RESEARCH ARTICLE

IMPACT OF MONITORING AND SUPPORTIVE SUPERVISION ON PERFORMANCE OF IMNCI TRAINED ASHAS IN BARAN DISTRICT OF RAJASTHAN, INDIA

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ARTICLE INFO	ABSTRACT
	IMNCI is a key evidence based strategy for reducing neonatal and infant mortality through systematic approach. The focus is on overall well being of the child. The aim of IMNCI is to train, and provide preventative and home-based care through, India's network of frontline health workers and supervisors. ASHA occupies a major position and perform as important element in health system networking. Supportive supervision and timely monitoring of any program is of utmost importance to make the program a success. **Objective:** To assess the impact of monitoring and supportive supervision on performance of IMNCI trained ASHA. **Method:** The present study is a longitudinal study of Baran district of Rajasthan, India. A total number of 382 IMNCI trained ASHAs selected by random sampling technique. An interview schedule was used for collection of data regarding the skills of ASHA, the health worker for her skills on IMNCI protocol with respect to skill in identifying the sick child, grade him, and refer him/her if required and on recording and reporting of the program. Data analysis was done using SPSS 16.0. **Results:** The improvement in the overall IMNCI skills from visit first to third visit was highly significant statistically. **Conclusion:** Close monitoring, supportive supervision and re-strengthening of the program had a positive impact on the overall performance of ASHAs.

INTRODUCTION

IMNCI is an integrated approach to child health that focuses on the wellbeing of the whole child. IMNCI aims to reduce death, illness and disability, and to promote improved growth and development among children under five years of age (Millennium Developmental Goals – India Report, 2011). The critical intervention strategy under IMNCI is home visits in the early postnatal period to ensure that preventative and curative care is provided in order to prevent infant deaths (Ministry of Health and Family Welfare, 2005e). IMNCI is evidence based systematic approach for management of 0-2 months and 2 months – 5 years age group children (Ingle and Malhotra, 2007 and Ministry of Health and Family Welfare, 2003). In India, Ministry of Health and Family Welfare approved the implementation of IMNCI and by 2009. IMNCI was implemented in 18 out of 25 districts of Gujarat state (Indian Pediatrics, 2006). WHO defines supportive supervision as "a process that promotes quality at all levels of the health system

by strengthening relationships within the system," achieved by "working with health staff to establish goals, monitor and correct problems, and proactively improve the quality of service" (PATH Guidelines, 2003). The aim of IMNCI is to train, and provide preventative and home-based care through, India's network of frontline health workers and supervisors, such as the MO, ANM, LHV, and LS at the SC and PHC levels, and through ASHA and AWW at the village and household levels. ASHA occupies a major position and perform as important element in health system networking. She plays important role in controlling the infant mortality rate and increasing awareness about newborn care since she is the one who is constantly in touch with community just like roots in soil. ASHA is a health activist in the community who creates awareness of health and its social determinants. She provides information to the community on determinants of health such as nutrition, basic sanitation and hygienic practices, healthy living and working conditions. She counsels women on birth preparedness, importance of safe delivery, breast feeding and complementary feeding, immunization, contraception and care of the young child. ASHA provide

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primary medical care for minor ailments such as diarrhea, fevers, and first aid for minor injuries. She informs about the births and deaths in her village and any unusual health problems/disease outbreaks in the community to the Sub-centres/Primary Health Centre (ASHA Guidelines, National Rural Health Mission, 2012).   Under IMNCI she is required to visit Infants (0-2 months) and Young child (2 months-5 years). ASHA is trained to use Charts booklets especially designed for IMNCI which aid in identifying, classifying and in recommending appropriate treatment. Red, yellow and green colours indicate the seriousness of illness and subsequent intervention. ASHA does the assessment of the young infant/child. She is trained to classify the illness, identify treatment, treat the infant/child, counsel the mother and give follow-up care. This becomes very difficult for ASHA to remember and work as per IMNCI training in absence of timely supervision. Under IMNCI, there is even greater ambiguity in the clarity and designation of the supervisory responsibilities over ASHA, as only a small number of supervisors have received the corresponding supervisor training, leading to inconsistent supervision of ASHA. Furthermore, as IMNCI is a skills-based approach, the successful implementation of this program also requires a certain level of supportive supervision, such as on-the-job training and supervision. "Existing supervisors of the front line workers [need] to be equally skilled in IMNCI and (need to) be mobile to perform field visits for supervision for most part of the week" (Abel et al, 2009). Therefore the present study was undertaken to evaluate the skills of ASHA (accredited social health activist) trained under the IMNCI Program to establish skill reinforcement and acknowledge the change in their performance.

MATERIALS AND METHODS

This is a longitudinal study conducted in four blocks of Baran district in Rajasthan namely Anta, Atru, Chipabarod and Kishanganj over a period of two years. Intensive IMNCI Training for 8 days was given to the team of five Supervisors. The role of these supervisors was to provide supportive supervision to the IMNCI trained ASHA Sahyoginis (n= 382) and assessed them using an interview schedule. The block supervisors regularly visited anganwadi centers and PHC's and supervised ASHA in improving their skills using IMNCI Training module in sector meetings as well as individually. ASHA Sahyoginis were revisited so as to assess improvement in her abilities after she had been corrected and supported in the weaker aspects of her work. They were assigned A, B$^+$, B and C grades on the basis of their efficiencies in the field. A score was given on scoring 80 -100 points in the given components, B+ on scoring 60 – 80 points, B – 40 -60 points and C on getting a score below 40 points. The performance was assessed at an interval of three months. Components used to grade ASHA were

(1) IMNCI skill assessment of ASHA: The grading of ASHAs was based on Assessment of skills regarding-identification, classification of sick children and its treatment as per IMNCI training module; they were also evaluated on the basis of referrals made for very sick children. A score of

maximum 20 was given for the 0- 2month age group and similarly for 2 months to 5 year old.

(2) IMNCI record and report assessment of ASHA: This part included proper and correct filling up of forms, completing and maintaining their records, regular visits to babies born and regularity in reporting to concerned authorities. Similarly, a score of maximum 20 points for record and reporting was given for the 0- 2 month age group and similarly for 2 months to 5 year old.

(3) Community knowledge of ASHA: ASHAs ability of interacting, understanding the Community reflects community knowledge and her field visits to assess sick child. The supply of logistics affects performance directly; therefore this was also taken in view. A score of 20 points was given on the basis of knowledge of ASHAs on community. The data was compiled and analyzed using SPSS-16.0.

RESULTS

The Total numbers of AWCs in seven blocks of Baran were 1134, where 882 ASHAs were appointed. Out of these, 94.2 percent were IMNCI trained. Performances are based on three visits made by supervisors to evaluate IMNCI skills of ASHA's of four blocks.

IMNCI skill assessment of ASHAs

Skill assessment measured the ability of ASHAs to classify and identify a sick child. This was the practical aspect of IMNCI. Table 1 illustrates the mean scores of ASHAs in the four blocks. The baseline scores for IMNCI skills for assessing infants in age group of 0-2 months was 7.23 at the end of second visit the mean scores in the four blocks improved to 10.62 and further to 13.36 at the end of third visit. Similarly the mean scores for skills of ASHAs for 2 months to 5 year age group improved from a score of 6.68 at baseline to 9.74 at second visit and subsequently 13.37 at the end of third visit.

IMNCI record and report assessment of ASHAs

ASHAs were required to report the number of newborns (0-2months) and children of age group (2months-5years) visited and their health checkups based on IMNCI classification. Maintaining records and reporting in the correct format is an essential part of IMNCI. About 124 ASHAs were educated less than 8th class. This is a big impediment in maintaining records and reporting correctly for such ASHAs very poor scores were seen in both (i.e. 0-2 months and 2 months-5 years records) after the first visit, and they improved after the third visit. At baseline the scores for record and reporting were better in 0-2 month age group probably due to reasons the main focus on new born. The scores were 5.92 at baseline improving to 9.20 at second visit and further to 11.26 at third visit for neonates. In children from 2 months to 5 year the record and reporting was very poor and at baseline the scores were 1.88 ± 3.30, improving at second visit to 5.67 and subsequently to 9.60 ± 4.97 by the third visit.

Table 1. Mean scores of ASHA for their skill assessment

BLOCK	VISIT-1		VISIT-2		VISIT-3	
	SKILL (0-2m)	SKILL (2m-5yr)	SKILL (0-2m)	SKILL (2m-5yr)	SKILL (0-2m)	SKILL (2m-5yr)
ATRU(n=68)	10.96 ± 1.98	8.82 ± 2.14	10.75 ± 2.18	10.29± 2.43	13.41 ± 3.58	13.64 ± 4.68
ANTA(n=98)	6.43 ± 2.27	6.28 ± 2.31	10.26 ± 3.16	9.95 ± 3.1	13.44 ± 3.58	13.65± 3.73
CHIPABAROD(n=110)	5.95± 2.09	5.64 ± 2.15	10.41 ± 3.46	8.14 ± 3.76	11.41 ± 4.18	10.38 ± 4.09
KISHANGANJ (n=106)	6.90 ± 2.81	6.76 ± 2.59	11.20 ± 2.78	10.86 ± 2.24	14.71 ± 4.15	15.28 ± 3.42
TOTAL(n=513)	7.23 ± 2.93	6.68 ± 2.55	10.62 ± 3.05	9.74 ± 3.17	13.36 ±4.13	13.37 ± 4.23

Table 2. Mean scores of ASHA for their record and report assessment

BLOCK	VISIT-1		VISIT-2		VISIT-3	
	Record and Report (0-2m)	Record and Report (2m-5yr)	Record and Report (0-2m)	Record and Report (2m-5yr)	Record and Report (0-2m)	Record and Report (2m-5yr)
ATRU (n=68)	6.99 ± 3.13	0.07 ± 0.61	7.94 ± 3.59	4.56 ± 4.63	10.0 ± 4.08	9.77 ± 5.23
ANTA (n=98)	4.49 ± 4.45	2.25 ± 3.31	8.88 ± 2.74	5.41 ± 4.35	11.41 ± 3.22	9.23 ± 5.15
CHIPABAROD (n=110)	6.18 ± 3.52	1.41 ± 2.80	9.26 ± 3.19	5.50 ± 4.49	10.19 ± 2.84	7.56 ± 3.84
KISHANGANJ (n=106)	6.29 ± 4.76	3.19 ± 4.11	10.29 ± 2.84	6.81 ± 4.96	12.19 ± 3.60	11.43 ± 4.89
TOTAL (n=382)	5.92 ± 4.16	1.88 ± 3.30	9.20 ± 3.15	5.67 ± 4.66	11.26± 3.43	9.60 ± 4.97

Table 3. Mean scores of ASHA for their community knowledge

BLOCK	VISIT-1	VISIT-2	VISIT-3
	Community Knowledge (0-5 Yr)	Community Knowledge (0-5 Yr)	Community Knowledge (0-5 Yr)
ATRU (n=68)	9.41 ± 2.27	10.76 ± 3.40	14.55 ± 3.61
ANTA (n=98)	9.51 ± 2.33	12.58 ± 3.42	15.42 ± 3.62
CHIPABAROD (n=110)	9.28 ± 2.28	11.89 ± 3.15	13.69 ± 2.76
KISHANGANJ (n=106)	9.79 ± 2.48	13.43 ± 3.06	16.02 ± 3.03
TOTAL (n=382)	9.50 ± 2.35	12.29 ± 3.36	15.12 ± 3.33

Table 4. Blockwise grading of ASHA of Baran district for their IMNCI knowledge and skills

BLOCKS	VISIT-1 GRADE				VISIT-2 GRADE				VISIT-3 GRADE			
	A	B+	B	C	A	B+	B	C	A	B+	B	C
ATRU (n=68)	0	0	6 (8.8)	62 (91.2)	2 (2.9)	23 (33.8)	6 (8.8)	37 (54.4)	12 (17.6)	22 (32.4)	19 (27.9)	15 (22)
ANTA(n=98)	0	0	18 (17.6)	80 (78.4)	0	15 (15.3)	51 (52)	32 (32.7)	14 (14.3)	42 (42.2)	32 (33)	10 (10.5)
CHIPABAROD(n= 110)	0	0	18 (16.4)	92 (83.6)	2 (1.8)	17 (15.5)	35 (31.8)	56 (50.9)	7 (6.4)	30 (27.3)	46 (41.8)	27 (24.5)
KISHANGANJ (n=106)	0	0	29 (27.4)	77 (72.6)	0	28 (26.4)	61 (57.5)	17 (16)	28 (26.4)	50 (47.2)	22 (20.7)	6 (5.7)
TOTAL (n=382)	0	0	71 (18.5)	311 (81.41)	4 (0.8)	83 (21.72)	153 (40.05)	142 (37.17)	61 (15.96)	144 (37.69)	119 (31.15)	58 (15.18)

Figures in parentheses denotes percentages

Table 5. Mean scores of ASHA for overall IMNCI skill

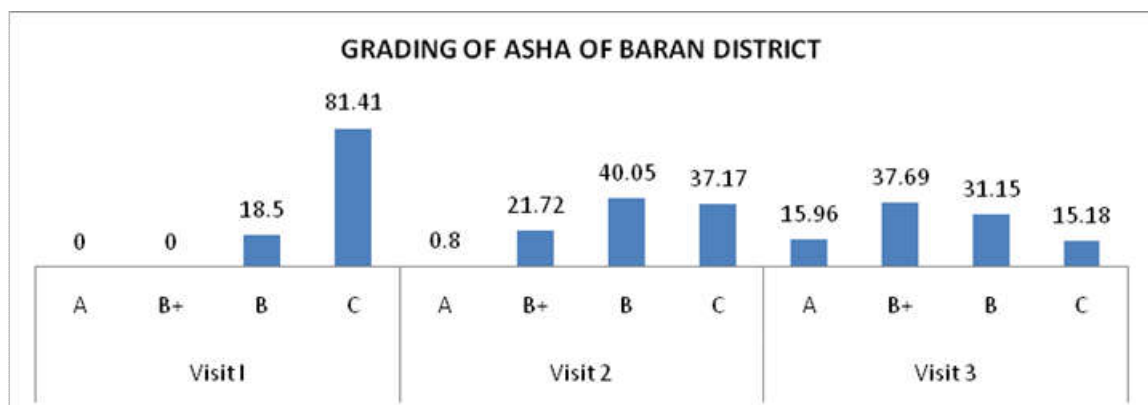| BLOCK	VISIT-1	VISIT-2	VISIT-3	ANOVA
ATRU (n=68)	36.25 ±5.91	44.15 ± 12.23	61.37 ± 14.37	27.688 (0.000)
ANTA (n=98)	28.9 ± 10.93	45.74 ± 12.57	64.41 ± 15.34	178.636 (0.000)
CHIPABAROD (n=110)	28.34 ± 9.84	45.75 ± 16.10	54.53 ± 17.15	82.258 (0.000)
KISHANGANJ (n=106)	32.70 ± 12.36	53.01 ± 11.12	69.87 ± 17.03	192.537 (0.000)
TOTAL (n=382)	31.10 ± 10.73	47.47 ± 13.68	55.08 ± 27.14	165.336 (0.000)

Figure 1.

IMNCI assessment of ASHAS for community knowledge

ASHAs insight and interaction with the community represents community knowledge of ASHA. The mean scores of the four blocks were 9.50 at baseline and increased to 12.29 at second visit to 15.12 after the third visit. The scores for community knowledge were better than record, report and skill assessment. The supervision made them sagacious. The participation in community and knowledge also improved significantly at the end of third visit.

Overall IMNCI assessment of ASHAs

The improvement in the overall IMNCI skills from visit I to visit III was observed. ANOVA was used to determine the positive change in the scores of overall IMNCI skills. It was found that the improvement in the overall IMNCI skills from visit I to visit III was highly significant statistically.

Supply and Logistics

The supply of medicines especially for pediatric use was not available throughout the district. There was a constant shortage of recording and reporting forms, GV paint, weighing scales (for 0-2 months) and ORS packets. Although the district level authorities were sending the material to the blocks, but the distribution in the field was not satisfactory.

Grading of ASHAs

ASHA (n=382) trained under IMNCI program were assessed. Table 4 illustrates the overall grades of ASHAs in the 4 blocks of Baran District. In the first visit none of the ASHA managed to reach Grade A or B+. The performance of ASHA in second visit improved and there was a positive shift in the Grades. Number of ASHA increased in Grade A and B+. Figure 1represents the overall picture of ASHA in Baran district. In Baran four blocks it was found that 81 % ASHAs were in Grade C at baseline with supportive supervision there was a positive shift and number of ASHAs scoring B+ were 21.7 % and scoring grade B increased to 40 %. Similarly at the end of third visit number of ASHAs scoring A grade were around 16 %, B+ were 37.7 %, B were 31.1 % and scoring grade C reduced to 15 % only.

DISCUSSION

It was observed that initially ASHA were not carrying out the IMNCI activities as recommended. This was due to the fact that there was no supervision of IMNCI work there was a gap in training time and implementation of work allocated and delay in payments which made them reluctant. Overall poor IMNCI assessment in first visit was a consequence of a long gap between IMNCI training and assessment. Also, the ASHAs were not sufficiently sensitized for IMNCI work. Low educational status of ASHAs also interfered in understanding importance of revisits to a neonate and sick child and to perform duties. A study in Ballabgarh also showed that attained knowledge and skills may decline over a period of time among health workers (Anand et al., 2004). A study in Tanzania also showed poor adherence to IMCI guidelines for

managing under-five children after gap in IMCI training (Nicholas et al., 2009). Inefficiency in recording and reporting was faced due to lack of supervision, unavailability of recording and reporting formats, lower educational level of ASHAs and no supply of logistics. Also to strengthen the IMNCI program, availability of drugs is the main corner stone to achieve good results (Bharani et al., 2012). For effective skill retention, there is a need to strengthen implementation of IMNCI with specific attention to supportive supervision, timely refresher courses, maintenance of constant drug supply, strong referral mechanism and general system strengthening (Venkatachalam et al., 2012). After the intervention, the ASHAs became more active in home visits, after supervision and motivation, the ASHAs made more visits within 24 hours to babies born in their area. The number of babies who were visited thrice in first seven days improved three folds. Reporting and recording improved, assessment improved and so did the referrals of sick child. The monitoring and supportive supervision laid a strong foundation for ASHAs to perform well. The improvement in reporting and recording, community knowledge, IMNCI skills showed that timely revisions of IMNCI training, continuous moral building up and incentives could play a major role in reducing infant mortality rate.

Conclusions

 It is evident from the findings that the effectiveness of any program can be achieved by close monitoring, support and re-strengthening of the grass root level workers. For effective implementation of IMNCI and positive outcomes the logistics should be supplied timely.

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