

A Study to Assess the Logistics and Skills of Rural Anganwadi Worker for IMNCI Strategy in Ahmedabad District.

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ABSTRACT:

Introduction: IMNCI is an integrated approach to decrease morbidity and mortality amongst children between 0-5 years. Training to pre-service level during medical, nursing-education and anganwadi worker (AWW) is the first fundamental stage of IMNCI. This study was conducted to evaluate the skills of AWWs trained under the IMNCI program and to identify the problems in implementation of IMNCI program in rural areas. **Methodology:** A cross sectional study was carried out including 38 anganwadi workers (AWWs) of sanand Taluka, of Ahmedabad district selected by random sampling technique during the period from June 2014 to September 2014. **Results:** Most of the AWWs were ≤ 40 years of age. Out of 38 AWWs, 24% AWWs underwent IMNCI training between 1 to 2 years duration and 25 (66%) AWWs underwent training between 2 to 5 years period from the date of interview. All AWWs were equipped with weighing scales but were not having supplies like, chloroquine (86%) ORS (10%), Cotrimoxazole (52%) and IFA (10%). Out of 35 (92%) AWWs who had maintained the register, only 8 (21%) AWWs had completed them. Lack of motivation and supervision with overburden due to other programs and inadequate stocks of drugs were major difficulties found in this program. Breast-feeding problems were identified by 53% AWWs. Only 21% AWWs had checked immunization cards. The performance score is poor for 1/3rd of anganwadi workers for identification of danger signs in IMNCI program. **Conclusion:** The study identified a number of programme related and external constraints and by taking care of these problems we might improve implementation and skills of anganwadi worker for IMNCI strategy.

Keywords: IMNCI program, AWWs, skills, problems in implementation

Introduction:

Every year more than 10 million children die in developing countries before they reach their fifth birthday¹. Most of these deaths are preventable and are mainly due to infective etiologies like diarrhoea, respiratory tract infections, measles, malaria, AIDS, tuberculosis etc². Apart from malnutrition, the other factors contributing to illnesses in this age group are poor living conditions, unsafe drinking water, poor hygiene and overcrowding.

Seven in ten of these deaths are due to acute respiratory infections (mostly pneumonia), diarrhoea, measles, malaria or malnutrition – and often to a combination of these illnesses. Evidence suggested an integrated approach should be made available to manage sick children to achieve better outcome. So, during the

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mid- 1990s, the WHO, in collaboration with UNICEF and other agencies, institutions and individuals developed a strategy known as Integrated Management of Childhood Illness (IMCI). The IMCI strategy addressed curative care, various aspects of nutrition, immunization and other important elements of disease prevention and health promotion.

There are two most important reasons for such high mortality that is seen in this age group: (1) Inability of the parents to identify danger signs and symptoms especially in young infant at an early stage and not seeking treatment and (2) Poor quality of health services in rural areas. It was noted that in spite of implementation of IMCI program that was developed by UNICEF and WHO based on the rationale that reduction in childhood mortality rate can be achieved without using expensive and sophisticated technologies, it was found that only neonatal mortality was responsible for more than 2/3rd of the Infant mortality rate (IMR) in India³. So, to decrease Neonatal mortality rate (NMR) which is a major problem in India the strategy was strengthened with “N” (neonatal) component and now it was known as IMNCI (Integrated Management of Neonatal and Childhood Illnesses). IMNCI is evidence based syndromic approach for management of 0-2 months & 2 months – 5 years age group children^{4,5,6,7,8}. The total duration of training period is 8 days for anganwadi worker.

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 state⁹. The IMNCI training is being given to all health personnel as well as to the Anganwadi workers. The present study was undertaken to evaluate the skills of Anganwadi workers trained under the IMNCI program and to identify the problems about logistics management in rural areas.

Methodology:

The study was a cross sectional study carried out at the anganwadi centers of Sanand Taluka of Ahmedabad district during June 2014 to September 2014. (3 months).

Data collection: There are a total of 190 anganwadi workers per anganwadi centers in Sanand Taluka of Ahmedabad district. Among them 38 (20%) anganwadi workers (AWWs) were selected by random sampling method.

The two components taken into consideration for evaluation of implementation and effectiveness of the program included: (1) Logistics: Maintaining of registers and equipment, problems faced by AWWs, drug supply, referral notes, etc. (2) Skills practiced: Two different age groups as defined in IMNCI were included i.e. (0 to 2 months) and (2 months to 5 years) and skills of the AWWs were observed. All 38 anganwadi centers were visited after informing each anganwadi worker. Interview was taken in the local language (Gujarati) using a semi structured preformed questionnaire to get an understanding about the logistic component and the standard IMNCI proforma was used to determine the skill based performance of the selected anganwadi workers.

The Skills practiced by the AWWs were evaluated as per the IMNCI training module. For each major group like serious bacterial infection, diarrhoea, feeding problem skills of the AWWs were observed and scores were given with grading of the performance as very poor, poor, satisfactory and good based on the performance score. A scoring system was used to identify whether the AWW's had acquired the necessary skills and whether they were using them in the correct manner, so as to evaluate the effectiveness of training given under the IMNCI program. With correct identification and interpretation of the signs or symptoms of illness a score of 2 was given, while with every identification without interpretation of the sign a score of 1 was given and with no identification of the sign a score of 0 was given. All the data collected was compiled and analyzed using Microsoft excel and Epi Info 7.

Results:

Logistics:

For the success of IMNCI program, availability of drugs and material like registers, chart book and is very essential and an important component without which we may not achieve our goals. This may lead to loss of confidence in services provided by AWWs at community level. According to the IMNCI guidelines, supervisory visits should occur at regular intervals to improve the program quality.

Table 1: Stock of logistics available at anganwadi center (n=38)

Logistics	Yes(n=38) Frequency (%)	No(n=38) Frequency (%)
Availability of Register for IMNCI	35(92.10)	3(7.89)
Availability of Complete records for IMNCI	8(21.05)	30(78.94)
Visit of newborn by anganwadi worker in GHATAK 1	28(73.68)	10(26.31)
Visit of newborn by anganwadi worker in GHATAK 2	32(84.21)	6(15.78)
More than 3 visit of young infant by anganwadi worker	31(81.57)	7(18.42)
Availability of chloroquine	5(13.15)	33(86.84)
Availability of Co-trimoxazole	18(47.36)	20(52.63)
Availability of Oral rehydration solution (ORS)	30(78.94)	8 (21.05)
Availability of Iron and Folic acid (IFA)	28(73.68)	10(26.31)
Availability of Paracetamol (PCM)	32(84.21)	6 (15.78)
Availability of 1% Gentian violet lotion (GV)	26(68.42)	12(31.57)
Availability of weighing scale	38(100)	0(0)
Availability of chart book	29(76.31)	9 (23.68)
Availability of referral register	34(89.47)	4 (10.52)

Even though 92 % (35) of the AWW's had all the required registers, only 21 % (8) AWW's had registers with complete records. Around 73% (28) and 84%(32) of the newborns were visited by AWWs in both Ghatak 1 and 2 respectively. There were inadequate supplies of chloroquine (87%), Co-trimoxazole (53%), Oral rehydration solution (ORS) (21%), Iron and Folic acid (IFA) (26%), 1% Gentian violet lotion (GV) (31%) and Paracetamol (PCM) (15%) in

anganwadi centers (AWC). All the AWWs were equipped with weighing scale in working condition and Chart books were available with 29 anganwadi workers. (Table 1) More than half (74%) of the AWWs studied were aged ≤ 40 years and 26% AWWs were above 40 years. The results of skill based performance in young infants and 2 months to 5 years children were found similar in both age groups (≤ 40 years and >40 years) with statistically insignificant p value.

Table 2: The performance score of anganwadi workers (AWWs) in relation to their work experience. (Max score =20) (n=38)

Duration period from training	Performance score <10	Performance score >10	No. of AWWs (n=38)
Within last 1 year	1(6.67%)	3(13.04%)	4(10.52%)
1 to 2 years	4(26.67%)	5(21.74%)	9(23.68%)
2 to 5 years	10(66.67%)	15(65.21%)	25(65.78%)
Total	15(100%)	23(100%)	38(100%)

Table 2 shows that 24% AWWs underwent IMNCI training between 1 to 2 years duration and 25 (66%) AWWs underwent training between 2 to 5 years period from the date of interview. Out of 13 AWWs, who were trained within preceding 2 years, 5 AWWs had a score of $<50\%$ in both the groups; while out of 25 AWWs who were trained between preceding 2 to 5 years, 10 AWWs had scores of $<50\%$ in study. The most common reasons for referral were low birth weight (LBW) and fever according to anganwadi worker for young infant.

Evaluation of Skills : The anganwadi workers (AWWs) have to look for signs and symptoms of Serious Bacterial Infection and correct identification and interpretation of knowledge of danger signs as per the chart book. To able to identify for several diseases is important because if we delayed than it will leads to dangerous outcome. Earlier recognition of symptoms and signs lead to immediate treatment or referral which help in recovery and reduce morbidity and mortality.

Table 3: Performance of the AWWs in use of signs to identify Serious Bacterial Infection & Danger signs (n=38 & max. score=20)

Performance	Score	Serious Bacterial Infection (n=38)(%)	Danger Signs (n=38)(%)
Very Poor	<5	0	4(10.53)
Poor	6-10	2(5.26)	8(21.05)
Satisfaction	11-15	6(15.79)	12(31.58)
Good	16-20	30(78.95)	14(36.84)
Total		38(100)	38(100)

More than 36 (94.73%) anganwadi workers have satisfactorily able to identified serious bacterial infection so they can get immediate treatment for sick young infant and children. There were 14 (36%) anganwadi workers (AWWs) who were able to explain the danger signs properly to the mother. In the age group of 2 months to 5 years children, 12 (31%) anganwadi workers

(AWWs) performed poorly or very poorly in asking general danger signs. The sample size is too small to comment on the performance (Table 3).

Children are very prone to diseases so it is important to give them all the vaccines recommended through immunization schedule. Most of the AWWs (97%), checked for immunization status. But among them only 10 (26%) AWWs checked through the immunization card and rest 33 (86%) AWWs elicited information verbally. 30 (79%) AWWs were able to give proper advice to the mother about immunization.

Image 1: Evaluation of breast feeding technique by the AWWs (n=38)

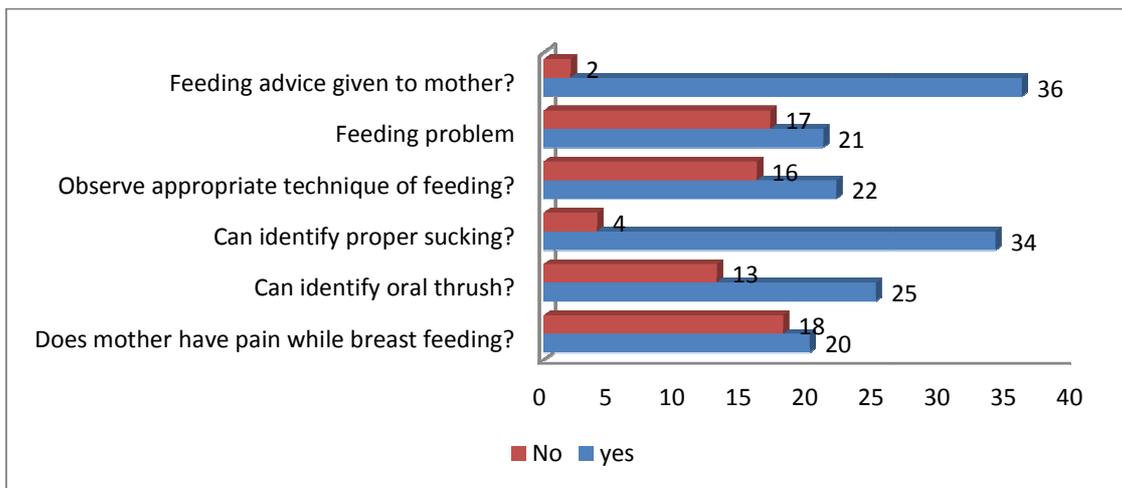


Figure 1 implies that among 38 AWWs, 36 (94%) AWWs gave appropriate advice for exclusive breast feeding to the mothers and 21 (55%) AWWs could identify feeding problems encountered by mothers. However, only 22 (58%) AWWs had observed the technique of breast feeding.

Image 2: Evaluation of anganwadi worker in relation to Nutritional status & feeding practice in children

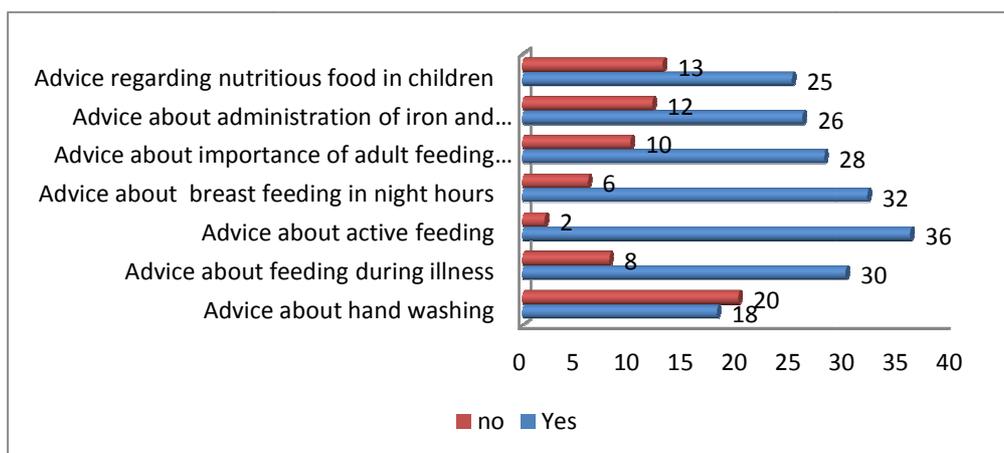


Figure 2 shows the feeding practices asked and checked by AWWs. About 53% AWWs had not given any importance to hand washing. Similarly, feeding during illness, active feeding, breast feeding in night hours and the importance of adult feeding the child were common errors of AWWs which were identified.

Discussion:

IMNCI is relatively a new program and for any new program the success and results are dependent on its effective implementation. The success of the program is again based on skills of the frontline workers.

The AWWs had many other registers to maintain apart from IMNCI program registers. So if at all they had started filling the data in the registers, it was left incomplete, thus leading to unavailability of reliable data which is necessary to evaluate the success of any program. As most of the neonatal deaths are early neonatal deaths this miss may be very crucial. According to a study on child health⁷ in districts where IMNCI is implemented, out of reported birth only 63% newborns were visited on the first day by AWWs and 61% newborns had 3 visits during first 10 days of life. There is noticeable deficiency of logistics at the anganwadi center which affect the implementation and effectiveness of IMNCI program in rural area. Deficiency of drugs stock and lack of maintenance records registers and referral registers of at PHC level and anganwadi center affect the implementation and successful running of program. This may lead to loss of confidence in services provided by AWWs at community level. Even though AWWs classified illnesses correctly, she could not give the medicine because of unavailability. The finding of this study throws the light on phenomenon that IMNCI training should implement to all health care providers. It suggests that more the duration of experience and time from the training period the anganwadi worker can treat the children effectively. Similar findings were observed in study done in Vadodara.⁹

Avoiding medical advice at proper time results in poor outcome. So there is an urgent need to promote early and timely referral of a sick infant. The data also suggested that the anganwadi workers performance were good to identify signs and symptoms of serious bacterial infection but poor to identify dangerous signs. So it may result into delayed referral or treatment of sick infant or children. Identification of feeding problems and to observing the feeding technique were other weak aspects in the AWWs performance and need further strengthening because feeding, malnutrition and morbidities are interrelated. Another aspect that should be emphasized is checking the immunization card to get correct information regarding immunization especially when coverage is only 45 to 50% in most of the state⁹.

Conclusion:

The findings of this study throw the light on phenomenon that IMNCI training should implement to all health care providers. This study also concludes that there is inadequate logistics at the anganwadi centre which affect the implementation. The data also suggested that

the anganwadi workers performance were good to identify signs and symptoms of serious bacterial infection but poor to identify dangerous signs. So it may result into delayed referral or treatment of sick infant or children of IMNCI program in rural area. Lack of motivation and supervision with overburden due to other programs and inadequate stocks of drugs were major difficulties found in this study.

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