USE OF DISPOSABLE DELIVERY KIT & CORD CARE IN SAFE DELIVERY ACTIONS BY RECENTLY DELIVERED WOMEN IN UTTAR PRADESH, INDIA

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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 grassroots health workers since 2005 when the NRHM was introduced in the Empowered Action Group (EAG) states. UP is one such EAG state. The current study explores the actual activities done by Recently Delivered Women (RDW) on three activities related to safe delivery practices. These are use of Disposable Delivery Kit (DDK), tool used to tie and cut the umbilical cord. 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 safe delivery practices are reflected upon to give a picture that represents the entire state of UP. The relevance of the study assumes significance as detailed data on the modalities of actual actions done by the RDWs separately for use of DDK and the tools regarding cord care for their last delivery to make the delivery safer and not available even in large scale surveys like National Family Health Survey 4 done in 2015-16. The current study gives an insight into these three activities separately. The current study is basically regarding the summary of three actions on safe delivery practices done & replied by RDWs during their peri and post-natal stage. When poor safe delivery practices are done 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 through the emergence of Maternal & Neonatal Tetanus (MNT). 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. The 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 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 the ASHAs in all the four districts were not following up all the deliveries in their catchment area as there was poor use of DDKs by the RDWs. The tool used for cutting the cord was the next action of RDWs. Among the four districts, it was seen that in Gonda district, 1% of RDWs each replied that sickle and scissors were used to cut the umbilical cords of their last born while another 1% did not recall about the event. In the most developed district in the study, it emerged that 12 percentage of RDWs had used boiled thread from home for delivery.

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 (5th 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 (5th 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 (5th 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 safe delivery package likewise of DDK, tools to tie & cut the cord as replied by the RDWs. The details of the tools like DDK and the thread are not mentioned in many studies mentioned below including large-scale surveys like NFHS 4. The current study reflects on these three aspects of safe delivery practices in detail through the profile of actual activities done by the RDWs.

About Maternal and Neonatal Tetanus

The three safe delivery practices mentioned in this article deals with hygienic practices related to cord care thereby preventing Maternal & Neonatal Tetanus (MNT). Therefore, it is evident that a brief description of the efforts towards prevention, control and elimination of MNT: Among the causes of neonatal deaths, 33% of deaths are due to neonatal infections which includes Tetanus (UNICEF, 2017)

Immunization Program was launched India started its immunization program in 1977 through the introduction of Expanded Program on Immunization (EPI) through vaccines like BCG, OPV & DPT. Following that, the Universal Immunization Program was launched in India that included TT vaccines for all pregnant women including the booster doses. Thereafter, Government of India introduced efforts towards elimination of the disease. The effort was named Maternal & Neonatal Tetanus Elimination (MNT-E) programme and India succeeded in 2015 after a period of 37 years that started in 1977 (GOI, 2005).

Elimination of Neonatal Tetanus is defined as an incidence of less than one case of NT per 1000 Live Births (LB) in every district or similar administrative unit across the nation in a year (WHO, 2015). The three activities on safe delivery practices in this article is a triad strategy to eliminate Tetanus. In a study on MNT, the various strategies mentioned for successful elimination are increased coverage of maternal tetanus immunization, use of delivery kit for safe umbilical cord practices & local dais for safe delivery practices (Cousins S, 2015). Currently, any personnel conducting deliveries are called as Skilled Birth Attendants (SBA) (GOUP, PIP, NHM, 19-20).

Activities by RDWs with respect to safe delivery practices in UP

The current study done in 2017 is unique in the sense that it examines the three activities of RDWs and their families in the catchment area of ASHAs regarding safe delivery practices. The study delves into the actions like use of DDK, tool to cut & tie the cord regarding cord care. The Maternal Child Health & Nutrition (MCHN) report of UP mentions that 63% of mothers received two Tetanus Toxoid injections during their index pregnancy (NIHFW, MCH report, 2006). There is no mention of the three activities mentioned in this article.

The report of NFHS 4 of UP mentions that 98% of all the home deliveries had used a clean blade to cut the umbilical cord. About 33% of these home deliveries had used a DDK as part of safe delivery practices (NFHS 4, 2015-16).

The actions of the RDWs & their family members are influenced by the visit of ASHAs to their homes as mentioned in this article. Hence it is prudent to include the findings of an evaluation report of ASHAs of UP. An evaluation on the performance of ASHAs done by NRHM mentions that 94.8% of ASHAs replied that they provided clean items for birth plan in advance as a support service (GOUP, 2013).

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.
RESULTS AND DISCUSSIONS

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 use of DDK, tool to tie cord & tool to cut the cord of the newborn in relation to the recent delivery of the respondents. The quantitative data related to these three activities were seen as per the actions done by the RDWs. All these actions form the basis of the ensuing results and discussion section given below.

Research tool

The RDWs were interviewed using an in-depth, open-ended interview schedule which had five sections that 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 their recent delivery. The first activity is about RDWs reply about the use of DDK. The second and third activities are regarding actions like the tool used to tie the cord and the other tool used to cut the cord. 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 the use of DDK in their recent delivery. The second and third tables are regarding actions like use of the tool to tie the cord & the other tool to cut the cord.

Table 1

<table>
<thead>
<tr>
<th>Names of districts &amp; Number of RDWs surveyed (n=500)</th>
<th>Banda (n=124)</th>
<th>Barabanki (n=124)</th>
<th>Gonda (n=128)</th>
<th>Saharanpur (n=124)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDK used during delivery</td>
<td>96.7</td>
<td>86.2</td>
<td>74.2</td>
<td>80.6</td>
</tr>
<tr>
<td>DDK not used during delivery</td>
<td>3.3</td>
<td>13.8</td>
<td>25.8</td>
<td>19.4</td>
</tr>
</tbody>
</table>

About 26% RDWs in Gonda replied that DDK was not used in their last delivery. The figure for this practice was 20% in Saharanpur, 14% in Barabanki and 3% in Gonda. This showed that these deliveries were high risk deliveries. This depicted that the ASHAs were not following up all the deliveries in their catchment area.

Table 2

<table>
<thead>
<tr>
<th>Names of districts &amp; Number of RDWs surveyed (n=500)</th>
<th>Banda (n=124)</th>
<th>Barabanki (n=124)</th>
<th>Gonda (n=128)</th>
<th>Saharanpur (n=124)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New blade from home</td>
<td>17.7</td>
<td>20.2</td>
<td>20.3</td>
<td>28.2</td>
</tr>
<tr>
<td>Blade from DDK</td>
<td>82.3</td>
<td>79</td>
<td>77.3</td>
<td>71.8</td>
</tr>
<tr>
<td>Scissors</td>
<td>0.0</td>
<td>0.8</td>
<td>0.78</td>
<td>0.0</td>
</tr>
<tr>
<td>Do not remember</td>
<td>0.0</td>
<td>0.0</td>
<td>0.78</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The tool used for cutting the cord was the next part of this table. In Gonda, 1% of RDWs each replied that sickle and scissors were used to cut the umbilical cords of their last born while another 1% did not recall about the event. As mentioned above in the discussion on ASHAs, 11% of ASHAs in Gonda had replied that sickle was to be used to cut the cord. 28% of RDWs in Saharanpur, 20% each in Gonda and Barabanki and 18% in Banda replied that a new blade from home was used to cut the cord. Most of the RDWs in the 4 districts replied that blade from DDK was used to cut the cord. 82% of RDWs in Banda, 79% in Barabanki, 77% in Gonda and 72% in Saharanpur said that blade from DDK was used to cut the cord. It clearly showed that cord care was the poorest in Gonda implying that ASHAs were not following up on all the deliveries at home.

Table 3

<table>
<thead>
<tr>
<th>Names of districts &amp; Number of RDWs surveyed (n=500)</th>
<th>Banda (n=124)</th>
<th>Barabanki (n=124)</th>
<th>Gonda (n=128)</th>
<th>Saharanpur (n=124)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread from DDK</td>
<td>99.2</td>
<td>97.6</td>
<td>84.4</td>
<td>79</td>
</tr>
<tr>
<td>Boiled thread from DDK</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
<td>12.1</td>
</tr>
<tr>
<td>Do not remember</td>
<td>0.0</td>
<td>0.0</td>
<td>3.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Thread from home</td>
<td>0.8</td>
<td>1.6</td>
<td>12.5</td>
<td>8.9</td>
</tr>
</tbody>
</table>

In Gonda, 3% RDWs did not remember about the thread used to cut the cord while 12% RDWs in Saharanpur and 1% RDW in Barabanki replied that boiled thread from home was used to cut the cord. In all the RDWs, in Barabanki 98% of RDWs, In Gonda 84% RDWs and in Saharanpur 79% RDWs told that thread from DDK was used to cut the cord.

In the most developed district, 12 percentage of RDWs had used boiled thread from home for delivery.

CONCLUSIONS

The above results showed that even after India declaring itself MNT free in 2015, the study done after two years in 2017 found use of scissors & sickles as tools to cut the cord. This indicates high risk practices for Tetanus infections although the said cases luckily did not have the infections. This implies
that use of DDK has to be scaled up in all home deliveries. The act of boiling the thread before use has to be scaled up in all home deliveries. It is to be noted that because of cultural reasons, home deliveries will stay even after full emphasis on scaling up of JSY or Maternal Protection Scheme to increase institutional deliveries. The three activities were seen in relation to the recent delivery of the respondents. The dissemination process for these actions are very critical for home deliveries where the skilled personnel rubs it out against the socio-cultural practices that act as barriers.

The triad of activities on safe delivery practices as replied by RDWs should represent the gamete of MCH & these should be planned & done for each pregnancy. This will help the RDWs& their family members to address the three activities related to safe delivery practices (DDK, tool to tie umbilical cord, tool to cut cord)thereby reducing neonatal & infant mortality (GOUP, PIP, NHM, 19-20). Data should be collected in large scale surveys on all the three parameters of safe delivery of RDWs exclusively. All these efforts can significantly reduce the cultural obstacles& help improve maternal, neonatal, infant health& child health. As a result, reduction in NMR& IMR in UP & India will follow eventually as a process.

References

4. GOI; Ministry of Health and Family Welfare; 2015; Update on the ASHA Programme, January 2015

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