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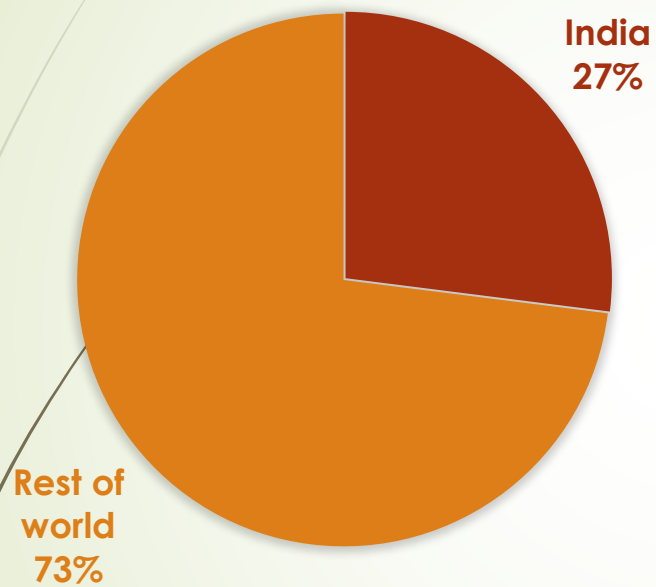
Understanding Barriers to Practicing Kangaroo Mother Care in Delhi Slums

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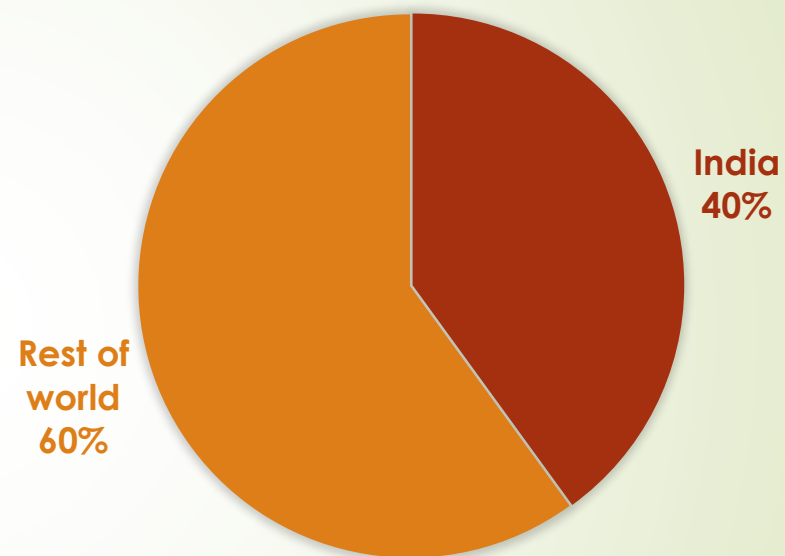


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Global Burden of Neonatal Deaths



Global Burden of Low Birth Weight Babies



Source: *State of India's Newborns 2014*

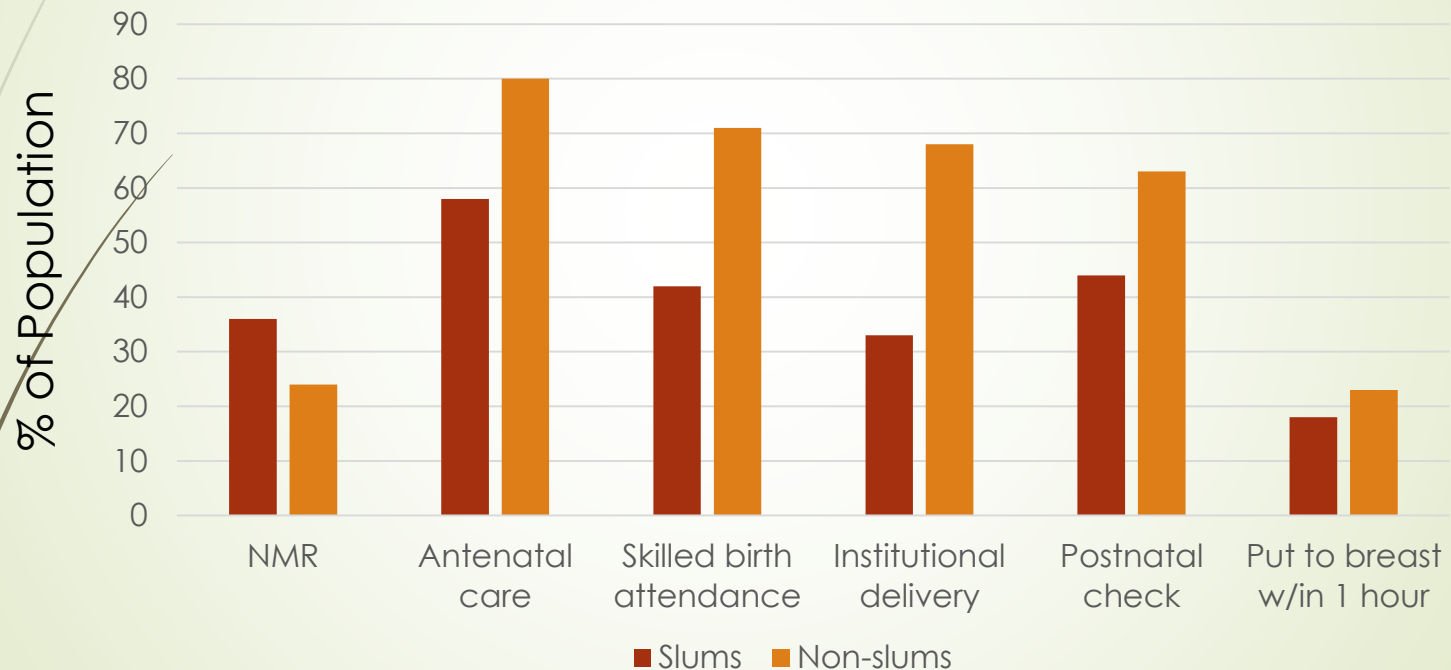


Urban Health in India

- ▶ Urban population is 377 million and expected to reach 590 million by 2030 (State of India's Newborns, 2014).
- ▶ 52,500 babies are born every week among the urban poor in India and this is expected to double by 2020 (Urban Health Resource Center).
- ▶ An estimated 21% of the population in Delhi lives in slum areas (State of India's Newborns, 2014).
- ▶ **Urban poor living in slum areas have a higher neonatal mortality rate** (36.8 per 1,000 live births) **than the urban average** (28.7 per 1,000 live births) (National Family Healthy Survey 3, 2005-2006).

Slums vs. Non-Slums

Maternal and Newborn Health Indicators



Source: National Family Health Survey 3, 2005-2006



Research Aims



- Gather baseline information on existing KMC practices by mothers of LBW infants living in slum areas.
- Identify acceptability by mothers, mothers-in-law, and husbands of KMC practices at home and in the community.
- Test acceptability of the new Laerdal Global Health wrap design by the community.

Methodology



Semi-structured interviews (n = 22)

- Mother of LBW infant delivered in past 6 months
- Mother lives in Delhi slum area

Focus Group Discussions

- Husbands of interviewees (n = 8)
- Mothers-in-law and mothers of interviewees (n = 11)

Recruitment

- 6 slum areas in South Delhi
- Mobile van providing maternal and child health care
- Community health workers



Demographics

Mothers

Characteristics	Frequency (n=22)	%
Length of Residence in slum		
0 – 2 years	11	50
3 – 5 years	7	31.8
>5 years	2	9.1
Education		
Illiterate	11	50
Primary School	1	4.5
Middle School	6	27.3
High School or greater	4	18.1
Age at Marriage (10.5 – 22yrs)		
< 18 years	8	36.4
≥ 18 years	14	63.6
# of children under 5		
1	10	45.5
2	5	22.7
≥3	7	32
Delivered at hospital	18	82
Delivered at home	4	18

Infants

Characteristics	Frequency (n=24)	%
Gestational Age at Birth		
≤ 37 weeks	8	33.3
≥ 38 weeks	16	66.7
Infant Age at Data Collection		
0 – 30 days	6	25
1 month	11	45.8
≥2 months	7	29.2
Infant Sex		
Female	10	41.7
Male	14	58.3
Infant Weight		
≤ 2.0 kilograms	7	29.2
2.1 – 2.5 kilograms	15	62.5
Doesn't know (home delivery)	2	8.3
# of days infant hospitalized (n=18)		
1 – 2 days	6	33.3
3 – 4 days	10	55.6
> 4 days	2	11.1

Results: *Skin-to-Skin & Breastfeeding*

Question	Frequency	%
Have you ever heard of Kangaroo Mother Care?		
Yes	0	0
No	22	100
Have you ever practiced skin-to-skin contact?		
Yes	0	0
No	22	100
Did you ever breastfeed your baby?		
Yes	22	100
No	0	0
During first 3 days after delivery, did you give the thick (yellow/white) liquid that came from your breasts?		
Yes	13	59.1
No	6	27.3
Don't know	3	13.6
During first 3 days after delivery, give anything other than breast milk?		
Yes	8	36.4
No	13	59.1
Don't know	1	4.5
What drink was given?		
Milk (other than breast milk)	7	
Plain water	5	
Gripe water/Jaggery	6	
Tea	3	
Honey	5	

Results:

Healthcare Advice

- Exclusive breastfeeding
 - Keep baby warm and covered
 - Oil massage (1- 4 times daily)
 - Give medication
 - Keep baby clean
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- 46% of mothers sought advice from their mother-in-law on how to take care of the baby
 - 41% reported their husband as having final decision making power over the baby's health



Focus Groups

Mothers-in-Law



"This looks like how a monkey holds the baby."

"The mother has glued the baby to her chest."

Focus Groups

Husbands



"When I play with my baby I feel out of this world."

"Doctor said it [baby] was okay, but I felt the baby was weak."

"I make sure to keep my wife warm so she can keep the baby warm."

New KMC Wrap



"For the baby's health I would allow my daughter-in-law to do this"

"Can I take this home [KMC wrap] my baby is still small"



Results:

Focus Group Discussions

Mothers-in-Law

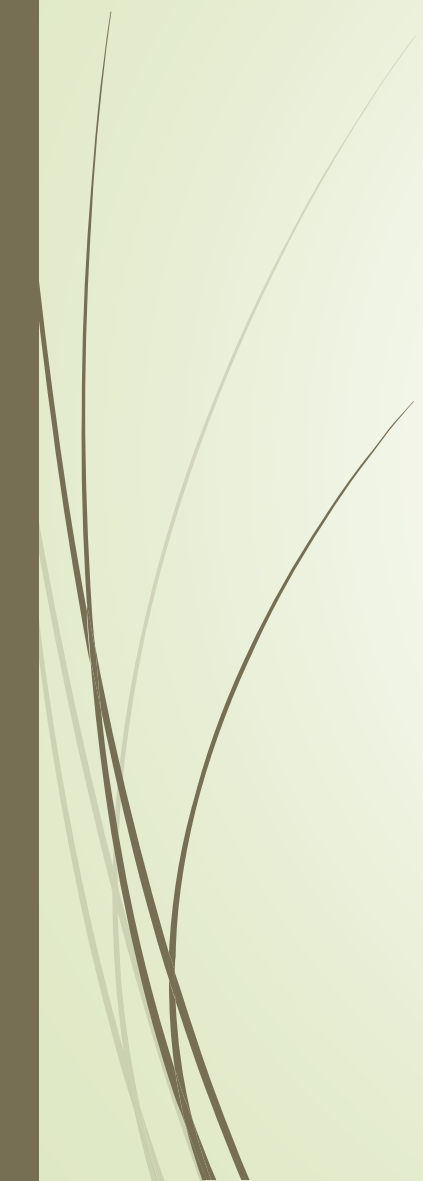
- Well educated on the importance of colostrum, hygiene and exclusive breastfeeding.
- Enthusiastic about the wrap; eager to share information with other mothers in community and home villages
- Related skin-to-skin contact to the way a monkey carries her baby.

Husbands

- Supportive of mothers practicing skin-to-skin contact with baby at home
- Uncomfortable with the idea of practicing skin-to-skin contact themselves
- Reported that work kept them away from child care activities



Limitations

- Small sample size; initial study to support a larger study
 - Interviewer biases
 - Husbands and mothers-in-law were sometimes present during interview
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Conclusions

- Community is unaware of KMC as a practice. Most of the mothers had never heard the word 'Kangaroo'.
- Different practices are followed to keep the baby warm, but skin-to-skin contact does not appear to be one of these practices.
- Lack of counseling (both at the hospital and community) for the risks associated with LBW babies and the need for KMC.
- Mothers and mothers-in-law are well educated on exclusive breastfeeding and colostrum, however, not all mothers translate this into practice.
- Both MILs and husbands were willing to support KMC practice by the mothers, however, they were not counseled at the hospital.
- The new wrap design appears promising, but further research is needed on it's effectiveness and acceptability.



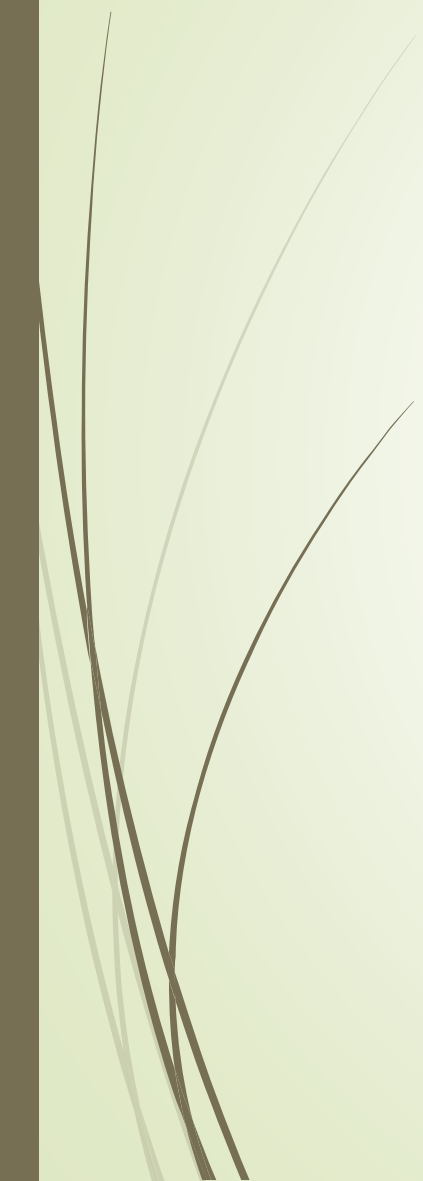
Literature Review

- ▶ Traditional cultural practices (Shah 1984, Winch 2005)
 - ▶ Keeping a “sigri” of burning coals to protect against cold weather
 - ▶ Wrapping the baby in a cotton saree or dhoti to help maintain body temperature of baby
 - ▶ Common practice to start breastfeeding on 3rd day after delivery
 - ▶ Seclusion for first 40 days after birth

- ▶ Community KMC – Skin-to-skin (STS) care (Darmstadt et al., 2006)
 - ▶ 2% of mothers in usual care arm practiced STS
 - ▶ STS acceptance rates by mothers of LBW infants was 76%
 - ▶ Mothers associated KMC with a sense of empowerment, fulfillment and confidence in caring for their baby



Future Ongoing Research

- To understand the socio-economic and cultural barriers to continued KMC practices by mothers after discharge from the hospital.
 - To understand the barriers to practicing kangaroo mother care for preterm babies in healthcare facilities that serve urban slum areas in India.
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References

- ▶ India's National Family Health Survey 3 2006
- ▶ State of India's Newborns 2014
- ▶ Darmstadt GL et al., Introduction of community-based skin-to-skin care in rural Uttar Pradesh, India. *Journal of Perinatology*, 2006, 26; 597-604.
- ▶ Sample Registration System Report 2012. Ministry of Home Affairs, Office of the Registrar General and Consensus Commissioner, India. Available online at: http://www.censusindia.gov.in/vital_statistics/SRS_Report_2012/11_Chap_4_2012.pdf.
- ▶ Quasem I, Sloan N, Chowdhury A, Ahmed S, Winikoff B, Chowdhury AMR. Adaptation of kangaroo mother care for community-based application. (January 2003) Research and Evaluation Division, BRAC, BRAC Center.
- ▶ Shah U, Pratinidhi AK, Bhatlawande PV. Perinatal mortality in rural India: intervention through primary health care. II Neonatal mortality. *Journal of Epidemiology & Community Health*, 1984, 38; 138-142.
- ▶ Winch PJ et al., Local understandings of vulnerability and protection during the neonatal period in Sylhet district, Bangladesh: a qualitative study. *Lancet*, 2006, 366; 478-485.



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