

Definitions

- **Skin to skin:** "Practice of placing an infant direct skin contact with mother/caregiver – ventral skin of baby touching ventral skin of mother/caregiver"
 - Baby naked except for diaper
 - Baby's back & limbs covered
 - Face & head exposed
 - Medically stable mother & baby

Definitions

- **Kangaroo care: A programme**
 - Early & prolonged skin to skin contact between a mother/caregiver
 - Exclusive breastfeeding
 - *Early discharge from health facility*
 - Appropriate follow up.

Physiological effects of KC

Autonomic nervous control - stabilised

- **Cardiac stabilisation**
- **Respiratory:**
 - Rate remains in the normal range
 - Better oxygenation including brain
 - Reduced need for O₂ even when ventilated
 - Desaturations/apnoeas rare

Physiological effects of KC

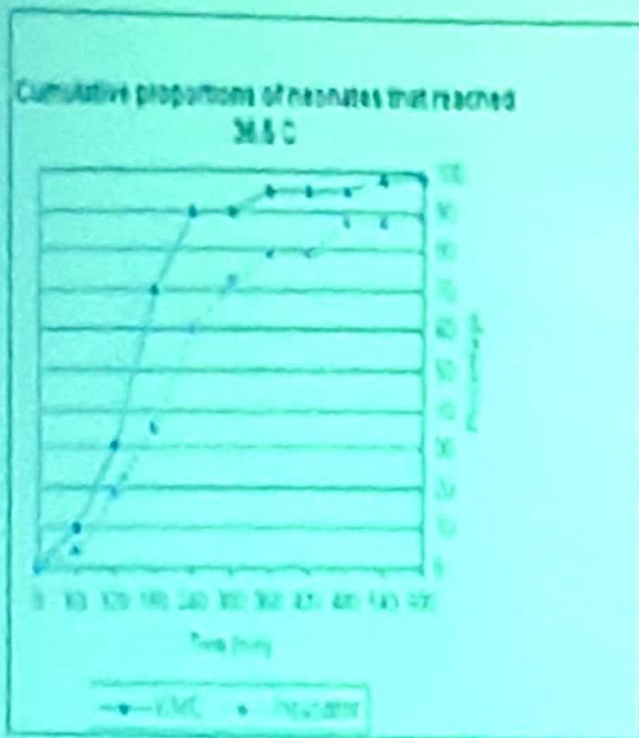
- **Thermoregulation**

- Mother/caretaker's temperature changes according to the needs of the baby – prevent hypo & hyperthermia

- **Metabolic/endocrine maturation & Gastrointestinal function**

- Better glucose control
- Good growth

Temperature control



Physiological effects of KC

- **Neurodevelopment**
 - Better sleep/wake pattern
 - Reduces stress
 - Provides analgesia
 - **Promote brain maturation and complexity**

What does skin-to-skin do?

The greatest disease burden of being born preterm is developmental disabilities that persist for life (*Were KNH study*)

However it has been shown that:

Stimulation through KC accelerates autonomic and neurobehavioural maturation

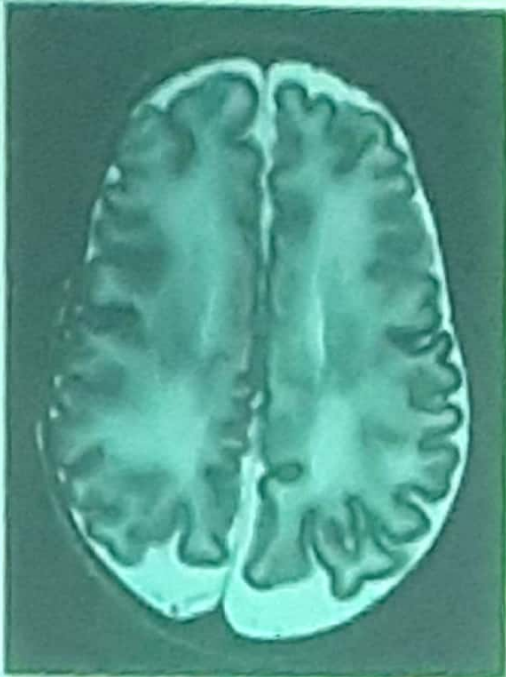
Even at 15yr the non KC group showed incomplete myelination (*Schneider et al 2012*)



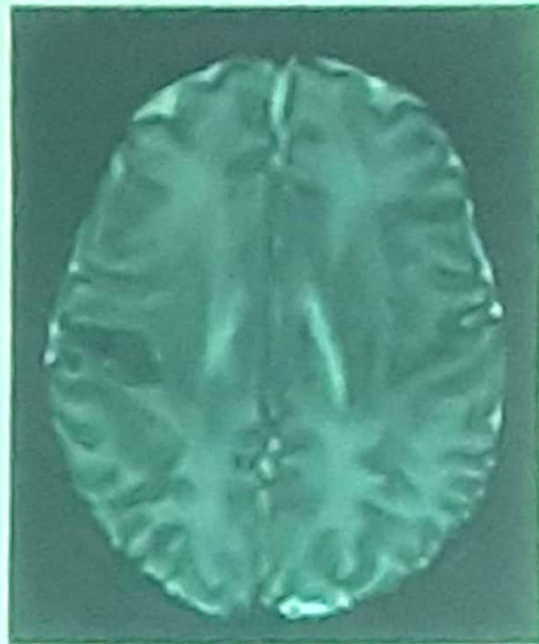
100 Child kangaroo care

Structural brain differences at age equivalent to term

Very preterm Born 26w GA
Image at 40w GA
(14 weeks ex utero)



Full term Born 40w GA
Image at birth: 40w GA



Rueckert's 2003-06

MR Club Kangaroo Care

Differences in white matter (less myelinated fibers)

■ Ex. : thinner corpus callosum (link between hemispheres)

■ This induces lesser installation of interhemispheric dialogue and in turn

lesser installation of intrahemispheric specialties and function

(Insufficient pruning = non maturation of corpus callosum)

Schneider's slide 2012



Other effects of KC

- **Infection reduction**
 - Exposure to maternal organisms
 - Reduce exposure to neonatal unit organisms
 - Less crowding
- **Maternal effects**
 - Reduced anxiety & stress effect on lactation
 - Maternal satisfaction
 - Improved bonding

If you were a preterm what would you choose?

Kangaroo care

Mother provides:

- Warmth (adjusted according to the need)
- Auditory (heart beat & voice)
- Sensory :single/few loving care giver
- Sense of belonging

Incubator care

Incubator provides:

- Warmth (not always at appropriate level)
- Auditory (a constant hum)
- Sensation: many care givers
- Bright lights day & night
- Despair of being abandoned

The need for care

33-36 weeks gestation:
warmth; and feeding;
prevention of infection

28-32 weeks gestation:
warmth; feeding; and
some respiratory support
e.g. O₂ administration or
CPAP; prevention of
infection

<28 weeks gestation:
warmth, feeding, intensive
respiratory support,
prevention of infection
*(All babies need
stimulation)*

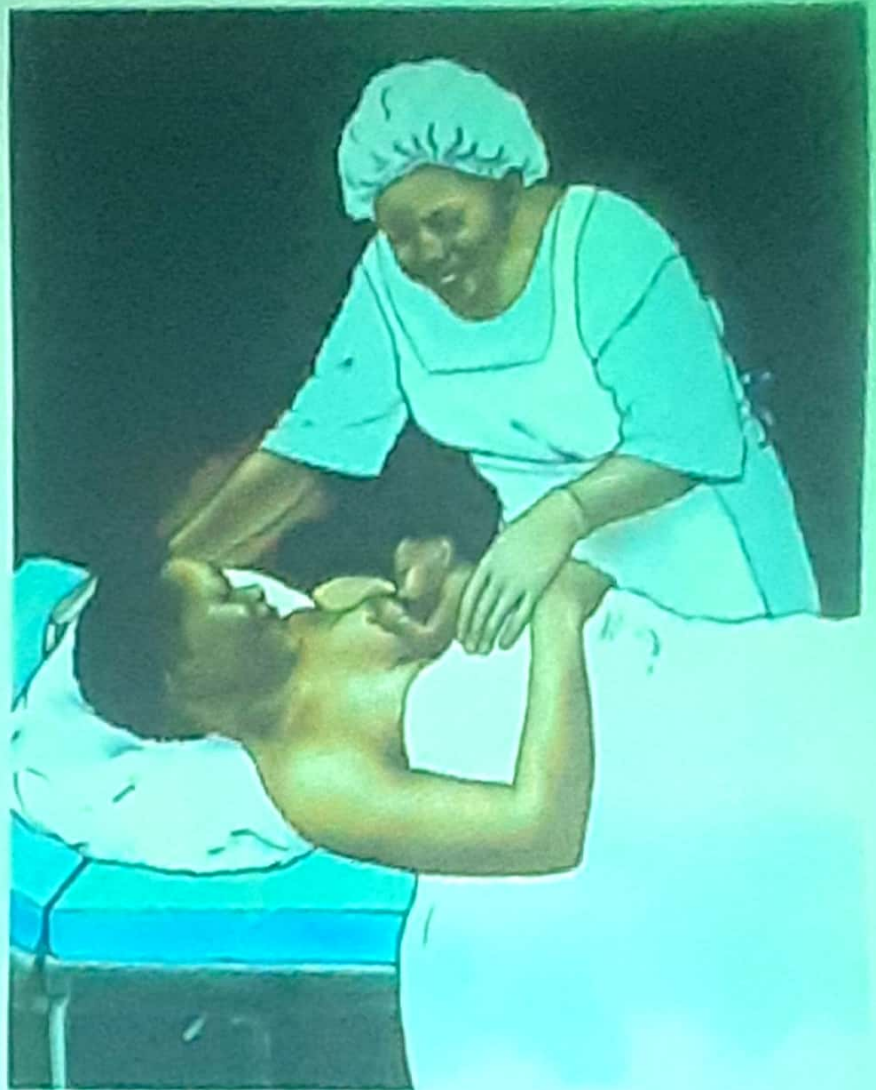


100% Child Development Care

Initiate Skin to skin
immediately & breastfeeding
within an hour of birth

Interpretation:

- Cut the cord 1-2
minute after delivery
- Dry the baby and
place baby skin to skin
and cover
- Assist mother to
initiate breastfeeding
unless there is a
justifiable reason not
to do so



MB ChB Kangaroo care

Preparation for KC

- **Counsel mother:** Information for mother; Demonstrate procedure
- **Mother's clothing:** Front-open, light dress as per the local culture
- **Baby's clothing:** Cap, socks, nappy/diaper and front-open sleeveless shirt
- **Ensure baby is stable** ie not on IV fluids and off oxygen

1. Kangaroo Position: Placement and securing of baby



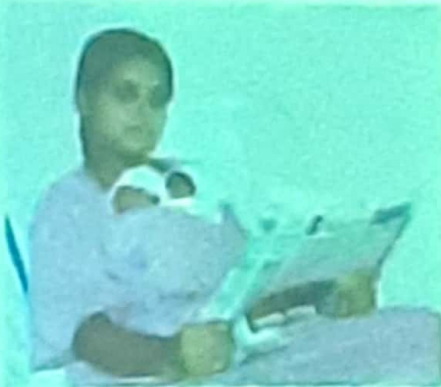
100 Child Kangaroo care

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Sleeping/resting position



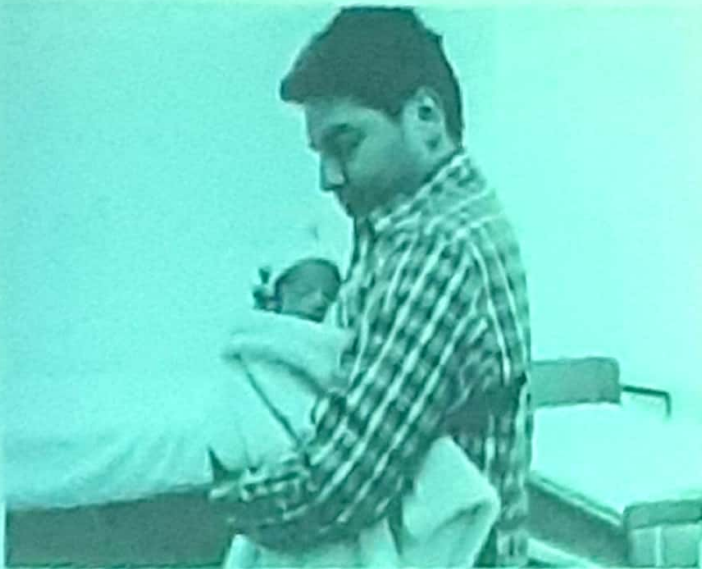
Reclining in a chair



With Child Kangaroo care

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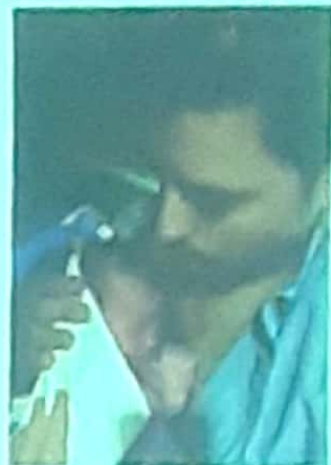
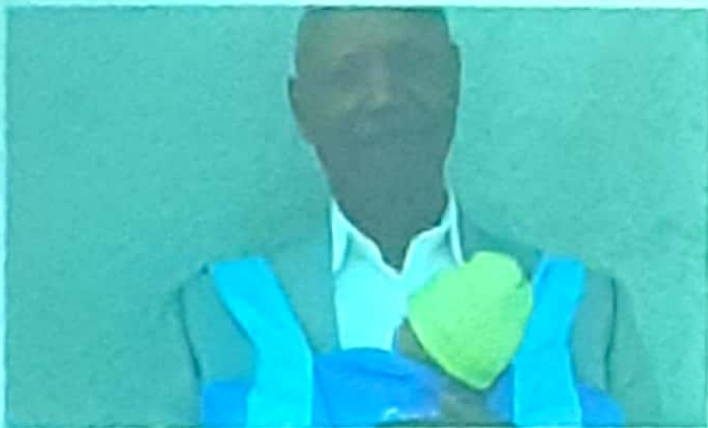
Father participation



M&G Kangaroo care

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Father participation



Multiple births



Ms Chib Kangomo Kari

Ambulatory



MR CH. Kenguru.com

KC in NICU/NHDU



Length and duration per day

- **Intermittent KC**

- A few to several hours per day; the more the better.
- In between incubator or warmer

- **Continuous KC**

- Aim at 20 or more hours per day.
- If mother needs a break baby is placed in warm cot and covered. **OR** Another caregiver can take over

2. Feeding

- Exclusive use of breastmilk
- Frequency: every 2-3 hrs
- Micronutrient supplements
- Methods of feeding depending on maturity
 - Tube
 - Cup or
 - Direct from the breast

Position for breastfeeding



Monitoring during KC

- Neck position is neutral
- Airway is clear
- Breathing is regular
- Colour is pink
- Temperature is being maintained
- Weight taken daily and calculate rate of growth

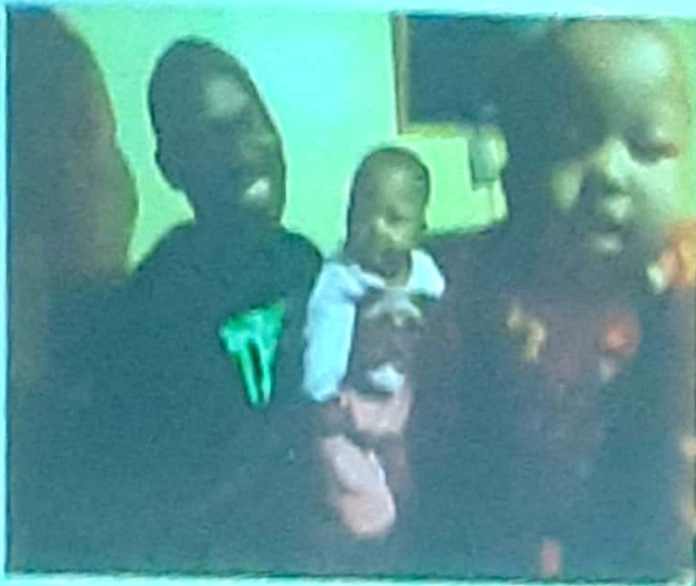
Discharge criteria – health facility

- Baby is well with no evidence of infection
- Feeding well
- Gaining weight (15-20 gm/kg/day)
- Maintaining body temperature
- Mother confident of taking care of the baby
- Follow-up visits ensured

3. Follow up

- Once or twice a week till 37-40 wks / 2.5-3 kg
- Thereafter, once in 2-4 wks till 3 months chronological age
- Subsequently, every 1-2 months during first year
- More frequent visits if baby is not growing well

Follow up



Discontinuation of KC

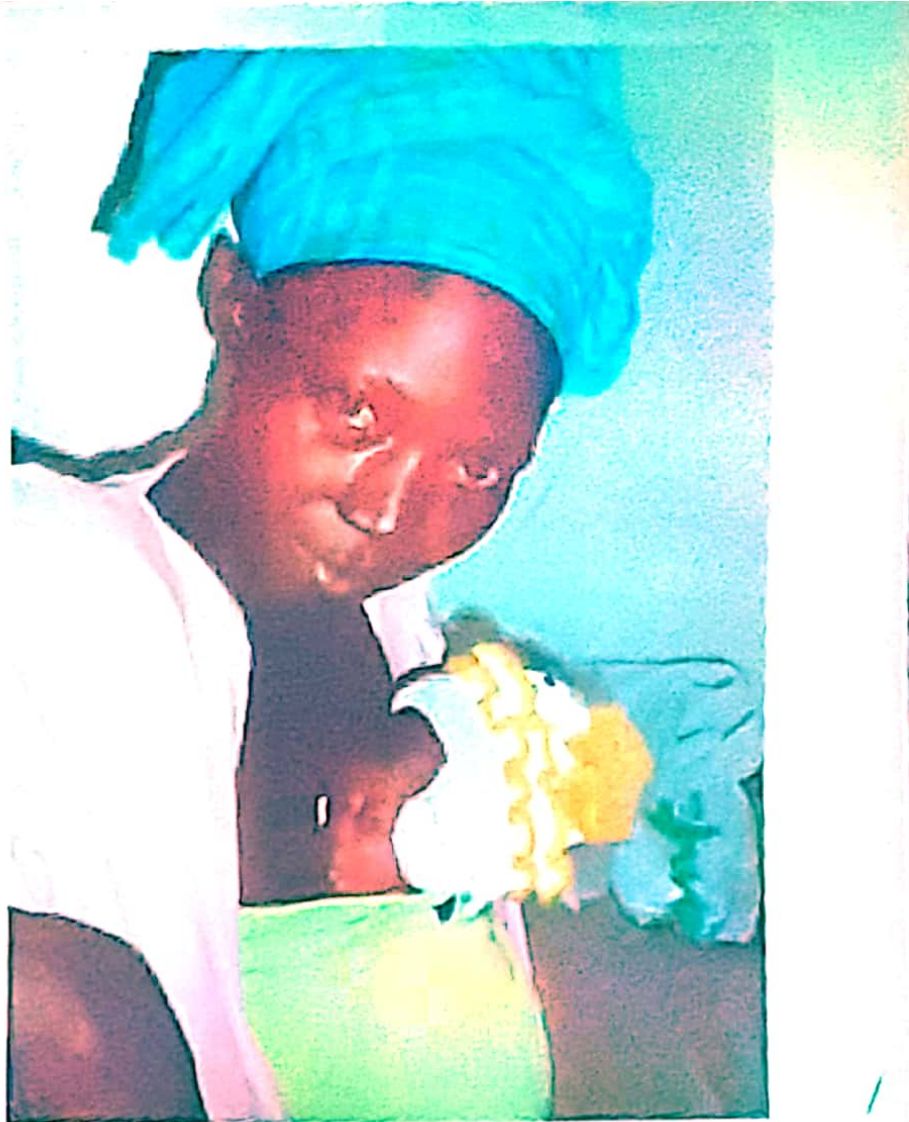
- Term gestation
- Weight ~ 2500 gm
- Baby uncomfortable (self weaning)
 - Wriggling out
 - Pulls limbs out
 - Cries and fusses

Kangaroo Care in Kenya

- KNH – intermittent & continuous
- Country as a whole: training of HCW
- Scaling up
- All hospitals encouraged to have KC rooms
- Father participation
- National guidelines available

Summary: KC care includes

1. Kangaroo position
2. Exclusive breastfeeding
3. Adequate follow up



MB ChB Kangaroo care

Summary

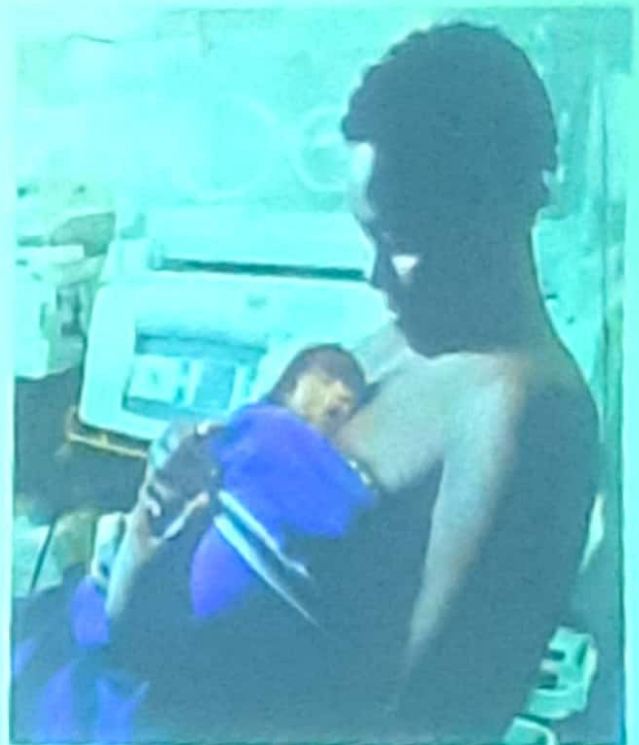
- **Kangaroo care is:**
 - Cheep
 - Easy to implement
 - Safe
 - Reduces morbidity & mortality
 - Promotes adequate growth & development

So lets embrace it!

We copled



We succeeded



John Clark Kangaroo 1990

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