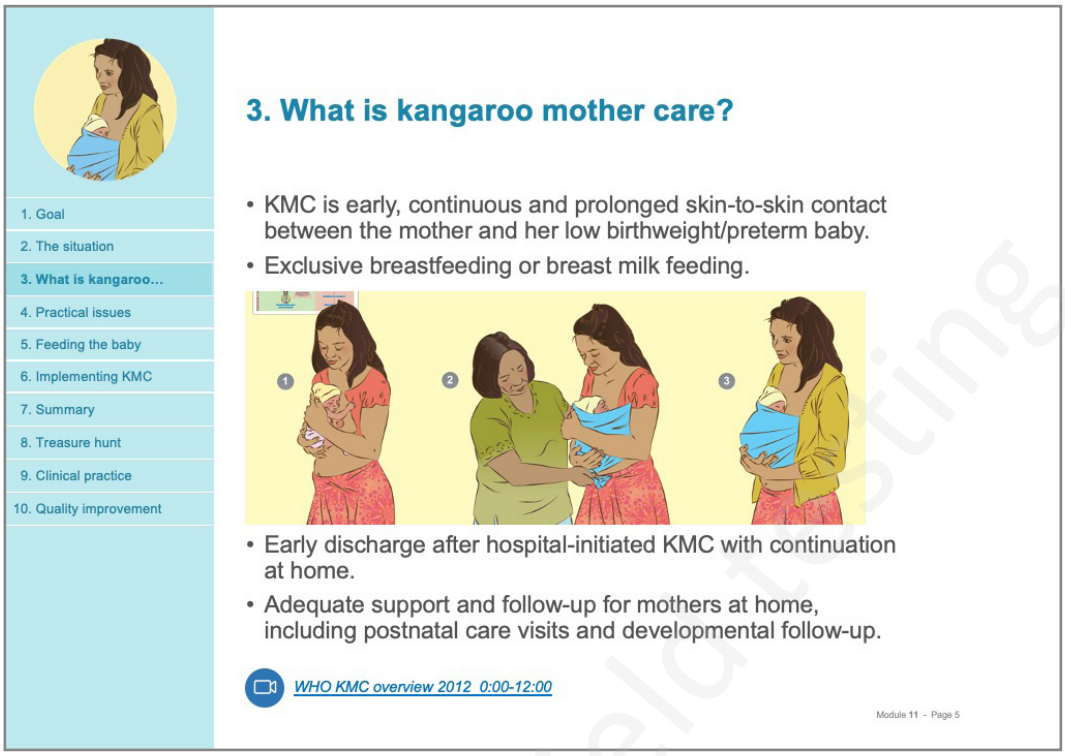
Show video

- ***Counsel mother for kangaroo mother care*** *0:00–2:46*

Ask

- **Did you counsel Lydia and her mother for KMC in a similar way?**
- **Do you do anything differently in your current practice?**
- **Were you sensitive to Lydia's anxieties and loss?**
- **Does this video highlight a quality gap in your setting?** If yes, fill out your POCQI form for KMC.

3. What is KMC?



Ask

- **What is kangaroo mother care?**
  - *Check answers using the Action Plan or the EENC Clinical Practice Pocket Guide.*

Explain

Add points noted from observation of the simulation.

- KMC is early, continuous and prolonged skin-to-skin contact between the mother and low birthweight and preterm babies; exclusive breastfeeding or breast milk feeding; early discharge after hospital-initiated KMC with continuation at home; and adequate support and follow-up for mothers and their newborns at home.
- **KMC is NOT just skin-to-skin care**. Continuous skin-to-skin care is an evidence-based practice for ALL newborns. Newborns should be placed in continuous skin-to-skin contact immediately after delivery for at least 90 minutes or until the baby has breastfed.

In-service

- KMC is an evidence-based approach, recommended by WHO, for the care of low birthweight (especially preterm) newborns. KMC has been shown to reduce mortality by up to 50% in low birthweight newborns weighing <2000 g when compared with conventional care. Evidence for this is particularly strong in lower- and middle-income countries.
- KMC was originally intended for more poorly-resourced and high-mortality settings. However, an increasing body of evidence shows multiple benefits for newborns and their families in all settings, including high-income countries. Babies weighing 2000–2500 g may also benefit from KMC. Other benefits include improved duration of breastfeeding, weight gain and physiological stability for infants. KMC also supports parent–infant bonding and child development in all settings, including improved longer-term neuro-behavioural and psychomotor development and brain maturation.

- There is a need for continuous medical education to ensure that all staff are up-to-date as new evidence becomes available.
- KMC involves all the family. The mother, grandparents, siblings and the extended family can participate, especially if the mother is sick or has died.
- In many countries, skin-to-skin contact and KMC are now considered the gold standard for preterm newborns and are regularly integrated into family-centred care approaches to inpatient care.
- KMC empowers families to care for their small newborns and shortens their length of stay in the hospital. Studies also show that KMC can reduce the workload for health care providers, especially nurses. Both intermittent and continuous KMC are beneficial and can be provided alongside other interventions and care, such as continuous positive airway pressure (CPAP), as appropriate for the newborn's clinical condition.

Optional
Show video

- ***WHO KMC overview 2012*** 0:00–12:00
  - *If you show the WHO 2012 video, note the most recent recommendations are to start continuous skin-to-skin care as soon as possible.*

Ask

- **What is new knowledge for you in this video?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, fill out your POCQI form for KMC.

Ask
Explain

- **What are the three core components of KMC?**
- Continuous skin-to-skin contact (at least 20 hours in each 24-hour period), exclusive breastfeeding and monitoring for illness.

Ask
Explain

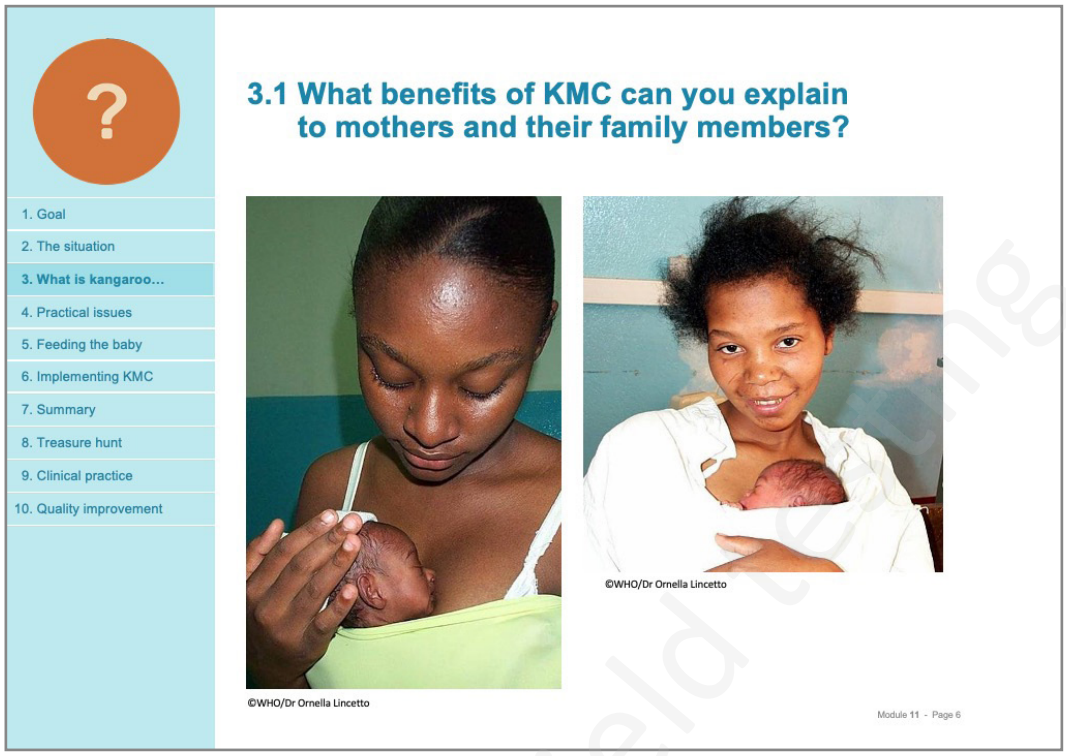
- **What additional care is needed for these low birthweight newborns?**
- Use the Action Plan, PCPNC J2 or the EENC Clinical Practice Pocket Guide, p. 60.
- Thermal protection, feeding support, continuous skin-to-skin care, nurturing family-centred care, monitoring and planning for discharge.

Ask
Explain

- **What else is very important for these newborns?**
- Ensuring infection prevention.

Ask
Explain

- **How will you prevent infection in these vulnerable newborns?**
- Correct handwashing with soap and water at recommended moments.
- Skin-to-skin care to maintain temperature and to encourage colonization with maternal flora.
- Colostrum and breast milk feeding.
- Good cord care.
- Prophylactic eye care.
- Immunization.
- Not placing infants in dirty cots or incubators.
- If separation cannot be avoided, do not place more than one infant in a cot or incubator. Ensure that cleaning and disinfection guidelines are followed.
- Follow newborn treatment guidelines if mother has any infection or suspected infection.



Ask

- **What benefits of KMC can you explain to mothers like Lydia and her family members?**
  - *Check answers*

Explain

- Additional benefits *(if not covered)*:
  - It helps the mother to form strong emotional bonds with her baby.
  - The mother feels more confident in handling her baby.
  - The mother feels good about herself and the care she can give her baby.
  - The mother feels less stressed during KMC.
  - The mother is more likely to exclusively breastfeed her baby.
  - With all the family involved, the small baby is more likely to have continuous skin-to-skin care and to have a stable temperature.
  - The mother can interact with her newborn and observe progress. This is motivating for the mother and family members.
  - All mothers giving birth to a small baby, whether or not KMC is being considered, should be encouraged to start expressing her breast milk as soon as possible after delivery. The small newborn needs colostrum to prevent infections and hypoglycaemia. Mothers with small babies need to express breast milk every 2–3 hours to establish milk production starting within hours of delivery.
  - The father and other relatives should be involved in responsive family-centred care.

Ask

- **Can Lydia and Amos start kangaroo mother care now?**

Explain

- YES. As soon as possible after birth.
- When to start depends on the competence, experience and confidence of the health staff and the willingness of the parents. Hospital policies vary around the world.

Show video
to ALL learners

- ***Immediate KMC all newborns*** 0:00–2:05

Ask learners to reflect on what they have just seen.
Ask for and answer questions.

Ask

- **For KMC, must a baby be able to breathe on her own?**

Explain

- No. With experience you can support KMC for babies who are on continuous positive airway pressure (CPAP) or are ventilated.

Ask

- **Does the newborn need to have the ability to coordinate sucking and swallowing?**

Explain

- No. The baby can receive breast milk via a nasogastric tube and have continuous skin-to-skin care.
- Kangaroo mother care may provide a sick baby with its **best chance of survival and to thrive** in a situation where referral to a specialized newborn unit is not possible.

Explain

- KMC is not about mothers alone. Mothers need the support of their families and communities. Families also need to understand what KMC is, why it is important and how to participate in the care. Families need access to their babies around the clock to practise infant- and family-centred developmental care.
- Health workers **need to understand** the special care that low birthweight infants need and to **integrate infant and family-centred developmental care** into quality essential newborn care for all small babies.
- Always explain discharge criteria for deciding when the baby will be ready to go home. Caring for their small baby will increase the confidence and competence of the family in providing care so that they are ready for discharge.

Ask learners to review the handout Infant and family-centred developmental care.

Ask

- **Must the baby be free of life-threatening disease or malformations for KMC?**

Explain

- Management of life-threatening conditions takes first priority over KMC. For babies at the end of their life, practising KMC depends on the unit and parents' wishes.
- WHO Standard 1.41 Small or sick newborns have access to appropriate palliative care. This can be in the KMC position.
- "Newborns are entitled to a dignified, pain-free death. Newborns should be allowed to die with their families, in a private, quiet space; parents should be given the opportunity to hold their baby before and at the end of life. Good-quality, compassionate bereavement care, including psychological and spiritual support, after a newborn dies reduces the negative emotional, psychological and social effects on parents and staff".

Explain

- Effective communication with mothers and families is key. Ensure that they understand what KMC is, why their infant needs this intervention and what is expected from them, both in the health facility and at home. Allow families to ask questions and express their concerns.
- Explain to the parents the **dangers of them and other people smoking** near their baby or in the same house. Keep newborns away from cooking fires.

Explain

- If essential care for small babies and KMC is new to you, practise until you are confident, using mannequins with your peers before moving to real babies. Watch more experienced colleagues and learn from them.

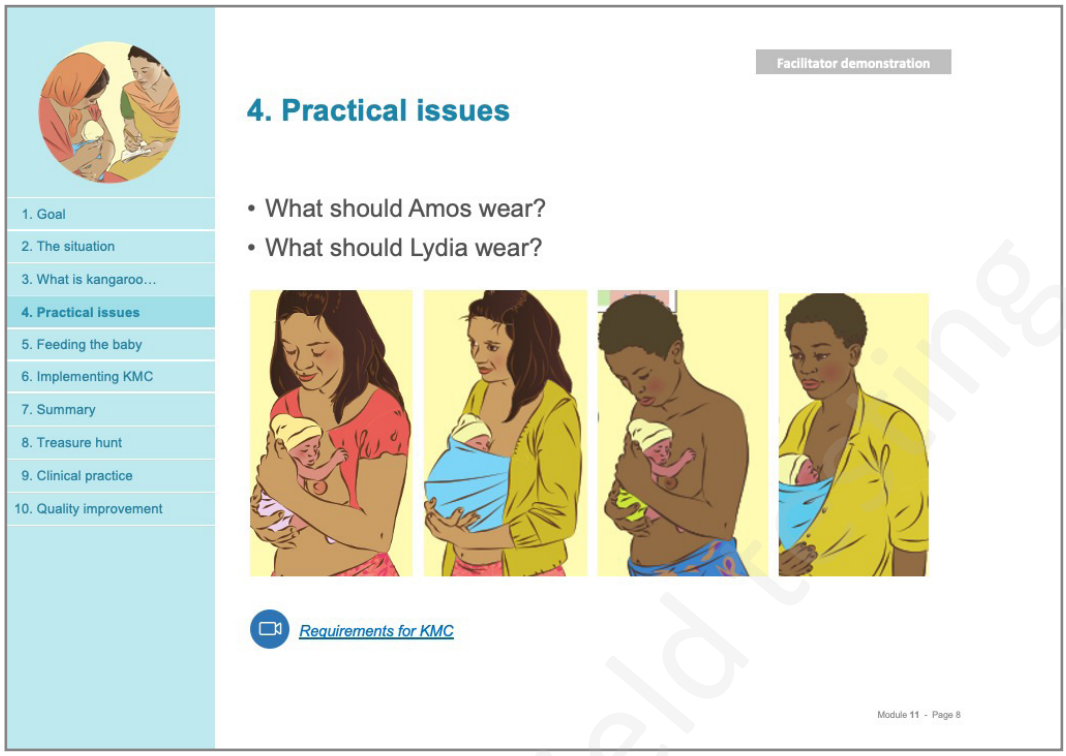
- ***Continuous skin-to-skin care***

- ***Which babies are eligible*** for KMC and reference **WHO's 2021** study *Immediate "kangaroo mother care" and survival of infants with low birth weight.*

Ask

- **What is new knowledge for you in this video?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.

4. Practical issues



Ask

- **What should Amos wear?**
- **What should Lydia wear?**

Demonstrate

Show appropriate local baby's clothes and demonstrate in cooperation with a mother who is prepared and ready or with a mannequin.

Ask

- **What should Amos wear?**

Explain

- If the surrounding temperature is 22–24 °C, then the baby should be naked inside the cloth or "pouch", except for a diaper, a warm hat and socks.
- If the temperature is below this, then in addition to the diaper, warm hat and socks, the baby should wear a sleeveless cotton shirt.

Ask

- **What should Lydia wear?**

Explain

- Emphasize that the shirt should be open in the front to allow the baby's face, chest, abdomen and arms and legs to remain in skin-to-skin contact with the mother's chest and abdomen. The mother then covers herself and her baby with her usual clothes.
- The clothes and cloths or binder should be locally available and not represent an expense and barrier to implementation.
- The mother or other family member providing KMC should wear whatever she/he finds most comfortable and warm for the surrounding temperature. She should ensure that her clothes are large enough to accommodate the baby and that skin-to-skin contact can be maintained. In some contexts, you will see mothers wearing special clothes, but these are not necessary unless traditional

garments are too tight. Many traditional garments can be easily adjusted so that they maintain privacy and dignity. The use of shawls and scarves are good where this is an issue.

- Temperatures below 18 °C are unlikely to be enough to keep the mother warm, and her clothing may then be insufficient to provide enough warmth for her baby. The room will then need to be warmed by other means.

Ask

- **What step is critical before starting to support Lydia for KMC positioning?**

Explain

- **Counselling for KMC.** Mothers need to be prepared in advance and counselled about KMC. Review *Handout common questions on KMC*

Ask

- **What should counselling cover?**

Explain

- The importance of hand hygiene.
- Continuous skin-to-skin contact.
- How she will feed her baby.
- How to position and attach her baby for breastfeeding (or feed by an alternative method).
- How to express her breast milk and store it safely.
- How she will learn the cues and respond to the needs of her baby.
- What she can and cannot do.
- When the baby will be ready for discharge home.
- Follow-up after discharge.

- All mothers giving birth to a small baby should be encouraged to start expressing breast milk as soon as possible after delivery. The small newborn needs colostrum to prevent infections and hypoglycaemia. Mothers with small babies need to start to express breast milk soon, every 2–3 hours to establish milk production (see breastfeeding overcoming difficulties).

Demonstrate

Demonstrate step-by-step using a low birthweight mannequin or a real baby and mother. If working with a real mother, demonstrate on a mannequin and support the mother to do it herself

- *Use locally available, culturally acceptable and appropriate cloths.*
- *Ensure infection prevention with correct handwashing.*
- *Ensure respectful communication and privacy.*
- *Place the baby between the mother's breasts directly on the skin in an upright position. Turn the head to the side, in a slightly extended position. Put the baby's legs and arms in a flexed position.*
- *Secure the baby in a kangaroo binder while holding the baby securely.*
- *Pull the top of the binder to the baby's ears.*
- *Put the baby's legs into frog position and pull the binder down to cover both legs.*

Explain

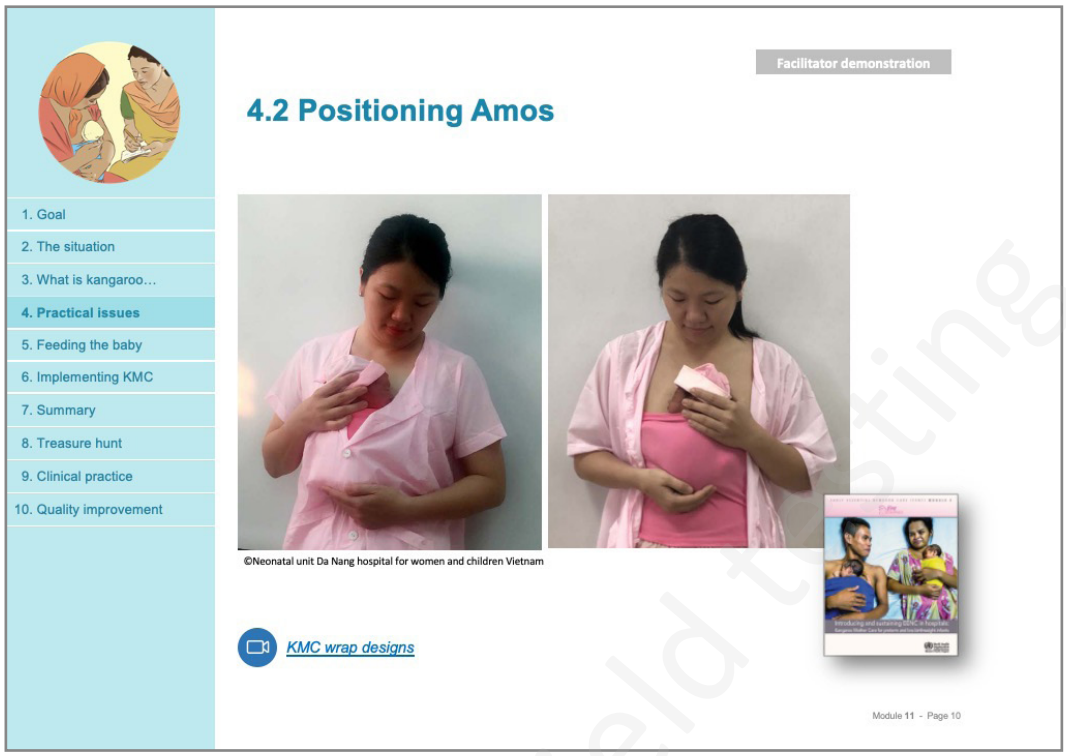
- Ensure that the baby is supported by the binder. Make sure the baby can breathe easily. Do not put too much pressure on the baby's abdomen.
- Cover with a shirt or other suitable local clothing. Ensure that the mother can walk around comfortably.

Show video

- ***Place the baby in kangaroo mother care position***

Ask

- **What is new knowledge for you in this video?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.



Ask

- **How can you ensure that Lydia keeps Amos in place safely?**
- **What do you use to support the baby in KMC position in your context?**

Show video

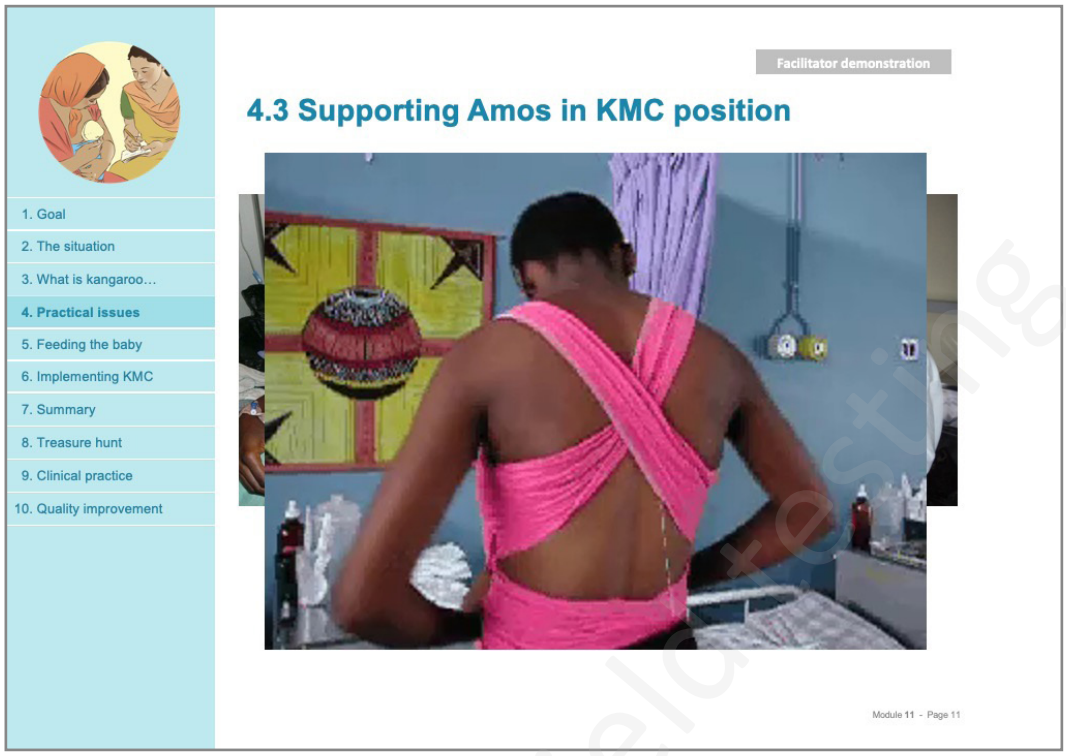
- ***KMC wrap designs***

Ask

- **What is new knowledge for you in this video?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.

Demonstrate

Continue demonstration



Pre-service

Ask

- **Why is a KMC binder the preferred method of providing KMC in some health facilities?**

Explain

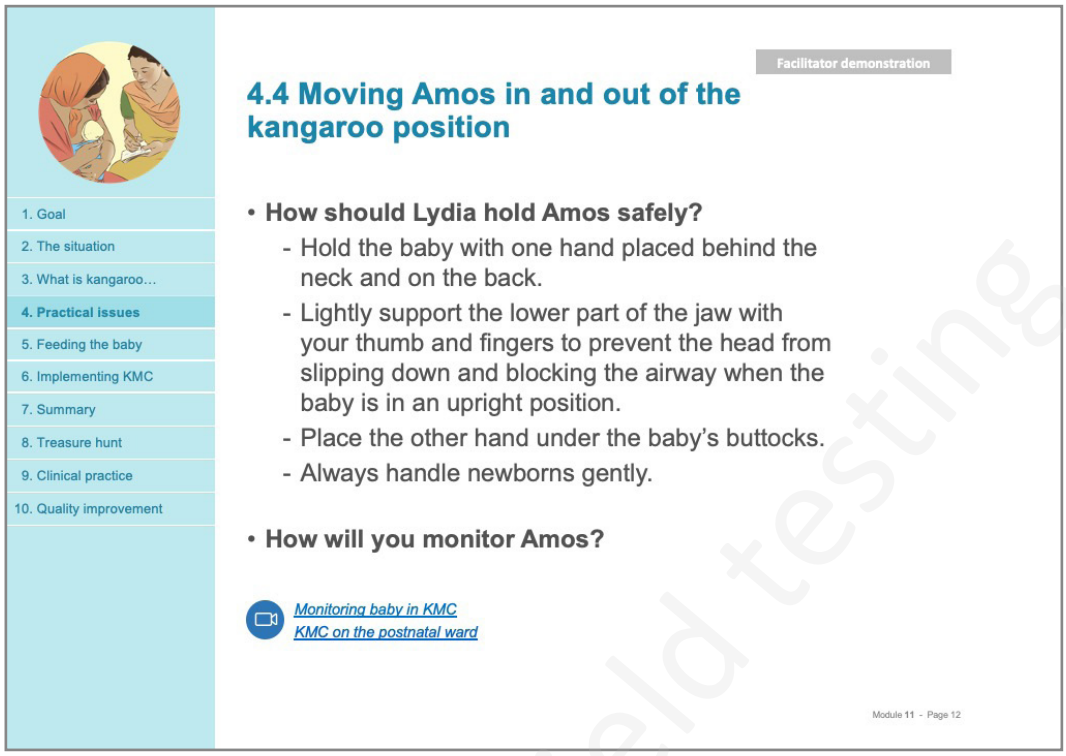
- A KMC binder holds the baby firmly against the mother's chest and increases her mobility by allowing her to stand and walk with the baby in place. A binder allows the baby to be easily shifted for breastfeeding and expressing breast milk while keeping the baby in skin-to-skin contact.
- Conventional wraps are more cumbersome and make it more difficult to move the baby for feeding in the KMC position. The use of only a shirt is less effective at maintaining the baby in skin-to-skin contact and does not provide enough support to allow the mother to move around with free hands.

Optional: Ask

- **How will you help Lydia make a binder?**

Demonstrate

- Choose a locally available, reasonably priced fabric or cloth or clean recycled cloth from home.
- The cloth should have some elasticity so that it will hold the baby snuggly.
- Cut the cloth into strips 0.8–0.9 metres long and 0.5 metres wide.
- Sew the ends of each cloth strip together to form a loop.
- Test the binders with mothers and preterm babies to establish correct average size. Adjust the fabric and length to ensure an adequate fit for the average mother.



Ask

- **How should Lydia hold Amos safely?**
  - *Check answers (on slide).*
  - *Ask and answer questions.*

Explain

- Always practise hand hygiene. Wash hands with soap and water before handling the baby.
- Whenever the baby is taken out or put back into the pouch or binder it should be as stress free as possible and comfortable for the baby.
- Always keep the baby warm.
- If the mother or carer needs to go to the bathroom, the baby should not be left alone on the bed nor put with other babies in a cot. Another family member can support Amos in the KMC position.

Demonstrate

Demonstrate with a low birthweight mannequin or doll with flexible hips and knees and a learner playing the mother or with a real mother and her newborn.
Support the mother to carry out manoeuvres herself. Do not do it for her.
Demonstrate on a mannequin at same time.

- *Hold the baby with one hand placed behind the neck and on the back.*
- *Lightly support the lower part of the jaw with your thumb and fingers to prevent the head from slipping down and blocking the airway when the baby is in an upright position.*
- *Place the other hand under the baby's buttocks.*

Ask

- **How will you monitor Amos?**

Explain

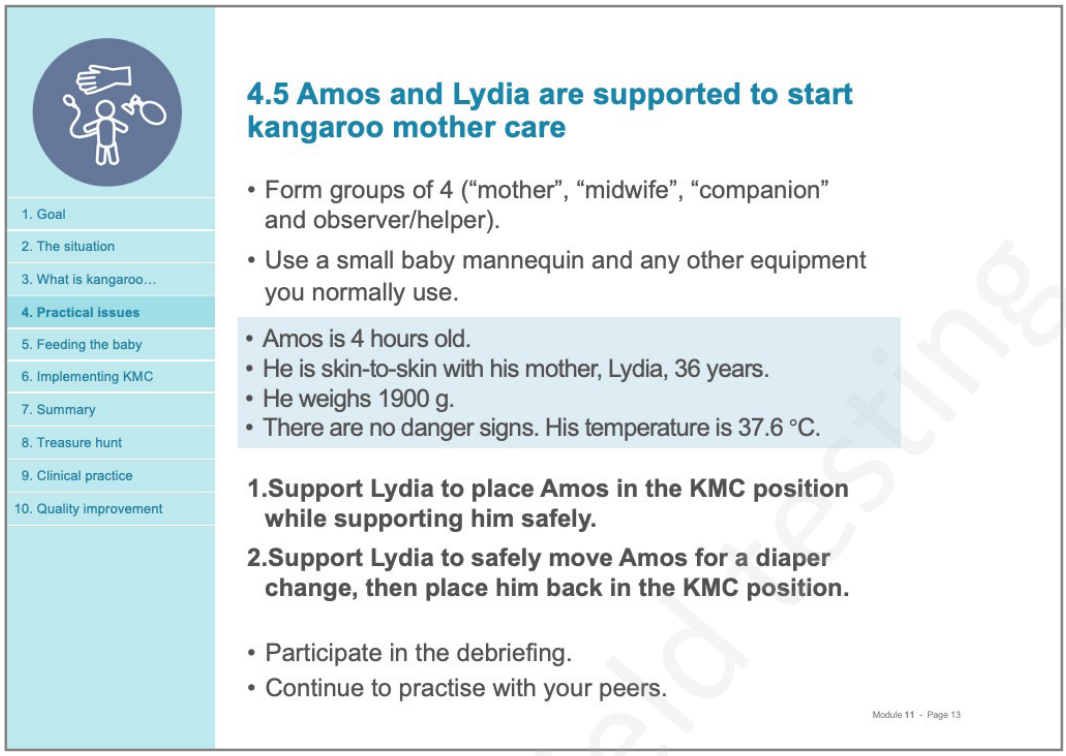
- 6-hourly heart rate, respiratory rate, temperature activity, colour, intake and output.
- Daily weight.
- Daily KMC score and assessment for readiness for discharge.

Show videos

- ***Monitoring baby in KMC***
- ***KMC on postnatal ward***

Ask

- **What is new knowledge for you in this video?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.



Brief and debrief, following *Methodologies for facilitation*

Brief
Read scenario

Skills and performance
Learners demonstrate:

1. *Effective, respectful communication explaining clearly to the mother and her companion what KMC is, why it is important and how to practise it, answering any questions they have.*
2. *Supporting the mother to safely place and secure the newborn in KMC position so that she can move around freely.*

Debrief

- *Address any issues related to norms, behaviours or concerns about practices now, in this safe environment. Ask the questions below.*
  - *Were you sensitive to Lydia's anxieties?*
  - *Was communication respectful, ensuring privacy and using language that Lydia and her companion understood?*
  - *Did you ensure infection prevention?*
  - *Was Amos held safely?*
  - *Was the position of his head correct, protecting the airway?*

- *Points to observe:*
  - *Explains the three components of KMC.*
  - *Explains at least three benefits of continuous KMC.*
  - *Shows the mother how to prepare for KMC.*
  - *Washes hands before baby care.*

- *Prepares clothes for the mother and the baby and prepares the KMC binder.*
- *Ensures that there are front-opening clothes on the mother.*
- *Removes clothes from the baby and ensures that the baby is wearing a cap, socks and a diaper.*
- *Repeats handwashing after touching the baby, the clothes and the diaper.*
- *Holds the baby safely – one hand on the head and one hand on the bottom. Places the baby between the breasts, chest-to-chest, vertically with legs and arms flexed.*
- *Ensures that the baby's head is slightly extended, with the head turned to one side and arms flexed.*
- *Pulls the binder over the baby's feet, upper edge of the wrap placed at the level of the baby's ears and then the lower edge pulled under the baby's buttocks with the feet inside the binder in the frog position.*
- *Adjusts the binder to hold the baby securely so that when the mother moves around, the baby will not fall.*
- *Checks that the baby can breathe easily and that the tight edge of the binder is not over the baby's chest.*
- *Buttons or ties clothes over the baby and covers with a blanket.*
- *Ensures that the mother is comfortable.*
- *Washes hands after baby care.*

Demonstrate

Demonstrate step-by-step

- *Hold the baby with one hand placed behind the neck and on the back.*
- *Lightly support the lower part of the jaw with your thumb and fingers to prevent the head from slipping down and blocking the airway when the baby is in an upright position.*
- *Place the other hand under the baby's buttocks.*
- *The baby's head should be turned to one side and slightly extended. This slightly extended head position keeps the airway open and allows eye contact between the mother and baby.*
- *The top of the binder is just beneath the baby's ear.*

Ask

- **Who else can support KMC?**
  - *Check answers.*

Explain

- Family members.
  - Fathers and grandparents who do not have a cough, cold, fever, transmissible systemic infectious disease (for example, hepatitis A or E), skin infection on the chest or arms (boils, abscesses, furuncles) or some psychiatric illnesses, intoxication with alcohol or illicit or prescription drugs.
  - Twins and triplets can also be cared for in kangaroo position.
  - It is not recommended that children support KMC. However sometimes it is the only option. Ensure that siblings are well supervised to ensure safety and scrupulous hand hygiene.

Ask

- **What are the important points when counselling other family members to support KMC?**

Ensure that the discussion includes:

- *Infection prevention, keeping the baby warm, recognizing danger signs and behavioural cues, and responsive care. No smoking and a smoke free environment.*
- *Remind family members that Amos should spend maximal time skin-to-skin with Lydia so that he is very close for breastfeeding. All family members should practise good hygiene. No handling of the baby by anyone who has not washed their hands.*
- *Link with experienced families who can share their experiences, their successes and how they overcame the challenges with KMC.*

Show video

- ***Counsel other family members to support KMC***

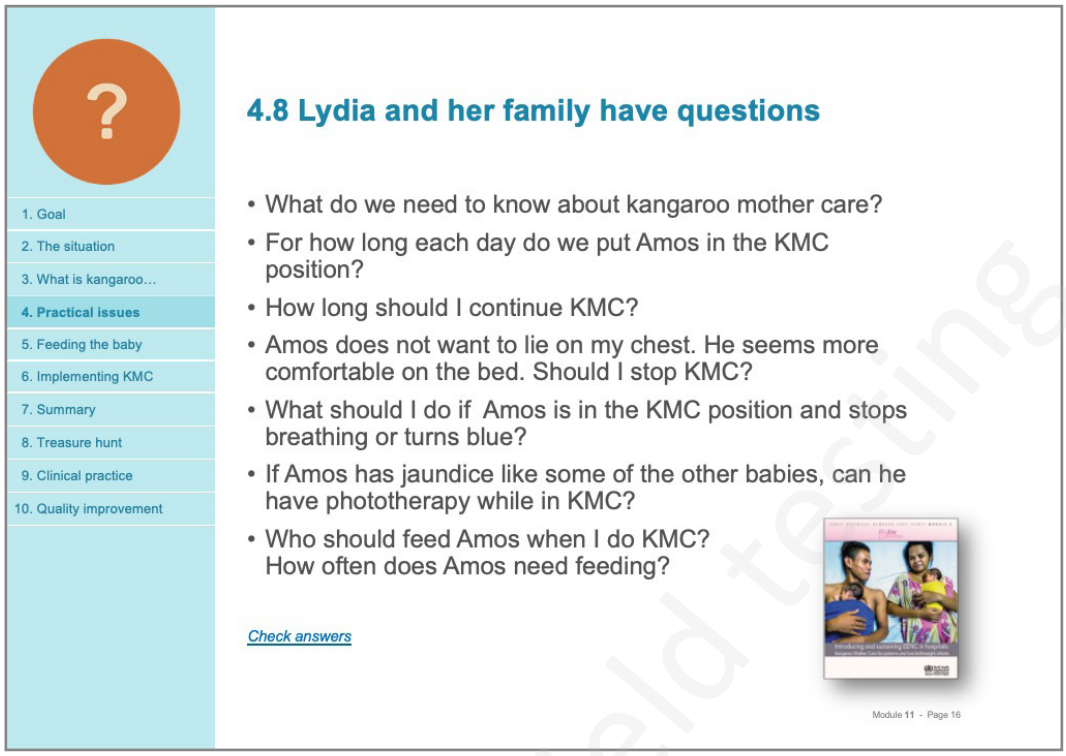
Ask for and answer questions.

Show video

- ***Family -centred care***

Ask

- **What is new knowledge for you in these videos?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.



Ask

- **If Lydia and her family ask you the following questions, how would you answer?**
  - *Check answer sheet.*

Ask

- **What do I need to know about kangaroo mother care?**

Explain

- Know how to correctly position and safely secure the baby against the chest.
- Know how to give expressed breast milk safely and give it to the baby if the baby cannot suck, recognizing feeding cues.
- Recognize when the baby is sick or needs help.

Ask

- **How long each day do I put Amos in the KMC position?**

Explain

- KMC is initiated right after birth and practised all day and night, every day. WHO recommends that the baby spends at least 20 hours each day in direct skin-to-skin contact. Breaks should not last more than 30 minutes.

Ask

- **How long should I continue KMC?**

Explain

- KMC is continued until the baby does not want to be in the position any longer. This usually happens when the baby has reached an adequate weight and is able to suck and breastfeed on its own. Most babies will stay in KMC for a few weeks. Babies who are born small may stay in KMC for up to 2 months.

Ask

- **Amos does not want to lie on my chest. He seems more comfortable on the bed. Should I stop KMC?**

Explain

- No. KMC should be continued. Babies usually get used to the KMC position quite quickly. If the baby seems restless, check that she or he has been secured in the correct position, is being fed adequately and frequently enough and that there are no signs of illness.

Ask

- **What should I do if Amos is in the KMC position and stops breathing or turns blue?**

Explain

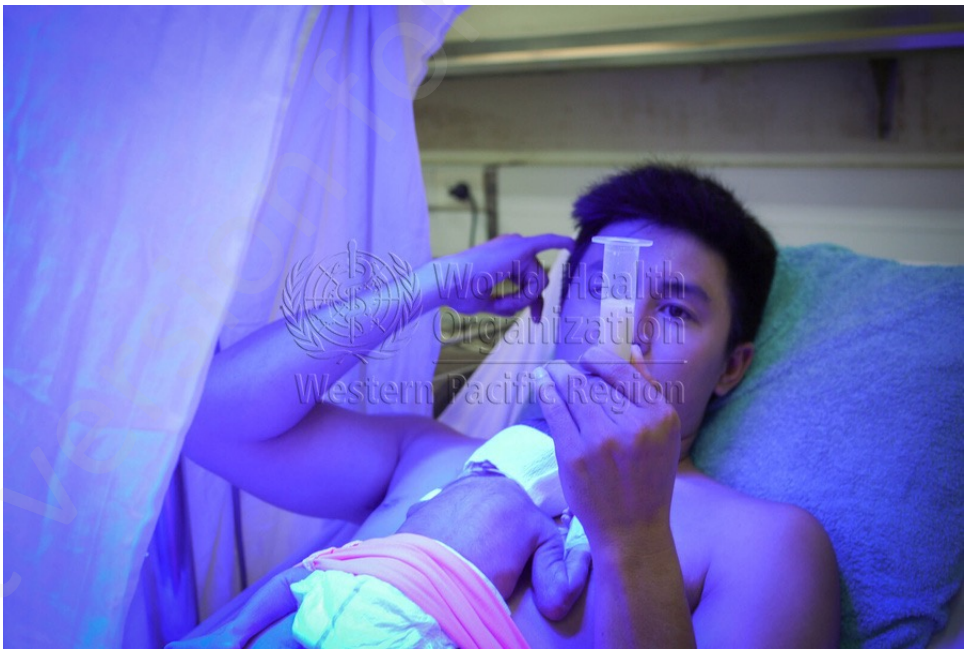
- This is called apnoea. The baby should be kept in the KMC position and a health professional should be called immediately to examine the baby. The KMC position reduces apnoea and irregular breathing.

Ask

- **If Amos has jaundice like some of the other babies here, can he have phototherapy while in the KMC position?**

Explain

- Certain types of phototherapy can be done while the baby is in the KMC position.



Ask

- **Who should feed my baby when I do KMC?**

Explain

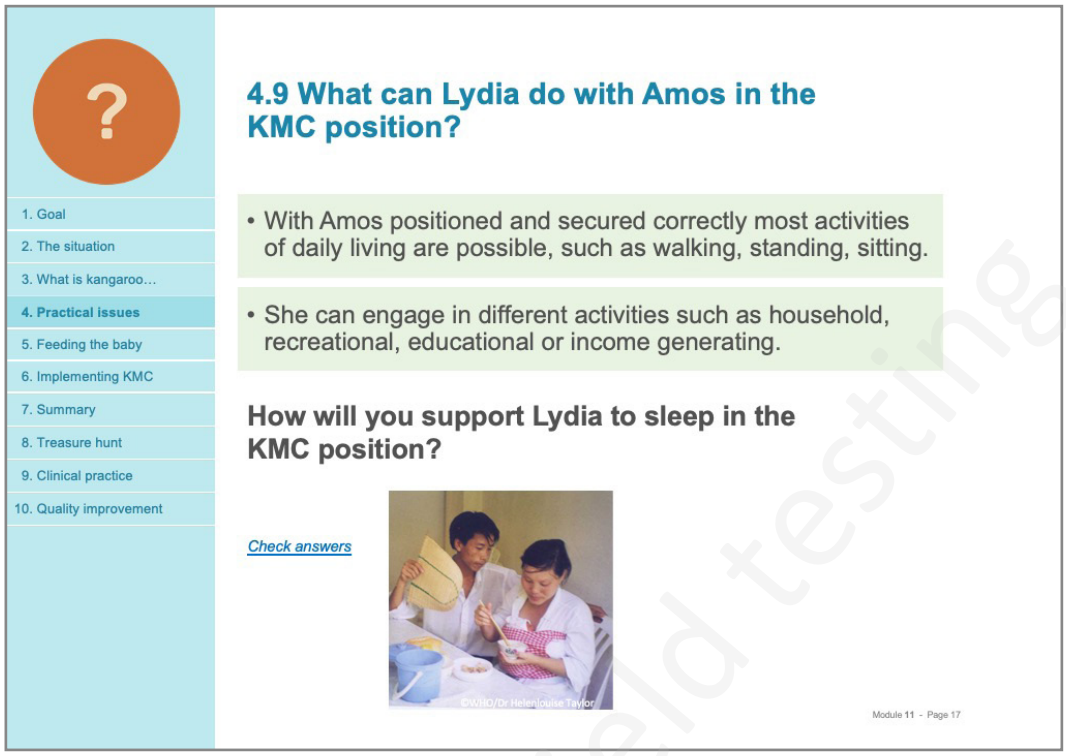
- You should feed the baby yourself with the baby in the KMC position. If the baby is able to suck, then you can feed the baby directly from the breast. This can be done either sitting up or lying down.

Ask

- **How often should I feed my baby?**

Explain

- You should try to feed the baby every 2 hours on average, 8–12 times a day.



Ask

- **What activities can Lydia carry out while Amos is in KMC position?**
  - *Show answers (slide).*

Explain

- Once the baby is positioned correctly during the day the mother can do whatever she likes. She can walk, stand, sit or engage in different activities such as recreational, educational or income-generating activities.
- The only requirements she has to meet are cleanliness and hygiene including washing her hands frequently, maintaining a low level of noise and regular feeding of the baby.
- Mothers and caregivers can also enjoy interactions with the baby including gentle stimulation and play (talking, singing, touching and massaging their infants after guidance from their health worker).

Ask

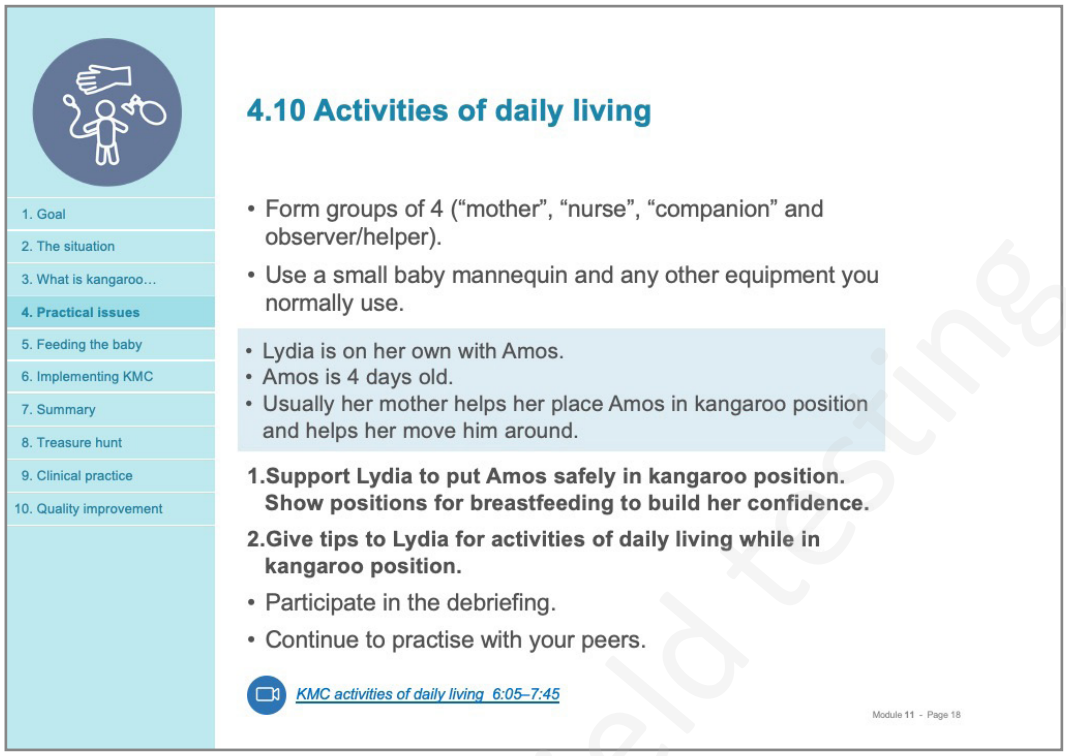
- **Is it safe for Lydia to sleep with Amos in KMC position?**
  - Yes.

Ask

- **How will you support her to sleep in kangaroo position?**

Explain

- Check answers using *handout*. When the mother wants to rest or sleep, a reclined or semi-sitting position is best. Pillows or cushions or folded blankets can help achieve this on a bed. A semi-sitting position helps the baby to breathe normally.
- If the mother finds the semi-sitting position uncomfortable and cannot sleep, she should sleep in her usual position because the advantages of kangaroo mother care are greater than the risk of her baby developing breathing problems.
- Consider the context at the mother's home: she may normally sleep on the floor on a mat and never use pillows. Help find local solutions that are feasible so that mothers and families can continue KMC after discharge.



Brief and debrief, following *Methodologies for facilitation*

Brief
Read scenario

Skills and performance
Learners demonstrate:

1. *Effective, respectful communication explaining clearly about KMC and activities of daily living.*
2. *Demonstrate supporting Lydia to safely place Amos in KMC position and breastfeed in KMC position.*

Debrief

- *Address any issues relating to norms, behaviours or concerns about practices now, in this safe environment. Ensure infection prevention. Examples of concerns could include:*
  - *Poor communication.*
  - *Careless hygiene or rough handling of the baby.*
  - *If the health worker explains that there is a minimum weight or gestational age for starting KMC.*
  - *The health worker does not recommend local low-cost materials for securing the infant.*
  - *The infant is not correctly secured and slips down, or the airway or diaphragm is compromised.*

Ask

- **Were you sensitive to Lydia’s loss and anxieties?**
- **Was communication respectful, ensuring privacy and using language that Lydia understood?**

Demonstrate

Demonstrate using a mannequin or real mother and small newborn.
Explain at the same time as demonstrating.

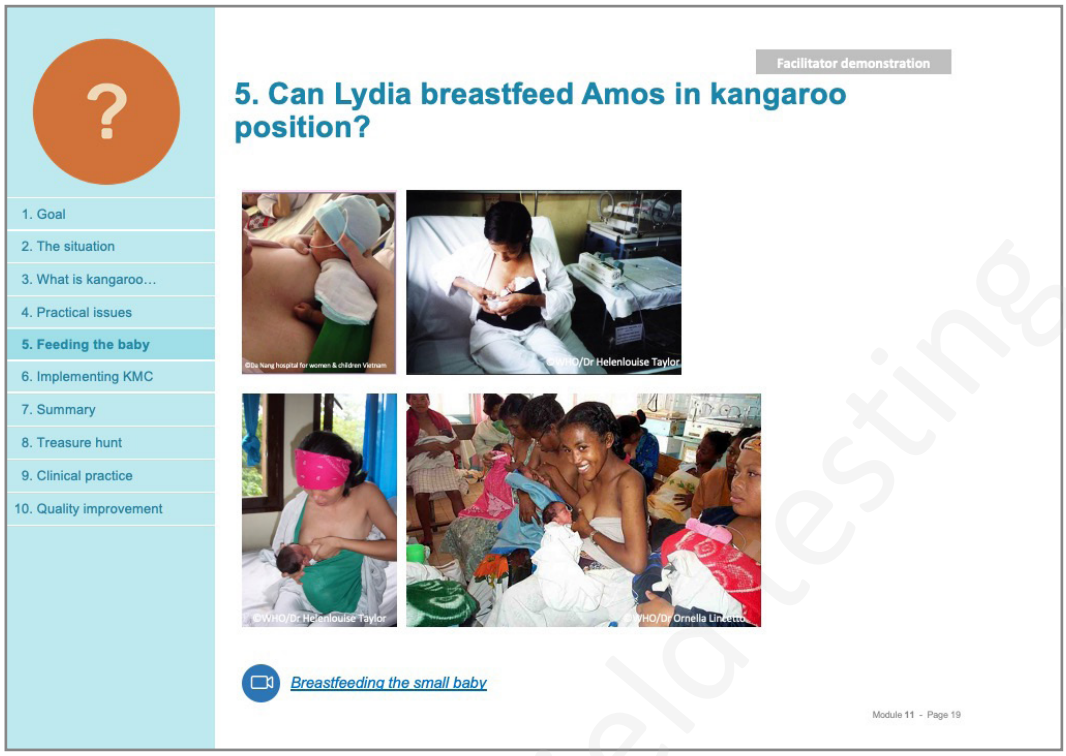
Show video

- ***KMC activities of daily living***

Ask

- **What is new knowledge for you in the video?**
- **Are there any skills or practices that are different to your current practice?**
- **What provider behaviours are different to your current practice?**
- **Does this video highlight a performance quality gap or problem in your setting?**

5. Feeding the baby



Ask

- **Can Amos be breastfed in the kangaroo position?**

Explain

- Yes. Lydia will need support.

Demonstrate

- Teach this mother about attachment and positioning in advance, for example, by having her observe another mother who is breastfeeding successfully or by demonstrating on a mannequin. Otherwise, teach her the key points of correct positioning and attachment now.
- Support the mother to breastfeed her baby in the kangaroo position. This is same method as when she directly expressed breast milk into the baby's mouth previously (see the alternative feeding methods module).
- Loosen the pouch/cloth and handle the baby carefully, supporting the head and buttocks. Ensure that the baby remains wrapped so that he or she does not get cold, but has the arms and hands free.
- Ask the mother to breastfeed at regular intervals, every 2 to 3 hours during the night and during the day. Continue with frequently scheduled exclusive breastfeeding until the baby shows a satisfactory growth (15 g/kg/day or more) or until the baby reaches 1800 g of weight. Support the mother to breastfeed on demand, responding to evolving feeding cues from the baby.
- If the mother notices the baby seems to be tired or looks blue or dusky or the colour is not right, then ask her to stop feeding and call a health worker and let the baby rest. Check the baby's breathing after few minutes.

Show video

- ***Breastfeeding the small baby***

Ask for and answer questions.

Ask

- **What should you discuss with Lydia about breastfeeding Amos?**
  - *Check answers.*

Explain

- Importance of breastfeeding.
- Recognizing feeding cues.
- Frequency of feeding.
- Attachment and positioning.

Ask

- **How will you support Lydia to position Amos?**

Explain

- Ensure correct handwashing.
- Loosen or move the binder so that the baby is covered but in correct position to breastfeed.
- Support Amos so that he is close, with maximal skin-to-skin contact.
- Support Amos's whole body, not just the neck and shoulders.
- Ensure that Amos's ear, shoulder and hip are in a straight line
- Ensure that Amos's face looks towards the breast, with his nose opposite the nipple.
- Ensure that Amos's chin is touching the breast.

Ask

- **How will you support Lydia to help Amos attach to the breast?**

Explain

- Be sure that his mouth is wide open.
- His lower lip should be turned out/downwards/everted.
- More areola is visible above Amos's mouth than below.
- Amos feeds with slow, deep sucks.

Explain

- Discuss with Lydia signs of good breastfeeding.
  - Occasional short pauses in sucking are normal.
  - No sucking sounds should be heard.
  - Feed on both sides until the breasts feel empty after feeding. (You may need to feed twice from each side or express breast milk by hand if Amos tires).

Demonstrate

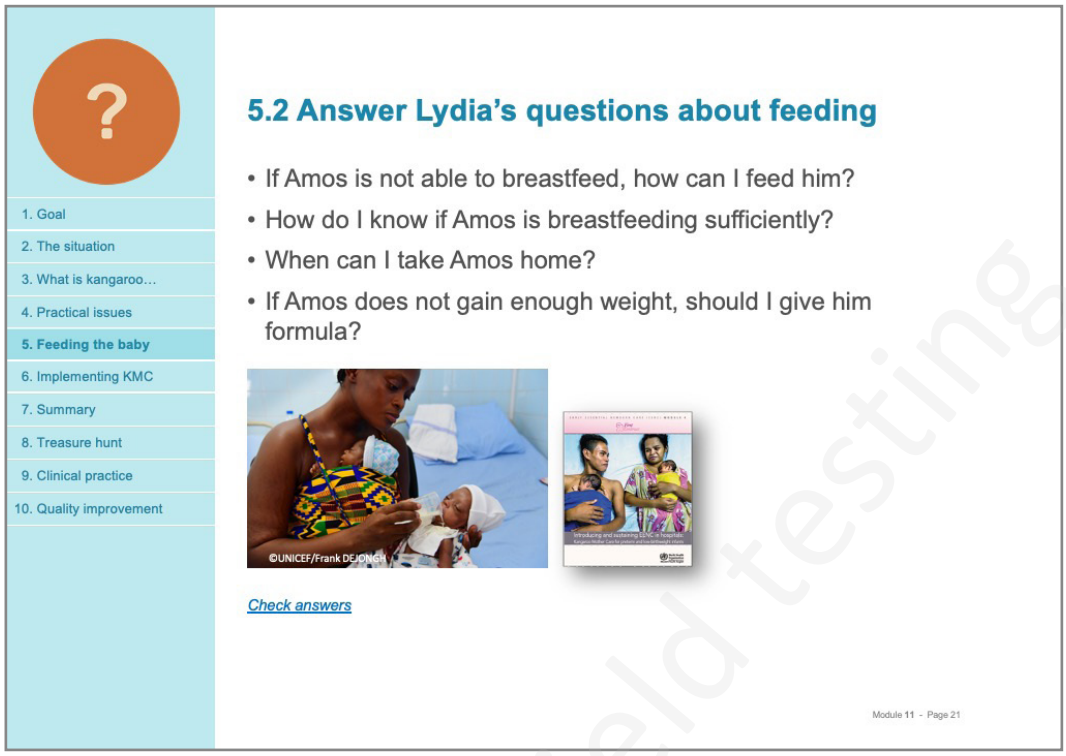
Demonstrate how to return the baby to the KMC position.

- *Move the baby back into the KMC position by supporting the head and buttocks and adjusting the binder.*
- *The baby's head should be turned to one side and slightly extended. This slightly extended head position keeps the airway open and allows eye contact between the mother and baby.*
- *The top of the binder is just beneath the baby's ear.*
- *Wash hands correctly.*

Review relevant video/s

- ***How to express your first milk***
- ***Cup feeding your small baby***
- ***Breastfeeding the small baby***
- ***A small baby's feeding journey***

Ask learners to reflect on videos shown and update POCQI form.



Ask

- **If Lydia and her family ask you the following questions, how would you respond?**
  - *Check responses using answers.*

Ask

- **If Amos is not able to breastfeed, how can I feed him?**

Explain

- If Amos is not able to suck, then he can be fed your own expressed breast milk. This can be given to him in a cup or a spoon.
- In other small babies who cannot swallow (usually babies less than 28 weeks) breast milk can be given through a nasogastric/stomach tube.

Ask

- **How do I know whether Amos breastfeeding sufficiently?**

Explain

- Babies receiving sufficient breast milk are calm and are not distressed. Steady growth is the best sign that the baby is getting adequate breast milk.
- It is normal for preterm babies to lose 10% of their body weight in the first 7–10 days of life, even if they are receiving adequate breast milk.
- 7–10 days after birth they should have gone back to their birthweight. After 10 days a weight gain of at least 15 g/kg/day is expected if babies are receiving an adequate amount of breast milk.

Ask

- **When can I take Amos home?**

Explain

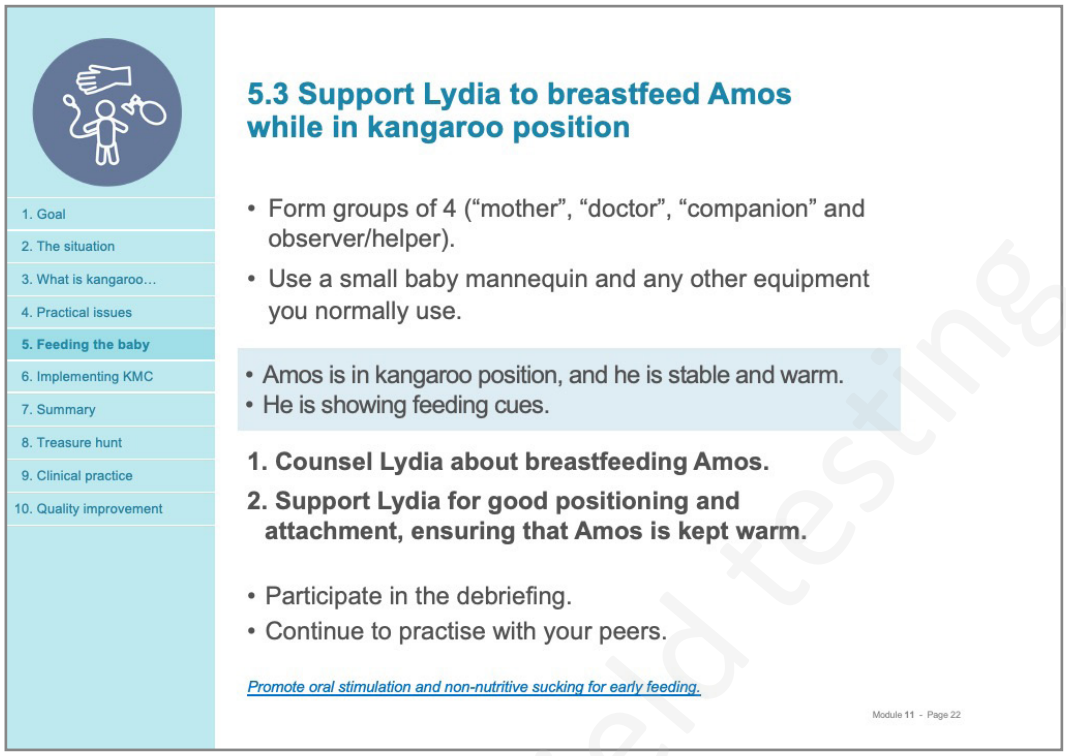
- Your baby can go home when she or he is feeding well, gaining weight, has a stable temperature and when you and your family have the confidence to practise KMC at home.

Ask

- **If Amos does not gain enough weight, should I give him formula?**

Explain

- Formula should not be given. Poor weight gain can usually be solved by improving position and attachment, expressing more breast milk (by expressing day and night), feeding with a cup or spoon and ensuring that feeds are given often enough.
- If weight still does not improve, the baby can be fed more nutrient-dense hindmilk. Also, KMC should be practised as much as possible, which helps to keep the baby warm and promotes growth.
- Babies who suddenly stop gaining weight need to be assessed for a medical problem.



Brief and debrief, following *Methodologies for facilitation*

Brief
Read scenario

Skills and performance
Learners demonstrate:
1. *Effective, respectful communication while counselling Lydia about breastfeeding.*
2. *Demonstrate how to support Lydia for good positioning and attachment, ensuring that Amos stays warm.*

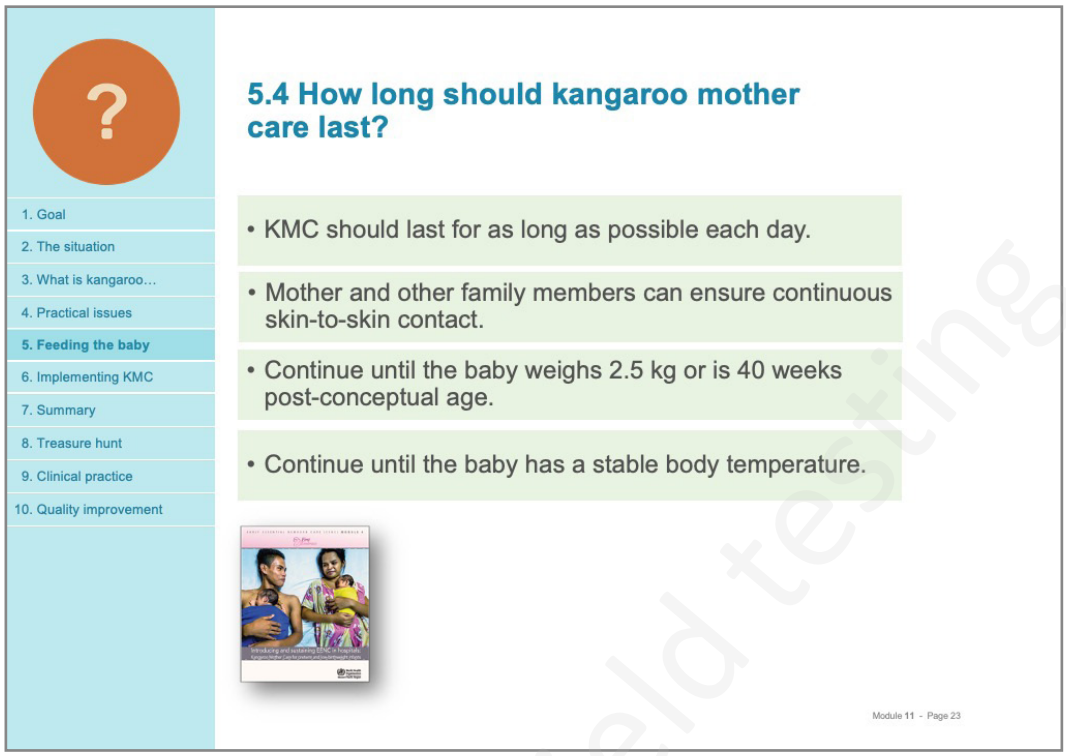
Debrief
- *Ensure that learners were sensitive to Lydia’s loss and anxieties and communication was respectful, ensuring privacy and using language that Lydia and her companion understood. Ensure infection prevention. Ask questions below:*
  - *Was Amos supported and positioned safely?*
  - *Was he supported and positioned safely both when moving him from and replacing him in the kangaroo position?*
  - *Was Amos well-positioned and attached?*
  - *Did the health worker explain about the frequency of breastfeeding?*
  - *Did the health worker explain when to be concerned and what are the danger signs?*

- *Address any issues related to norms, behaviours or concerns about practices now, in this safe environment. Ensure infection prevention. Examples of concerns could include:*
  - *Poor communication.*
  - *Careless hygiene or rough handling of the baby.*
  - *Explains that there is a minimum weight or gestational age for starting KMC.*
  - *Does not recommend local low-cost materials for securing the infant.*
  - *Infant not correctly secured and slips down when hands are no longer providing support.*
  - *Lydia's dignity not respected.*
  - *No culturally appropriate covering of breasts.*
  - *Does not encourage Lydia's active participation.*

Optional
Demonstrate

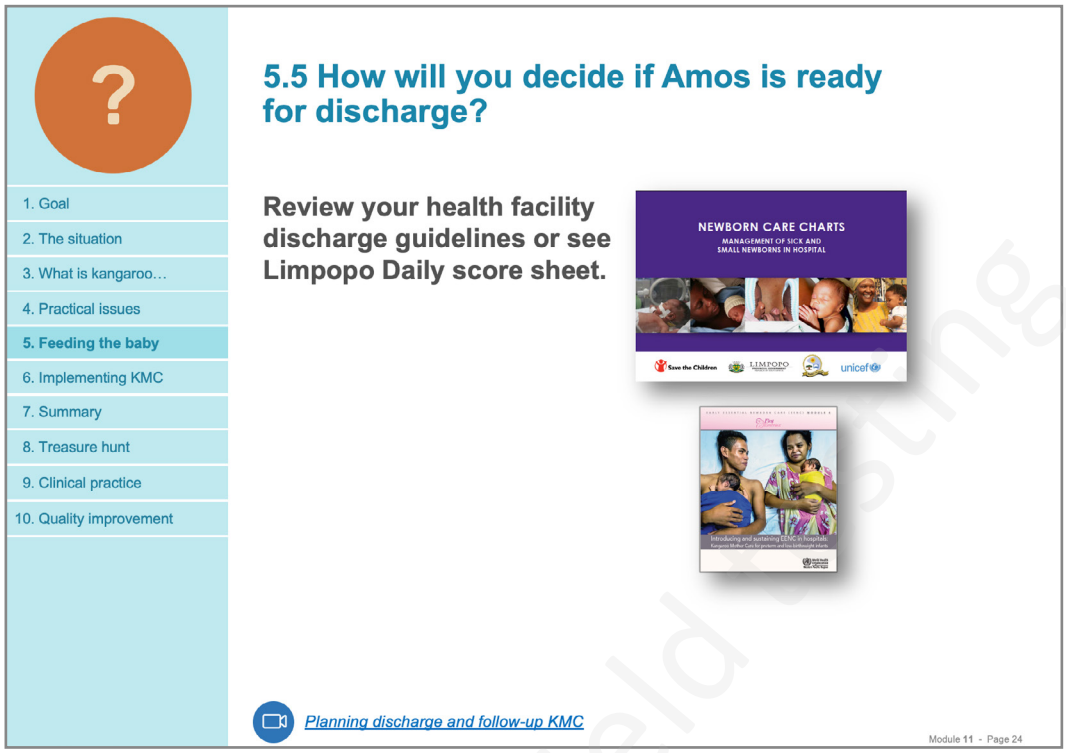
Demonstrate again using mannequin and model breasts, emphasizing those steps omitted or where there was difficulty.

Reference: Sasmal S. Promote oral stimulation and non-nutritive sucking for early feeding. Asian J Nursing Ed Res. April 2021.



Ask

- **Lydia asks how long KMC should last. Answer her question for the amount of time each day and for the duration in time.**
  - *Show answers (slide).*
  - *Ask for and answer questions.*



Ask

- **How will you decide if Amos is ready for discharge?**
  - *Check answers.*

Explain

- Discharge planning should start as early as possible after birth in collaboration with families. They should understand the criteria that you use.

Explain as necessary

- Decision-making for discharge:
  - Breathing: no apnoea, no fast breathing or chest indrawing.
  - Temperature is normal and stable (36.5–37.5 °C).
  - Weight gain is adequate over 3 consecutive days.
  - Fully breastfeeding or using an alternative method of feeding.
  - Baby is tolerating feeds well.
  - Mother is confident in giving KMC, understands the danger signs for seeking care and has adequate family support at home.
  - Mother has no health or psychosocial concerns.

- Assess for discharge decision-making:
  - Assess the mother–baby dyad and plan to discharge them when: baby is breastfeeding well and gaining weight adequately for 3 consecutive days.
  - Baby's body temperature is between 36.5–37.5 °C for three (3) consecutive days.
  - Postnatal visits for mother–baby dyad are organized.

Review your local discharge guidelines or the KMC daily score sheet used in Limpopo.

KMC Daily Score Sheet Based on the Intra-hospital KMC Training Programme in Bogota, Colombia				Date of birth ...../...../..... Date _____							
Name:		Breastfeeding:		Date started 24 hour KMC ...../...../.....	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Hospital No:		Formula:									
Evaluation	Score			Weight _____							
	0	1	2	Remark							
Socio-economic support	No help or support	Occasional help	Good support system								
Mother's milk production	Expresses 0 -10ml breast milk	Expresses 10 - 20 ml breast milk	Expresses 20 - 30 ml breast milk	Must score before discharge. N/A for formula							
Positioning and attaching of baby on to breast	Always need assistance	Occasionally needs assistance	No assistance needed	Not applicable for formula feeding							
Baby's ability to suckle at the breast / cup feed	Gets tires very quickly	Gets tired infrequently	Takes all feeding well								
Confidence in handling baby, e.g. feeding, bathing, changing	Always need assistance	Occasionally needs assistance	No assistance needed								
Baby's weight gain per day	0 - 10g	10 - 20g	20 - 30g	Must score 1 or 2 before discharge							
Confidence in administering vitamin and iron drops	No confidence	Some confidence	Fully confident								
Knowledge of KMC	No knowledge	Some knowledge	Knowledge-able								
Acceptance & application of KMC	Does not accept or apply KMC	Partly accepts & applies KMC method	Applies KMC without having to be told	Applies KMC without having to be told							
Confidence in caring for baby at home	Does not feel sure or able	Feels slightly unsure and unable	Feels confident								
TOTAL SCORE per day											

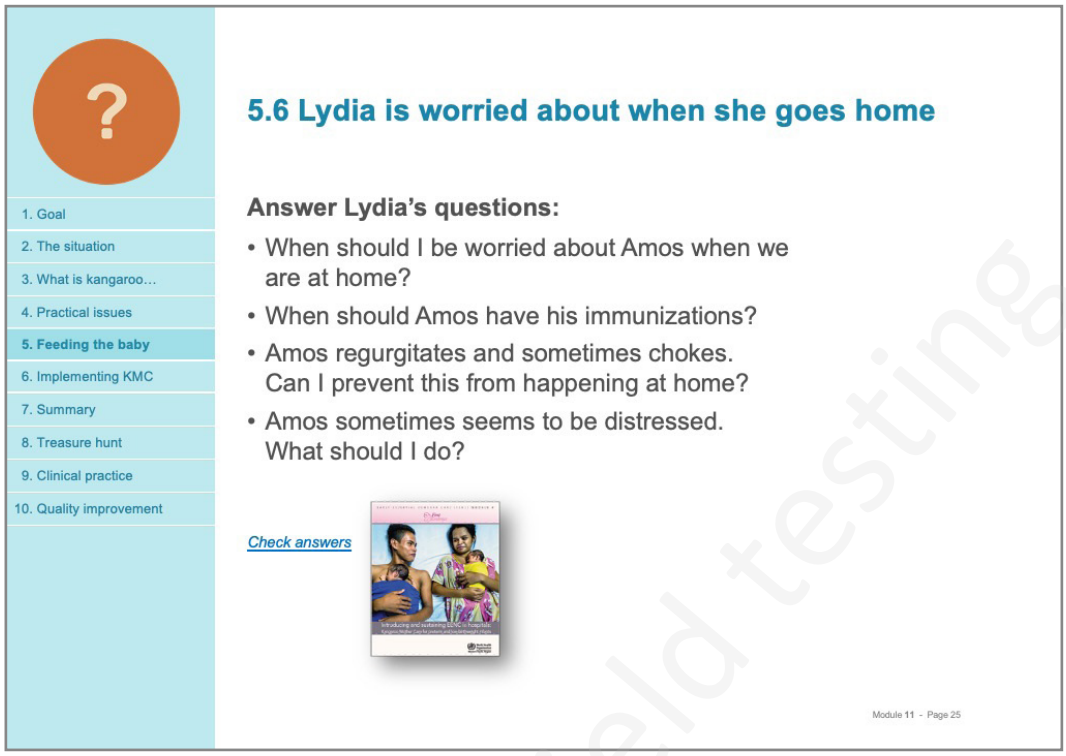
Limpopo Job Aids and Tools: KMC daily score chart.

Show video

- ***Planning discharge and follow up KMC***

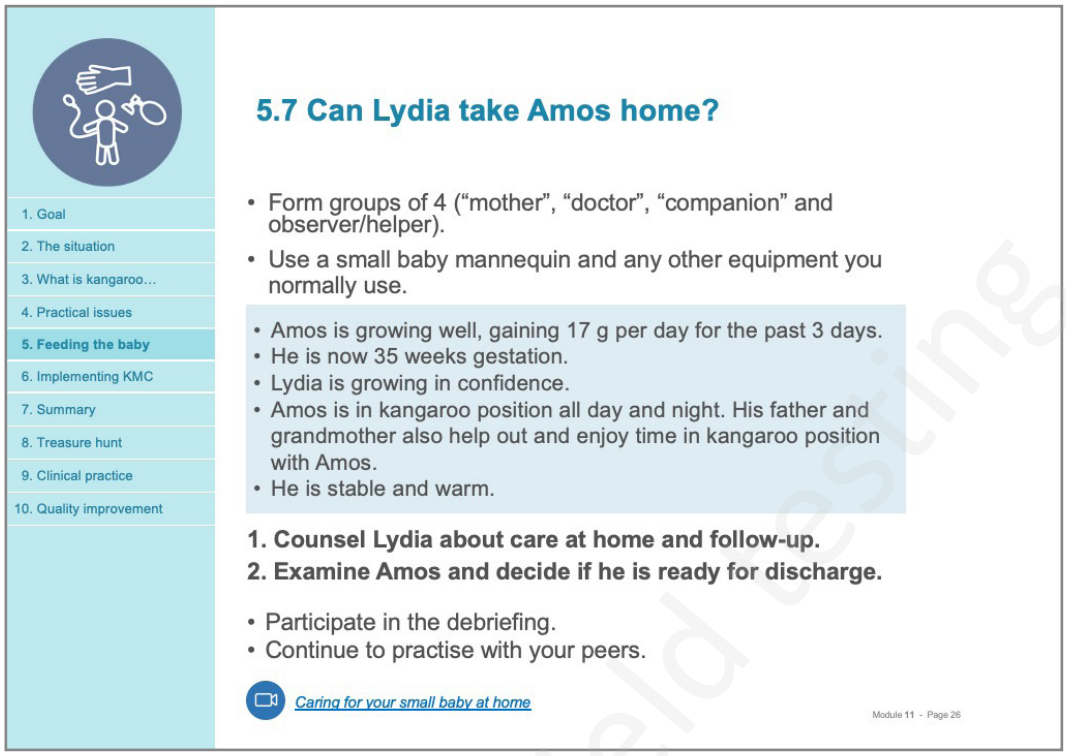
Ask

- **What is new knowledge for you?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this demonstration highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.



- Check answers to Lydia's questions using the job aid and *answer* sheet.

Ask for and answer questions.



Brief and debrief, following *Methodologies for facilitation*

Brief
Read scenario

Skills and performance
Learners demonstrate:
1. *Counsel Lydia about home care and follow-up.*
2. *Demonstrate routine examination of a small baby in the KMC position and decision-making regarding whether the baby is ready for discharge.*

Debrief
- *Ensure that communication was respectful, ensuring privacy and using language that Lydia understood. Ensure infection prevention. Address any issues relating to norms, behaviours or concerns about practices now, in this safe environment. Examples of concerns could include:*
  - *Poor communication.*
  - *Careless hygiene or handling of the baby.*
  - *Forgets to explain the time and place and reason for follow-up visits.*
  - *Doesn't explain to Lydia and family that Amos is ready to go home.*

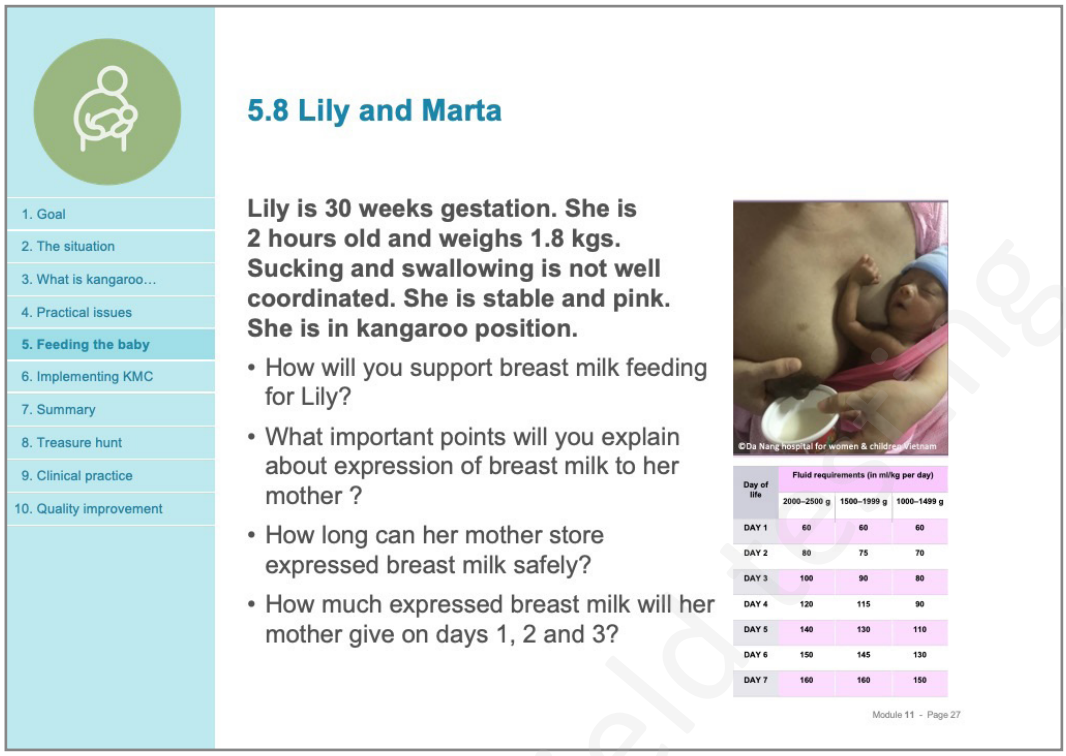
Ask

- **What went well?**
- **Did you use the job aid or parent card or watch the video with Lydia?**
- **What was missed?**
- **Was the examination sequence correct?**

Show video

- ***Caring for your small baby at home***

Ask learners to reflect on practices seen in the video.



Ask

- **How will you support breast milk feeding for Lily?**

Explain

- Safe expression of breast milk.
- Safe milk storage.
- Safe cup feeding or feeding with a gastric tube.

Explain as necessary

- To support the establishment and maintenance of breastfeeding among mothers practising KMC, health workers can:
  - Support the mother to breastfeed her baby in kangaroo position. This is the same method as when she directly expressed breast milk into the baby's mouth previously (see alternative feeding methods module).
  - Loosen the pouch/cloth and handle the baby carefully. Support the head and buttocks. Ensure that Lily remains wrapped so that she does not get cold, but she has her arms and hands free.
  - It is helpful to teach this mother about attachment and positioning in advance, for example, by having her observe another mother who is breastfeeding successfully or by demonstrating on a mannequin. Otherwise, teach her the key points of correct positioning and attachment now.
  - Ask the mother to breastfeed at regular intervals, every 2 to 3 hours during the night and during the day. Continue with frequently scheduled exclusive breastfeeding until the baby shows a satisfactory growth (15 g/kg/day or more) or until the baby reaches 1800 g of weight. Support the mother to breastfeed on demand.
  - If the mother notices that the baby seems to be tired or looks blue or dusky or "his colour is not right", then ask her to stop feeding and call a health worker and let the baby rest. Check the baby's breathing after few minutes.

Ask

- **How long can her mother store expressed breast milk safely?**

Explain

- This depends on the method of storage.
  (*See milk storage guidelines below.)*

Location of storage	Temperature	Maximum recommended storage duration
Room temperature	16–29 °C (60–85 °F)	4 hours optimal
		6–8 hours acceptable under very clean conditions
Refrigerator	~4 °C (39.2 °F)	4 days optimal
		5–8 days under very clean conditions
Freezer	0 °F (–18 °C)	6 months optimal
		12 months acceptable

Source: Eglash A, Simon L, Academy of Breastfeeding M. ABM Clinical Protocol #8: Human milk storage information for home use for full-term infants, revised 2017. Breastfeed Med. 2017;12(7):390-5. doi: 10.1089/bfm.2017.29047.aje.

Ask

- **How much expressed breast milk will her mother give on days 1, 2 and 3?**

Explain

- Answer 60, 75 and 90 ml per kg per day.

Day of life	Fluid requirements (in ml/kg per day)		
	2000–2500 g	1500–1999 g	1000–1499 g
DAY 1	60	60	60
DAY 2	80	75	70
DAY 3	100	90	80
DAY 4	120	115	90
DAY 5	140	130	110
DAY 6	150	145	130
DAY 7	160	160	150

Explain

- Quantity of milk should be prescribed by medical staff and charted in notes and feeding charts.
- Calculate ml per kg/day according to weight and age, then:
  - If 3 hourly feeds prescribed, divide the total by 8 to give the amount per feed.
  - If 2 hourly feeds prescribed, divide total by 12 to give the amount per feed.
- Watch for feed tolerance. Weigh daily.
- Use the section **"Quantity to feed by cup"** on **PCPNC K6**, or Algorithm 4, p. 60, EENC Clinical Practice Pocket Guide or application recommended by your ministry of health.

Weight (kg)	Day 0	1	2	3	4	5	6	7
1.5–1.9	15 ml	17 ml	19 ml	21 ml	23 ml	25 ml	27 ml	27+ ml
2.0–2.4	20 ml	22 ml	25 ml	27 ml	30 ml	32 ml	35 ml	35+ ml
2.5+	25 ml	28 ml	30 ml	35 ml	35 ml	40+ ml	45+ ml	50+ ml

Answer Marta's questions.
Check answers using answer sheet.

Ask

- **I didn't breastfeed my last baby. Why is breastfeeding beneficial for Lily?**

Explain

- Breastfeeding is one of the most life-saving interventions we have. Delays in initiation of breastfeeding are associated with dramatic increases in death and illness.
- Babies who are fed formula have 4–6 times the risk of dying compared with exclusively breastfed babies.

Ask

- **When will Lily be ready to breastfeed?**

Explain

- Babies will develop a suck-and-swallow reflex and be able to successfully breastfeed between 32 and 36 weeks. Each baby is different. Babies <28 weeks usually require tube feeding because they do not have a swallow reflex.

- From 28 to 32 weeks, babies may require tube feeding at first, but can transition to cup-and-spoon feeding and begin to practise breastfeeding. All babies >32 weeks should attempt breastfeeding every day with cup-and spoon feeding added if required.

- To initiate breastfeeding, mothers should look for feeding cues, express drops of milk directly onto the mouth of the baby and encourage attachment. The baby may initially suck for brief periods, but with repeated attempts, will feed longer until normal breastfeeding is initiated.

Ask

- **How will I know if Lily is ready to breastfeed? Are there special signs?**

Explain

- Newborns show feeding cues. The earliest sign is drooling, followed by mouth opening, tonguing, licking, rooting and biting of fingers or hand. If skin to skin, eventually, the baby will crawl towards the breast and open his or her mouth widely to attach to the breast.

Ask

- **Lily is preterm. Will I have enough milk?**

Explain

- The vast majority of mothers have an adequate supply of breast milk. If the baby is not yet able to breastfeed, expressed breast milk can be given to the baby by tube, cup or spoon, and stored
- If necessary mothers should express breast milk 8–12 times over the day and night until the baby begins breastfeeding. Stimulation of the breast sends messages to the mother's brain and back to the breast to produce more milk. Once the baby is around 32 weeks of age, the mother can introduce normal breastfeeding. A full-term newborn's stomach is only the size of a thumbnail (and a preterm is smaller). Provided that the mother's breastfeeding technique is effective (positioning and attachment), most babies can get enough milk from the mother.

Ask

- **Should I give Lily a bottle?**

Explain

- Bottle feeding reduces the likelihood that the baby will develop an effective suck-and-swallow reflex and begin to breastfeed normally. Also, it increases the risk of aspiration and of infection. Feeding with a cup and spoon reduces these risks.
- Cup-and-spoon feeding may be slightly slower than bottle feeding, but this is outweighed by the benefits to the baby for long-term breastfeeding success. Cup-and-spoon feeding of expressed breast milk can be carried out effectively by mothers and family members.

Ask for and answer any questions.

Show video

- ***The cost of not breastfeeding***
  - *Ask learners to reflect on the video.*

Ask

- **What important points will you explain about cup feeding for Lily?**
  - *Check answers.*

Explain

- Marta should be taught how to safely cup feed Lily in a way that gives her confidence to do it herself.
- If a mother and baby are separated, teach a family member such as the father or grandmother to cup feed the newborn.

Show video

- ***Cup feeding your small baby***

Ask

- **What is new knowledge for you in this video?**
- **Are there any skills or practices that are different from your current practice?**
- **What provider behaviours are different from your current practice?**
- **Does this video highlight a quality gap in your setting?** If yes, update the POCQI form for KMC.

Demonstrate

Cup feeding

- *Explain to Marta and support her to:*
  - *Wash hands with soap and water.*
  - *Prepare the cup.*
  - *Measure a* **quantity** *of milk into the cup.*
  - *Hold the baby in a semi-upright, sitting position on her lap.*
  - *Hold the cup of milk to the baby's lips.*
  - *Rest the cup lightly on the lower lip.*
  - *Touch the edge of the cup to the outer parts of the upper lip.*
  - *Tip the cup so that milk just reaches the baby's lips.*
  - *Do not pour milk into the baby's mouth. This can cause choking and aspiration (milk in lungs).*

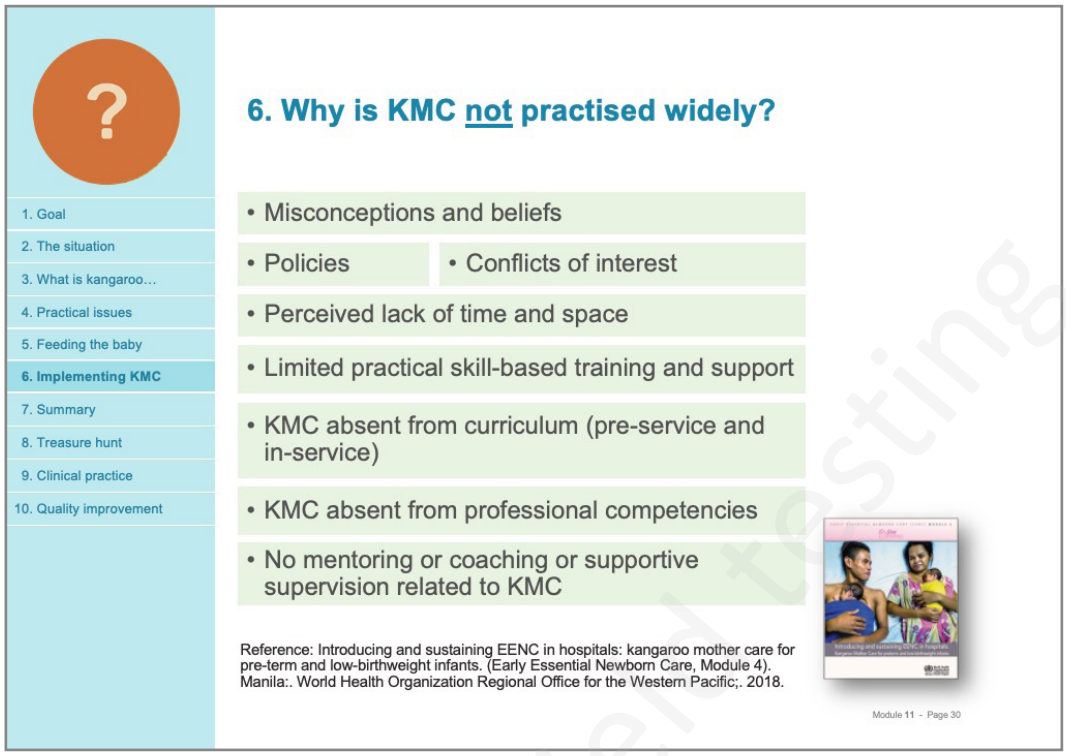
Ask

- **After 3 days she is more active and is licking expressed breast milk from her mother's breast. What do you do next?**

Explain

- Support her on breast positioning and attachment.
- Gradually reduce cup feeding.

6. Implementing KMC



Ask

- **If Kangaroo Mother Care is so effective, why is it not practised more widely?**
  - *Check answers.*

Explain as necessary

There may be additional local reasons, which often include misconceptions, scepticism, fear and cultural factors.

- **Policy-makers/faculty/health workers** may believe that care for small or preterm babies must include incubators in neonatal care units. Those with no experience may not be convinced of the value of KMC, and powerful experts or teachers can be influential in the resistance to change.

- **Families** may never have seen KMC and may not understand the evidence for using it as a modality of treatment. Often, mothers and family members have fear of caring for fragile, small babies. Mothers may feel embarrassed about their bodies being exposed. Parents may feel that it is difficult to practise KMC when they have work commitments and other children at home.

- **Outdated policies.** In many countries, stable, preterm and low-birthweight babies are separated from their mothers, admitted to neonatal care units for observation and fed formula milk. Stable babies born by caesarean section (both preterm and fullterm) are often managed the same way. National or hospital policies can restrict access of mothers and families to neonatal care units, making it impossible to implement KMC.

- **Conflicts of interest**. Violations of the International Code of Marketing of Breast-milk Substitutes, such as marketing of infant formula or giving free samples to staff in hospitals is common (see WHO UNICEF Baby Friendly Hospital Initiative 2020).

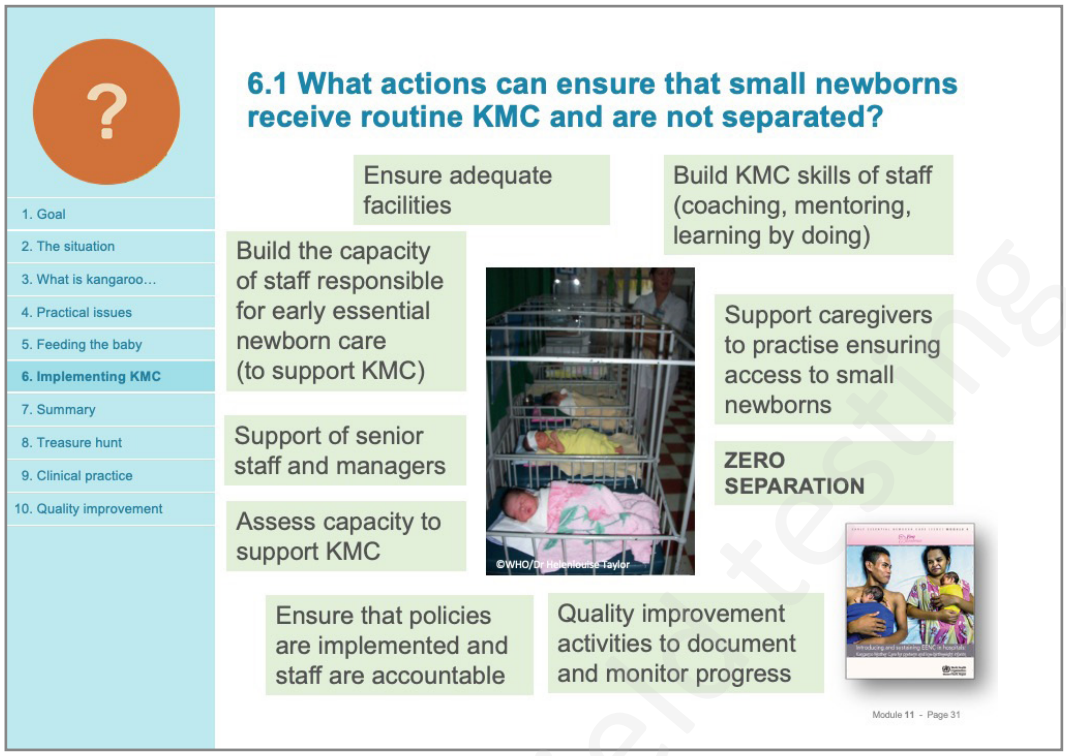
- **Perceived lack of time and physical space.** Due to high workloads, hospital staff may think that working with families to support KMC is a burden. Hospitals often do not allocate space and logistical support for mothers and babies to practise KMC.

- **Limited practical training and support for KMC**. KMC may not be in pre-service and in-service training or professional competencies for health workers. Government policies and training plans do not include KMC. Effective, skill-based training is not available, and there is limited mentoring or supportive supervision after training.

Ask

- **Is this a quality issue in your health facility?** If yes, fill out the POCQI form for KMC.

Reference: Introducing and sustaining EENC in hospitals: kangaroo mother care for pre-term and low-birthweight infants. (Early Essential Newborn Care, Module 4). Manila. World Health Organization Regional Office for the Western Pacific. 2018.https://apps.who.int/iris/handle/10665/273625

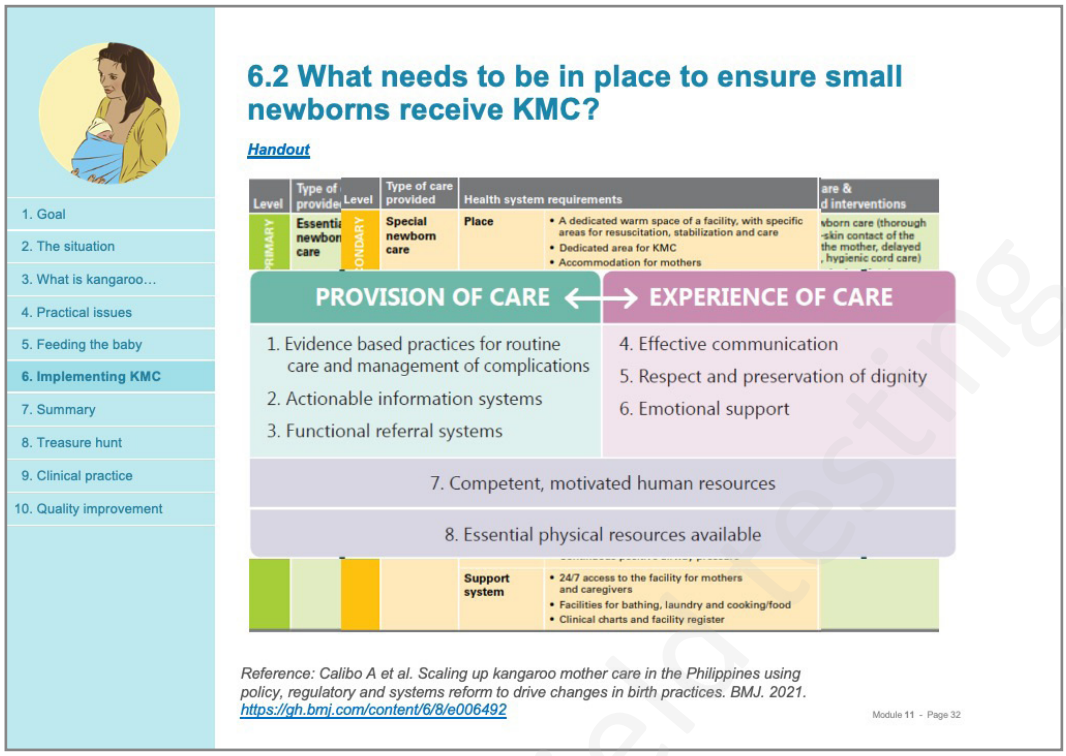


Ask

- **What actions can you suggest to support routine implementation of KMC in a health facility?**

Explain as necessary

- Build KMC skills of staff (through coaching, mentoring, learning by doing, confidence building) and families (through access support, confidence building).
- Build the capacity of staff responsible for essential newborn care (to support KMC).
- Assess capacity to support KMC and address any issues.
- Include KMC in quality improvement activities.
- Seek and gain support of senior staff and managers, targeting key actors who can support change.
- Promote zero separation.
- Water sanitation, handwashing and infection prevention measures must be functional, reliable, safe and sufficient to meet the needs of these small vulnerable newborns and their families.
- Safe breast milk feeding is an important part of KMC, and mothers and families need patient coaching to ensure that practices are safe and adequate on discharge, and families are empowered to continue safely at home. This includes correct storage of expressed breast milk.



Ask

- **What needs to be in place for routine practice of KMC?**
  - *Ask learners to check handout*

Explain as necessary

- Essential newborn care for every baby and some special newborn care.
  - Immediate newborn care (thorough drying, skin-to-skin contact of the newborn with the mother, delayed cord clamping, hygienic cord care).
  - Early initiation and support for exclusive breastfeeding.
  - Routine care (vitamin K, eye care and vaccinations, weighing and clinical examinations).
  - Detection and management of infection.
  - Detection and management of conditions that need referring.

- Special newborn care
  - Thermal care.
  - Assisted feeding for optimal nutrition.
  - Kangaroo mother care.
  - If you are not providing quality essential newborn care, you will not be able to provide quality kangaroo mother care.

Explain

- Quality care also includes the experience of care for the mother, the family and the newborn.
- **WHO Standard 2020 8.5**: All carers of small and sick newborns have a dedicated area with supportive elements, including adequate space for kangaroo mother care, family-centred care, privacy for mothers to express breast milk and facilities for hygiene, cooking and laundry.
- Even in very difficult circumstances such as humanitarian situations, lives can be saved by practising KMC.

- Work supported by WHO in many countries shows that a healthy newborn is the best sales point for essential newborn care and the starting point for health workers, babies and families alike. KMC is an important component of essential newborn care for small newborns.
  - Health workers gain confidence and skills by practising (learning by doing) in much the same way that parents do.
  - Policy support, costed EENC action plans, national technical working groups and an MoH focal person, strengthened monitoring and evaluation and routine information systems can follow naturally when policy-makers and planners see KMC in action and see the results for themselves.

Ask

- **Can you practise KMC in a baby-friendly unit or hospital?**
  - Yes. There is even special guidance.

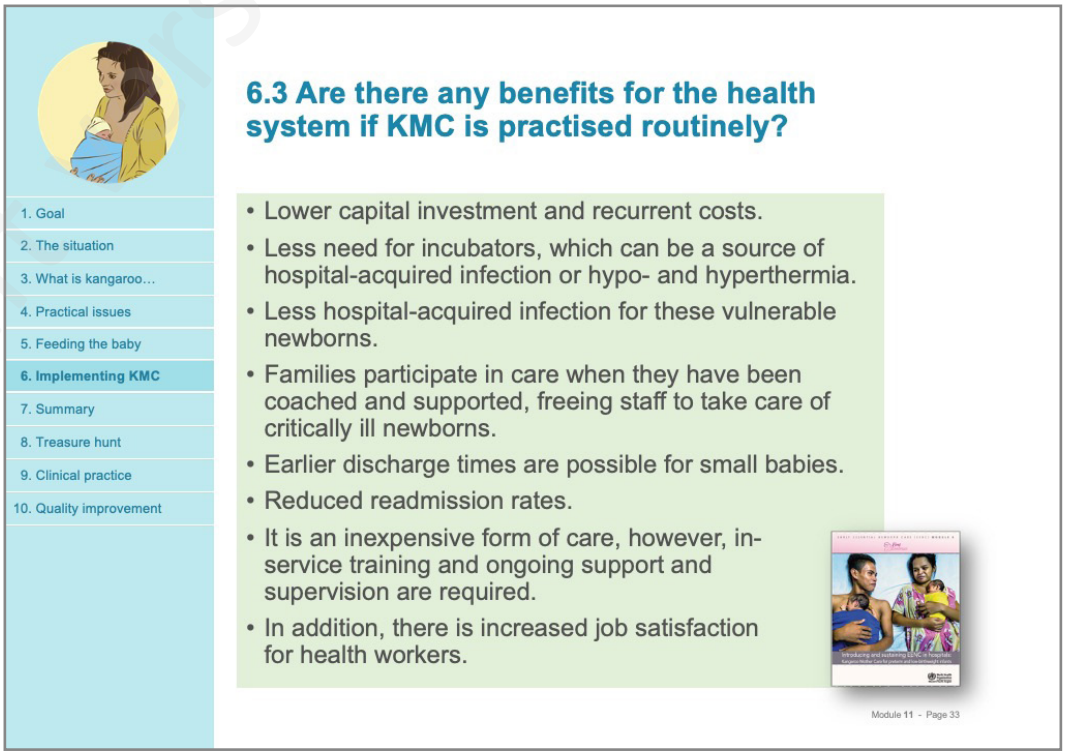
Ask

- **How many staff members are required to support mothers practising KMC?**

Explain

- This may vary according to country. However, estimations can be made:
  - For a simple basic KMC area, one nurse or equivalent staff for 8–10 beds.
  - If the KMC area includes continuous positive airway pressure (CPAP), phototherapy or palliative care, estimate at least two nurses for 8–10 beds.
  - At least one staff member should be present at all times (24 hours a day). These ratios should be modified according to the hospital policies and resources.

Reference: Calibo A et al. Scaling up kangaroo mother care in the Philippines using policy, regulatory and systems reform to drive changes in birth practices. BMJ. 2021. https://gh.bmj.com/content/6/8/e006492



Ask

- **Are there any benefits to the health system If KMC is practised routinely?**
  - *Check answers.*

Explain additional points as necessary

- There may be other relevant local issues.
  - Less hospital-acquired infection for these vulnerable newborns.
  - Families participate in care when they have been coached and supported, freeing staff to take care of critically ill newborns.
  - Increased job satisfaction.
  - Lower capital investment and recurrent costs.
  - It is an inexpensive form of care; however, in-service training and ongoing support and supervision are required.
  - There is less need for incubators, which can be a source of hospital-acquired infection or hypo- and hyperthermia.
  - Earlier discharge times are possible for small babies.
  - There are reduced readmission rates.

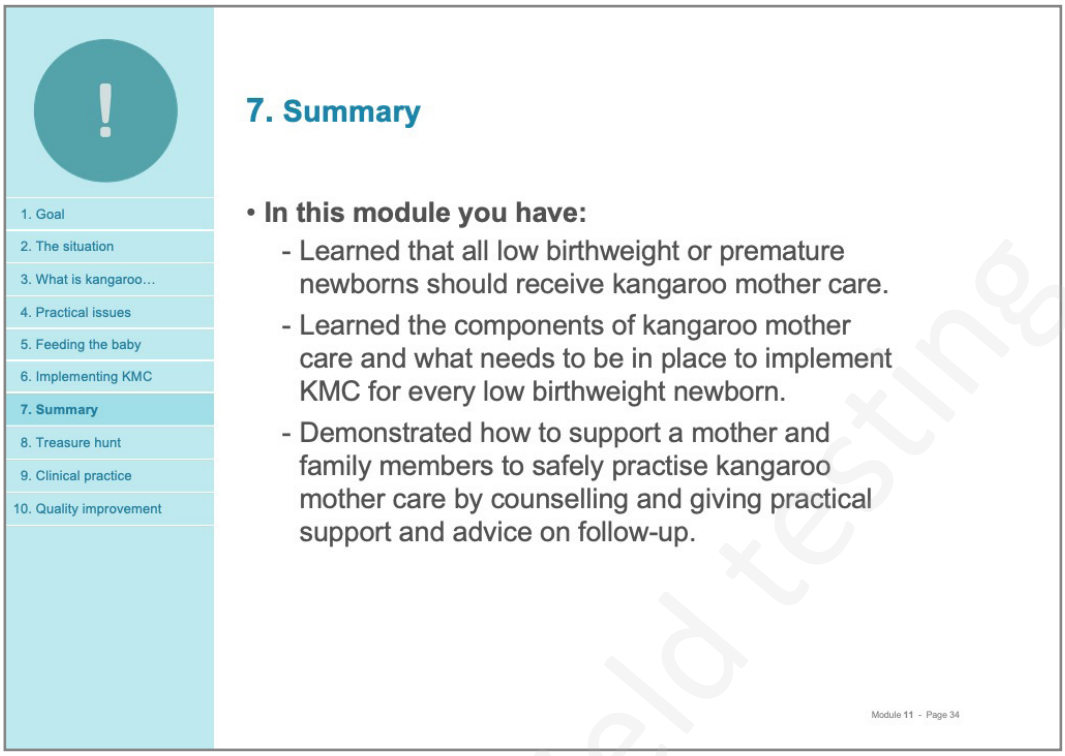
Ask

- **How will you prevent infection in these vulnerable newborns?**

Explain any missed points

- Correct handwashing with soap and water.
- Skin-to-skin care to encourage colonization with maternal flora.
- Colostrum and breast milk feeding for microbiota.
- Good cord care.
- Prophylactic eye care.
- Immunization.
- Not placing infants in dirty cots or incubators.
- If separation is necessary, do not place more than one infant together in a cot or incubator. Ensure that cleaning and sterilization guidelines are followed.
- Following treatment guidelines for newborn if mother has any infection or suspected infection (HIV, TB, hepatitis B, syphilis, gonorrhoea, chlamydia, Group B streptococcus).

7. Summary



Go through slide.

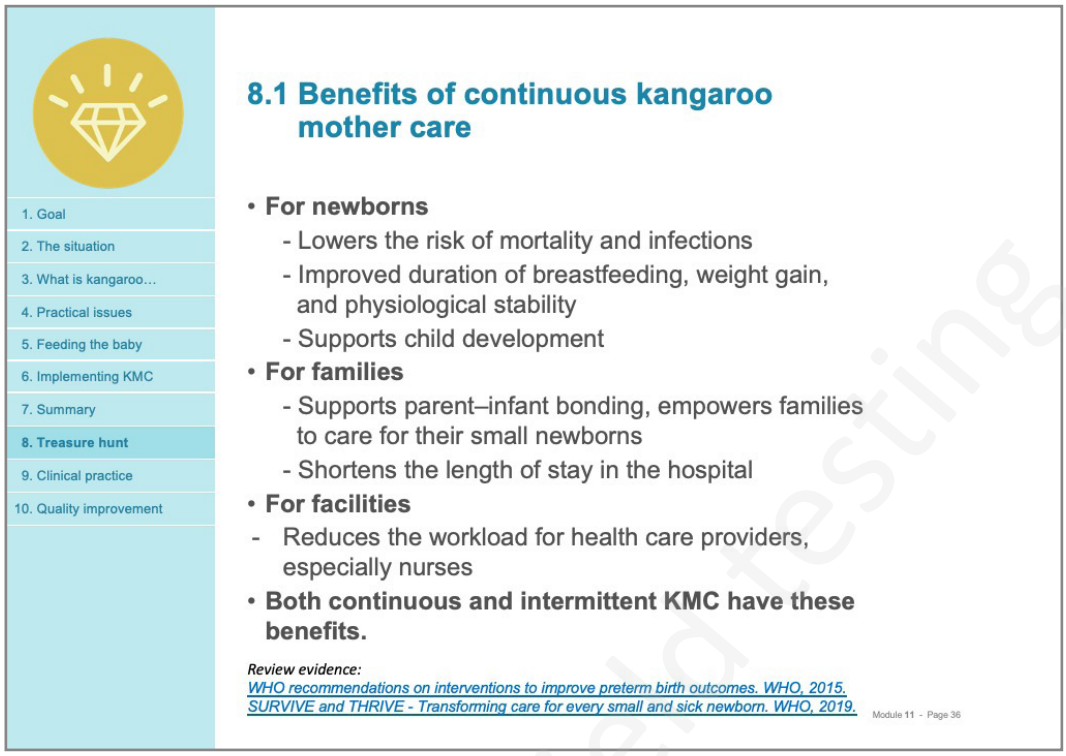
8. Treasure hunt

Learning objective: Learners find the evidence and apply the recommendations appropriately.

Explain and organize following *Methodologies for facilitation*

Ask

- **Why is Kangaroo mother care recommended for small babies?**



Ask finder to show and explain the recommendation and evidence.
Learners should apply the recommendations whenever caring for newborns.

Explain

- Clinically stable preterm newborns weighing <2000 g should be provided with kangaroo mother care, an evidence-based intervention which prevents hypothermia and hypoglycaemia and promotes bonding.
- Newborns weighing <2000 g at birth should be provided as close to continuous kangaroo mother care as possible.
- Skin-to-skin contact is a low cost and simple measure.

Ask

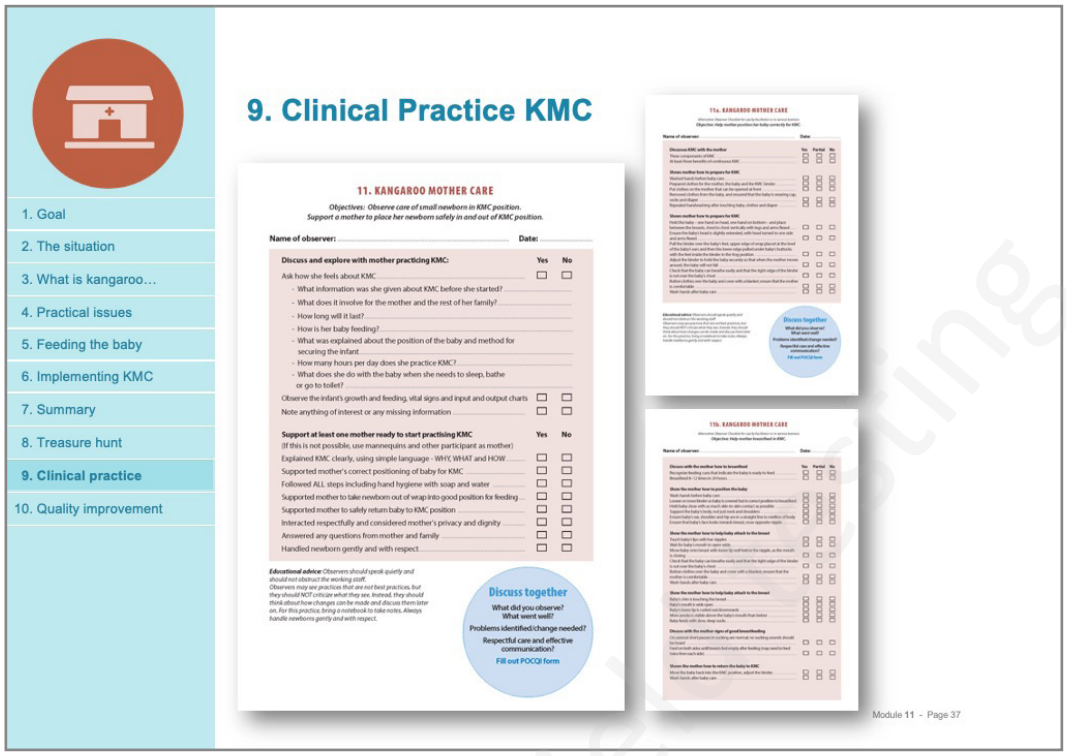
- **Do you have any concerns about implementing this recommendation?**
  - *Discuss.*

- **Does this recommendation highlight a quality gap in your setting?** If yes, update the POCQI form.

Review the evidence

- *WHO recommendations on interventions to improve preterm birth outcomes. WHO, 2015.*
- *SURVIVE and THRIVE: Transforming care for every small and sick newborn. WHO, 2019.*
- *Standards for improving the quality of care for small and sick newborns in health facilities. WHO, 2020.*
- *Kangaroo mother care: a practical guide. WHO, 2003.*

9. Clinical practice



Organize, brief, run practice, debrief, demonstrate and explain, following *Methodologies for facilitation*

Skills and performance

Learners demonstrate:

1. *Observation skills and effective communication skills for kangaroo mother care.*
2. *Support mothers to apply safe kangaroo mother care*

Brief

- Ensure that learners have KMC, breastfeeding, communication clinical cards and the POCQI form. Introduce each group to a mother practising KMC. If there are adequate mother–baby dyads, allow each learner to carry out the whole process with an individual mother. Ensure respectful communication, privacy and the dignity of the mother. Ensure that learners do not comment on their observations or show any disapproval while in the clinical setting. Ensure correct handwashing. Give feedback after the clinical practice, during the debriefing and NOT on the ward.
- Note there are alternative checklists for example if you implement KMC coaching in your country. Use local observation checklist.

Run simulation

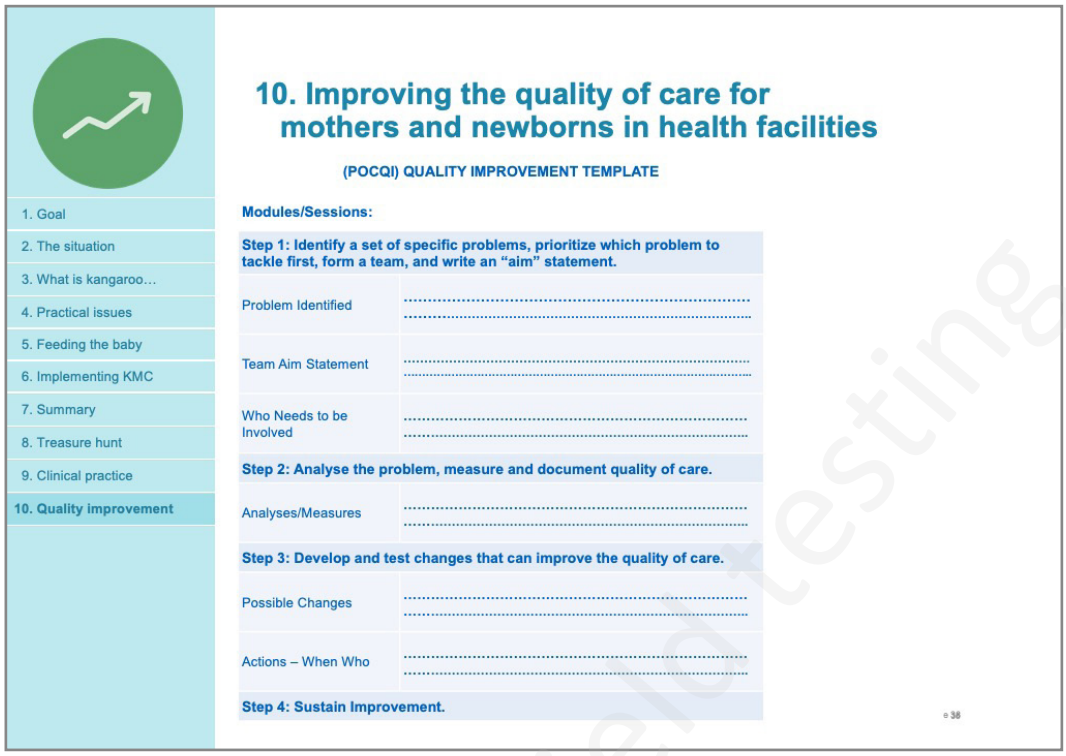
Debrief

- *Debrief the clinical practice session away from the ward.*
- *Ask learners what they observed and whether it was different from what they learned during the training and what they learned from their discussion with the mother.*
- *Emphasize positioning and securing the baby, breastfeeding/breast milk, how to calculate feeds calculations and safe monitoring.*

Demonstrate

Demonstrate step-by-step any points which were not well carried out.

10. Quality improvement



Learning objective: Learners reflect on gaps in quality of care and prioritize actions.

Explain and review the POCQI template and organize a discussion following *Methodologies for facilitation*

Show video

- ***Example of QI KMC***

After clinical practice always facilitate a discussion on observations made, possible reasons for practices and changes needed to improve the quality of essential newborn care. Focus on small doable steps.

For pre-service learners:
- *Document gaps or practices observed needing to change.*
- *Reflect on practical solutions.*
- *Discuss and prioritise one simple achievable step.*

For in-service learners:
- *If trained in POCQI, link to the full Plan-Do-Study-Act cycle.*
- *If not trained, document gaps and priorities and discuss as above.*

Ask

- **What quality gaps have you noted for kangaroo mother care?**
- **What are your concerns?**
- **What are possible solutions and challenges?**
- **Choose one achievable action and prioritize its start.**
- **In your group of 4, review relevant standards/recommendations for care for kangaroo mother care, prioritize a problem to tackle first, make sure it is achievable and then fill out the POCQI tool.**

Reference: The full POCQI quality improvement template

Further reading

- *Kangaroo mother care: a practical guide. WHO, 2003.*
- *Introducing and sustaining EENC in hospitals: kangaroo mother care for preterm and low-birthweight infants. WHO, 2018.*
- *Nurturing care for early childhood development. WHO, 2018.*
- *Essential Newborn Care 1: Immediate care and helping babies breathe at birth.*
- *Essential Newborn Care 2: Assessment and continuing care.*
- *Seidman G, Unnikrishnan S, Kenny E, Myslinski S, Cairns-Smith S, et al. Barriers and enablers of kangaroo mother care practice: a systematic review. PLOS ONE. 2015;10(5): e0125643. https://doi.org/10.1371/journal.pone.0125643*
- *Boundy EO, Dastjerdi R, Spiegelman D, Fawzi WW, Missmer SA, Lieberman E et al. Kangaroo mother care and neonatal outcomes: a meta-analysis. Ped. January 2016;137(1):e20152238;*