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Assessment of Home Based Newborn Care in Slums of Behrampura Area in Ahmedabad City during November,2014

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Abstract:

Introduction : Government of India has started a new strategy called "Home Based Newborn Care" in 2011 to help improving Neonatal Mortality Rate (NMR). This study was conducted to evaluate these services. Objectives: 1. To evaluate Home Based Neonatal Care (HBNC) services at Behrampura &to assess knowledge of mothers about essential new born care at home. **Method :** Cross section study on postnatal mothers who delivered in last 6 months with purposive Sampling technique. **Results :** 69%of Link workers (LW) visited homes on 1stday of delivery, 52.8% LW completed all 6 home visits.70% mothers had registered pregnancy during 1st trimester. 97.2% of mothers gave exclusive breast feeding.75% mothers started breast feeding their babies on day1 of the delivery.72.2% babies were fed colostrums on the day of delivery.78% mothers didn't apply anything on the cord stump.85.6% of mothers were given information about the vaccination by LW. **Conclusion :** The LW could not complete the visits as per guidelines, so there should be strict observation and follow up by MO. The mothers should be educated well about the danger sign to be aware of in the babies and the vaccination.

Key words : HBNC, Essential New Born Care at Home

Introduction :

The Global Scenario of NMR

A high Neonatal Mortality Rate (NMR) in developing countries accounts for nearly two-thirds of infant mortality. Annually, four million neonatal deaths, and about the same number of stillbirths, occur globally, 98% of them occur in developing countries. [1, 2] Globally, over 130 million babies are born every year, and almost 4 million die in the first four weeks of life. [3] Even though the primary causes of neonatal deaths are estimated to be preterm birth (28 percent), severe infections (26 percent), birth asphyxia and injuries (23 percent), tetanus (seven percent), congenital anomalies (seven percent) and diarrhea (three percent), with Low Birth Weight contributing to large proportion of neonatal deaths. [4] Studies show evidence about contribution of care practices immediately following delivery to new-born's risk of morbidity and mortality. [9] Studies report that most new-borns in low income countries like India die at home while they are cared by mothers, relatives, and traditional birth attendants.[5]

India

Infant Mortality Rate (IMR) has declined from 146 in 1951 to 42 in 2012.[5]Presently, the infant mortality rate (IMR) for India is 38 per 1000 live births, and the neonatal mortality rate (NMR) is 28 per 1000 live births. [6] Each year, out of the 26.5 million infants born in the country, about 0.78 million die before they complete one month of life and a total of million die before their first birthday.

Infections, prematurity, and birth asphyxia, are the major causes of death in the neonatal period. As per the recent World Health Organization: Child Health Epidemiology Reference Group report, the estimated under five deaths are nearly two million per year. It also shows that neonatal deaths constitute 52% of under 5 mortalities in India. The main causes of death in order of frequency are preterm complications and intra-partum related events such as birth asphyxia.

Incases of institutional delivery, where the baby and mother are discharged after 48 hours according to current guidelines, it is expected that

care for the new born during this period is provided at the institution. A significant proportion of mothers prefer to return home within a few hours after delivery, so there is need of home based new born care to be available even for such babies born in institutions to tide them over the first day and thereafter. Although this is not desirable and all efforts should be made to convince the mothers to stay in the institutions for the first 48 hours, existing evidence shows that while at an all India level nearly 45% of mothers return home before 48 hours. However, this percentage is very low in states of Bihar (15.3%), Haryana (29.2%), Nagaland (21.1%) and Orissa (28.3%) as per Coverage Evaluation Survey-2009 by UNICEF. [7]

Government of India has started a new strategy called Home Based Newborn Care in 2011 to help improving NMR. This study was conducted to evaluate these services. Community-based trials from Maharashtra and Uttar Pradesh in India showed 62% and 54% reductions in neonatal mortality, respectively, through multiple prenatal and postnatal home visits by trained community level health workers. [8, 9] Studies on newborn care in some communities show that the knowledge and practice of basic newborn care for instance prevention of hypothermia, feeding of colostrums and exclusive breast-feeding are lacking; even awareness regarding care seeking on the identification of life threatening signs has been found to be very low. [10]

Home based newborn care service program has been there since 2011, the main objective of it is new born care continuum. ASHA gets incentives for this.

Objectives :

1. To assess home based neonatal care services in Behrampura area during November,2014.
2. To assess the knowledge of mothers about essential new born care at home.

Method :

This is a cross sectional type of study, in which evaluation of provision of Home Based Newborn Care was done in slum population of Behrampura area, at Ahmedabad city. Out of 65 wards in Ahmedabad city area, Behrampura ward was selected as per convenience. The questionnaire was formed and 180 post-natal women were interviewed house to house. Sampling technique used to select mothers is convenient type of sampling, (mothers who were available at home at the time of visit and who were willing to take part in the study were included). Inclusion criteria of the study was mothers who delivered baby in last 6 months to ignore the recall bias and exclusion criteria was mothers who did not want to be the part of the study.

Permission of Family Welfare Officer, Ahmedabad city, and the Medical Officer of the Urban Health Centre -Behrampura was taken. Informed verbal consents of the women were taken at the time of the interview and confidentiality was maintained. Ethical clearance was also ensured from Institutional Ethics Committee.

Results :

Table 1: Distribution of Socio-demographic profile of mothers

Variable	Frequency	Percentage
Type of family		
Nuclear	180	100
Joint	0	0
Education		
Primary	137	76
Secondary and	35	20
higher secondary		
Graduation	1	0.5
Illiterate	7	3.5
Religion		
Hindu	121	68
Muslim	59	32
Below Poverty Line (BPL) Status		
Yes	160	89
No	20	11

Table shows the socio demographic profile of the mothers who were included in the study.

Out of 180 mothers, neonates delivered with help of traditional birth attendant (TBA) were 3%. The 56.14 % mothers had 2-4 years of spacing between two children, followed by 42.1% who had birth spacing below 2 years, which is followed by 1.7% who had birth spacing of more than 4 years. Mean age of the mother is 23.34±2.681, where 70% of mothers were of age between 20-25 years. Mean number of children is 1.94±0.96 years, where 37.5% had one child, 42.2% had 2 children and 20.1 mothers had > 3 children. 74.2 of the neonates had birth weight between 2.5 to 3.5 kg, followed by 25.2% neonates who had birth weight of <2.5kg and 0.6% neonates who had birth weight of >3.5kg. Mean birth weight of neonates is 2±1.2kg. 79.3% of neonates had birth order 1 to 2,followed by 19.5% neonates who had 2-4 birthorder and 1.2 % neonates had birth order >4. Mean birth order is 1.89±0.92

Mothers had registered pregnancy during first trimester were 70%. 75.6% mothers had <4 ANC visits done and 24.6 % women had >4 ANC visits done,Mean ANC visits done 3.64±1.31, mothers who had institutional delivery were 96.7% and all deliveries were full term. Among all babies 53.3% were males.Mothers of 21% neonates had applied kajal around neonate's eyes. Only 5%of mothers had knowledge about dangers signs. Mothers with information about the vaccination given by Link Workers(LW) were 85.5%.Neonates who were visited at home on 1st day of delivery were 68.9%..

Exclusively breastfed Neonates were 97.2%. Mothers of 75% had started breast-feeding on day 1 of the delivery. Neonates who were given colostrum on the day of delivery were 72.2%. Neonates who were given delayed bath after birth were 71.9%. All the babies were wrapped in multilayer cloth after birth. (Table 2)

Table 2 : Distribution of mothers according to newborn care practices

Variable	Yes	No
Exclusive breast feeing	95%	5%
Colostrum	72.2%	27.8%
Bath(delayed)	73.8%	26.2%
Multilayer wrap	100%	-

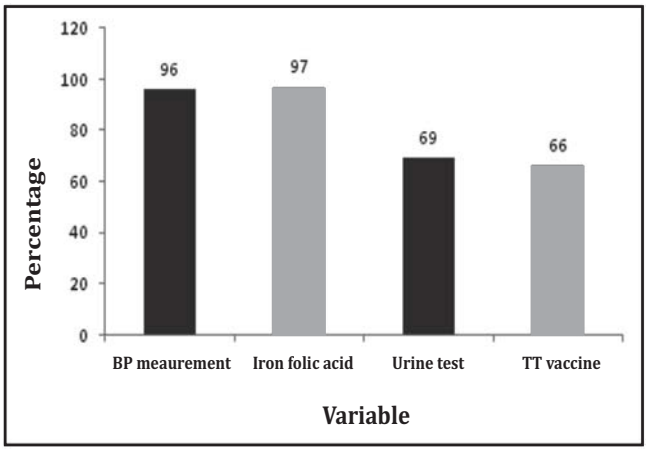
Mothers of 78% neonates did not apply anything on the cord stump and remaining 28% applied several things that is shown in the graph. Mothers of 62.8% neonates were practicing hand washing with soap and water every time before handling the baby

Table 3 : Distribution of mothers according to Essential newborn care knowledge

Parameter	Frequency	Percentage
Vaccine education	154	85.6
Application of kajal around eyes	38	21.1
Hand washing	113	62.8
Danger signs knowledge	8	4.4

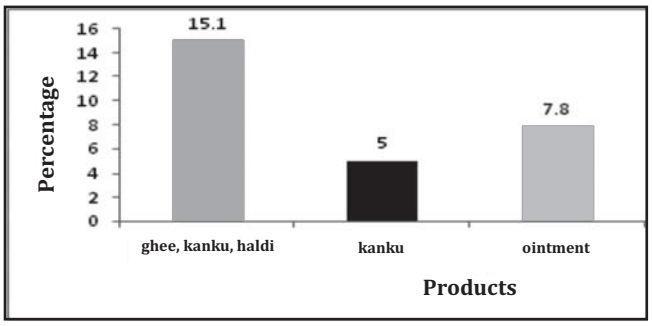
21.1 % mothers applied kajal around eyes of neonates,62.8% were performing hand washing before carrying the baby, 4.4 % had knowledge about danger signs to be aware of in the neonates.

Figure 1 : Distribution of Antenatal profiles in mothers (n=180)



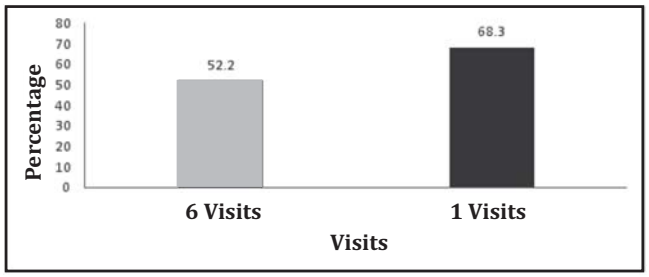
96% mothers had BP measured everytime they visited the ANC clinic,97% mothers had taken iron folic acid regularly during pregnancy, 69% had urine test day on ANC visit and 66% women had taken tetanus toxoid taken during pregnancy.

Figure 2: Distribution of various products applied on cord stump (n=40)



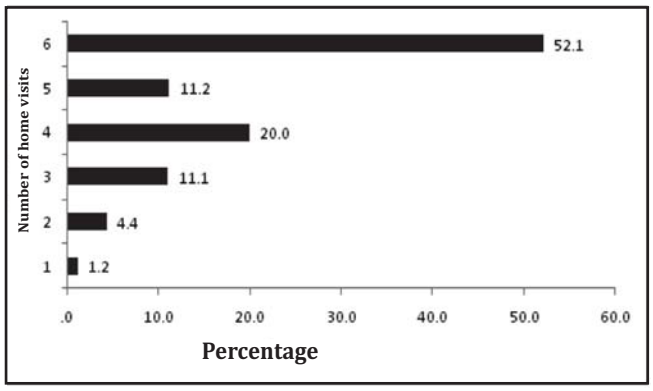
78% mothers did not apply anything on the cord stump and remaining 22% applied several things that is shown in the graph.

Figure 3 : Distribution of home visits done by link workers(LW) (n=180)



52.2 % link workers had done all 6 home visits and 68.3% had visited the neonate on the 1st day of delivery

Figure 4 : Distribution of mothers according to home visits done by LW (n=180)



52.1% link workers(lw) had 6 complete home visits,11.2 % had 5 visits done,20% had 4 visits done,11.1% had 3 home visits ,4.4% had done 2 home visits and 1.2 % LW had done 1 home visit .

Discussion :

ome based newborn care services have been in place since 2011.Majority of mothers know about vaccine and about birth registration. According to our study, in half of the neonates, six mandatory home visits were done by the link workers. 4.4 % mothers had knowledge about danger signs to look for in neonates. We could find out that most of the mothers had adapted to SAFE practices, except in the area of cord stump application with various products as mentioned in results section. 78% mothers did not apply anything on the cord stump and remaining 22% applied several things. Some other studies also show low coverage of clean cord care practices among home deliveries in South Asia.[11] 97.2% of mothers were giving exclusive breast feeding to their neonates.75% mothers had started breast feeding their neonates on day 1 of the delivery.72.2% neonates were fed colostrum on the day of delivery. Recent studies from Nepal, Pakistan and Bangladesh also which shows early breast-feeding initiation rates of 91 percent, 73 percent and more than 90 percent respectively. [12- 14]Over 85% of the mothers were given the education about vaccination. [9] 21 % of mothers applied kajal around their babies' eyes, 62.8% were practicing hand washing before carrying neonates, 4.4 % had knowledge of danger signs. Studies on newborn care in some communities show that the knowledge and practice of basic newborn care for instance prevention of hypothermia, feeding of colostrum and exclusive breast-feeding are lacking; even awareness regarding care seeking on the identification of life threatening signs has been found to be very low. [10] Most of the mothers had less than 4 ANC visit, certain other studies have also shown that less ANC visits are associated with more mortality, which can also be associated with less effective job by the LW.A randomized controlled trial in Pakistan showed that training TBAs and their integration into the health system to propagate newer safe practices, such as cord care, were effective in reducing neonatal mortality by 30%. [15] Low birth weight prevalence in India is 20% while in

our study it was 25%. [16]In the last decade, as per the National data, health indicators including utilization of antenatal care services were as poor as 60% in rural India. [1] While in our study, the utilization of ANC care is about 96%. Therefore, based on present study it is recommended that there should be refreshers training for the LW at regular intervals. The mothers should be educated well about the danger signs to be aware of in the neonates and also the vaccination. There should be follow-up of all the post-natal mothers by the LW according to the days given in the guidelines.

Declarations :

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Conflict of interest : Nil

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