

KANGAROO MOTHER CARE

This module on Kangaroo Mother Care is designed to complement in-service education and orientation of nursing personnel involved in care of newborn babies.

LEARNING OBJECTIVES

The participants will learn about:

- The procedure and benefits of Kangaroo Mother Care (KMC)
- How to counsel and support the mothers for doing KMC

MODULE CONTENTS

The module includes following elements:

- **Text material:** Easy to read format for quick reproduction and essential reference material for the participants. Key messages are highlighted in the boxes.
- **Clinical skills:** Practising skills of initiation and supporting KMC in actual case scenarios in a hospital setting.
- **Demonstration:** There will be a demonstration on practice and procedure of KMC using a poster.
- **Video Film:** Learn initiation of KMC. Listen to the views of mothers, family members, and health professionals regarding KMC.
- **Role-play:** Observing steps of counseling a mother for initiation of KMC. Participants will also be provided with an opportunity to do role play.
- **Self-evaluation:** At the end of text, self evaluation based on what has been learnt is included. Feel free to refer your text material if you need assistance in recapitulating.

1. WHAT IS KANGAROO MOTHER CARE?

Kangaroo Mother Care (KMC) is a special way of caring for the low birth weight (LBW) babies. It improves their health and well being by promoting effective thermal control, breastfeeding, infection prevention, and bonding.

In KMC, the baby is continuously kept in skin-to-skin contact with the mother and breastfed exclusively. KMC is initiated in the hospital and continued at home.

1.1 The two components of KMC are:

i. Skin-to-skin contact

Early, continuous and prolonged skin-to-skin contact between the mother and her baby is the basic component of KMC. The infant is placed on her mother's chest between the breasts.

ii. Exclusive breastfeeding

The baby on KMC is breastfed exclusively. Skin-to-skin contact promotes lactation and thus facilitates exclusive breastfeeding.



Skin to skin contact of the infant on the mother's chest

1.2 The two pre-requisites of KMC are:

- i. Support to the mother in hospital and at home
A mother needs counseling, support, and supervision from health care providers for initiating KMC in the hospital. She would also require assistance and cooperation from her family members for continuing KMC at home.
- ii. Post discharge follow-up
KMC is continued at home after early discharge from the hospital. A regular follow up and access to healthcare providers for solving problems are crucial to ensure safe and successful KMC at home.

Components of KMC

- *Skin-to-skin contact*
- *Exclusive breastfeeding*

Pre-requisites of KMC

- *Support to the mother in hospital and at home*
- *Post-discharge follow up*

2. BENEFITS OF KMC

i. Breastfeeding

Studies have revealed that KMC results in increased breastfeeding rates as well as increased duration of breastfeeding. Even if initiated late and practiced only for a limited duration, KMC has still been shown to exert a beneficial effect on breastfeeding.

ii. Thermal control

Prolonged skin-to-skin contact between the mother and her preterm/ LBW infant provides effective thermal control with a reduced risk of hypothermia. For stable babies, KMC is at least equivalent to incubator care in terms of safety and thermal protection.

iii. Early discharge

Studies have shown that KMC cared LBW infants could be discharged from the hospital earlier than the conventionally managed babies. The babies gain more weight on KMC than on conventional care.

iv. Less morbidity

Babies receiving KMC have more regular breathing and less predisposition to apnea. KMC protects against nosocomial infections. Even after discharge from the hospital, the morbidity amongst babies managed by KMC is less. KMC is associated with reduced incidence of severe illness including pneumonia during infancy.

v. Other effects

KMC helps both infants and parents. Mothers are less stressed during kangaroo care as compared with a baby kept in incubator. Mothers prefer skin-to-skin contact to conventional care. They report a stronger bonding with the baby, increased confidence, and a deep satisfaction that they were able to do something special for their babies. Fathers felt more relaxed, comfortable and better bonded while providing kangaroo care.

Benefits of KMC: *Effective thermal control, increased breastfeeding rates, early discharge, less morbidities such as apnea and infection, less stress, and better infant bonding*

3. REQUIREMENTS FOR KMC IMPLEMENTATION

- Training of nurses, physicians and other staff involved in the care of the mother and the baby
- Educational material such as information sheets, posters and video films on KMC in local language should be available to the mothers, families and community
- If possible, reclining chairs in the nursery and postnatal wards, and beds with adjustable back rest should be arranged. Mother can provide KMC sitting on an ordinary chair or in a semi-reclining posture on a bed with the help of pillows

- ***Once KMC is implemented, nurses and other staff appreciate KMC because of the health benefits to the babies and the satisfaction expressed by the mothers***
- ***KMC does not require extra staff***



DEMONSTRATION

Facilitator will conduct a demonstration on KMC using a poster

कंगारू माता देखभाल

(कंगारू मदर केयर : के.एम.सी)

कंगारू माता देखभाल (के.एम.सी.) क्या होती है?

इस विधि में माँ अपने शिशु को अपनी नग्न छाती से चिपका कर रखती है



के.एम.सी. से गर्मी मिलती है, स्तनपान को बेहतर करती है व साँस ठीक से लेने में सहायता करती है।

के.एम.सी. कहाँ पर दी जा सकती है?



नर्सरी अथवा प्रसवोत्तर वार्ड

के.एम.सी. कैसे दी जाती है?

माँ बैठी हुई अथवा आधी लेटी हुई अवस्था में होनी चाहिए।



जितना समय तक संभव हो, के.एम.सी. दें।

कब तक के.एम.सी. देते रहना चाहिए?



घर पर भी जारी रखनी चाहिए

किन शिशुओं को के.एम.सी. की जरूरत होती है?

2.5 कि.ग्रा. से कम जन्म-भार वाले सभी शिशुओं को के.एम.सी. की आवश्यकता होती है।



सभी कम जन्म-भार वाले शिशुओं को के.एम.सी. से लाभ होता है।

माँ के जलावा और कौन के.एम.सी. दे सकता है?



परिवार का कोई भी सदस्य जैसे दादी, नानी, दादा, पिता के.एम.सी. दे सकता है।

के.एम.सी. देने के लिए आवश्यकताएँ

माँ की मदद करना और अस्पताल से छुट्टी के बाद उपचार प्रदान करना



के.एम.सी. की घटक क्या हैं?

माँ का अपनी छाती के साथ शिशु को चिपकाए रखना

स्तन-पान



लाभ :

- * शिशु उचित गर्म रहता है।
- * स्तन-पान को बढ़ावा देती है।
- * शिशु के मानसिक व शारीरिक विकास में सुधार करती है।
- * अस्पताल से जल्दी छुट्टी होती है।
- * शिशु में होने वाले रोगों की संभावना को कम करती है।
- * शिशु-माँ के आपसी बंधन को बढ़ावा देती है।

कंगारू माता देखभाल
शिशु का अधिकार माँ का प्यार

आप किस लिए इन्तजार कर रहे हैं?

के.एम.सी. एक आसान, कम-खर्च तथा अति प्रभावी उपचार है जो कम जन्म-भार वाले शिशुओं को फायदा पहुँचाती है।

- * शिशुओं तथा उनकी माताओं को के.एम.सी. अच्छी लगती है
- * आप भी अपनी यूनिट में के.एम.सी. को बढ़ावा दे सकते हैं
- * चाहें तो आज से ही शुरू कर सकते हैं
- * सभी कम जन्म-भार वाले शिशुओं के लिए के.एम.सी. सुनिश्चित कीजिए।



KMC India Network



कृपया और अधिक जानकारी के लिए हमारे वेबसाइट www.kmcindia.org पर लॉग ऑन करें।

KANGAROO MOTHER CARE

Kangaroo Mother Care India Network

What is Kangaroo Mother Care (KMC)?

Skin to skin contact between baby and mother's chest



Provides warmth, prevents apnea stimulates breathing

How to provide KMC?

Mother should be in sitting or semi reclined position



Provide KMC for as long as possible

Which babies need KMC

All stable LBW babies are eligible for KMC



All LBW babies benefit from KMC

Where can KMC be provided?



Nursery or postnatal ward

How long should KMC be practiced?



Should be continued at home

Who else can provide KMC?



Any family member can provide KMC

What are the components of KMC?

Skin-skin contact of the infant on mother's chest



Exclusive breast feeding



Pre-requisites of KMC

Support to mother & post-discharge follow-up



Benefits

- * Provides warmth to the baby
- * Promotes exclusive breast feeding
- * Improves weight gain & growth
- * Reduces hospital stay
- * Reduces infection
- * Promotes baby-mother bonding



What are you waiting for ?

KMC is a simple, low-cost and highly effective intervention which benefits low birth weight babies

- * The babies and their mothers love KMC
- * You too can promote KMC in your unit... start today...
- * Ensure KMC for all stable LBW babies



KMC India Network



For more information visit www.kmcindia.org

4. ELIGIBILITY CRITERIA

4.1. Baby

All stable LBW babies are eligible for KMC. However, very sick babies needing special care should be cared under radiant warmer initially. KMC should be started after the baby is hemodynamically stable. Guidelines for practicing KMC include:

- i. Birth weight ≥ 1800 g:** These babies are generally stable at birth. Therefore, in most of them KMC can be initiated soon after birth.
- ii. Birth weight 1200-1799 g:** Many babies of this group have significant problems in neonatal period. It might take a few days before KMC can be initiated. If such a baby is born in a place where neonatal care services are inadequate, baby should be transferred to a proper facility after initial stabilization and appropriate management. One of the best ways of transporting small babies is by keeping them in continuous skin-to-skin contact with the mother / family member.
- iii. Birth weight < 1200 g:** Frequently, these babies develop serious prematurity-related morbidities often starting soon after birth. They benefit the most from in-utero transfer to the institutions with neonatal intensive care facilities. It may take days to weeks before baby's condition allows initiation of KMC.

KMC can be initiated in a baby who is otherwise stable but may still be on intravenous fluids, tube feeding and/or oxygen

4.2 Mother

All mothers can provide KMC, irrespective of age, parity, education, culture and religion. The following points must be taken into consideration while counseling for KMC:

- i. Willingness:** The mother must be willing to provide KMC. Healthcare providers should counsel and motivate her. Once the mother realizes the benefits of KMC for her baby, she will learn and undertake KMC.
- ii. General health and nutrition:** The mother should be free from serious illness to be able to provide KMC. She should receive adequate diet as recommended by her physician.
- iii. Hygiene:** The mother should maintain good hygiene - daily bath/sponge, change of clothes, hand washing, and short and clean finger nails.
- iv. Supportive family:** Apart from supporting the mother, family members should also be encouraged to provide KMC when mother wishes to take rest. Mother would need family's cooperation to deal with the daily household chores while the baby is requiring KMC.
- v. Supportive community:** Community awareness about the benefits should be created. This is particularly important when there are social, economic or family constraints.

5. PREPARING FOR KMC

5.1 Counseling

When the baby is ready for KMC, arrange a time that is convenient to the mother and her baby. The first few sessions are important and require extended interaction. Demonstrate her the KMC procedure in a caring and gentle manner. Answer her queries patiently and allay her anxieties. Encourage her to bring her mother/mother-in-law/husband or any other member of the family. It helps in building positive attitude of the family and ensuring family support to the mother which is particularly crucial for post-discharge home-based KMC. It is helpful if the mother starting KMC interacts with someone who is already practicing KMC.

5.2 Mother's clothing

KMC can be provided using any front-open, light dress as per the local culture. KMC works well with blouse and sari, gown or shawl. A suitable apparel that can retain the baby for extended period of time can be adapted locally.

5.3 Baby's clothing

Baby is dressed with cap, socks, nappy, and front-open sleeveless shirt or 'jhabala'.

6. THE KMC PROCEDURE

6.1 Kangaroo positioning

- Baby should be placed between the mother's breasts in an upright position
- Head should be turned to one side and in a slightly extended position. This slightly extended head position keeps the airway open and allows eye to eye contact between the mother and her baby
- Hips should be flexed and abducted in a "frog" position; the arms should also be flexed
- Baby's abdomen should be at the level of the mother's epigastrium. Mother's breathing stimulates the baby thus reducing the occurrence of apnea
- Support the baby's bottom with a sling/binder



Kangaroo positioning



Baby upright between mother's breasts

6.2 Monitoring

Babies receiving KMC should be monitored carefully especially during the initial stages. Nursing staff should make sure that baby's neck position is neither too flexed nor too extended, airway is clear, breathing is regular, color is pink and baby is maintaining temperature. Mother should be involved in observing the baby during KMC so that she can continue monitoring at home.

Ensure that baby's neck is not too flexed or too extended, breathing is normal, and feet and hands are warm during KMC

6.3 Feeding

Mother should be explained how to breastfeed while the baby is in KMC position. Holding the baby near the breast stimulates milk production. She may express milk while the baby is still in KMC position. The baby could be fed with paladai, spoon or tube depending on the condition of the baby.

6.4 Privacy

KMC unavoidably requires some exposure on the part of the mother. This can make her nervous and could be de-motivating. The staff must respect mother's sensitivities in this regard and ensure culturally acceptable privacy standards in the nursery and the wards where KMC is practiced.

7. TIME OF INITIATION

KMC can be started as soon as the baby is stable. Babies with severe illnesses or requiring special treatment should be managed according to the unit protocol. Short KMC sessions can be initiated during recovery with ongoing medical treatment (IV fluids, oxygen therapy). KMC can be provided while the baby is being fed via orogastric tube or on oxygen therapy.

8. DURATION OF KMC

- Skin-to-skin contact should start gradually in the nursery with a smooth transition from conventional care to continuous KMC
- Sessions that last less than one hour should be avoided because frequent handling may be stressful for the baby
- The length of skin-to-skin contacts should be gradually increased up to 24 hours a day , interrupted only for changing diapers
- When the baby does not require intensive care, she should be transferred to the postnatal ward where KMC should be continued

9. CAN THE MOTHER CONTINUE KMC DURING SLEEP AND RESTING?

A comfortable chair with adjustable back may be useful to provide KMC during sleep and rest. In the KMC ward or at home, the mother can sleep with the baby in kangaroo position in a reclined or semirecumbent position, about 45° from above the ground. This can be achieved with an adjustable bed or with several pillows on an ordinary bed. It has been observed that this position decreases the risk of apnea in the baby. A supporting garment to carry the baby in kangaroo position will allow the mother or the father or the relatives to sleep with the baby in that position.



Father providing KMC

When mother is not available, other family members such as grandmother, father or any other relative can provide KMC

10. FROM HOSPITAL TO HOME

10.1 Criteria to transfer the baby from nursery to the ward

Standard criteria of the unit for transferring baby from the nursery to the postnatal ward should be as follows:

- Stable baby
- Gaining weight
- Mother confident to look after the baby

10.2 Discharge criteria

The standard policy of the unit for discharge from the hospital should be followed. Generally the following criteria are accepted at most centers:

- Baby's general health is good and there is no evidence of infection
- Baby is feeding well and receiving exclusively or predominantly breast milk
- Gaining weight (at least 15-20 gm/kg/day) for three consecutive days
- Maintaining body temperature satisfactorily for at least three consecutive days
- The mother and family members are confident to take care of the baby in KMC and should be asked to come for follow-up visits regularly

11. WHEN SHOULD KMC BE DISCONTINUED?

If the mother and baby are comfortable, KMC can be continued for as long as possible initially in the hospital and then at home. Often this is desirable until the baby's gestation reaches term or the weight is around 2500g. She starts wriggling to show that she is uncomfortable, pulls her limbs out, cries and fusses every time the mother tries to put her back skin-to-skin. This is the time to wean the baby from KMC. Mothers can provide skin-to-skin contact occasionally after giving the baby a bath and during cold nights.

12. POST-DISCHARGE FOLLOW UP

Close follow up is a fundamental pre-requisite of KMC practice. Each unit should formulate its own policy for follow up of these babies.

In general, a baby is followed up once or twice a week until 37-40 weeks of postmenstrual age or the baby reaches 2.5-3 kg of weight (smaller babies discharged earlier would need more frequent follow-up visits). Thereafter, a follow-up once in two weeks may be enough till 3 months of age. Later the baby should be seen at an interval of 1-2 months during first year of life.

The baby should gain adequate weight (15-20 gm/kg/day up to 40 weeks of postmenstrual age and 10 gm/kg/day subsequently). More frequent visits should be planned if the baby is not growing well.

References

- World Health Organization. Kangaroo mother care: a practical guide. Department of Reproductive Health and Research, WHO, Geneva.2003
- Udani RH, Nanavati RN. Training manual on Kangaroo Mother Care. Published by the Department of Neonatology, KEM Hospital and Seth GS Medical College, Mumbai. September 2004
- Website of KMC India Network . Guidelines for parents and health providers are available online at www.kmcindia.org



SELF EVALUATION

1. Components of KMC include
 - a. _____
 - b. _____

2. Benefits of KMC include
 - a. _____
 - b. _____
 - c. _____
 - d. _____

3. Mother should practice KMC at least for _____ in one sitting.

4. Do you need additional staff for implementing KMC in your unit: Yes / No

5. Who all can practice KMC?

6. A mother is practicing KMC during the day. Can she provide KMC during the night while she is sleeping?

7. Mention the discharge criteria from the hospital of a mother baby dyad practicing KMC.

8. Can KMC be provided in the following scenarios:
 - i. Baby on OG tube feed Yes/No
 - ii. Baby receiving in IV fluids Yes/No
 - iii. Baby receiving free flow O₂ Yes/No

****You will be given individual feedback after you have evaluated yourself.***



VIDEO

There will be a video demonstration on initiation and procedure of KMC. This will be followed by discussion.

1. Following aspects of KMC were shown

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

2. Comments on Video

Good aspects	Needs improvement
_____	_____
_____	_____
_____	_____

3. Video covered

Demonstrated procedure of KMC	Yes/No
Precautions to be taken while practicing KMC	Yes/No
Benefits of KMC	Yes/No
Views of mothers and nurses	Yes/No



ROLE PLAY

There will be a role-play on 'motivating and counselling a mother for providing KMC'.

Checklist for demonstration role play

A (Ask)

L (Listen)

P (Praise)

A (Advise)

C (Check understanding)

Checklist for role play by participants

A (Ask)

L (Listen)

P (Praise)

A (Advise)

C (Check understanding)
