

## Newborn care activities done by recently delivered women in relation to placental delivery for their recent delivery in in Uttar Pradesh, India

Tridibesh Tripathy<sup>1</sup>, Umakant Prusty<sup>2</sup>, Chintamani Nayak<sup>3</sup>

<sup>1</sup> Ph. D. in Health Systems Studies, TISS, Mumbai, India

<sup>2</sup> Research officer (Homoeopathy), Regional Research Institute (Homoeopathy), Puri, Odisha under Central Council for Research in Homoeopathy, Ministry of AYUSH, Government of India

<sup>3</sup> Assistant Professor, National Institute of Homoeopathy, Kolkata, West Bengal, Government of India

### Abstract

The current article of Uttar Pradesh (UP) is about the ASHAs who are the daughters-in-law of a family that resides in the same community that they serve as the grassroots health worker since 2005 when the NRHM was introduced in the Empowered Action Group (EAG) states. UP is one such Empowered Action Group (EAG) state. The current study explores the actual activities done by Recently Delivered Women (RDW) on three activities related to newborn care. These are dry, wrap, colostrum feeding and cord cutting of the newborn. From the catchment area of each ASHA, two RDWs were selected who had a child in the age group of 3 to 6 months during the survey. The action profiles of the RDWs on these aspects of newborn care are reflected upon to give a picture that represents the entire state of UP.

The relevance of the study assumes significance as data on the modalities of actual actions done by the RDWs for their last delivery are not available even in large scale surveys like National Family Health Survey 4 done in 2015-16. The current study gives an insight in to these activities separately. The current study is basically regarding the summary of three actions on newborn care done & replied by RDWs during their post- natal stage.

When late or poor newborn care actions are taken by the RDWs and their family members, it shows up poorly in the Neonatal Mortality Rate (NMR) & there by impacting the Infant Mortality Rates (IMR) in India and especially in UP. The current IMR in India is 33 where as it is 41 in UP which means 8 points higher per 1000 livebirths (SRS, May 2019). Similarly, the current NMR in India is 23 per 1000 livebirths (UNIGME,2018). As NMR data is not available separately for states, the national level data also hold good for the states and that's how for the state of UP as well. These mortalities are the impact indicators and such indicators can be reduced through long drawn processes that includes effective and timely actions on newborn care by RDWs in their deliveries. This is the area of actions detailing that the current study throws out in relation to placental delivery. A total of four districts of Uttar Pradesh were selected purposively for the study and the data collection was conducted in the villages of the respective districts with the help of a pre-tested structured interview schedule with both close-ended and open-ended questions. In addition, in-depth interviews were also conducted amongst the RDWs and a total 500 respondents had participated in the study.

The results showed that 98% RDWs in Gonda and all the RDWs in the other 3 districts replied that they dried their baby immediately and before placental delivery. Regarding wrapping, only 1% RDW in Gonda wrapped the baby after an hour or more after placental delivery. Rest of the RDWs in all the 4 districts wrapped the baby immediately before placental delivery. The results also showed that the ASHAs were not following up effectively for Early Initiation of Breast Feeding (EIBF) in the 3 districts other than Banda. This EIBF indicator also showed poor performance of ASHAs in Gonda and Barabanki districts. For cord cutting indicator, the practices of RDWs showed that among the deliveries conducted by the ANMs and the home deliveries, the cutting of the cord was delayed in relation to placental delivery.

**Keywords:** RDW, ASHA, placental delivery, EIBF, cord care

### Introduction

As RDWs were selected from the catchment area of the ASHAs in the four districts, the following section briefs out the details on ASHAs.

The ASHAs were recruited by the Local Self Governance from their own communities as per the guidelines set by NHM. Subsequent to the roll out of guidelines at the central level, the state of UP also rolled out the recruitment of ASHAs through the setting up of State Program Management Unit of NHM at state level and the District Program Management Unit (DPMU) at district level. These DPMUs helped set up the Block Program Management Unit at the block level. These units got in touch with the

Panchayati Raj Institutions which was part of LSGs and these PRIs represented by the Gram Pradhans or the village panchayat head nominated the ASHAs from the respective communities. They attached the ASHAs with the public health system at the block level to work as ASHAs who are incentive based workers. (GOUP, PIP, NHM, 2008).

Like India, UP also went through the CHW scheme in 1970s through the introduction of Village Health Guide in 1977 (5<sup>th</sup> Plan GOI, 1974-79) and the concept was ratified further in the Alma Ata conference of 1978 on primary health care. On the other hand, with the introduction of Integrated Child Development Services in 1975 (5<sup>th</sup> Plan GOI, 1974-79) the Angan Wadi Workers were in place as CHWs in phases.

Simultaneously, local Traditional Birth Attendants were in place since 1977 as CHWs (5<sup>th</sup> plan, GOI, 1974-79). Thereafter, the multipurpose male and female health workers came in to place through the Child survival and Safe Motherhood program in 1992 (Yearly Plan, GOI, 1992). Besides the sporadic efforts of NGOs putting in place CHWs through their small efforts in definite geographic areas, the cadre of Basic Health Workers were put in by the health system from 1992 till 2005 (GOI, 2005). Gradually the CHWs came here to stay with the introduction of ASHAs in 2005 through the introduction of NRHM (GOI, 2005). As per GOUP, there were 1,50,000 ASHAs in UP in 2019. The selection of RDWs in this study is dependent on the ASHAs.

Studies on RDWs in UP have not covered on actions related to newborn care package like drying & wrapping of newborn, colostrum feeding and cord cutting as replied by the RDWs in relation to placental delivery. These details are not seen in relation to placental delivery in many large-scale surveys like NFHS 4. The current study reflects on these three aspects of newborn care in detail where the activities are done by the RDWs.

#### **Activities by RDWs with respect to placental deliveries in UP**

The current study done in 2017 is unique in the sense that it examines the activities of RDWs and their families in the catchment area of ASHAs regarding three newborn care activities. The study delves into the actions like drying & wrapping, EIBF & cord cutting. It elicits these actions by the RDWs in relation to their placental deliveries if any.

The evaluation study of ASHAs of UP done in 2011 states that all the ASHAs had created awareness on newborn care and 98% of ASHAs created awareness about Early Initiation of Breastfeeding (EBF) (Bajpeyi & Dholakia, 2011). Actual activities are not mentioned in relation to placental delivery. The Maternal Child Health & Nutrition (MCHN) report mentions that 22% of newborns were bathed on 3<sup>rd</sup> day of the birth (NIHFW, MCHN report, 2006). Indirectly, it can be inferred that the newborn would have been dried and wrapped. There is no mention of these activities in relation to placental delivery.

The Comprehensive Child Survival Program (CCSP) evaluation report of UP informs that 58.4% of Eligible Women (EW) reported that ASHA counseled them on Kangaroo Mother Care (KMC). Further, it is mentioned that 79.5% of EW reported that they gave colostrum to their newborn & out of these EWs, 52.2% gave the colostrum within an hour of birth (GOUP, CCSP report, 2013). The KMC method is related to drying & wrapping activity of New Born Care (NBC) of this article to maintain thermal care of the newborn. Here also, there is no link to placental delivery.

A delivery has four stages out of which the delivery of the foetus is the first stage and placenta delivery is the third stage as mentioned in the training modules of ASHAs (GOI, 2005). The study revolves around the knowledge of ASHAs on newborn care with the placental delivery as the pivot.

A study by National Health System Resource Centre (NHSRC) on evaluation of performance of ASHAs suggests optimization of

ASHA's functionality and effectiveness. It highlights low performance in areas of newborn care, postnatal care, antenatal care and nutrition by ASHAs due to lack of skills and support (Ved et. al, NHSRC, 2011). The current study also focuses on these areas to see the performance of ASHAs. In other studies, it is cited that evaluations of CHW performance in 1998, 1999 and 2000 in Siaya, Kenya (Kelly et. al, 2001) found that key reasons for the deficiencies in performance appear to be guideline complexity and inadequate clinical supervision. These issues hold true for the state of UP also.

Newborn care was one of technical component of India Newborn Action Plan of Government of India. The Bottle Neck Analysis toll of the global Every Newborn Steering Group was used to find the package critical to reduce preventable newborn deaths. One of the packages was basic newborn care that covered cleanliness including cord care, warmth and feeding. The other was Kangaroo Mother Care that focuses on skin to skin, breast feeding and feeding support for preterm and premature babies (INAP, GOI, 2014). This was the New Born Care (NBC) package that the current study focused upon.

The knowledge on Early Initiation of Breast Feeding (EIBF) in relation to placental delivery is also critical as only 25.2% of children in UP are fed the colostrum where as it is 45.2% in the country. The report also mentions that 98% of all the home deliveries had used a clean blade to cut the umbilical cord. (NFHS 4, 2015-16).

#### **Research Methodology**

Using purposive sampling technique, four districts were chosen from the four different economic regions of UP, namely Central, Eastern, Western and Bundelkhand. Further, the Government of UP in 2009 categorized the districts as per their development status using a composition of 36 indicators. Purposefully, the high developed district chosen for the study is Saharanpur from the western region, the medium developed district chosen for the study is Barabanki from the central region, the low developed district chosen for the study is Gonda from the eastern region and the very low developed district chosen for the study is Banda from the Bundelkhand region (GOUP, 2009).

In the next step, purposefully two blocks were selected from each of the district and all the ASHAs in these blocks were chosen as the universe for the study. From the list of all the ASHAs in each of the two blocks, 31 ASHAs were chosen randomly from each block for the study. In this way, 62 ASHAs were chosen for the study from each of the districts. In Gonda district, 64 ASHAs were selected to make the total number of ASHAs for the study to 250. From the catchment area of each ASHA, two Recently Delivered Women (RDW) were chosen who had a child in the age group of 3-6 months during the time of the data collection for the study. In this way, 124 RDWs from three districts and 128 RDWs from Gonda district were chosen thus a total of 500 RDWs were selected for the study.

The following figure shows the four districts of UP in the map of the state of UP.



Fig 1

The data was analyzed using SPSS software to calculate the percentage and absolute values of the three activities done by RDWs using the detail profiles of the drying & wrapping of newborn, EIBF and cord cutting of the newborn in relation to placental delivery. The quantitative data related to the profiles was seen for the actions done by the RDWs that forms the basis of the ensuing results and discussion.

Table 1: RDWs replying about drying and wrapping their last newborn in relation to placental delivery

Names of districts & Number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Dried the baby immediately and before placental delivery	100	100	98.4	100
Dried the baby within an hour after placental delivery	0.0	0.0	0.78	0.0
Dried the baby after an hour or more after placental delivery	0.0	0.0	0.78	0.0
Wrapped the baby immediately and before placental delivery	100	99.1	98.4	97.5
Wrapped the baby within an hour after placental delivery	0.8	0.0	0.78	2.4
Wrapped the baby after an hour or more after placental delivery	0.0	0.0	0.78	0.0

Regarding newborn care when RDWs were asked about drying the baby in relation to placental delivery, 98% RDWs in Gonda and all the RDWs in the other 3 districts replied that they dried their baby immediately and before placental delivery. Only 1% RDW in Gonda dried within an hour after placental delivery and another 1% also in Gonda dried the baby after an hour or more after placental delivery.

**Research tool**

The RDWs were interviewed using an in-depth, open-ended interview schedule which included a section on various components of Natal & Post Natal Care. The three tables are from the section four of the tool that comes under the stage after delivery. The section 4 of the tool deals with Natal and Post Natal care. They were asked about three activities in relation to placental delivery. The first activity is about RDWs reply about drying and wrapping their last newborn in relation to placental delivery. The second and third activities are regarding actions like Early Initiation of Breast Feeding (EIBF) and cord cutting in relation to placental delivery. Five hundred research tools were used for the study to interview 500 recently delivered women who had a child in the age group of 3 to 6 months during the survey. The following section details out the results and discussions related to the study.

**Results and Discussions**

This section has three tables where the first table is about RDWs reply about drying and wrapping their last newborn in relation to placental delivery. The second and third tables are regarding actions like Early Initiation of Breast Feeding (EIBF) and cord cutting in relation to placental delivery.

Similarly, for wrapping the baby only 2% in Saharanpur and 1% each in Gonda and Banda said that they wrapped the baby within an hour after placental delivery. Only 1% RDW in Gonda wrapped the baby after an hour or more after placental delivery. Rest of the RDWs in all the 4 districts wrapped the baby immediately before placental delivery.

Table 2

Percentage of RDWs replying about breastfeeding the baby in relation to placental delivery				
Names of districts & Number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Breastfed before placental delivery	92.7	58.8	48.4	69.3
Breastfed after placental delivery	7.3	41.2	51.6	30.7

Regarding EIBF the data in 4 districts showed that in Banda 93% RDWs breastfed the baby before placental delivery. 70% of RDWs did this in Saharanpur, 59% in Barabanki and 48% in Gonda. This showed that the ASHAs were not following up effectively for EIBF in the 3 districts other than Banda. Delaying the breastfeeding would delay the placental delivery and EIBF will be delayed further. 30%

RDWs did not do it in the most developed district of Saharanpur and the figure was higher with 52% RDWs not doing in Gonda and 41% not doing in Barabanki. It showed poor performance of ASHAs in Gonda and Barabanki districts. Even in Banda 7% RDWs missed out on this activity for which no external support was required.

Table 3

Percentage of RDWs replying about cutting the baby's cord in relation to placental delivery				
Names of districts & Number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Cord cut before placental delivery	45.1	50	45.3	34.6
Cord cut after placental delivery	54.9	50	54.7	65.4

More percentage of RDWs replied that they cut the cord of the baby after placental delivery. 55% RDWs in Banda, 50% in Barabanki, 55% in Gonda and 65% in Saharanpur replied that they cut the cord after placental delivery. These practices showed that in the deliveries conducted by the ANMs and the home deliveries the cutting of the cord was delayed in relation to placental delivery.

### Conclusions

The above results showed that the summary of the three activities on newborn care that includes drying, wrapping, colostrum feeding and cord cutting show wide variation among the four districts. The three activities were seen in relation to placental delivery. The dissemination process for these actions are very critical for home deliveries where the skilled personnel rubs it out against the socio-cultural barriers that are the actual obstacles in achieving these three indicators. To substantiate this fact, a study mentions that there were many barriers in HBNC practices like delayed early initiation of breast feeding, non-adherence to exclusive breast feeding, poor cord care and early bathing of newborns. All these factors contributed to higher neonatal mortality (Kumar and Mohanty. et.al, Lancet 2008). These barriers come into play as the ASHAs have poor knowledge. The triad of activities on newborn care activities as replied by RDWs should represent that these are done immediately without waiting for placental delivery. This will help the RDWs & their family members to address the three activities related to newborn care (dry, wrap, colostrum) there by reducing neonatal & infant mortality (GOUP, PIP, NHM, 19-20). Data should be collected in large scale surveys on all these parameters of newborn care services in relation to placental delivery of RDWs exclusively as these efforts can significantly reduce the cultural obstacles & help improve neonatal, infant health & also child health. As a result, reduction in NMR & IMR in UP & India will follow eventually in the long run.

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