

## ASHA's Involvement in Newborn Care: A Feasibility Study

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We assessed the feasibility of involvement of Accredited Social Health Activist (ASHA) in newborn care. All the ASHAs ( $n = 33$ ) of PHC Dayalpur, Faridabad district of Haryana were trained for one day which was followed by two refresher trainings. The mean (SD) knowledge score (out of 11) of ASHAs were 6.45 (2.44), 6.50 (2.01), 7.45 (1.36) and 7.15 (1.27) at pre-training, immediately after training, and after three and six months, respectively. Four fifth (83%) of the newborns born at home were weighed within 3 days of birth. About half (44%) of ASHAs weighed the neonates within  $\pm 250$  grams of the weight recorded by the author. We conclude that ASHAs could be involved in providing care for newborn. However, such efforts should ensure a stronger focus on skill development and practical experience.

**Key words:** Accredited Social Health Activist (ASHA), Newborn Care, Feasibility study, India.

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Every year in India over one million newborns die before they complete their first month of life, accounting for 30% of the world's neonatal deaths [1]. Prematurity, sepsis and birth asphyxia contribute to 85% of neonatal mortality [2]. In India, only 40.7% deliveries were institutional and only 36.3% mothers received postnatal care within 2 days of delivery [3]. Till the above programmatic bottlenecks are removed, it would be difficult to prevent neonatal deaths. One of the ways to address these issues under National Rural Health Mission (NRHM) could be by utilizing Accredited Social Health Activists (ASHAs) for providing newborn care. They are already being used to promote institutional delivery under Janani Suraksha Yojana (JSY). Under the guidelines of NRHM, it is mentioned that states could explore the possibility of involvement of ASHAs in providing care for newborn through graded training [4]. This study was done as a pilot study to assess the feasibility of involvement of ASHAs in newborn care after training.

### METHODS

The study area was Primary Health Center (PHC) Dayalpur which is under the Comprehensive Rural Health Services Project (CRHSP) of Centre for Community Medicine (CCM), All India Institute of Medical Sciences (AIIMS) located in the Ballabgarh block in Faridabad district of Haryana.

The study design was Interventional (pre and post training comparison) and conducted from December 2008 to June 2009. Informed oral consent was taken from all ASHAs. All the ASHAs ( $n = 33$ ) of Primary Health Centre Dayalpur were trained in providing newborn care by community physicians at Civil Hospital, Ballabgarh. This was followed by two refresher training at three months interval and supportive supervision. Twenty eight ASHAs had studied upto eighth standard, four were 10th standard pass and only one was 12th standard pass. They had undergone two rounds of induction training for five days each under the routine program.

The components included under newborn care

were weighing of the newborn, identification and referral of low birth weight babies and sick neonates, and counseling of mothers on neonatal issues like breastfeeding, warmth, cord care etc. The training by medical officers included both didactic and demonstration session. The training manual consisted of chapters which corresponded to different components of neonatal care listed above as well as antenatal care, intranatal care, and recording and reporting. All the ASHAs were provided a book and a spring balance weighing scale at the end of the training.

The outcome variables assessed were related to knowledge assessment, performance assessment and skill assessment. ASHA's knowledge related to all the components of newborn care was assessed using a questionnaire which consisted of 11 multiple choices questions. They were assessed before training and immediately after the training, after 3 months and after 6 months. The mean knowledge score was calculated.

ASHA's performance was assessed for 6 months. The performance indicators were related to different activities they were expected to perform and are listed in **Table I**. Monthly reports were submitted by ASHA through health workers, who cross-checked the reports.

ASHAs' skill of weighing the neonates was assessed using a checklist with 8 items. The precision of each ASHA's measurement of neonate weight was compared to that of the author (SP) using the same weighing scale.

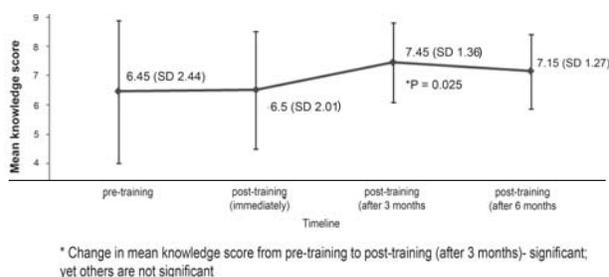
All the data were entered in MS Excel 2007 and analysis done using Stata 9. Repeated measures ANOVA test was used to detect any significant change in mean knowledge score from baseline and was considered significant at  $P < 0.05$ .

**RESULTS**

Out of 33 ASHAs, thirty one attended the training, and 30 attended the pre-training assessment. Post training assessment immediately after training was attended by 29 ASHAs. At the end of 3 and 6 months, 24 and 25 ASHAs attended the assessment, respectively. At the end of 6 months, 25 ASHA's skill of weighing the neonates was assessed (**Fig.1**). Ony

20 ASHAs attended all the assessments. Out of 219 hospital deliveries, 124 (56.6%) were escorted by ASHAs. Out of 112 newborns born at home during the six months period, 93 (83%) were weighed within 3 days of birth (**Table I**). ASHAs identified and referred six low birth weight babies and 16 sick neonates over a period of six months.

All the 8 steps of measuring the infant's weight were done correctly by almost all ASHAs except for the fourth step which was a critical step of ensuring no zero error (**Table II**). Eleven ASHAs weighed the newborns within  $\pm 250$  grams of the weight recorded by the author.



**Fig.1** Mean knowledge scores of twenty ASHAs who attended all assessments before and after training.

**TABLE I** PERFORMANCE OF ASHAs FOR NEONATAL CARE IN 6 MONTHS PERIOD AFTER TRAINING

Indicators	Frequency
Mother counseled	
Breast feeding	330
Weaning	339
Hospital delivery (n=219)	
Escorted	124
Home delivery (n=112)	
Newborn weighed on 1 <sup>st</sup> d	54
Newborn weighed 2 <sup>nd</sup> – 3 <sup>rd</sup> d	39
<i>Performance</i>	
Sick Neonates	
Identified	22
Referred	16
Escorted	3
Follow up after 2 days	14
Birth wt <2 kg	
Identified	10
Referred	6
Escorted	2
Follow up after 2 d	6

**WHAT THIS STUDY ADDS?**

- ASHAs could be involved in providing some components of neonatal care like taking birth weight and advising about neonatal health at the domiciliary level.

**DISCUSSION**

Our study showed that the knowledge did not increase immediately after training. This could be because pre-training knowledge of ASHAs was high. This could be attributed to the induction trainings under routine program and working experience for more than 2 years. In addition, this could be due to shorter duration of training. Three months after training, there was significant increase in the knowledge of ASHAs. This could be attributed to learning by doing and indicates the need for practical training for ASHAs.

We did not attempt to validate the performance of the ASHAs. The validity of identification of sick neonates by community health worker was demonstrated in Bangladesh and showed a sensitivity of 73% and a specificity of 98%, against physician diagnosis [5]. In contrast to our study, they received training for 36 days, which is not replicable as per NRHM guidelines.

The limitations of the study were not validating the ASHA's performance and lack of denominators

on low birth weight babies and sick neonates. So we could not measure the efficacy of ASHA's performance. However, in our study, the proportion of birth weight < 2000 g was 10.7%. The denominator was only 93 home delivered newborns weighed by ASHAs. This is comparable with 22% of low birth weight babies (<2500 g) where only 34% of newborns were weighed [6]. No incentives were provided to ASHAs during this exercise and it is to be expected that the performance will improve if these are linked to explicit incentives as is being done for their other activities. In conclusion, ASHAs could be involved in providing care for newborn. However such efforts should ensure a stronger focus on skill development and practical experience. This also calls for a stronger monitoring and supervision of their activities by the health system.

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**TABLE II** PERFORMANCE OF ASHAs IN CORRECTLY FOLLOWING EIGHT STEPS OF WEIGHING THE NEWBORN DURING SIX MONTHS AFTER TRAINING

Steps	n (%)
Remove the extra clothes	15 (60)
Spread the baby carrier in a surface	25 (100)
Make the baby lie down on the baby carrier	25 (100)
Ensure the pointer is in zero position, if not then do it	4 (16)
Height of the machine should be at the level of observer's eyes	24 (96)
Fix the baby carrier with the baby to the hook of the weighing machine	25 (100)
While reading the weight, nobody should touch the baby	23 (92)
When the baby is quiet and the pointer is stable, note the weight	25 (100)

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