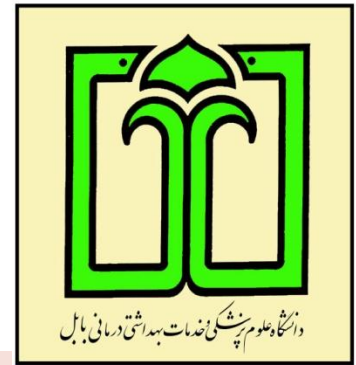


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KMC Implementation

نحوه اجرای مراقبت کانگرویی



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08.03.1400

Goals



- 1- Time of initiation
- 2- Eligibility criteria
- 3- Requirements for KMC Imp.
- 4- Preparing for KMC
- 5- Baby monitoring
- 6- Barriers to Kangaroo Care

Time of initiation



- KMC can be started as soon as the baby is stable.
- **Short KMC sessions** can be initiated during recovery with ongoing medical treatment (IV fluids, oxygen therapy).
- For **continuous KMC**, however, baby's condition must be stable; the baby must be breathing spontaneously without additional oxygen.
- The ability to feed (to suck and swallow) is not an essential requirement. KMC can begin during tube-feeding.

Eligibility criteria: Baby

- Stable neonates are eligible, *Stable means* no deterioration of condition within 24 hours before KC.
- All neonatal lines and tubes must be well secured.

Neonatal respiratory support in the form of oxygen supplementation or nasal CPAP is not a contraindication.



Eligibility criteria

- ***Baby***

- *Birth weight >1800 g*
- *Birth weight 1200-1799 g*
- *Birth weight <1200 g*

- ***Mother***

- *Willingness*
- *General health and nutrition*
- *Hygiene*
- *Supportive family*
- *Supportive community*



KMC India Network

Eligibility criteria: Baby



- **Birth weight >1800 gm:**

Start at birth

- **Birth weight 1200-1799 gm:**

Hemodynamically stable – takes a **few days**

- **Birth weight <1200 gm:**

need specialized care due to sickness – may take **weeks** to initiate

Hemodynamic stability is a MUST

Eligibility criteria



1. Stable LBW babies $> 1800\text{g}$
 2. Birth wt. 1200-1797g:
NICU care
Transport to NICU with KMC method
 3. Birth wt. $< 1200\text{ g}$: NICU \rightarrow it takes days or weeks before babies condition allows initiation of KMC
- cont.



Preparing for KMC



1. Arrange a time that is convenient to the mother and her baby
2. Demonstrate to her the KMC procedure
3. Encourage her to bring her mother/ husband or any other member of the family
4. Better to interact with some one already practicing KMC for her baby



تمایل و خواست مادر



- مادر باید مایل به انجام KMC باشد.
- مراقبین بهداشتی درمانی باید با مادران مشاوره کنند و آنها را به اینکار ترغیب نمایند.
- زمانی که مادر از مزایای KMC برای فرزندش آگاهی یابد شروع به یادگیری نموده و KMC را قبول خواهد کرد.



سلامتی عمومی و تغذیه مادر



- مادر نباید بیماریهای جدی داشته باشد تا قادر به انجام KMC شود. وی باید مواد غذایی کافی و کاملی که بوسیله پزشک معالج توصیه شده را دریافت کند.

بهداشت



- مادر باید بهداشت را بخوبی رعایت کند. حمام روزانه یا شستشو با اسفنج، تعویض لباسها و کوتاه و تمیز نگهداشتن ناخنها را باید بدقت انجام دهد.

حمایت خانواده



- علاوه بر حمایت از مادر، دیگر اعضای خانواده نیز باید زمانی را که مادر نیاز به استراحت دارد به انجام KMC تشویق شوند
- مادر تا هنگامیکه شیرخوار به KMC نیازمند باشد به همکاری خانواده نیاز خواهد داشت تا بتواند مسؤلیتهای معمول در کارهای روزمره خانه را انجام دهد.

جوامع حمایتی



- باید آگاهی اجتماعی درباره مزایای KMC ایجاد شود .
- اینکار بخصوص زمانیکه مشکلات خانوادگی_اقتصادی و اجتماعی وجود دارد، از اهمیت زیادی برخوردار است.

EQUIPMENT



- Comfortable armless chair
- Pillow
- Thermometer
- Footstool
- Sheet
- Cap/ bonnet (necessary if weight < 1200 gr)
- Mirror (selective)
- Cloth

The Components/Elements of KMC

- **Kangaroo position**
 - Skin-to-skin on the mother's chest
- **Kangaroo nutrition**
 - Exclusive breastfeeding whenever possible
- **Kangaroo discharge**
 - Mother continues KMC practice at home after discharge
- **Kangaroo Support**
 - Health care staff provide support to the mother to take care of her infant in the hospital
 - Family support of mother in practicing KMC at home



Requirements for KMC implementation

Skills •

Nurses, physicians and other staff

Educational material •

Information sheets, posters and video films on KMC

Furniture •

NO SPECIAL EQUIPMENT IS NEEDED TO GIVE
KANGAROO MOTHER CARE

Preparation



- **Educate parent(s) about KC** by giving them an informative pamphlet, showing a video, or verbally educating them **about benefits and need to provide at least 1 hour of KC per session.**
- Determine **parental readiness** for KC and obtain their agreement to provide KC to their infant
- Set up privacy screen beside incubator.

Preparation of environment



- Decrease light & noise (comfortable sleep, good sucking, ↓aimless activity)
- Planning for sleep
- Day & night cycle
- Nidation (including cap)
- Curve position (same as intra uterus) decrease heat waste

آمادگی جهت KMC



- هنگامیکه نوزاد برای انجام KMC آماده است، زمان مناسبی را باید تعیین نموده و روند انجام KMC را با ملایمت و حوصله برای او شرح داده و به سوالات مادر به روشنی پاسخ داده شود.
- سعی گردد تا از اضطراب و نگرانی او کاسته شود.
- تعامل و مشورت مادر در زمان شروع KMC با افرادی که قبلاً تجربه KMC داشتند بسیار کمک کننده است.

لباس مادر



- KMC میتواند با استفاده از هر نوع لباس جلوباز و سبک و مطابق فرهنگ بومی انجام شود. KMC به آسانی با پیراهن و لباس راحت قابل انجام است. یک لباس مناسب که برای مدتی نسبتاً طولانی نوزاد را نگهدارد، برای اینکار لازم است.



ساختار آغوش

روش انجام KMC



- نوزاد باید بین پستانهای مادر در حالت عمودی قرار داده شود
- سر نوزاد باید به یک طرف برگردانده شود و در وضعیت کمی کشیده به عقب قرار گیرد. این وضعیت به باز ماندن راههای هوایی کمک نموده و اجازه تماس چشم با چشم بین مادر و فرزندش را فراهم میسازد
- مفصل ران باید خم بوده و در وضعیت قورباغه ای قرار گیرند.
- بازوها نیز باید به حالت خم شده در آیند. شکم باید در سطح فوقانی شکم مادر قرار گیرد. تنفس مادر موجب تحریک تنفسی نوزاد شده و امکان آینه را کاهش میدهد
- قسمتهای تحتانی بدن نوزاد باید با بندی که در پایین لباس مادر وجود دارد بسته شده و حمایت گردد.





KMC











Baby monitoring



During the initial steps; should be monitor:

1. Neck position
2. Airway is clear
3. Breathing is regular
4. Color is pink
5. Temperature is stable
6. Mother should be involved in observation

Cont.



Baby monitoring



1. Feeding:
Expressed milk
by spoon or tube or dropper
2. Privacy



Monitoring Vital Signs



- Continue infant on all routine cardiorespiratory monitoring.
- Continue pulse oximetry as ordered.
- Monitor temperature before and after KC and during KC per NICU protocol (ie, every 30 minutes) and as needed.
- Allow infant 15 to 20 minutes after transfer to stabilize vital signs.
- Monitor and document any sign of distress.

پایش Monitoring



- شیرخوارانی که KMC میشوند بخصوص در مراحل اولیه باید به دقت مورد مراقبت وپایش قرار گیرند.
- کنترل درجه حرارت – ضربان قلب و spo2 قبل و حین KMC انجام گردد.
- پرسنل پرستاری باید مطمئن شوند که وضعیت گردن نوزاد نه خیلی خمیده و نه خیلی کشیده باشد.
- راههای هوایی باز،تنفس منظم،رنگ صورتی باشد
- مادر باید از علائم خطر آگاه باشد و توانایی تشخیص آنرا داشته باشد.
- باید به مادر آموزش داد که در موقع قطع تنفس با مالش ملایم پشت یا سر نوزاد و یا حرکت گهواره ای وی را تحریک کرده تا نوزاد شروع به تنفس کند و اگر با تحریک هم نفس نکشید از پرستار کمک بخواهد.

علائم خطر



- تنفس مشکل
- فرو رفتگی و تو کشیدگی قفسه سینه
- ناله کردن
- تنفس خیلی سریع یا خیلی آهسته
- دوره های مکرر و طولانی آپنه
- علیرغم گرم کردن معمول ، نوزاد یا هایپوترم شده و یا زیاده از حد معمول گرم است
- استفراغ
- تشنج

EQUIPMENT



- Comfortable armless chair
- Pillow
- Thermometer
- Footstool
- Sheet
- Cap/ bonnet (necessary if weight < 1200 gr)
- Mirror (selective)
- Cloth

Dressing for KMC

- **Baby's clothing**
 - Cap, socks, nappy
- **Mother's clothing**
 - Front-open, light dress as per the local culture





Mother's clothing :

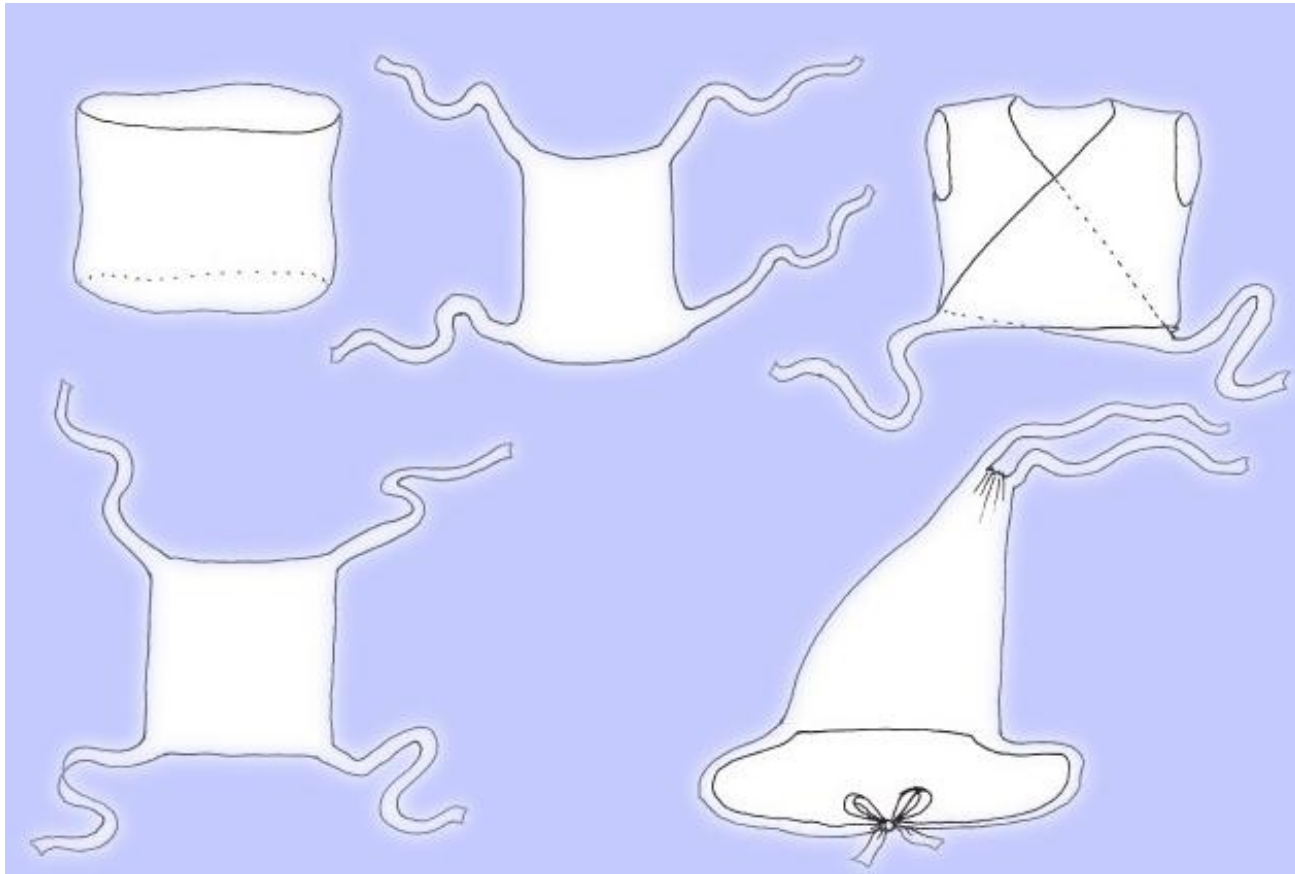
- Front open, light dress as per the local culture

Baby's clothing:

- Dressed with cap, socks, nappy
- Front open sleeveless shirt



Baby's clothing:



لباس نوزاد



نوزاد با کلاه - جوراب - پوشک - و پیراهن جلو باز بدون آستین
یا زیر پیراهنی پوشانیده شود.



The KMC procedure



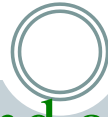
Kangaroo positioning

- The baby should be placed between the mother's breasts in an upright position
- The 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.

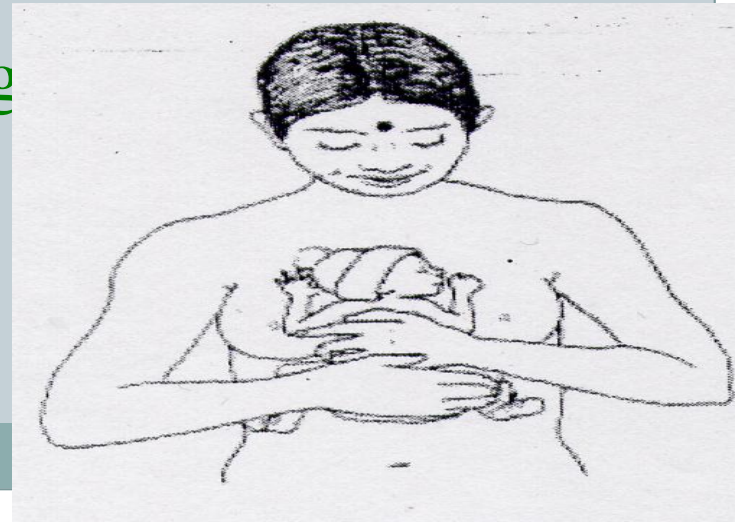
Cont.



The KMC procedure



- This 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



KMC by person other than mother



The infant can be also placed on the chest of another healthy person willing to assume the mother's role if the mother is unable to do it. Besides the mother, **fathers, aunts and uncles, grandparents, sisters and brothers or any other relative** are appropriate kangaroo position providers



Duration of KMC



- Start KMC sessions in the nursery
- Practice at least **one hour sessions** initially
- Transit from conventional care to longer KMC
- Increase duration up to 24 hours a day

Best time for KMC



- The best time is **immediately after feeding**. (upright position -----> digestion facility)
- If permitted to sucking nipple ----> start KMC 1-2 hour before sucking.
- **After imaging , ophthalmic exams.**

Criteria for Returning Infant to the Incubator



- Increased O₂ requirement of 10-20%
- Infant shows signs of distress i.e. apnoea/ bradycardia/ desaturation/ colour change, despite providing stimulation
- Hypothermia
- Baby remains unsettled and distressed.

Discontinuation of KMC

- Term gestation
- Weight ~ 2500 gm
- Baby uncomfortable
 - Wriggling out
 - Pulls limbs out
 - Cries and fusses

Mother can continue KMC after giving the baby a bath and during cold nights

Infants not eligible for KC/ exempt infants:



- Any infant with a chest (thoracostomy) tube, Umbilical lines /chest drains
- Baby on vasopressor drugs
- Any infant with an intracardiac line (right atrium, left atrium).
Baby at risk for IVH
- Any infant with an arterial line.
- Any infant who is being actively weaned from a ventilator.
- Any infant who has had an acute or sudden deterioration in condition within the past 24 hours.
- Unstable on respiratory support (CPAP or ventilation)
- Parents with rashes, open skin lesions, and active colds should abstain from KC

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.

Cont.



Duration of KMC



- 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 post-natal ward where KMC should be continued.



Adverse effects of Kangaroo Care

- Increased stress on dislodgement of venous or arterial lines or accidental extubation.
- Feelings of guilt if infant becomes physiologically unstable during Kangaroo period.



Barriers to Kangaroo Care with ventilated neonates in practice

- **Fear of arterial or venous line dislodgement**
- **Fear of accidental extubation**
- **Safety issues for very low birthweight infants**
- **Inconsistency in technique**
- **Nurses' feelings that their work load increased.**
- **Nursing reluctance.**
- **Medical staff reluctance**
- **Difficulty administering care during KC**
- **Staff concerns for parental privacy**
- **Lack of experience with KC**
- **Insufficient time for family care during KC**
- **Belief that technology is better than KC**

شرایط قطع مراقبت



- افزایش نیاز به اکسیژن به میزان ۱۰ - ۲۰٪
- آپنه طولانی همراه با کاهش spo2
- برادیکاردی $HR < 80$
- کاهش spo2 $< 85\%$
- کاهش دمای بدن (هایپوترمی)

Best time for KMC



- The best time is **immediately after feeding**. (upright position -----> digestion facility)

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Minimum criteria for discharge to home

- Thermoregulation of the infant in the kangaroo position
- Appropriate weight gain pattern of the infant
- Stable infant with absence of acute illness
- Successful kangaroo mother care adaptation
- Potential social risk factors considered and accounted for Confidence and willingness of mother/KMC provider to take care of the infant at home
- Family commitment and ability to adhere to follow-up schedule

In Conclusion KMC



- Mother is
 - PRIMARY CAREGIVER
- Nurse is
 - PRIMARY SUPPORTER

In affluence,
Kangaroo Mother Care
is a precious gift
In financial constraints,
it is a useful addition to infant care
In poverty,
it may be the only means of survival

