Original Research Article

Knowledge evaluation of clinical case management in IMNCI among trained and untrained accredited social health activists in two districts of Uttar Pradesh, India

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ABSTRACT

Introduction: IMNCI was launched in Uttar Pradesh, India in 2005 for integrated management of under 5 children. Success of IMNCI depends to a large scale on the performance of ASHAs. The performance of ASHAs will in turn depend on their knowledge and skills. There is a paucity of research describing and comparing the knowledge of ASHAs who are trained in IMNCI to those who are not trained. The present study was done to compare and describe the knowledge of non-trainees and the follow up knowledge of the trainees regarding clinical case management of IMNCI in two districts of Uttar Pradesh of India. This study indirectly assessed the effects of IMNCI training in the improvement of knowledge of health care personnel.

Materials and Methods: It was a Cross-sectional comparative study conducted in two districts Kanpur & Kannauj of Uttar Pradesh and specifically Shivrajpur and Jalalabad blocks of Kanpur and Kannauj respectively over a duration of one year from March 2019 to February 2020. Shivrajpur block of Kanpur had 122 ASHAs and none of them had received 10 days IMNCI/CCSP training. Jalalabad block of Kannauj had 153 ASHAs and all of them had received 10 days IMNCI/CCSP training(as per NRHM UP data). 108 ASHAs from Kanpur and 94 ASHAs from Kannauj participated in the study.

Results: CHI-Square test was done to test whether the finding that knowledge difference between the ASHAs of Kanpur Nagar and Kannauj was real or merely a chance finding. The results were pooled form the two districts against each of the 26 variables. The proportion of trained in IMNCI module and untrained was calculated.

Discussion: Results show that clinical case management of IMNCI training status had an association with knowledge score. This study testified much higher knowledge score among trained personnel than their counterparts.

1. Introduction

In the year 1992, in a response to the global challenge of child mortality WHO and UNICEF responded by launching Integrated Management of Childhood Illness (IMCI) strategy.[1] The integrated approach ensured that all relevant needs of the child are looked at and attended to during the contact of the child with the health workers.

In India a large number of births occur at home and death is frequent among them in the early days of life. Therefore the government incorporated "N" denoting neonate/newborn into existing IMCI and the strategy was adapted in India as the integrated management of neonatal & childhood illness (IMNCI).[1,2]

In Uttar Pradesh IMNCI was launched as a pilot programme in Lalitpur district in 2005. The government of UP perceived the need to adapt IMNCI in the context of the state. It was observed and felt by the government of Uttar

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Pradesh that IMNCI does not address aspects like maternal health and counselling skills of the workers. Accordingly the strategy was modified and came to be known as comprehensive child survival programme (CCSP).[3]

Success of IMNCI depends to a large scale on the performance of ASHAs. The performance of ASHAs will in turn depend on their knowledge & skills. There is a paucity of research describing and comparing the knowledge of ASHAs who are trained in IMNCI to those who are not trained.

The present study was done to compare and describe the knowledge of non-trainees and the follow up knowledge of the trainees regarding clinical case management of IMNCI in the districts of Kanpur and Kannauj in the province of Uttar Pradesh of India. This study indirectly assessed the effects of IMNCI training in the improvement of knowledge of health care personnel.

2. Materials and Methods

It was a Cross-sectional comparative study conducted in two districts Kanpur & Kannauj of Uttar Pradesh and specifically Shivrajpur and Jalalabad blocks of Kanpur & Kannauj respectively over a duration of one year from March 2019 to February 2020. These blocks are adjacent to each other and were selected because of logistical constraints.

Shivrajpur block of Kanpur had 122 ASHAs and none of them had received 10 days IMNCI/CCSP training. Jalalabad block of Kannauj had 153 ASHAs and all of them had received 10 days IMNCI/CCSP training[4](as per NRHM UP data). 108 ASHAs from Kanpur and 94 ASHAs from Kannauj participated in the study.

Fieldwork was done by a team of social work staff. A subcentre roughly covers around five villages. Each village has one to four ASHA depending upon the population, so around four to five ASHAs were visited on each day. ASHAs were informed about the purpose of study and were given a pretested & structured questionnaire to assess their knowledge. They were also assured that the study participants would remain anonymous and the data would be used only for the study purpose. Our team was always be present at the site to help ASHA with any difficulty that she may have in understanding a question. ASHAs who were not present during at least two visits during the study were irrespective of reason, excluded from study.

A structured questionnaire in hindi was developed. The questionnaire included knowledge about danger signs, respiratory problems, diarrhea and worm infestation, immunization, nutrition and breast-feeding, and safe remedy in children up to five years of age as these are common contributors of mortality and morbidity in children. For the purpose of analysis, each question was assigned to one of the six groups danger signs, respiratory problems, diarrhea and worm infestation, immunization, nutrition and breast-feeding and miscellaneous questions.Data was exported to SPSS 21st version software for analysis. Informed written consent was taken from each of participant after brief verbal explanation.

3. Result

A total of 202 ASHAs participated in the study out of 202 53% were from Kanpur Nagar & 47% from Kannauj.

In totality maximum ASHAs fall in 26 to 30 years of age group in Kanpur (45%) and 36 to 40 years age group in Kannauj (36%). Combining the districts 64% ASHAs fall in the age of 26 to 30 and 36 to 40 years of age group. Half the number of ASHAs form both the districts (Kanpur 46% and Kannauj 50%) passed 8th standard with one fifth (Kanpur 18% and Kannauj 19%) having passed intermediate exam. About one third from Kanpur (37%) and close to one fifth from Kannauj (16%) have cleared high school (std 10th). A close to half of the ASHAs have field population area between a population of 900 to 1199 (Kanpur 51% & Kannauj 39%). One fifth in Kanpur lies between 701 to 899 (22%) & 1200 to 1399 (22%) and in Kannauj one fifth lies in 1200 to 1399 (19%) and one third in 701 to 899 (30%). Nearly all the ASHAs have been working for more than 5 years (Kanpur 100% & Kannauj 94%).

When ASHAs were asked about their selection procedure, it was revealed that majority 70% Kanpur & 68% Kannauj's ASHAs were selected by the recommendation from Pradhan/MOI/C /ANM/AWW. However, none of the ASHAs was aware about the actual selection procedure. Further just 7%in Kanpur &6% in Kannauj believed they were selected based on their qualification and experience. Nearly a quarter (Kanpur 23%, 26% Kannauj) of them mentioned, just filling the application form by ASHAs as selection procedure. Nearly one third (31% Kanpur & 32% Kannauj) of the ASHAs think that ANM plays the most important role in the selection process, followed by (27% Kanpur & 28% Kannauj and 23% Kanpur & 25% Kannauj) ASHAs each who mentioned that MO-I/C and Pradhan respectively where both play a crucial role in the selection procedure.

The most important factor motivating ASHAs for this job was that this job gives them opportunity to serve the community as indicated by the majority (75% Kanpur & 67% Kannauj) of the ASHAs. The second most important factor was to earn money (60% Kanpur & 57% Kannauj).

CCSP/ IMNCI training was not held in Kanpur (Shivrajpur Block) whereas 100% ASHAs were trained under IMNCI module in Kannauj (Jalalabad). All the ASHAs admitted that the training was adequate, beneficial & satisfactory. All the ASHAs were given the training modules and they had gone through them. All the ASHAs were paid stipend for the training.

Danger Signs and symptoms related to respiratory system were analyzed under one category. It was found

that there was a difference of approximately 16% difference of knowledge among the trained (Kannauj, Jalalabad) and untrained (Kanpur, Shivrajpur). The maximum difference being in knowledge of chest indrawing (27%) and minimum in cut of values of fast breathing in 2 months to 12 months and 1 year to 5 year child (9% each). There was also marked difference in knowledge of Pneumonia (25%).(Table 1 : Knowledge of Respiratory System using IMNCI).

Knowledge of Diarrhea & Immunization was analyzed under one category, also the meaning of IMNCI/CCSP. The maximum difference being in knowledge of severe persistent diarrhea (46%) and minimum Immunization schedule (5%) and signs of severe dehydration (6%). There is a reverse difference in knowledge where more ASHAs from Kanpur know about ORS than the ASHAs of Kannauj, difference is 3%.(Table 2: Knowledge of Diarrhea, Immunization using IMNCI & What is IMNCI?).

Knowledge of Vit A dose, Jaundice, Breastfeeding, Kangaroo Mother Care (KMC), Low Birth Weight (LBW) and deworming was analyzed under one category. The maximum difference being in knowledge of KMC & good positioning for breastfeeding (28% & 23%) and minimum in LBW (1%). There was also marked difference in good signs of attachment for breastfeeding.(Table 3: Nutrition, Breastfeeding & Worm Infestation).

Composite Breathing is sum addition of stridor, wheezing, chest indrawing, fast breathing & the three cut off values of breathing. The total score of all the parameters were distributed and observed that majority of ASHAs from Kannauj 56% were less than a score of 2 and with respect to Kanpur 59% were less than a score of 2. The minimum from Kannauj 1% were in category 3-5 score and with respect to Kanpur 14% were in between a score of 3-5.

Composite score Diarrhea is the sum addition of Signs of Dehydration, Severe persistent diarrhea, Dysentery, ORS and Zinc dosage in 2 to 6 months and > 6 months. The results showed that one third of the ASHAs from Kannauj (30%) have scored 5 out of 6 followed by one fifth scoring 6 on 6(22%) whereas approximately half of the ASHAs in Kanpur (40%) have scored 3 out of 6 followed by one fifth scoring 2 on 6(20%).

Composite score breastfeeding is the sum addition of good positioning, good signs of attachment & feeding problems. The result show half of the ASHAs from Kannauj (49%) and three fourth of the ASHAs in Kanpur (76%) have scored 0 out of 3 followed by one third in Kannauj (33%) scoring 3 out of 3 whereas in Kanpur (17%) it was observed whereas approximately one fifth of the have scored 3 out of 3.

Composite Score Early Newborn Care is the sum addition of the scores of Low birth weight, Kangaroo Mother Care and Jaundice. The result shows approximately one third of the ASHAs from Kanpur (28%) & Kannauj (35%) have scored 3 out of 3. Half of the ASHA in Kanpur

(49%) have scored 2 out of 3 and one fifth in Kanpur (20%) have scored 0 out of 3.

Composite Score is the sum addition of 2 questions each of the dosage of Vitamin A & Zinc.The maximum score an ASHA can obtain is 4. The result shows approximately half of the ASHAs from Kanpur (46%) & Kannauj (40%) have scored 2. Another half of the ASHAs in Kanpur (41%) have scored 0 whereas in Kannauj (30%) approximately one third have scored 4/4.

Composite score here is the sum addition of deworming & Immunization. The maximum score an ASHA can obtain is 2. The result shows half of the ASHAs from Kanpur (51%) & three fourth in Kannauj (74%) have scored 2. Another half of the ASHAs in Kanpur (42%) have scored 1 whereas in Kannauj (21%) approximately one fifth have scored 0.

CHI-Square test was done to test whether the finding that knowledge difference between the ASHAs of Kanpur Nagar and Kannauj was real or merely a chance finding. The results were pooled form the two districts against each of the 26 variables. The proportion of trained in IMNCI module and untrained was calculated. From these two proportions we did further calculations. The results obtained are given in the value column against each variable.Table 4

Independent sample statistical t test was done for all the variables, with respect to trained and untrained ASHAs under IMNCI module for Kanpur and Kannauj, P value was found to be statistically highly significant for all the 26 variables (Significant P value was taken as P <0.05).(Table 5: Independent-Sample Test)

4. Discussion

Child health of India is one of the most lagging indicators of the country development. IMNCI/CCSP is one major step to reduce child mortality and the ASHAs are expected to make home visits to the family using the triage concept of the IMNCI module.

The current study is based on qualitative research methodology. This study examined the knowledge level of the ASHAs in service delivery for child hood illness among trained and untrained ASHAs with respect to IMNCI/CCSP module. The present study revealed that most (83%) of the ASHAs belonged to young and middle age group (21-40 years age group). This may be the strength for the programme being energetic and active; the ASHAs in this age group may deliver better service with proper motivation and capacity building.

Education level is a major determining factor in the performance of ASHAs. The guidelines put emphasis on education criteria up to junior high school, while at some places, where no eligible candidate were found education criteria was reduced to primary level. The study has revealed that majority (92%) of the ASHAs were having the qualification between 8-12th class, showing high adherence

Table 1: Knowledge of Respiratory System using IMNCI

ASHA	Kannauj	Kanpur	Difference in Knowledge
Enumerate danger signs in sick child	71 (76%)	71 (60%)	16%
Define Stridor	41 (44%)	27 (25%)	19%
Define Wheezing	35 (37%	25 (23%)	14%
Define Chest Indrawing	31 (60%)	36 (33%)	27%
Fast Breathing?	71 (76%)	65 (60%)	16%
What are the cut off values of fast breathing in <2 months old child	40 (43%)	36 (33%)	10%
What are the cut off values of fast breathing in 2 to 12 months old child	37 (39%)	32 (30%)	9%
What are the cut off values of fast breathing in 1 year to 5 years old child	39 (41%)	35 (32%)	9%
Define Pneumonia	43 (46%)	23 (21%)	25%

Table 2: Knowledge of Diarrhea, Immunization using IMNCI & What is IMNCI?

ASHA	Kannauj	Kanpur	Difference in Knowledge
What are the signs of severe dehydration	70 (74%)	73 (68%)	6%
What do you mean by Severe persistent Diarrhea	65 (69%)	25 (23%)	46%
What do you mean by Dysentery	67 (71%)	65 (60%)	11%
What do you mean by ORS	62 (66%)	75 (69%)	-3%
What is the dosa0 of Zinc 2 to 6 months	61 (65%)	27 (25%)	40%
What is the dose of Zinc above 6 months	62 (66%)	30 (28%)	38%
Immunization Schedule of 1 year old Child	73 (78%)	79 (73%)	5%
What do you mean by IMNCI/ CCSP?	94 (100%)	0 (0%)	100%

Table 3: Nutrition, Breastfeeding & Worm Infestation

ASHA	Kannauj	Kanpur	Difference in Knowledge
What is the Vit A dose at the time of Measles vaccination?	61 (65%)	45 (42%)	23
What is the Vit A dose for 15 months old	45 (48%)	41 (38%)	10
Classify Jaundice in newborn	48 (51%)	35 (32%)	19
What is the good positioning for the breast feeding	44 (47%)	26 (24%)	23
What are the good signs of attachment for breast feeding	39 (41%)	21 (19%)	22
Classify feeding problem	35 (37%)	22 (20%)	17
What is Kangaroo Mother Care	54 (57%)	31(29%)	28
What is low birth weight (LBW)	73 (78%)	83 (77%)	1
How many times you will de- worm your child a year?	70 (74%)	76 (70%)	4

towards the established government guidelines. Most of the ASHAs (72%) served a population of 701-1199, which is a shows good adherence to the guidelines. 94% of the ASHAs were working for more than 5 years which corresponds to the report by Govt. of India[5] UP (93%), Bihar (95%) & MP (96%).

In the recruitment process of ASHAs, the present study has revealed that none of the ASHAs were aware of the actual selection process and 69% of ASHAs stated that they were selected by the recommendation form Pradhan/MOIC/ANM/AWW. Thus, according to the study although ASHAs were fulfilling the eligibility criteria

required for the selection, but unawareness of almost all the ASHAs regarding the actual selection process and views of the MO-I/C pointing towards the outside influence in the selection process, reflect the deviations in the selection procedure.

The sustenance of the NRHM programme depends on the long-term motivational factors for the ASHAs to keep her going with spirit and enthusiasm. The most important factor motivating them for this job was to serve the community as indicated by majority (67%) of the ASHAs. The second important factor was to earn money (57%).

Table 4: Chi-Square Test

Variables	Value	df	Asymp. Sig. (2-sided)
What is IMNCI/ CCSP	202.000[a]	1	.000
Danger signs in sick child	5.381[a]	1	.020
Stridor	7.800[a]	1	.005
Wheezing	4.776[a]	1	.029
Chest Indrawing	13.954[a]	1	.000
Fast Breathing	5.381[a]	1	.020
Cut off value fast breathing in <2 months old child	1.820[a]	1	.177
Cut off values fast breathing in 2 to 12 months old child	2.116[a]	1	.146
Cut off values of fast breathing in 1 year to 5 years old child	1.786[a]	1	.181
LBW?	.019[a]	1	.891
Frequency of de- worming child in a year	.421[a]	1	.516
Signs of severe dehydration	1.149[a]	1	.284
Severe persistent Diarrhea	43.050[a]	1	.000
Dysentery	2.730[a]	1	.098
ORS	.280[a]	1	.597
Dose of Zinc 2 to 6 months	32.533[a]	1	.000
Dose of Zinc above 6 months	29.538[a]	1	.000
Immunization Schedule of 1 year old Child	.549[a]	1	.459
Vit A dose at Measles vaccination?	10.872[a]	1	.001
Vit A dose for 15 months old	2.019[a]	1	.155
Jaundice in newborn	7.227[a]	1	.007
Good positioning breast feeding	11.471[a]	1	.001
Good signs of attachment breast feeding	11.697[a]	1	.001
Classify feeding problem	7.056[a]	1	.008
Pneumonia	13.656[a]	1	.000
Kangaroo Mother Care	17.036[a]	1	.000

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 39.55.

In our study only ASHAs of Kannauj (Jalalabad Block) have been trained in IMNCI therefore a comparative analysis of the discussion is given below with respect to Kanpur Nagar (Shivrajpur Block) where no IMNCI/CCSP training has been given by the government.

In the study danger signs and symptoms related to respiratory system were analyzed under one category. It was found that in enumerating danger signs there was a difference of approximately 16% difference of knowledge among the trained (Kannauj, Jalalabad) and untrained (Kanpur, Shivrajpur). The maximum difference being in knowledge of chest indrawing (27%) and minimum in cut of values of fast breathing in 2 months to 12 months and 1 year to 5 year child (9% each). There was also marked difference in knowledge of Pneumonia 25%). Similar study by Khan RA et al (2009)[6] showed difference of 44% in enumerating danger signs between trained and untrained IMNCI workers, 52% difference of knowledge in defining chest indrawing and 61% difference in identifying signs of pneumonia in Lahore and Sheikhpura districts of Pakistan. In another study by Sahni HV et al (2009)[7] showed that there was a difference of 18% knowledge of breathing among trained and untrained ASHAs in Tonk and Karauli districts of Rajasthan. In a study by NIPI-UNICEF (2012).[8]

In the study knowledge of diarrhea & immunization was analyzed under one category. It was found that there was a difference knowledge among the trained (Kannauj, Jalalabad) and untrained (Kanpur, Shivrajpur). The maximum difference being in the knowledge of severe persistent diarrhea (46%) and minimum in immunization schedule (5%) and signs of severe dehydration (6%). There is a reverse difference in knowledge where more ASHAs from Kanpur know about ORS than the ASHAs of Kannauj, difference is 3%. In another study by Sahni HV et al (2009)[7] showed that there was a difference of 24% in knowledge of diarrhea among trained and untrained, but the untrained ASHAs have more knowledge under Immunization (47.6%) (ASHAs in Tonk (trained) and Karauli (untrained) districts of Rajasthan. In a study by NIPI-UNICEF (2012).[8] Assessment of Supportive Supervision Initiative for strengthening of CCSP/IMNCI in UP showed that in Aligarh 93%, Siddarth Nagar 60% of the ASHAs trained in IMNCI had knowledge of Immunization & in Aligarh 100%, in Siddarth Nagar 92% could assess diarrhea as per IMNCI standards.

Table 5: Independent-Sample Test

	T	d.f	Sig. p-value)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
What is IMNCI/ CCSP	13.227	202	.000	.465	.40	.53
Danger signs in sick child	20.351	202	.000	.673	.61	.74
Stridor	10.100	202	.000	.337	.27	.40
Wheezing	9.216	202	.000	.297	.23	.36
Chest In drawing	12.966	202	.000	.455	.39	.52
Fast Breathing	20.351	202	.000	.673	.61	.74
Cut off value fast breathing in <2 months old child	11.011	202	.000	.376	.31	.44
Cut off values fast breathing in 2 to 12 months old child	10.212	202	.000	.342	.28	.41
Cut off values of fast breathing in 1 year to 5 years old child	10.780	202	.000	.366	.30	.43
LBW?	26.108	202	.000	.772	.71	.83
Frequency of de- worming child in a year	22.892	202	.000	.723	.66	.79
Signs of severe dehydration	22.072	202	.000	.708	.64	.77
Severe persistent Diarrhea	12.709	202	.000	.446	.38	.51
Dysentery	19.469	202	.000	.653	.59	.72
ORS	20.583	202	.000	.678	.61	.74
Dose of Zinc 2 to 6 months	12.456	202	.000	.436	.37	.50
Dose of Zinc above 6 months	12.966	202	.000	.455	.39	.52
Immunization Schedule of 1 year old Child	24.719	202	.000	.752	.69	.81
Vit A dose at Measles vaccination?	14.898	202	.000	.525	.46	.59
Vit A dose for 15 months old	12.207	202	.000	.426	.36	.49
Jaundice in newborn	11.840	202	.000	.411	.34	.48
Good positioning breast feeding	10.324	202	.000	.347	.28	.41
Good signs of attachment breast feeding	9.216	202	.000	.297	.23	.36
Classify feeding problem	8.889	202	.000	.282	.22	.34
Pneumonia	9.876	202	.000	.327	.26	.39
Kangaroo Mother Care	12.084	202	.000	.421	.35	.49

In the present study the difference of knowledge among trained and untrained with respect to knowledge of Vit A dose (23%), Jaundice (19%), good signs of breastfeeding (22%), good positioning of breastfeeding (23%), Kangaroo Mother Care (KMC) (28%), significant knowledge difference was found. The maximum difference being in knowledge of KMC & good positioning for breastfeeding (28% & 23%) and minimum in LBW (1%). In another study by Sahni HV et al (2009)[7] showed that there was a difference of 24% in knowledge with respect to breastfeeding, 41% knowledge difference with respect to LBW among trained and untrained, among ASHAs in Tonk (trained) and Karauli (untrained) districts of Rajasthan. In a study by NIPI-UNICEF (2012).[8] Assessment of Supportive Supervision Initiative for strengthening of CCSP/IMNCI in UP showed that in Aligarh 20%, Siddarth Nagar 31% of the ASHAs trained in IMNCI had knowledge of breast feeding could assess breastfeeding as per IMNCI standards.

However, in Surendranagar district lesser proportion of the ASHAs was found to have good knowledge regarding breastfeeding in a study by Mahyavanshi et al (2011).[9]

In the study the total score of all the parameters were distributed and observed that the average score of ASHAs in Kanpur was 10.16 and in Kannauj was 15.48 out of a maximum of 26.

It has been argued that in order to achieve the measurable impact on child mortality reduction, IMNCI clinical training may be accompanied by health system strengthening and community IMNCI activities (Huicho et al., 2005).[10] Tanzania and Bangladesh have succeeded in delivering clinical IMNCI trainings along with improved health system and involving community and family (Arifeen at al., 2004,[11] Armstrong et al., 2004[12]). Simultaneous implementation of most of the components of IMCI strategy in Bangladesh and Tanzania proved beneficial in reducing child mortality (Arifeen at al., 2004,[11] Armstrong et al., 2004[12]). On

the other hand, little progress in child survival has been observed in Latin America and Caribbean (Peru, Brazil and Haiti) due to non- implementation of all components of IMNCI strategy (Amaral et al., 2005,[13] Huicho et al., 2005[10]) and unequally distributed limited resources especially for community and family practices (Arrive et al., 2004[14,15]).

This study did not address other key components of IMNCI strategy including performance of personnel, improved health care system and improved family-community practices, acting as limitations of the present study.

IMNCI strategy is good enough which can improve knowledge and therefore performance of health care personnel. To achieve desirable gains in child health all of its components must be implemented simultaneously with adequate coverage. In all the studies inclusive of this it was found that the compared knowledge score of frontline worker (ASHA) was found to be better in trained frontline workers than in the untrained ones.

5. Conclusion

Results show that clinical case management of IMNCI training status had an association with knowledge score. This study testified much higher knowledge score among trained personnel than their counterparts.

Keeping in view the scope and limitations of the study, further research may be extended to health care personnel in other districts. Other health care personnel such as Medical officers, nurses and medical technicians may also be included in future studies. Moreover, questionnaire must ask other relevant trainings that could add to knowledge without attending clinical management of IMNCI training. It would also be interesting to assess knowledge regarding clinical case management of IMNCI before training, immediately after training and in distant future to better judge the impact of training and long-term effect of training.

It is further recommended that trainings during service, as a public health strategy, of all health care personnel serving at first level rural health care sector should be initiated and continued. This may improve their knowledge and understanding about clinical case management of IMNCI and may result in improved practices. Better knowledge and understanding of clinical case management of IMNCI may also improve management practices for neonates and children resulting in their better survival.

6. Conflict of Interest

The author declares no potential conflicts of interest with respect to research, authorship, and/or publication of this article.

7. Source of Funding

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