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## RESEARCH ARTICLE

# COMMUNITY BASED INTERVENTION (CBI) FOR DEMAND GENERATION OF IFA CONSUMPTION AMONG RURAL PREGNANT WOMEN

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### ABSTRACT

**Introduction:** Anaemia is a worldwide public health problem associated with an increased risk of morbidity and mortality, especially in pregnant women and young children. In India, anaemia prevalence is highest among pregnant women, infants, and young children due to the high iron demands for growth and during pregnancy. On average, 45% of pregnant women and 49% of children under five years of age are anaemic in developing regions. Therefore, for generating demand among community people for IFA tablets consumption, a community based intervention was needed for demand generation for IFA tablets by pregnant women. **Objective:** To implement few packages of social mobilization activities by adopting inter sectoral approach to generate demand for IFA consumption through community based intervention. **Material & Method:** Social Mobilization Activities were carried out for Demand Generation of IFA Tablets by Pregnant Woman. Activities like news coverage through print media, meeting and workshop with media personnel's at different levels, radio / TV talk on anaemia by leading gynecologists, post card campaign with pregnant women, orientation meeting of registered medical practitioners (RMPs), sensitization meeting for opinion leaders, etc. Were carried out. **Results:** Awareness about anaemia, as per the end line survey results, was quite high, as more than 90 percent of the women had heard about anaemia. The matching figure for the baseline was 49.2 percent, which showed a noteworthy increase after intervention for demand generation activities. Knowledge that taking iron pills can prevent anaemia had increased significantly from 12.9 percent at the time of baseline to 51.5 percent at the end line survey. **Recommendation:** Government and NGOs must come forward to train the Front level workers by mentoring and handholding so that they deliver better and efficient antenatal services at large. This should also be supported by demand generation activities in the region.

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## INTRODUCTION

Anaemia is a worldwide public health problem associated with an increased risk of morbidity and mortality, especially in pregnant women and young children. Among the numerous factors, both nutritional (such as vitamin and mineral deficiencies) and non-nutritional (such as infection and hemoglobinopathies), that contribute to the onset of iron deficiency Anaemia. Estimates from the World Health Organization report that from 35% to 75% (56% on average) of pregnant women in developing countries are anaemic.

In India, anaemia is the most common nutritional problem affecting more than ½ of the total population particularly in children and pregnant women where the incidence is 50 to 97%. Anaemia prevalence is highest among pregnant women, infants, and young children due to the high iron demands for growth and during pregnancy. On average, 45% of pregnant

women and 49% of children under five years of age are anaemic in developing regions<sup>[1]</sup>.

In India the prevalence of anaemia is high because of poor dietary intake especially iron and folic acid, poor bioavailability of iron due to phytate and fiber rich Indian diet, chronic blood loss due to infection such as malaria and Hookworm infestation<sup>[2, 3]</sup>. However the prevalence of anaemia in pregnancy varies considerably because of differences in socioeconomic conditions, lifestyles, and health-seeking behaviors across different cultures. The World Health Organization (WHO) estimates that 52% of pregnant women in developing countries are anemic compared with 23% in the developed world<sup>[4]</sup>.

The impact of anaemia in pregnancy affects both mother and fetus. Anaemia in pregnancy is one of the predisposing factors for preterm delivery, low birth weight, stillbirth and neonatal

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death and maternal deaths. So there was a need of mass awareness campaign to make people understand the requirement to maintain adequate hemoglobin level by consuming iron rich diet and to meet out the excess demand of iron at the time of pregnancy/ childhood by intake of additional IFA tablets.

However, DLHS (2006) for Varanasi district has reported only 7% consumption of IFA tablets by pregnant women who were given free tablets by health functionaries. Therefore, for generating demand among community people for IFA tablets consumption, a community based intervention was carried out for demand generation for IFA tablets by pregnant women of rural Varanasi.

### **Specific Objective**

To implement few packages of social mobilization activities by adopting inter sectoral approach to generate demand for IFA consumption through community based intervention targeted to reduce prevalence of nutritional maternal anaemia among PW.

### **General Objectives**

1. To increase the consumption of 100 iron folic acid tablets (100 mg elemental iron and 500 mcg Folic acid) provided to pregnant women (PW) under the existing government program.
2. To increase the demand in the community for IFA supplementation through behaviour change communication (BCC) by adopting various channels for community based intervention.

**Table 1** Social mobilization activities for demand generation carried out in rural blocks

Sr. No.	Activity Conducted	Concept	Objective	Forum	Outcome
1	Reconfirmation Survey	To know the awareness level of local villagers about importance of IFA during pregnancy.	To understand current status of IFA distribution & consumption	Field Survey through interview schedule	Status of IFA supplementation during pregnancy in 3 blocks of Varanasi
2	News Coverage through Print Media, Meeting and Workshop with media personnel's at Different levels	To sensitize personnel's of print & electronic media about maternal anaemia and for neutralizing negative attitudes for IFA supplementation & consumption.	Mass level awareness generation through media to promote demand generation	Organized media meeting and preparing news flashes and articles for publications	Awareness generation in community through media at large scale for improving compliance and for better monitoring by alternative channels.
3	Radio / TV talk on Anaemia by leading Gynecologists	To make people & PW's aware about their health issues by Gynecologists through Radio & TV talks.	To motivate PW to consume 100 IFA tablets during pregnancy	To organize radio and TV talk.	Building up of faith with the help of experts to motivate PW for early registration & IFA consumption
4	Post Card Campaign with PW	Appraisal letter for moral boosting of PW's who got registered and benefited by regular IFA consumption. This message will pass to others to encourage IFA consumption by PW.	To appreciate PW who has adopted Janani Suraksha Yojana (JSY) scheme. (JSY was a govt programme to increase institutional deliveries)	Post card writing to PW who adopted Janani Suraksha Yojana (JSY) scheme.	Increase in the registration of PW and distribution of IFA tablets and its consumption
5	Orientation Meeting of Registered Medical Practitioners (RMPs)	Many PW prefer private practitioners (RMPs) for ANC services including IFA. But private doctors do not prescribe IFA tablets as a routine. So RMPs are important for demand generation.	To motivate private practitioners to prescribe IFA tablets in place of syrups	Meetings with RMPs in all the 3 blocks of Varanasi.	Increase in the distribution of IFA tablets & its consumption. Will reach those PW with correct message to improve compliance that otherwise miss by routine government system.
6	Sensitization meeting for opinion leaders	Opinion leaders can motivate for community participation, to enhance IFA supplementation leading to the betterment of child and mother health. Iron preparation advised by RMPs are bought from Chemists and druggist, so they can also motivate pregnant women.	To create awareness among PW and community through opinion leaders.	To organize sensitization meeting with opinion leaders in all the 3 blocks.	Development of the positive environment for IFA consumption by PWs.
7	Sensitization of chemists and druggists	Edutainment shows viz. Puppet show, Nukkad Natak (Folk plays), Street shows and Folk songs etc. Can make people informed about the significance of consumption of IFA tablets during pregnancy.	To create awareness among PW through Chemists and druggists.	To organize sensitization meeting with Chemists and druggists in all the 3 blocks.	Developing positive environment for IFA consumption by PWs.
8	Edutainment shows at fairs and other public gatherings	A large group of population can be reached through school children. Their parents and family can be contacted through them. This approach reduces the cost of travel to the community and leads to larger impact.	To sensitize mass about the importance of IFA consumption during pregnancy.	To make them aware about the importance of IFA intake during pregnancy.	Community people became aware about the importance of IFA intake during pregnancy
9	Using School System for Dissemination of take Home messages for households.	Medical Representatives can play vital role in the introduction of IFA products to doctors. So that they start referring IFA at regular basis to PW during pregnancy.	To sensitize children through school teachers about the importance of IFA consumption.	To organize IEC activities for school teachers at block level.	Reached community through school children with the help of their teachers.
10	Sensitization of the Medical Representatives		To create awareness among medical representatives about significance of IFA tablets supplementation during pregnancy.	To organize sensitization meeting with Medical representative at District level.	Medical representatives got sensitized about IFA supplementation programme.

## MATERIAL AND METHOD

Social Mobilization Activities were carried out for Demand Generation of IFA Tablets by Pregnant Woman as cited in the following table. For this purpose 3 poor performing blocks of Varanasi district (Araziline, Sewapuri and Cholahpur) were identified by A2Z, the USAID Micronutrient Project, New Delhi covering a population of about 1.1 million.

### Findings of End line Study for Maternal Anaemia, Uttar Pradesh

Study Conducted By an independent agency (IIHMR, Jaipur, India) and technically supported by A2Z, the USAID Micronutrient and Child Blindness Project, India.

#### Knowledge on Anaemia

Awareness about anaemia, as per the end line survey results, was quite high, as more than 90 percent of the women had heard about anaemia. The matching figure for the baseline was 49.2 percent, which showed a noteworthy increase after intervention for demand generation activities. Regarding awareness about the symptoms of anaemia, a large majority of the women in all the comparison groups were aware about tiredness, weakness and dizziness. Endline findings showed a remarkable improvement in the awareness of symptoms, particularly regarding weakness and dizziness. Knowledge that taking iron pills can prevent anaemia had increased significantly from 12.9 percent at the time of baseline to 51.5 percent at the end line survey. Moreover, the proportion of women knowing about importance of iron supplementation was higher in intervention blocks as compared to less intervened blocks (44.6 percent).

#### Prevalence of Anaemia among Currently Pregnant Women (CPW)

The prevalence of anaemia was found to be 50.7 percent. However, the related figure for baseline was 72.6 percent, which indicates a significant reduction in the prevalence of anaemia during the project period. It may be also noted that the reduction is more in severe and moderate anaemia. The mean Hb level has increased from 9.8 at baseline to 10.9.

## DISCUSSION

There has been significant improvement in ANC coverage as well as in provision and consumption of IFA. Similarly level of awareness and knowledge about anaemia and IFA has also improved as compared to baseline. Indicators related to provision and consumption of ICDS food, consumption of iron-rich food, etc. were also higher at the end of the study period. These findings clearly indicate that after intervention period there is a significant increase in the provision of antenatal care, and that this change could be attributed to the project interventions. The findings also indicate an increasing role of government health providers in delivery of services, counselling and dissemination of information. A shift from private providers to government health providers was particularly prominent. However, some of the indicators like

use of bed-nets, de-worming and malaria did not show much improvement.

The FGDs with the beneficiaries (high compliance and low compliance groups) revealed that the major factors that motivated women to take IFA were: (1) fear of risk to mother and child due to anaemia, (2) positive effect of IFA on the health of mother and child, (3) regular follow-up and availability of IFA, (4) inclusion of family members for counselling on such issues. It seems that in most of the cases, these factors worked together to motivate the women to take IFA, and to ensure compliance for the same. Probably, these factors might have led to the change in the other indicators too. These findings are consistent with the FGDs carried out with the ANMs, AWWs and ASHAs, which indicated increase awareness, knowledge, and role of these service providers. Most of the health providers were aware of strategies to find out target groups, and had good knowledge about anaemia and IFA related issues. The coordination among these service providers (ANM, ASHA and AWW) in identification of pregnant women and delivery of services appeared to be remarkable. Such coordination was quite evident during the observation of MCHN sessions. The capacity building initiatives of health providers resulted in better identification of target groups, better follow-up and improved information sharing.

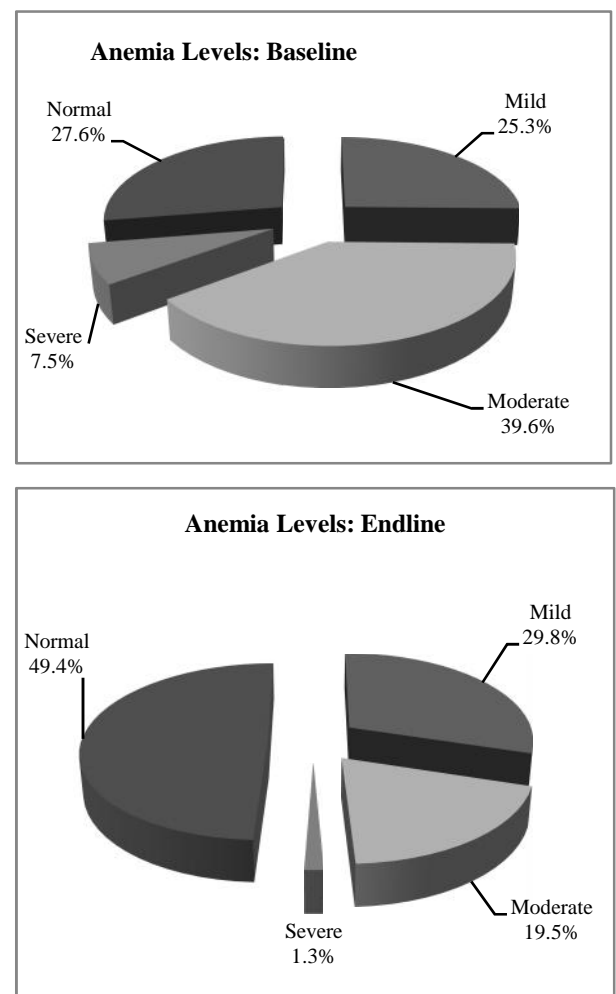


Figure 1 and 2 Anaemia Level at Baseline and Endline Survey

**Table No. 2** A2Z Maternal Anaemia: Endline Survey in Uttar Pradesh - Key Indicators

Indicator	Baseline - Endline Comparison (Intervention Blocks)	Baseline	Endline	P Value
<b>Antenatal Care</b>				
% received advice on consumption of IFA		40.9	95.4	.000
% received advice on food consumption when anaemia		19.7	89.9	.000
% of women received advice on malaria		9.8	31.6	.000
% of women received advice on De-worming		4.3	20.5	.000
% of women received IFA Tablets		41.5	77.9	.000
% of women received 100 or more IFA Tablets		9.8	54.4	.000
% of women consumed 100 or more IFA Tablets		7.4	28.0	.000

**Table No. 3** A2Z Maternal Anaemia: Endline Survey in Uttar Pradesh Knowledge on anaemia and its prevalence among CPWs.

Baseline - Endline Comparison (Intervention Blocks)	Characteristics	Test	Baseline	Endline	Statistics
<b>Knowledge on Anaemia</b>					
	% of RDWs ever heard about anaemia		49.2	95.4	.000
	% know that taking IFA during pregnancy can prevent anaemia		12.9	89.9	.000
<b>Prevalence (percent) of Anaemia among CPWs</b>					
	Severe		7.7	1.3	
	Moderate		39.6	19.5	.000
	Mild		25.3	29.8	
	<b>Total Anemic</b>		72.6	50.7	
	Mean Hb level g/dl		9.835	10.901	

Source of Fig 1 & 2 and Table 2 & 3 : End line survey in Uttar Pradesh by A2Z, the USAID Micronutrient Project, New Delhi,

## CONCLUSION

In India the prevalence of anaemia is high because of poor dietary intake. The impact of anaemia in pregnancy affects both mother and fetus. Anaemia in pregnancy is one of the predisposing factors for preterm delivery, low birth weight, stillbirth and neonatal death and maternal deaths. The deficiency of IFA tablets intake may also be leading to many unrecognised neural tube defects in the community and the situation must be measured to understand the magnitude of the problem. Government and NGOs must come forward to train the Front level workers by mentoring and handholding so that they deliver properly a better and efficient antenatal services at large scale. This should also be supported by demand generation activities in the region to make pregnant women of eastern Uttar Pradesh to deliver healthy babies who live a productive and healthy life.

## Disclaimer

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