

## Bathing and Weighing of Neonants of Recently Delivered Women in Home Based Newborn Care in Uttar Pradesh, India

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### Abstract

When ASHAs were introduced in NRHM in 2005, their primary aim was to visit homes of newborns as the first program in UP operated through the ASHAs was the Comprehensive Child Survival Program in 2008. Since then, tracking of all deliveries and all the newborns are an integral part of the work of ASHAs in all the primary health care programs operated by the NHM in UP (GOI, 2005, GOUP, 2013). The current article examines the role and work of ASHAs through the responses of the mothers of newborns at district level. Evaluation studies on the performance of ASHAs was done since 2011 as by then ASHAs had actually worked in the field for a minimum period of 5 years. It is to be noted that National Rural Health Mission was rolled out in April 2005 but it took about one to two years for the states to hire ASHAs and put things in place right from the state to the village level (GOUP, 2013). In this article, a comprehensive feedback is elicited from the Recently Delivered Women on bathe and weight of their newborn as part of newborn care program at the district level.

The current study explores some of the crucial variables on the home-based newborn care activities like bathing and weighing of the newborn response of mothers of newborns on newborn care. Bathing and weighing of newborn in child health programs is a critical component and the current article follows up the role of ASHAs in Home Based Newborn Care program through the response of the mothers. The mothers were selected as respondents as they were the selected mothers from the list of mothers available with their ASHAs at the time of survey.

The relevance of the study assumes significance as data on the details of the bathing of newborn in days and weighing component of child health and newborn are not included in many surveys. Further, response details from the mothers on these two components are usually not collected in many studies/surveys. Such responses that collect actual actions on the bathing and weighing thereby indirectly assessing the work and approach of ASHAs including their awareness on the programs related to weighing and bathing are not the focus in very large-scale health surveys. Such response on these two activities of newborn care through the work of ASHAs in the current implemented programs do not come under the ambit of many social studies or surveys. The surveys gain more teeth when the response is solicited from the horse's mouth like the current article.

A total of four districts of Uttar Pradesh were selected purposively for the study and the data collection was conducted among the mothers in the respective districts. A pre-tested structured and in-depth interview schedule was used with close-ended questions. These in-depth interview schedule collected descriptive details as responded by mothers. The quantitative data were conducted amongst the mothers and a total of 500 respondents participated in the study.

The results reflected that regarding bathing of the newborn for the first time after birth. as per the response of the RDWs across the 4 districts, majority of them had bathed their baby on the 3rd day after birth. On the activity of weighing their newborns, most of the RDWs in the 4 districts replied that their newborn was weighed. As per the mother child card, most of the newborns across the four districts had 3 kilograms as their recorded weight in the card.

Regarding recall of weight of the newborns by their mothers, it was evident that the ASHAs in Saharanpur discussed the weight of the newborn with the RDWs but in the other three districts it was not discussed and hence none of the RDWs were able to recall the weight of their newborn.

**Keywords:** ASHA; Thermal care; HBNC; Weighing; Vernix Caseosa.

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## Introduction

The current study focused on the responses of mothers of the four selected districts. Response of the mothers on bathing and weighing of their newborns were based upon their current knowledge about the messages on child health and newborn care programs. The responses included two aspects of newborn care that is when was the child bathed for the first time after birth cord and if bathed within a week, what was the day of bathe from the day of delivery. Bathing of the newborns and especially the Low Birth Weight (LBW) babies those have weight less than 2500 grams leads to hypothermia in the newborn. Hypothermia leads to infections. Hence, it is prudent to mention about studies that mention about causes of deaths in newborns out of which infections are a leading cause. This aspect is discussed in the next section. The following paragraphs deals with the mortality figures in children for which infections in newborns is a cause and the basics on Home Based New Born Care (HBNC) program.

The HBNC components have addresses the three needs of the newborns. The three needs are warmth, food, security. The warmth component includes activities like drying and wrapping the child immediately after birth followed by giving Skin to Skin Contact (STSC) by the mothers so that the child gets the warmth of the mother through the skin of the mother. The mother should not have any cloth between the newborn and herself. Both of them should be covered from the top and the child should be kept in frog position between the breasts with the mouth and nose sideways so that the child can respire. Human beings learnt this technique from the Kangaroo where the newborn of the Kangaroo is in the pouch of the mother deriving warmth from the skin of the mother. The

newborn of the Kangaroo breastfeeds within the pouch. Thus, the newborn safely travels the first month of life. The mother is the best warmer for the child which no Radiant warmer can substitute. The next activity is to delay the bathing of the child at least for a week after birth so that the Vernix Caseosa or the natural blanket that the child has on the skin is not removed and hypothermia in the child is prevented. Next component is food which is the Exclusive Breast Feed (EBF) of the child. This demands that other than ORS in case of diarrhoea, Vaccines and prescribed medicines in case of sickness, the child should not be given anything till 6 months of age. Water is also not allowed as the breast milk has enough water for the child. The third component is security where the child should not be left alone in any case for the first month of life. The KMC package includes STSC and EBF activities. As all these activities can be done at home with out any intervention from the health system, the package is called as HBNC package (GoI, INAP, 2014). To ensure that all these activities takes place at home, the outreach worker like ASHA should visit the mother during pregnancy to plan for HBNC and during postnatal stage to ensure implementation of these activities. The following paragraph deals with the reality that occurs if all these activities do not happen during the neonatal stage of life.

The current Neonatal Mortality Rate (NMR) in India is 22 per 1000 live births and the same data hold good for UP as NMR is calculated at the national level. In absolute numbers, it stands out at 549227 (UNIGME, 2019). The causes of these deaths are mentioned in the fig. 1. Prematurity is the leading cause category where the Low Birth Weight (LBW) babies fall and the current article deals in weight of the new-borns. Neonatal infection is the second leading cause and here it is related to poor thermal care. Timely referrals will also help address to reduce other causes like infections and asphyxia for which hypothermia is a contributing factor. It is here that the relevance of the current article comes into focus.

A newborn is a boy or girl in the age group of 0-28 days. The care of the newborn had taken a paradigm shift since the introduction of National Rural Health Mission (NRHM) in 2005 as the focus had moved from only facility-based care to a mix of home based and facility based. In fact, the World Health Organization (WHO) bulletin of 2012 stated that India's Home-Based Newborn Care (HBNC) model launched in 2011 can be touted as a global policy. The foundation stone of these efforts were

Causes of Neonatal deaths in India (Source-UNIGME, 2019)

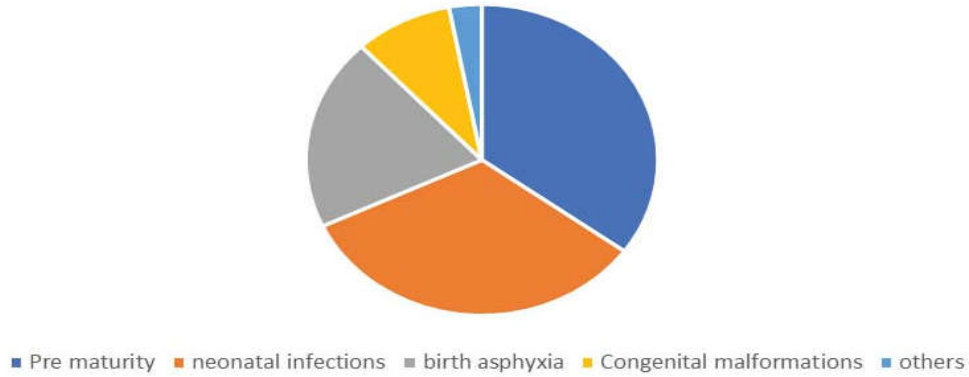


Fig. 1: Causes of Neonatal deaths

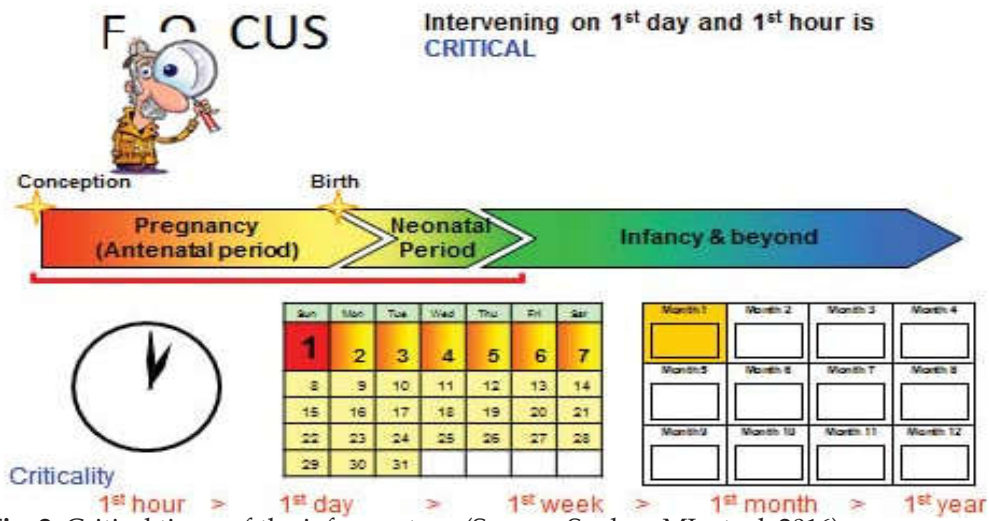


Fig. 2: Critical times of the infancy stage (Source- Sankar, MJ. et. al, 2016)

### Newborn Care (Bathing)

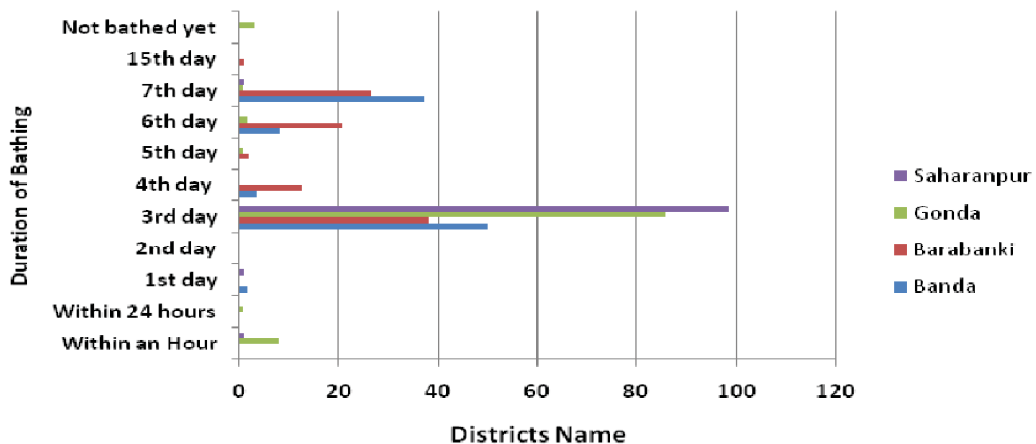


Fig. 3: Bathing of newborns

Thus, it was critical to note that 40% of all still births and neonatal deaths occurred within first 48 hours. About three fourths of the total neonatal deaths occur in the first week of life. 37% of these deaths occur within first 24 hours. It was significant to note that during this period, half of all maternal deaths also took place (Sankar, MJ. et. al, 2016).

Among the HBNC, warmth component was very critical. A newborn baby is homoeothermic. A low birth weight baby has decreased thermal insulation because of reduced amount of brown fat. Newborn loses heat by evaporation (amniotic fluid by surface), conduction (touch with cold object), convection (fan, window) where cold air replaces warm air. The warm and pink feet of the baby indicate thermal comfort. The behaviors like delayed bathing, delayed weighing and kangarooing in case of low birth weight babies contribute to warmth of the baby (NNFI, 2015). It further summarized to address three components which were clean airway, breathing and temperature.

The warmth component is extremely critical for low weight babies because if they are not kept warmth, they would not feed and will not gain weight in early neonatal period. Timely visit by ASHAs are critical to ensure proper care leading to weight gain in these babies. Low weight neonates were more prone to communicable diseases like diabetes, hypertension and heart disease in later life (Blencowe, et. al, 2010).

#### *Bathe and weight of newborns in UP*

The Maternal and Child Health Nutrition report of UP mentions that bathing of newborns after 3rd day of birth was reported in 22% of cases (GoUP, MCHN report, 2006). In another study in UP, thermal care practices are seen in detail where the timing of the newborn's first bath is mentioned in days. Among the respondent mothers, 25.9% responded that their newborn was bathed immediately, 56.8% responded that the first bathe was within six hours of birth while 10.4% responded that the bathe took place 7-23 hours after birth. Similarly, 6.8% mothers responded they bathed their baby on the second day of birth or later. Another related indicator on thermal care reflected that 19.9% of mothers reported that their newborn was dried and wrapped immediately or the first bathe after at least 2 days (Baqui A H et.al, 2007). The report does not mention anything on the weighing of newborns.

The Comprehensive Child Survival Program evaluation report mentions that as per the Eligible Women (EW), 58.4% of them received Kangaroo Mother Care services through the home visits

of ASHAs. Bathing of the newborn is related to thermal care and KMC is also related to thermal care but bathing is not a component of KMC. More than half of all the ASHAs listed out bad customs or practices in the community out of which 67.8% listed the bathing of the child immediately after birth as a bad practice (GoUP, CCSP, 2013). Regarding weighing of the newborn, 67.7% of Eligible Women (EW) reported that their newborn was weighed after birth and 7.8% replied that they can not recall when the newborn was weighed. The report does not talk about the actual weight of the baby but the days after birth on which the newborn was weighed for the first time.

Regarding the days on which the newborn's weight was taken, 92.1% Eligible Women EWs responded that their baby was weighed on the same day of birth, 1.3% told within 3 days, 0.7% told within 7 days and 1.7% replied that their baby was weighed on after 7 days of birth (GoUP, CCSP, 2013).

The Rapid Survey on Children report of UP mentions only about weighing of newborns and not bathing of newborns. It also does not mention the actual weight of the newborns like the current article. The report mentions that 28% of children were weighed within 24 hours of birth and out of those weighed, 22.3% had birth weight less than 2500 grams (RSOC, UP, 2014).

The NFHS 4 report mentions that 74% of home births followed the recommendation that the baby be immediately wiped dry and than wrapped without being bathed first (NFHS 4, 2016). The report does not talk about the days of bathing or the actual weight of the newborns as responded by their mothers. These are the issues that the current article deals with.

Here, it is noted that among the above-mentioned studies, only two studies done in 2006 and 2007 talked about thermal care through the days of bathing while another in 2013 mentions the days of weighing but not bathing. As it is a cultural practice, the current study done in the end of 2017 could bring out this issue to augment that the early bathing practices for newborn still prevail in UP. The current article focuses upon the aspects of bathing and weighing of newborns and the above-said reasoning further substantiates the importance of the current article.

#### **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. In order to include the category of caste and inclusion issue in to the domain of the study, 5 Scheduled Caste (SC) mothers from each district were selected from the existing list of ASHAs. As each district has two selected blocks, three mothers were selected randomly from one block and the

other two from the other block. The existing list of Recently Delivered Women (RDW) available with the ASHAs at the time of the survey was the universe for selecting the respondents. In this way, a total of 20 SC mothers were selected from the study. The criteria for choosing these mothers were that they had a 3 to 6 months old baby at the time of survey to fulfill the inclusion criteria of being an RDW for the current study or article.

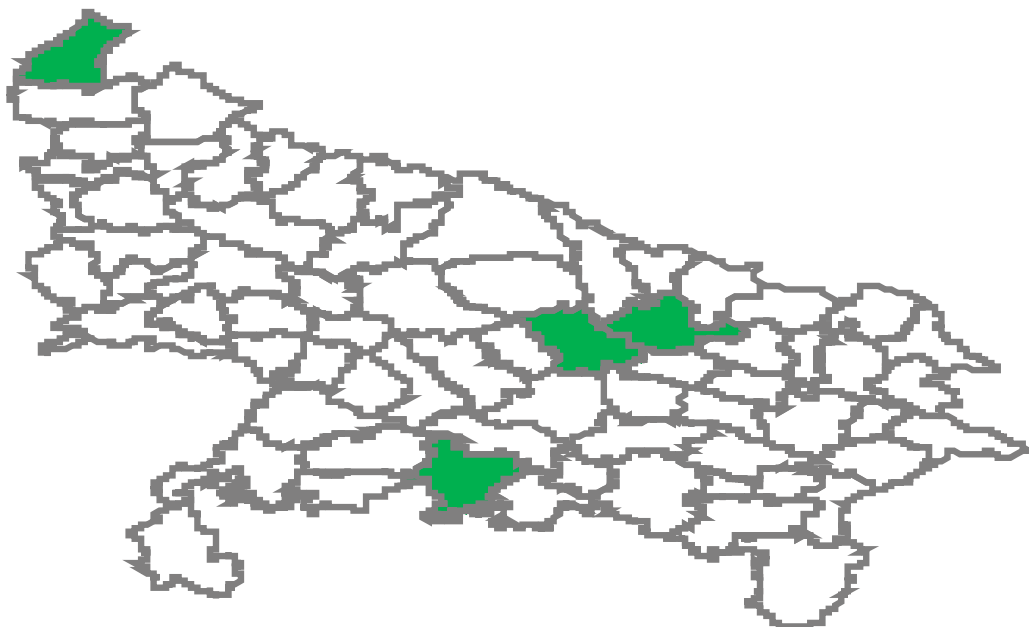
The study had a last stage of the sampling as well. In the last stage, the four program managers looking after the program at the four selected districts and the state level manager were selected as respondents to include the perspective of the personnel of the public health system. In this way, 5 managers were selected in the study and the study also dealt with the responses of these 5 program managers.

The current article deals with the sampling stage till the selection of 500 RDWs from the four districts.

The following figure 4 shows the four districts of UP in the map of the state of UP.

#### *Data analysis*

The data was analyzed using SPSS software to calculate the percentage of RDWs giving responses for each of the indicators on bathing and weighing of newborns. The quantitative data related to the details of all these type of responses for the four districts forms the basis of the results and discussions section of this article. The reference period of these responses was their entire experience with the health system and contacts with the ASHAs since



**Fig. 4:** Selected districts of the study

their last delivery. These mothers were selected as respondents of the current study or article. Five hundred mothers or RDWs (as they are called for the current article) were selected from the four selected districts of UP.

#### *Research tool*

The RDWs were interviewed using a close-ended detailed interview schedule which included five sections. The article deals with the fifth section of the schedule. The response of the mothers was on the detailed description of their actions regarding Home Based New Born Care in their recent delivery. These descriptions included the bathing and weighing aspects of the child health and new-born program guidelines. The responses are based on three questions of the schedule indirectly seeing the role of ASHAs in newborn care programs through the response of the mothers. The first question was the timing of the first bath of newborns in days. The next three questions were regarding the weighing of the newborns, weight of the newborns as per Mother Child Cards followed by the weight of the newborns as responded by their mothers through recall. All these aspects were seen in the context of the RDW's entire experience and contacts with the health system and ASHAs with respect to their recent delivery. The responses included RDWs who had either institutional or home deliveries. Five hundred in-depth interview schedules were used for the study to interview 500 mothers at the four selected districts. The following section details out the results and discussions related to the study.

### **Results and discussions**

There are four tables in this section that mention four different activities regarding HBNC and the tables are in sequence. It starts with the response of the Recently Delivered Women (RDW) about bathing of newborns for the first time after birth. The first table is on thermal care of the newborns. The next three tables are on the weighing of newborns. The responses revolve around whether their newborns were weighed after birth followed by the actual weight of newborns as registered in the mother child cards. The last table is about the recall of mothers on the weight of their new-born. The other three tables deal with identification of high-risk newborns or Low Birth Weight babies.

The table 1 is the bathing of the newborn for the first time after birth. As per the RDWs across the 4 districts, majority of them had bathed the baby on the 3<sup>rd</sup> day after birth. Here, 98% RDWs in

Saharanpur, 86% in Gonda, 50% in Banda and 38% in Barabanki bathed their baby on the 3<sup>rd</sup> day after birth. 8% in Gonda and 1% in Saharanpur even bathed the baby immediately after birth. 1% RDW bathed the baby within a day of the birth. 2% in Banda and 1% in Saharanpur bathed the baby on the first day after birth. No RDW bathed the baby on the second day in the 4 districts. 12% RDWs in Barabanki and 3% in Banda bathed their baby on the 4<sup>th</sup> day after birth. 1% RDW in Gonda and 2% in Barabanki bathed their baby on the 5<sup>th</sup> day after birth. 20% RDWs in Barabanki, 8% in Banda and 2% in Gonda bathed their baby on 6<sup>th</sup> day after birth. 37% in Banda, 27% in Barabanki and 1% each in Gonda and Saharanpur bathed their baby on the 7<sup>th</sup> day after birth. Only 1% in Barabanki bathed her baby on the 15<sup>th</sup> day after birth. 3% RDWs in Gonda replied that they had not bathed the baby yet.

The figure 3 is the graph related to the table 1 and the results.

Table 2 is about weighing of newborns. Regarding weighing of the newborn at birth, only 7% RDWs in Barabanki said that their newborn was not weighed and 2% RDWs in Gonda replied that they did not recall the event of weighing their newborn. Besides these, all other RDWs in the 4 districts replied that their newborn was weighed.

Table 3 reflects about weight of the newborns as per the mother child card. Regarding the weight of the newborn being recorded in the mother child card, the weight of the newborn as mentioned in the card was observed and recorded. 23% of RDWs in Barabanki, 10% in Banda and 6% in Gonda had a low birth weight baby as the recorded weight was 2 kilograms. 89% RDWs in Banda, 74% in Gonda, 69% in Barabanki and 50% in Saharanpur had a normal weight baby as the recorded weight was 3 kilograms. 50% RDWs in Saharanpur, 17% in Gonda, 8% in Barabanki and 2% in Banda had 4 kilograms as the birth weight of their baby. Only 2% RDWs in Gonda did not know about the card or about the weight of their baby.

In order to elicit the importance of weighing the newborn and the related actions thereafter, RDWs were asked to tell the weight of their newborn through recall. All these are mentioned in table 4. Only in Saharanpur the RDWs could recall the weight of their newborns. 85% RDWs could recall that the weight of their newborn was 3 kilograms. Similarly, 12% RDWs could recall that the weight of their newborn was 4 kilograms. The rest 3% RDWs could recall that the weight of their newborn was 2 kilograms. This showed that the ASHAs in Saharanpur discussed the weight of the newborn

**Table 1:** Bathing of Newborns.

**Percentage of RDWs replying on bathing the baby for the first time after birth.**

Names of districts and Number of RDWs surveyed (N=500)	Banda (N=124)	Barabanki (N=124)	Gonda (N=128)	Saharanpur (N=124)
Immediately/ within an hour after birth	0.0	0.0	7.8	0.8
Within 24 hours	0.0	0.0	0.7	0.0
1 <sup>st</sup> day	1.6	0.0	0.0	0.8
2 <sup>nd</sup> day	0.0	0.0	0.0	0.0
3 <sup>rd</sup> day	50	38.1	85.5	98.4
4 <sup>th</sup> day	3.2	12.4	0.0	0.0
5 <sup>th</sup> day	0.0	1.8	0.7	0.0
6 <sup>th</sup> day	8.1	20.4	1.5	0.0
7 <sup>th</sup> day	37.1	26.5	0.7	0.8
15 <sup>th</sup> day	0.0	0.8	0.0	0.0
Not bathed yet	0.0	0.0	3.1	0.0

**Table 2:** Weighing of newborns at birth.

**Percentage of RDWs replying on bathing the baby for the first time after birth.**

Names of districts and Number of RDWs surveyed (N=500)	Banda (N=124)	Barabanki (N=124)	Gonda (N=128)	Saharanpur (N=124)
Newborn was weighed	100	93.5	97.7	100
Newborn was not weighed	0.0	6.5	0.0	0.0
Do not recall	0.0	0.0	2.3	0.0

**Table 3:** Weight of newborns as per the mother child card.

**Percentage of RDWs replying on bathing the baby for the first time after birth.**

Names of districts and Number of RDWs surveyed (N=500)	Banda (N=124)	Barabanki (N=124)	Gonda (N=128)	Saharanpur (N=124)
2 kgs	9.7	23.3	6.2	0.0
3 kgs	88.7	69	74.2	50
4 kgs	1.6	7.7	17.2	50
Did not know	0.0	0.0	2.4	0.0

**Table 4:** Recall of weight of newborns by their mothers.

**Percentage of RDWs replying on bathing the baby for the first time after birth.**

Names of districts and Number of RDWs surveyed (N=500)	Banda (N=124)	Barabanki (N=124)	Gonda (N=128)	Saharanpur (N=124)
2 kgs	0.0	0.0	0.0	3.4
3 kgs	0.0	0.0	0.0	84.7
4 kgs	0.0	0.0	0.0	11.9
Did not know	0.0	0.0	2.4	0.0

with the RDWs but in the other 3 districts it was not discussed and hence none of the RDW was able to recall the weight of their newborn.

## Conclusions

The above results showed that the response of the RDWs is in favor of poor thermal care and not in favor of delayed bathing. The major problem is that culturally people still believe that the substances like Vernix Caseosa is dirty and will spread the infections in newborn. Large scale studies do not focus on this aspect any more as institutional delivery focus has reduced the focus on home deliveries. The opportunities, challenges and the future plans in newborn care programs should focus on thermal care as home deliveries still happen in spite of the scale up of the Janani Surakhya Yojana that promotes institutional deliveries.

The thermal care and weighing component of the programs like newborn and child health would only improve if the ASHAs and AWWs make home visits and follow up on the progress of the newborn within a day of delivery. This strategy would help in more delayed bathing care practices in home deliveries. The weighing process would identify the Low Birth Weight (LBW) babies and make the high-risk newborn referrals of the ASHAs effective and timely there by improving the program progress through the eyes of the community and the public health system.

In India, the Accredited Social Health Activists (ASHAs) are the community health workers that can potentially serve as a means of improving health outcomes for marginalized & vulnerable populations for various primary health conditions & improve referral system for improving utilization of health services (Das S, 2017). The same vehicle of ASHAs can be used for thermal care & bathing.

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## References

1. GOI (2005, 2015). Ministry of Health and Family Welfare; Update on the ASHA Programme, April 2005, January 2015.
2. Government of Uttar Pradesh (2009). Planning Atlas of Uttar Pradesh; Area Planning Division, State Planning Institute, Planning Department.
3. Baqui A H et al., New-born care in rural UP, Indian Journal of Pediatrics, Vol. 74, March 2007.
4. Goup, Report on evaluation of Comprehensive Child Survival Program, Vimarsh, Sifpsa, 2013.
5. Blencowe H, Lee AC, Cousens S et. al., Preterm birth associated neuro developmental impairment estimates at regional and global level for 2010, paediatric research, 2013, 74, suppl 1, 17-34.
6. India Newborn Action Plan, Ministry of Health and Family Welfare, GOI, September, 2014
7. National Neonatology Forum teaching aids, newborn care, 2015. [www.nnfi.org/index.php](http://www.nnfi.org/index.php)
8. National Family Health Survey, NFHS-4, IIPS, Mumbai, GOI, 2015-16.
9. Sankar MJ, et. al., 2016; state of New-born health in India, Journal of Perinatology, 2016; 36; S3-8.
10. Bang Abhay T., Bang Rani A., Reddy Hanimi M.; Home-Based Neonatal Care: Summary and Applications of the field Trial in Rural Gadchiroli, India (1993 to 2003); Journal of Perinatology, 2005; 25:S108-S122, Nature Publishing Group
11. Das S, Cottler L B. Health Care System in India. In: Christian Aspalter KT. Pribadi RG, eds. Health Care Systems in Developing Countries in Asia. 1<sup>st</sup> edition. Routledge, Taylor and Francis Group. New York; 2017:34.