South East Asia Journal of Public Health
ISSN: 2220-9476

Utilization of ASHA services under NRHM in relation to maternal health in rural Lucknow, India

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Abstract

To address poor utilization of maternal and child health services by the rural community, the National Rural Health Mission (NRHM) was launched in 2005 in India. Under NRHM, ASHA (Accredited Social Health Activist) was identified as an effective link between the government and poor pregnant women. The aim of the present study was to examine the utilization of ASHA services under NRHM in relation to maternal health by the Recently Delivered Women (RDW) in the study area. A cross-sectional study was conducted at PHC Sarojini Nagar, Lucknow and its rural field areas. A sample of 350 RDW, chosen by simple random sampling, were interviewed at bedside by a preformed schedule and then were followed up after six weeks. Antenatal registration was reported by 97% RDW of which 73% registered early. About 53% RDW had three or more antenatal care visits. Two dose Tetanus Toxoid coverage was 92.9%. Receipt and consumption of iron and folic acid was low. ASHA was the major facilitator for higher utilization of antenatal care services, except for Iron and Folic Acid receipt/consumption. Low utilization of postnatal care (21.5% RDW had at least one postnatal check-up) is a matter of concern. Knowledge and awareness of ASHA on importance of postnatal care needs to be enhanced via hands on training by specialists and regular orientation programs. Better and intense advocacy in the community regarding importance of availing services of ASHA in relation to maternal health needs to be addressed.

Keywords: Maternal health, ASHA, NRHM, Antenatal care, Postnatal care.

Introduction

A 3/4th reduction in maternal mortality rate (MMR) and to increase the proportion of births attended by skilled health personnel by 2015 is one of the United Nations' Millennium Development Goals.[1] The number of women dying as a result of complications during pregnancy and childbirth has decreased by 34% from 546,000 in 1990 to 358,000 in 2008.[1] However, the annual rate of decline of 2.3% is less than half of the 5.5% needed to achieve the target of reducing MMR by three quarters between 1990 and 2015.[2] Developing countries account for 99% (355,000) of the deaths, with Sub-Saharan Africa and South Asia accounting for 87% (313,000) of global maternal deaths. Global MMR is currently estimated to be 260 per 100,000 live births.[3] The maternal mortality ratio of India has declined from 254 in 2004-2006 to 212 in 2007-2009.[4] Uttar Pradesh still continues to have a high MMR of 359.[4] The national target as per the National Population Policy (2000) is to attain a MMR of 100 per 100,000 live births, 100% antenatal care (ANC) registration, 80% institutional deliveries, and 100% deliveries by trained person by 2010.[5] Quality antenatal, natal and postnatal care is the key to reduction of majority of maternal deaths and pregnancy complications. Globally about 80% of pregnant women received antenatal care at least once between 2000-2010, but only 53% received the

Practice points

- In developing countries, 99% of deaths of women are due to complications of pregnancy and childbirth.
- Under NRHM, ASHA has been assigned the duty to identify beneficiaries and facilitate receipt of antenatal, natal and postnatal care.
- The present study revealed that ASHA was the major facilitator for higher utilization of antenatal care (except IFA consumption/receipt) and natal care.
- However, utilization of postnatal care was found to be very low and is a matter of concern.
- Hands on training by specialists and regular orientation programs to enhance knowledge and awareness of ASHA on the importance of postnatal care needs to be implemented.

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South East Asia Journal of Public Health 2012;2(1):24-27.

WHO recommended minimum of four antenatal visits.[2] Current utilization of any antenatal care services in India is only 77% (72 % in rural areas). [6] The utilization of maternal and child health services (MCH) by the rural community has not been reached as desired. National Rural Health Mission (NRHM) was launched on 12th April 2005 in India, with a goal to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children.[7] Under NRHM, Accredited Social Health Activist (ASHA) has been identified as an effective link between the government and the poor pregnant women. ASHA has been assigned the duty to identify beneficiaries and facilitate early registration, receipt of at least 3 ANC visits, motivate for institutional delivery, identify health centre for referral/delivery, to escort and stay with till discharge.[8] The present study was conducted to examine the utilization of ASHA services in relation to maternal health in rural Lucknow, India.

Methodology

A cross-sectional study was conducted at Sarojininagar block PHC of Lucknow district from 31st August 2007 to 30th August 2008. The study unit consisted of RDW (Recently Delivered Women) at PHC Sarojininagar with a live newborn, belonging to villages within the confines of the PHC being served by ASHA. The study tool was a predesigned schedule, prepared at the Department of Community Medicine, Chattrapati Sahuji Maharaj Medical University, Lucknow in consultation with guides/faculty members after review of relevant literature. It was initially tested on 10% of sample size and deficiencies found were corrected before proceeding for the study.

The study was done in two stages. In the first stage, RDW were interviewed at their bedside about ANC received for the currently terminated pregnancy and about who facilitated them in availing the antenatal and natal services. In the second stage, RDW were followed up after six weeks of delivery to assess the postnatal care received after discharge and to identify the facilitator. 'Others' in the study means health care personnel as facilitator other than ASHA.

As per a previous study assisted by Department of Community Medicine, King George Medical University, utilization of any ANC was found to be 68.5% for rural Lucknow.[9] A sample size of 350 RDW was calculated assuming a minimum of any antenatal care service utilization of 68% and using the formula $4pq/d^2$.[10] Simple random sampling technique using lottery method was used to include RDW in the study sample.

A few deliveries were taking place at home, but their numbers were very low since the launch of Janani Surakshana Yojana (JSY).[8] Hence only institutional deliveries were selected for the study.

Results

Table 1 shows that out of 350 RDW studied, 341 (97%) RDW reported antenatal registration. Nine of the RDW were not sure about their registration. Early registration was reported by 73.1% of RDW. Majority of antenatal registration 310 (90.9%) and early registration (73.2%) were facilitated by ASHA.

Table 2 summarizes the receipt of different components of ANC and facilitator for the same. It was observed that about half of the RDW (52.6%) had three or more ANC visits. Amongst RDW facilitated by ASHA, 54.2% had three or more ANC visits compared to 40% amongst RDW facilitated by others. Overall only 27 (7.7%) of RDW didn't have any ANC visits. Only 6.4% of the RDW who came in contact with ASHA had no ANC visit compared to 17.5% who came in contact with others. Overall coverage for two TT injections was 92.8%. Amongst RDW who had contact with ASHA, 1.6% didn't receive any TT injection compared to 12.5% who had contact with others. Receipt as well as consumption of 100 Iron & Folic Acid (IFA) tablets was poor. Only 14.6% of the RDW received 100 IFA, whereas only 11% consumed the desired 100 IFA. Amongst RDW facilitated by ASHA, 12.9% received 100 IFA, compared to 27.5% of RDW facilitated by others. A statistically significant difference ($p<0.05$) was observed in facilitation for TT vaccination, ANC visits and receipt of IFA between ASHA and others.

Table 3 shows that only about one fifth (21.5%) of RDW had at least one postnatal check-up after delivery. Out of the total 344 RDW, only 32.3% were counseled by ASHA for postnatal check-up, of which less than half (46.8%) went for postnatal check-up. A statistically significant difference ($p<0.05$) for postnatal check-up was found between facilitation by ASHA and others.

Discussion

In the present study, 97.4 % of the RDW had registered for the current pregnancy and about three fourth i.e. 73 % had registered early within 16 weeks. However, as per a previous study early registration was not a common

Table 1: ANC registration and facilitator

Antenatal registration	ASHA	Others	Total	^{2}, *p*-value
Early (16 Wk)	227 (73.2 %)	22 (71 %)	249 (73.1 %)	0.07,
Late	83 (26.8 %)	9 (29 %)	92 (26.9 %)	0.78
Total	310 (100%)	31 (100 %)	341 (100 %)	

Table 2: ANC services and facilitator

ANC Services	ASHA (n=310)	Others (n=40)	Total (n=350)	^{2}, *p*-value
Antenatal care visitsg				
Three	168 (54.2 %)	16 (40.0 %)	184 (52.6 %)	10.33, 0.01
Two	106 (34.2 %)	12 (30.0 %)	118 (33.7 %)	
One	16 (5.2 %)	5 (12.5 %)	21 (6.0 %)	
None	20 (6.4 %)	7 (17.5 %)	27 (7.7 %)	
Tetanus toxoid injection received				
Two	296 (95.5 %)	29 (72.5 %)	325 (92.8 %)	28.81, 0.00
One	9 (2.9 %)	6 (15.0 %)	15 (4.3 %)	
None	5 (1.6 %)	5 (12.5 %)	10 (2.9 %)	
Iron and folic acid tablets received				
100	40 (12.9 %)	11 (27.5 %)	51 (14.6 %)	34.07, 0.00
50	20 (6.5 %)	12 (30.0 %)	32 (9.1 %)	
< 50	60 (19.4 %)	6 (15.0 %)	66 (18.9 %)	
Nil	190 (61.3 %)	11 (27.5 %)	201 (57.4 %)	
Iron and folic acid tablets consumed				
100	33 (10.6 %)	6 (15.0 %)	39 (11.1 %)	5.37, 0.146
50	20 (6.5 %)	5 (12.5 %)	25 (7.1 %)	
< 50	50 (16.1 %)	2 (5.0 %)	52 (21.4 %)	
Nil	207 (66.8 %)	27 (67.5 %)	234 (60.3 %)	

Table 3: Facilitator for postnatal check-up

Postnatal check-up	Facilitator			Total (n=344)	^{2}, *p*-value
	ASHA	Other	None		
Yes	52 (46.8 %)	1 (100 %)	21 (9.1%)	74 (21.5 %)	67.18, 0.00
No	59 (53.2 %)	0 (0.0 %)	211 (90.9 %)	270 (78.5 %)	
Total	111(100 %)	1 (100 %)	232 (100 %)	344 (100 %)	

practice, with state average being only 20.7%.[9] The National Family Health Survey-3 (NFHS-3), India (2007) reported that 44% RDW had ANC during the first trimester of pregnancy.[6] A recent study in Nigeria identified the reasons for late initiation of ANC and found that more than three-fifth of the women (65.6%) booked late due to ignorance or misconceptions of the purpose of, and right time to commence ANC.[11] High antenatal registration as well as early registration in the present study could be attributed to ASHA, who facilitated majority of antenatal registration (91%) and early registration (73%).

The present study identified that 52% RDW had three or more ANC visits and 92% of RDW received any antenatal visit for their recently terminated pregnancy. The District Level Household and Facility Survey-3 (DLHS-3), UP, India found 41% of pregnant women had three or more ANC visits and 84.8% had any antenatal check-up in Lucknow district.[12] NFHS-3, UP had reported utilization of any ANC services in rural area for the most recent birth as 64%.[6] A previous study also showed any ANC visit for rural Lucknow was 68.5%.[9] The high receipt of ANC, in the present study reflect facilitation and constant motivation by ASHA. A formative study by Varma *et al*.[13] had found that 83% of interviewed ASHAs (n=289) perceived achieving incentivized components like institutional delivery, three ANC check-ups and immunization as their main role.

Overall coverage of 2 doses of TT in current study was in line with observations of other studies. In the present study, 93% pregnant women received 2 TT injections. A previous study had also reported receipt of at least one TT injection by 84% of pregnant women in Lucknow district and 62.5 % at state level.[12] As per Baseline facts-UP, 2007 also coverage of TT injection for rural Lucknow was also high (80.5 %).[9]

In the present study, 14.6% RDW received 100 IFA. The findings are in agreement with that of DLHS-3, UP, India that found receipt of 100 IFA tablet in Lucknow district being 28.4%.[12] The lower receipt of 100 IFA in the present study was mostly due to unavailability of IFA with ASHA, Anganwadi Worker (AWW) and Auxiliary Nurse Midwives (ANM) during the study period. In the present study only 11% RDW consumed 100 IFA. Similar figures were reported by NFHS-3, U.P (2007) with about 7% of women from rural areas having consumed IFA for at least 90 days.[6] The findings are also in accordance with DLHS-3, UP that reported consumption of IFA tablets for at least three month by 5.6% of pregnant women in UP.[12] The lower consumption of 100 IFA in the present study could also be as a consequence of poor distribution of IFA.

In the present study, about one fifth i.e. 21.5 % of RDW had at least one postnatal check-up after delivery. A previous study also reported that postnatal check-up was not a common practice and was even lower at government health facilities.[9] DLHS-3 (2007-08) data for rural UP showed that 34% of currently married women aged 15-24 year received a postnatal check-up within two weeks of delivery.[12] A study by Varma *et al*.[13] also found that of the total women interviewed, 84% did not receive a postnatal check-up, irrespective of place of delivery. An analysis of women's responses on advice given by ASHAs revealed that ASHAs concentrate primarily on issues for which they receive performance-linked payments.[13] Reason for low postnatal check-up in the present study was that majority of RDW who did not have postnatal complications did not feel it to be necessary. Working women belonging to low socioeconomic class did not go for postnatal check-up for fear of losing their daily earning. Most importantly ASHA did not feel it necessary to advise healthy RDW to go for postnatal check-up and only one-third of RDW who had contact with ASHA were counseled for postnatal check-up.

Conclusion

In the present study, ASHA was found to be the major facilitator for receipt of ANC services like early registration, three or more ANC visits, two TT injections and natal care by RDW. A statistically significant difference was found between ASHA and 'Others' for facilitation of ANC visits, TT vaccination and receipt of IFA. ASHA was also the major motivator for adequate nutrition and adequate rest. The present study revealed that postnatal check-up was not a common practice in rural Lucknow. Knowledge and awareness of ASHA on importance of postnatal care needs to be enhanced via hands on technical training by specialists and regular orientation programs. Better and intense advocacy in the community to create awareness about importance of routine postnatal care needs to be addressed.

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