Home Based Kangaroo Mother Care in deprived communities of Rural/Tribal villages of Gujarat, India

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Participating Voluntary Service Organizations

- Tribhuvan Foundation, Anand –Rural Block
- SEWA Rural , Zagadia-Rural/Tribal Block
- Jashoda Narottam Public Health Trust, Dharampur-Rural/Tribal Block
- Bhansali Trust, ICDS Sami Block-Rural Block
- Gram Arogya Trust, Kharel-Rural/Tribal Block

- Serve very deprived section of population.
- Enjoy good credibility and provide basic MCH services.
- Advanced facilities of Newborn care not easily reachable, inadequate and unaffordable to majority.

Household; Where we are working

Background and Justification of the Study

- India has the most difficult challenges for newborn health care.
- FBNC not yet reached all needy newborns.
- Simple interventions like BF and KMC have great potential for saving many more newborns.
- Most studies of KMC are hospital based.
- Reluctance to study HBKMC because of safety, ethical and socio cultural concerns and other challenges.
- Community based health care workers with proper training, motivation, guidance and support can help achieve many milestones in newborn health care in developing countries.

Newborn Care Challenges of India

India's share of estimated annual global burden:

- The highest number of births (>27 millions)-20%
- The highest number of neonatal deaths-27%
- The highest number of LBWI (7.5 million)->40%
- The highest number of preterm-25%
- The highest number of still births-40%
- The highest number of maternal deaths- 25%
- Wide diversities in terms of urban-rural, poor-rich, gender , regional and other factors.

Objectives of study

Home Based Kangaroo Mother Care (HBKMC)

- Is it feasible , acceptable and safe?
- What problems are faced by newborns?
- What problems are faced by mothers ?
- What benefits do newborns get?
- What problems do mothers get?
- Are there any differences noted in the benefits achieved following KMC in preterm AGA babies as compared to the SGA babies, be they preterm or full term babies?

Methodology

- Prospective, observational, ongoing study.
- Study population : Deprived sections in rural/tribal villages served by voluntary service organizations working through public health system with a few additional inputs in training and manpower .
- CHWs with additional training in HBKMC along with other components of ENBC offered KMC to eligible LBWI as early as possible after birth and followed up through regular home visit schedule till 8weeks after birth.
- Data collected in pre structured, pre tested forms in local language and analyzed.

Eligibility criteria for newborns for HBKMC

All the Newborns from the selected villages and small hamlets

(Irrespective of the place of birth)

- Less than 2500 grams of birth weight*
- Stable with good respirations, good color and no danger signals suspected
- No life threatening obvious congenital anomalies
- Mother cooperative
- Family willing to allow mother for KMC and even support her for giving KMC

Observations

- Preparatory phase: 4 months Study period Total 8 months
- Data presented for study period of first 4 months
  (May'14 till August'14)
- Total number of villages : 146
- Total population covered: 208,633
- Total number of deliveries: 1094
- Home deliveries : 191 (22.13%)
- Hospital deliveries : 863 (77.87%)
- Total LBWI : 241 (23.3%)
- HBKMC given to 59 (plus a few more) (40.08% of LBWI)

Categories of Newborns under HBKMC

- I) Home delivered and continued to be home cared 18
- II) Hospital delivered but further care continued at home 39
- III) Hospital delivered, KMC started at hospital and after planned early discharge, continued at home 1

Maternal Factors

- Total mothers: 58
- Total babies: 59 (one set of twins)

- Age of mothers in years: <18----------1
  >18 to 20---19
  >20 to 25--- 29
  > 25----------9

- Educational Status: Illiterate------25
  Primary education ----23
  Secondary education ------7
  College and Higher studies-------3

- Joint families-- ---------- 44
- Nuclear families ---------- 14

Observations

Deliveries conducted by

- Untrained traditional birth attendants 10
- Trained birth attendants 10
- Auxiliary Nurse Midwife / Nurse 14
- Doctors 23
- Others 1

Neonatal factors

Birth weight *

- 1000 grams and below 1
- >1000 to 1500 grams 10
- >1500 to 2000 grams 18
- >2000 to 2499 grams 26
- Not recorded within first week 4 cases
- (29 Neonates were 2000 grams and less)
- (* Birth weights included earliest weight recorded within one week after birth, with the available accuracy of scales)

Observations on Neonatal Weight

- Time of recording the first weight after birth:
- Within first 24 hours : 41
- > 24 hours till 72 hours : 9
- >3 days till 7 days : 5
- After first week : 4

- Maturity Assessment*
- Preterm 21
- IUGR 38

(Roughly assessed from LMP, Weight and comparison of sole creases, ear cartilage and genitalia as marked on photographic charts)

Observations on KMC

Initiation of KMC after birth:

- Within one hour: 2
- Within 24hours : another 3
- > 24 hours till 72 hours 13
- > 3 days till 7 days 11
- > 7 days 18 Not recorded 12

Average Duration of KMC per day

- Less than 3 hours 28
- 4to 6 hours 14
- More than 6 hours 6 Not recorded 12

Who advised KMC?

In home delivered cases: 18

- Community health workers 16 cases
  (AWW/ASHA/Link worker from VHO)
- Doctor 1 case
- Self 1 case

In hospital delivered cases: 43

- Community Health Workers: 39 cases
- Doctors 2 cases

Training for giving KMC

- Mothers given proper training and instructions:
- Yes 43 Not recorded 16
- Family Members trained to help for KMC
- Yes 37 Not recorded 21

(Special emphasis was for KMC position, technique of breast feeding including expressed breast milk collection and feeding ,hand washing and detection of early signs of danger and immediate reporting)

Mode of Feeding during KMC

Initial feeding in KMC

- Direct breast feeding 44
- Expressed Breast Milk with cup and spoon 8
- Breast Feeding plus formula 4
- Breast Feeding plus cow's milk 3

At the time of weaning from KMC

- Shifted to Exclusive breast feeding 55
- Breast feeding with continued formula 4

No bottle feeds were given to any baby

Problems in Newborn Babies

Morbidities in Babies during KMC

* Umbilical discharge (watery) 4
- Cough 4
- Fever 1
- Difficulty in breathing 1
- Poor feeding 5
- Excessive crying 1

(All noticed in the early days of KMC and improved without any antibiotics)

Mortality Two cases

(One suspected massive aspiration following feeds died on 27th day after KMC and another possible septicemia died on 23rd day after KMC.)

- Detailed verbal autopsy did not provide any direct causal relation to KMC practice. However need to note with caution.

Problems in Mothers

- Back pain 12
- Stitch pain 4
- Mood changes and anger 1
- Boredom during KMC 3

Other problems mentioned in discussion

- No domestic help
- No privacy/proper place at home
- No support from family members for surrogate KMC
- Hot and humid weather , excessive perspiration
- Did not like baby soiling with excreta

Benefits to the Newborn
(As reported by mothers and family members)

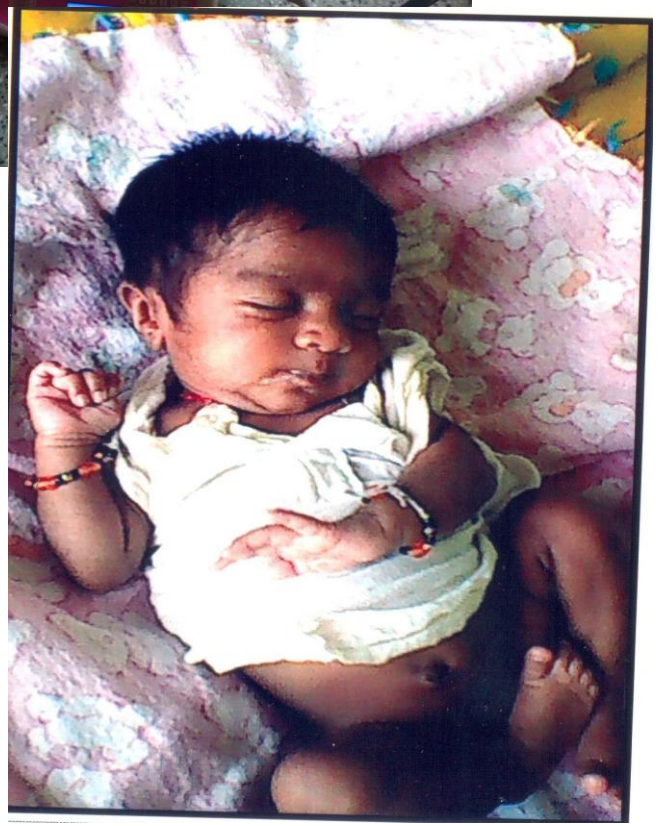
- Good health 6
- Feeding well 17
- Child is alert and quiet 30
- Fast improvement 14
- Good weight gain 19
- ? Less chances of infection 12

Can you believe?

- Through HBKMC
- A newborn with birth weight of 600 grams has been saved and to day thriving well with the weight of 3800 grams after 72 days.
- A set of twins with birth weight of 1600 and 1700 grams are thriving well.

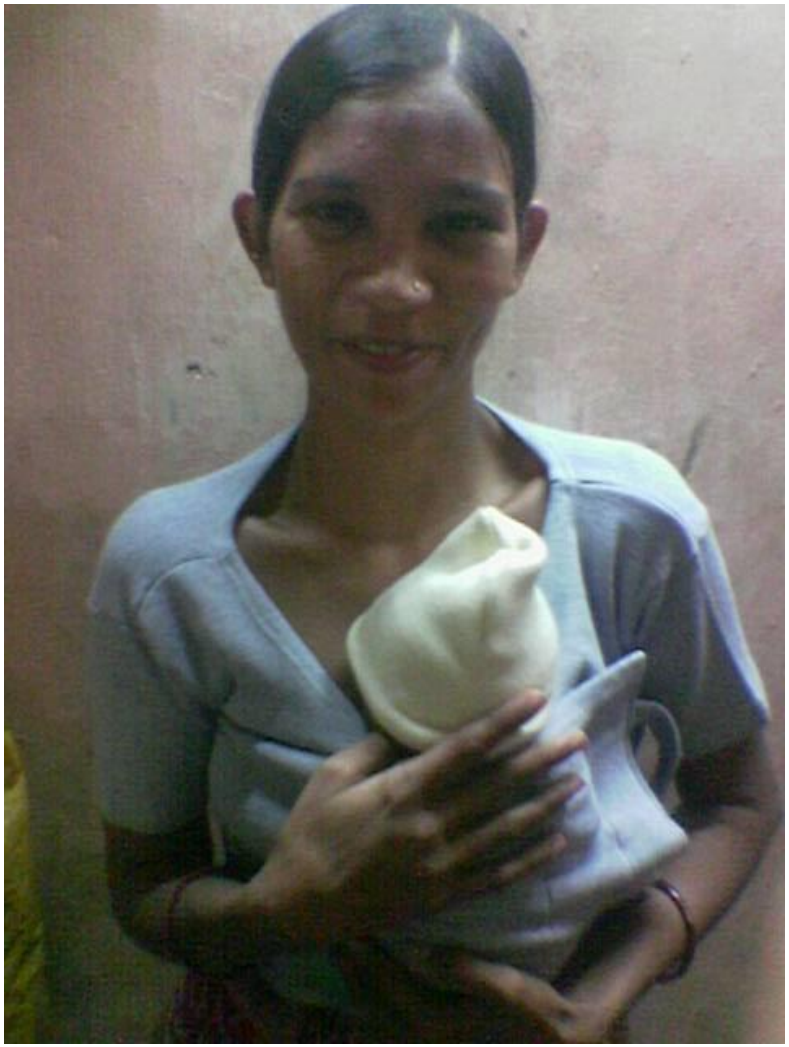
(We brought several such babies to 9th International conference of KMC at Ahmedabad.)

- When no other alternatives are available, HBKMC is worth trying.



Benefits to Mothers

- Easy to feed the baby 25
- Getting more breast milk 19
- ?Satisfaction 22
- Mentally peaceful 19



Overall perceptions of the KMC mothers

- Will you educate other mothers for KMC?
- Yes 48 Not recorded 10

- Do you find KMC useful?
- Yes 46 Not recorded 12

- If required will you offer KMC to your next child?
- Yes 46 Not recorded 12

Conclusions

- Under the guidance and supervision through regular multiple home visits of community health workers with additional training for HB KMC*, it is safe to introduce HBKMC along with FBKMC for the care of LBWI in deprived sections of the society till the ideal conditions are available to all the needy newborns.

- *(as part of ENBC including breast feeding, infection prevention measures, identification of early signals of danger and referral, communication skills and other simple interventions)
- Large scale studies are required in different population groups to support these conclusions.

Additional Suggestions

- For the better monitoring of LBWI at community level, it is desired to have better portable, easily readable weighing scales with accurate weighing of minimum of 10 grams.
- Use of mobile technology for prompt timely health care interventions
- The good work of CHW should be suitably appreciated, encouraged and rewarded in community functions.
- Frequent guidance and supervision must be provided to CHWs through higher level functionaries.
- Community participation encouraged through focused group discussions from time to time and other methods.

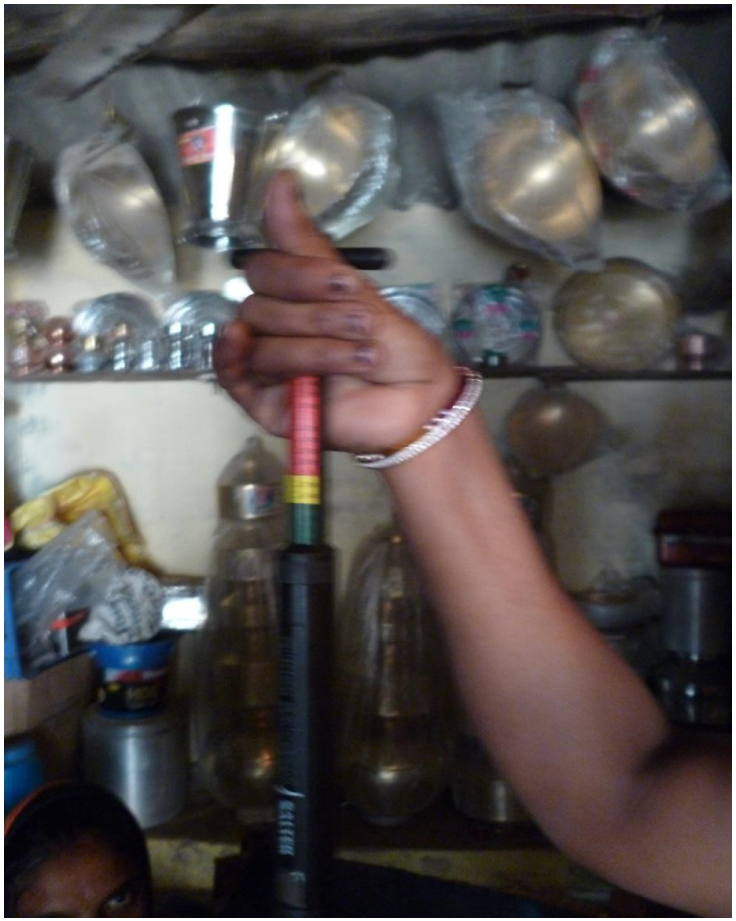
કાંગારૂ પદ્ધતિથી નવજાત શિશુની સંભાળ

ડો શશી વાણી
ડો નિખિલ ખારોડ
પ્રમુખસ્વામી મેડિકલ કોલેજ
કરમસદ

पोलिस पळाले सैरावैरा...!

Trainings

Frontline worker demonstrating the use of Kangaroo Zoli to mother



Meeting with women's group…

Thanks