Summer Training at
Khushi Baby Association, Udaipur

Supply and Consumption of IFA By Mothers in Three Blocks of Udaipur

By
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Under the guidance of
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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Ms. Soumya Shrivastava** has successfully completed her summer training at **Khushi Baby, Udaipur** from **2nd April 2018 to 2nd June 2018.**

The candidate herself completed the project assigned to her summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.

Dr. Neetu Purohit
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for

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KhushiBaby

Sr. No. - 05/Internship/KB/2018-19/

June, 02, 2018

To Whomsoever it may concern

This is to be certified that **Miss Saumya Shrivastava** from IHMR University Jaipur has attended the organization for her summer internship from 06/04/2018 to 02/06/2018. She has found satisfactory in delivering tasks in the organization. During the period of her internship program with us she had been exposed to different process & was found punctual and hardworking .

Wishing the best for her future endeavours .

(Dr. Jitendra Kumar Hayaran)
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ACKNOWLEDGEMENT

‘The only way to do great work is to love what you do’

- Steve Jobs

This internship was a milestone in my career; it not only helped to broaden my horizons, but also touched those areas of life which lie miles away from more mainstream. At the onset of my report, I would like to acknowledge my sincere thanks to our institute, Institute of Health Management and Research, Jaipur for providing us platform to gain enough knowledge and skills in different aspects of health management.

I express my gratitude and regards to my mentor **Dr. Neetu Purohit** for his able guidance and useful suggestions which helped me in completing the project work.

I would like to express my deepest gratitude to **Mohammad Shanawaz**, (COO) and **Dr. Jitendra Hayaran**,(Reasaearch& Policy Manager), Khushi Baby Association who provided me the possibility to complete this report..

I would also like to acknowledge with much appreciation the crucial role of**Vaidehi Supatkar**(Lead Designer), **Dr.Vijendra Banshiwal (**Field Tech Program Manager), **Mr. Pawan Singh** (Research & Data Manager) and **Mr. Hamid Abdullah** (Field Implementation Mananger) of Khushi Baby Association, who provided me with all the required information & guidance I needed to carry out my project.

About the Organization

Khushi Baby Inc.

Khushi Baby is an award winning maternal and child health platform which leverages Near Field Communication technology to provide beneficiaries with a decentralized, digital health record. Since winning the Wearables for Good Challenge, Khushi Baby has been focusing on deployment of its system and field trials in the Udaipur District of Rajasthan, India. In the last year, much was achieved with additional funding support via Arm. This included the following activities:

Launched KB 2.0 platform with 87 frontline nurses
Tracked 15,000 mothers and children across 375 Villages, over 80,000 vaccination events, and over 33,000 mother and child health checkups
Completed over 70,000 voice call reminders to beneficiary families
Surveyed over 1100 mothers as part of their second ongoing randomized controlled trial for Midline results
Grew Team to include 21 full-time and 14 part-time members between India and the US
Raised over 750K in funding for the next two years

Khushi Baby has demonstrated:

Increased engagement in discussion and satisfaction among mothers attending the immunization camp.
Mothers were better able to retain their child's record in the wearable form compared to traditional card.
More Complete Data on the KB pendant vs. paper card and more consistent data between patient health record and backend system than the government equivalent
Decrease in time to obtain data from field to backend from 30 days to 4 hours.

16% increase in immunization coverage and timeliness for vaccines through PENTA3 for beneficiaries receiving our KB Voice Reminder Calls.

40% increase in camps being held on time after tracking feature introduced on Dashboard and WhatsApp Groups

Accredited Social Health Activists (ASHAs) reported time saved, reduced distance travelled, and mobile balance saved because mothers are already reminded via the Voice Call system.

Since winning the wearable for Good Challenge, Khushi Baby has been focusing on deployment of its system and field trials in the Udaipur District of Rajasthan, India.

We have tracked 15,000 mothers and children across 375 Villages, over 80,000 vaccination events, and over 33,000 mother and child health checkups completed over 70,000 voice call reminders to beneficiary families.

Under KB, 1100 mothers are surveyed as part of their second ongoing randomized controlled trial for midline results.

Khushi Baby has focused on community engagement and satisfaction among mothers attending the Immunization Camp.

There has been 16% increase in coverage for immunization and timeliness for Penta3 for beneficiaries receiving KB Voice Reminder Calls. 40% increase in camps being held on time after tracking feature introduced on Dashboard and Whatsapp groups.

MISSION &GOAL:-

Khushi Baby mission is to monitor and motivate the health care of mothers and children to the last mile

KB goal is to provide a digital key to connect the last mile to health and social services.

About Khushi Baby System

KB have integrated mobile health, wearable NFC technology and cloud computing to produce a complete platform to bridge world's maternal and child health gap. By tying tradition with technology, we are putting the beneficiary back at the center of their care.

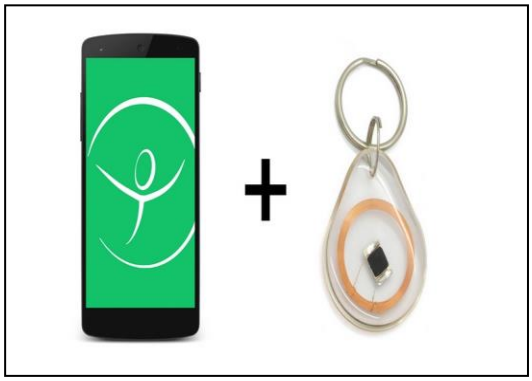
Khushi Baby appreciates that technology cannot replace human effort. As such its approach is not simply to provide a technology platform.

Instead, Khushi Baby takes an end-to-end perspective from community engagement to design to development to capacity building to deployment to field research to analysis, stakeholder engagement, and partnership building.

It empowered to see the complete process by bringing a multidisciplinary team of public health practitioners, designers, engineers, analysts, social workers, field researchers, physicians in training, and policy analysts - all working together around the same table along with a village of world class partners.

What's Next

Looking forward, Khushi Baby will look to grow it's footprint by making Udaipur a model district for maternal child health for others to scale and replicate. KB has been in talks with consultants for the Rajasthan State MOHFW to build custom analytics solution on maternal child health data quality on the existing State database.



This represents an important first step towards generating non-grant revenue and towards integrating into the State infrastructure for scale-up. KB will also continue to work with the state and central government to design frameworks for integrating multiple data streams from Mother and Child Health with Vaccine Inventory and Cold Chain, High Risk Pregnancy Tracking, and Disease Surveillance. UNICEF Innovation is also working with Khushi Baby to explore further collaborative opportunities with UNICEF Immunization teams for expansion in the field and opportunities for transition to scale in other geographies.

TASKS GIVEN DURING TRAINING:

- Script writing for App Demo
- Video segregation, selection and collection and shooting
- Worked on various indicators in Backend consistency table
- Training of the surveyors
- Monitoring of the surveyors
- ASHA Indicators Matrix and Questionnaire Translation
- Baseline report for End line indicators
- Call history records count of high risk beneficiaries, checkup denial reasons of equipments and other information from dashboard forwarded through whatsapp group.
- Benchmarking activity(Open SRP)
- Testing the endline questionnaire

OSERVATIONS AND LEARNINGS:

- ANM has to manage a lot of work in spite of KB app help.
- ASHA , ANM and AWW has communication issues and work problems.
- ANM does not enter information on KB APP fully.
- Dashboard has a lot of loaded information.
- Distance of an aganwadicentre from households.
- Functioning of sub centre, PHC and CHC.
- Interaction with higher officials
- Planning, organizing, and division of work

Learnings from the field

- **Related to the App (gogunda camp visit)(JHADOLI 26/4/2018)**
- Biometric/scanner did not work at the camp site. If biometric does not works for the registration of new mother then ANM has to fill in the details again.
- During filling the information of ANC Summary, under High risk Option
- ASHA and ANM both maintain the personal record as well along with the Reproductive and Child Health Register.
- ASHA collects photocopies of MAMTA CARD for her payment.
- While doing the biometric for returning mother, app does not show about the success of the function done.

- ANM does not view the due list from the app, they use their personal printed paper sheet of due list.
- IFA tablets supply problem is there, issues continue with supply system.
- In case of no tablets, ANM recommend beneficiaries to take IFA syrup.

LEARNINGS RELATED TO THE STUDY

- Whatsapp group helps in updating higher officials regarding all those important information which is synced on the dashboard. But responsiveness is very low as individuals don't respond in the group even there is important information being shared.
- There is no crosschecking of what ANM is entering on the APP and what actually the situation is. Although monitors keep a check but they cannot be there in each and every camp.
- So, the mother denials reason for IFA and HB might be a reason that ANM enters wrong information. Cross checking of this could not be possible as it has to be done properly and it could not be done in span of 1 month.
- ANM does not explain to mothers about importance of IFA tablets during pregnancy. (as observed in 5 camps out of 7 observed during the study)
- Mothers don't even bother to ask to ANM about the entire health related query including IFA tablets.
- There was no IEC material for IFA supplementation in most of the Aganwadi centers where mothers used to come for ANC checkups.
- There were communication problems between ANM, ASHA and Aganwadi workers.
- Mothers are in a hurry during the camps, they only visit for Vaccination and Mamta card and they forget to get Khushi baby pendant.
- Hemoglobin gets checked on the basis of color of blood sometimes which is not accurate.

SUPPLY AND CONSUMPTION OF IFA BY MOTHERS IN THREE BLOCKS OF UDAIPUR

INTRODUCTION:

Global burden of disease report 2015 has ranked India 143rd out of 188 counties in health care scenario which is quite not impressive. Approximately 0.28 million maternal deaths occurred worldwide and almost one-fourth of it occurred in India. After so many health services implementation in this field, MMR has decreased from 482.1 maternal deaths per 100,000 live births in 1990 to 284 maternal deaths in 2015, but India still has to go a long way to achieve Sustainable goals by the year 2030. In earlier studies, 20 % of maternal deaths are directly related to anemia and almost 50% of maternal deaths are indirectly related to it.

According to NFHS-4, 50.3 % of pregnant women are anemic in India and almost 52.1 % are anemic in Rural Rajasthan. Iron – deficiency Anemia is a serious problem for maternal deaths across globe and even in our India. WHO estimates almost 87 % of pregnant mothers are anemic in India despite of age and parity, which is an issue of concern. Iron deficiency Anemia leads to low birth weight born babies, preterm delivery and poor neonatal health.

Nutritional deficiencies among pregnant mothers are a cause of concern in India as it is attached to social stigma like gender inequality.

With the prevalence of Anemia in India, IFA supplementation is required for all pregnant females to improve their health and Government is providing free supplementation for at least 90 days for betterment of maternal and child health but adherence to it is still a problem in many concerned states. There were many studies before which focused on finding out the reasons for non-compliance of IFA tablets among mothers during pregnancy which ultimately increase anemia prevalence among them. NFHS-4 states that 60% of women receive IFA tablets but only 17 % consumed it in Rajasthan and all the IFA are going down in drain.

This study focused on finding out the view of mothers on IFA supplementation and HB test during ANC checkups and reasons for non-compliance and also an exploratory research to study and observe behaviors of women on health awareness related to anemia and IFA supplementation and also to study the supply side process of drugs and medicines under government.

LITERATURE REVIEW:

Iron and folic acid consumption by the ante-natal mothers in a rural India in 2010-study has been conducted to assess the proportion of consumption of IFA tablets by mothers and the factors responsible for the compliance. It is estimated that prevalence of anemia in India among women is 30%(2010). Anemia is one of the indirect causes of maternal mortality in India.

According to the District Level Household Survey (DLHS) 2007-2008, around 22.4% of mothers consume 100 tablets as given during the MCHN camps by the ANMs.

It is a cross sectional study community based study conducted among 50 antenatal mothers in Matigara block (consisting of 5 gram panchayats) of Siliguri subdivision in West Bengal. They chose multi-stage sampling method for the study. This was done over a period of 2 months from 1st June to 31st July 2010.

Eligible pregnant mothers were given pre-designed, semi-structured questionnaire and focus-group discussions were conducted among "AganwadiCentres" with the help of ICDS workers. Date of issue of IFA tablets was traced through Antenatal card and mothers were interviewed so that the consumption can be traced from the date of issue to till the date of the interview.

IFA tablets were adequately and regularly consumed by 31(62%) mothers out of total study population.(50). There has been found an association between the consumption and the awareness created by the health workers. An effort should be made at the training of the health workers for the proper compliance of IFA tablets.

Maternal anemia has remained high in Bihar despite of government mandate IFA supplementation. Study objective is to examine the Government's IFA Supply and Distribution system and to identify bottlenecks behind inadequate IFA Supply. A cross sectional mixed methods approach is used here to conduct study in November 2011 and July 2012 across 8 districts of Bihar. Interviews were conducted among 59 participants including health workers at village, health sub centre, block, and district and state levels.

44 % of the ANMs interviewed were found to be out of stock for IFA. Quantitative and Qualitative research was done. The study identified bottlenecks as IFA forecasting, storage, procurement, disposal, lack of personnel and training opportunities as key players in Supply Chain.

It is concluded that inadequate supply is the major constraint in effective IFA supplementation program which varies among districts. Improvements at all levels in terms of infrastructure,

training, monitoring, and effective practices will be very helpful to strengthen the issue of adequate IFA supply.

STATUS OF IRON FOLIC ACID TABLETS IN RAJSTHAN**:**

From the NFHS Survey, 60% of the pregnant mothers were given IFA tablets but only 17 % have consumed it.

In 2015-2016, out of 1.9 million registered for Antenatal health checkups, only 1.1 million received the IFA tablets, this was 62.92% of the total registrations.

Data shows that the most of the pregnant women don't consume IFA tablets; reasons outlayed by health officials include constipation, vomit and nausea.

46.6% of the pregnant women in reproductive age years (15-49) were found to be anemic in Rajasthan according to NFHS 4 while in India this figure was 50.3%.

There is no proper tracking system of the IFA consumption other than the ASHA asking mothers about consumption. Furthermore, it seems to be hardly possible to do effective monitoring.

RATIONALE

Two sides were put into consideration

a) Supply side: this area was taken into consideration to have a basic idea about how supply system of medicines and equipment work under the government.
   Secondly, Khushi Baby do monitor all the information related to supply issues through Dashboard and follow up by social media use i.e. Whatsapp
b) Consumption side: This area was taken into consideration to look at the status of compliance of IFA in mothers. Moreover, to understand and observe the reasons behind the non-compliance towards IFA tablets if any.

OBJECTIVES:

- To learn about supply side process of IFA distribution
- To know about the monitoring of IFA supply under Khushi Baby
- To assess the status of consumption of IFA and to know the reasons of non-consumption by mothers registered under Khushi Baby at Udaipur district of Rajasthan.

METHODOLOGY:

a) STUDY APPROACH-Qualitative approach, research was carried out through personal semi-structured interviews for gaining an insight and detailed perspective on a particular research subject.

b) STUDY AREA-Research was carried out in three blocks of Udaipur District of Rajasthan namely Jhadol, Gogunda and Sarada where Khushi Baby works.

c) STUDY POPULATION- Pregnant mothers and Lactating mothers(registered under Khushi Baby) are included in this study.

d) STUDY PERIOD: Study was done over a period of two months

e) SAMPLE DESIGN -Non-probability convenience sampling was used and the final sample size depends on the theoretical saturation of the questions. This means that getting the similar responses for our questions. We got saturation after interviewing 32 beneficiaries and 11 ANMs.

f) SAMPLE SIZE-Sample included 32 mothers, 11 ANMs, 5 ASHAs, 1 MOIC, 1 LHV and 1 BPM over all the three blocks.

Interviews were taken by reaching out to MCHN camps and houses of beneficiaries, also went to CHC, PHC, Aganwadi and Sub centre to meet with the ANMs,ASHAs, MOIC, LHV and BPM.

g) DATA COLLECTION AND ANALYSIS:

A semi-structured Questionnaire was used to get in depth view on the topic and the questions were asked to each respondent in a form of an in-depth discussion. All the responses were

collected on paper format and some of them were recorded as well on phone. Quantitative responses were entered on excel and major concepts were analyzed by reading the responses.Responses were re-read for observations and clearance of concepts. Key learning's were well observed and understood for the analysis part; graphs were made for the quantitative part.

FINDINGS:

1) SUPPLY SIDE PROCESS

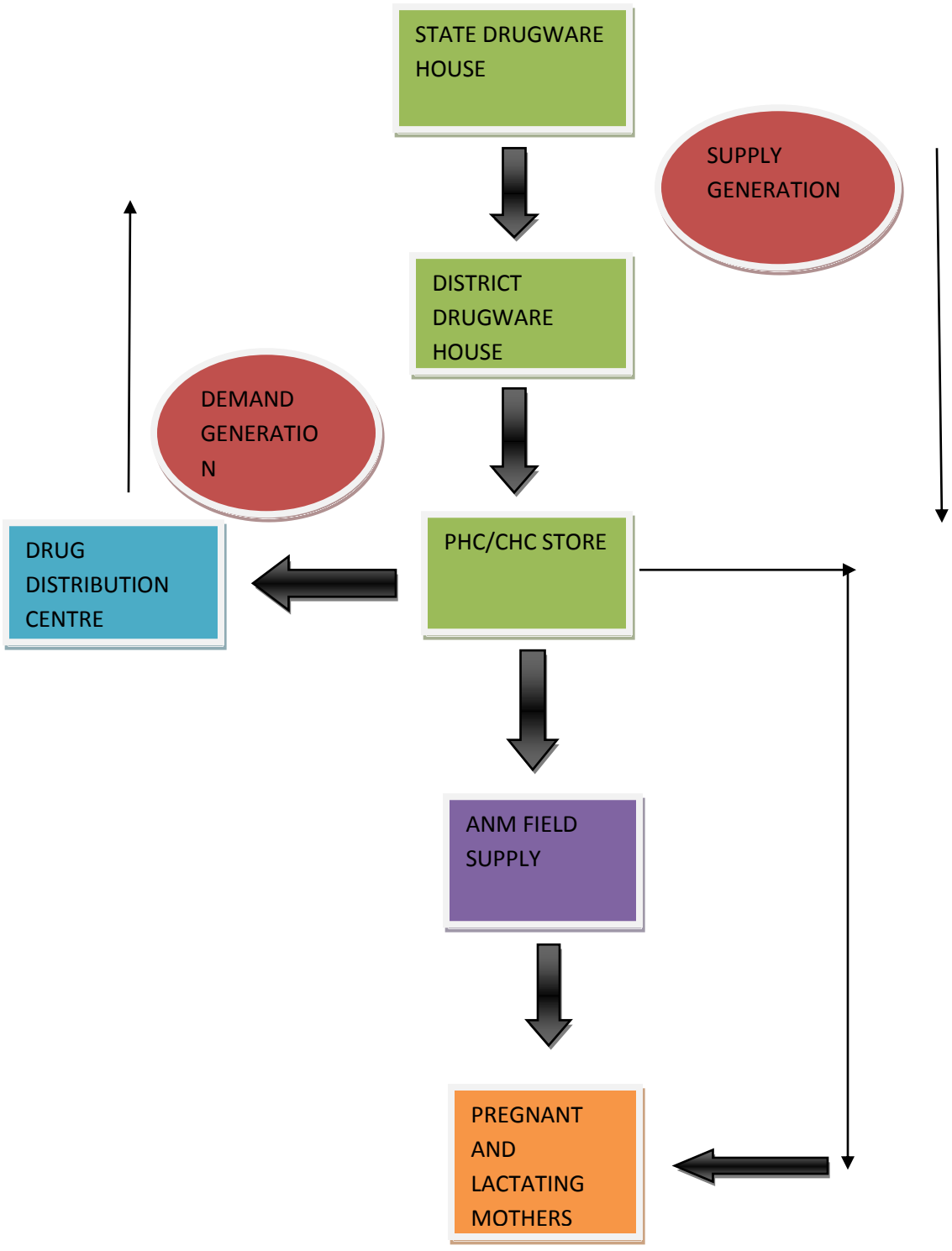
To understand the supply related issues, we spoke to ANM, ASHA, LHV, MOIC and BPM from the respective blocks.ANM and ASHA those who are working with Khushi Baby. Discussion was important as it will help us to better understand the denial reasons from mother's side as well as from ANM side. Better insight into ANM perspectives towards supply issues of medicines and also interaction with higher officials helps to better understand and build a view on particular situations.

A total of 11 ANMs were interviewed and 5 ASHAs, 1 LHV, 1 MOIC and 1 BPM were covered under study.

Here main objective was to understand supply side monitoring under Khushi Baby as well as to understand the Supply Side process takes place under the government health system.

Discussion with **MOIC, BPM and ANM** gives a clear view on how the supply side process under Government. Information collected as follows:

> ANM collects the medicines and equipments from the respective store in charge at PHC and CHC of the respective blocks. MOIC officer at particular PHC and CHC looks after whole supply related stocks of medicines as well as equipments. MOIC crosscheck whether ANM has given the IFA tablets to mother or not when mother comes at PHC during health checkups under government schemes. Medicines are ordered to the drug supplier according to the demand and supply comes on a fixed date every month and a voucher is generated and issued at drug warehouse of the hospital, then ANMs are called to take the medicines as per demand during sector meetings. MOIC told that supply shortage do take place so they put emergency stocks or hire from other institutions in urgent requirements. One of the ANM said, "The supply issue is going on in Sarada Block" and another ANM responds "I did not get the medicines from past year; I did make some arrangements from other facilities and gave 10 instead of 30 tablets to mothers."ANM complaints about the shortage of IFA to LHV as well as to officials in block meetings.While MOIC officer says that they do have emergency stocks with them and they call ANMs to come for taking of medicines on a particular day every month.


STATE DRUGWARE HOUSE
SUPPLY GENERATION
DISTRICT DRUGWARE HOUSE
DEMAND GENERATIO N
DRUG DISTRIBUTION CENTRE
PHC/CHC STORE
ANM FIELD SUPPLY
PREGNANT AND LACTATING MOTHERS

2) KHUSHI BABY MONITORING OF SUPPLY SIDE:

Khushi Baby monitors these issues through social media use .i.e.Whatsapp, Dashboard, Block meetings, camps visits and call reminders. All the officials are connected through a whatsapp group in all the five blocks covered under Khushi Baby. All the information is synced through KB App to Dashboard which can view by higher officials. Relevant information before the camps, supply of equipments, vaccines, cancellation of camps, follow up of high risk patients and other important information from the dashboard are all covered under messages given through whatsapp group so that all are aware of the information and scenario.

DASHBOARD:

Dashboard has all the synced data uploaded via Khushi Baby App. Data related to out of stock of IFA and Mother denial reasons are included.

SOCIAL MEDIA (WHATSAPP GROUP):

Social media is used for day to day related queries and all the higher officials are connected through this for cross checking as well.

BLOCK MEETINGS AND CAMPS VISITS:

Monitors meet respective ANMs and Health officials to look over a particular issue. These visits take place monthly.

CALL REMINDERS:

Phone calls are made to ANMs to ask why a concerned situation is being entered on the App and in some cases. Phone calls to higher officials are made as well.

3) SUPPLY AND CONSUMPTION STATUS:

DISCUSSION WITH MOTHERS AND ANMs:

Total of 32 mothers (pregnant and lactating mothers) were interviewed during the project personally from all the three blocks of Udaipur.

A total of 11 ANMs were personally interviewed as well as telephonically with the help of semi-structured questionnaire.

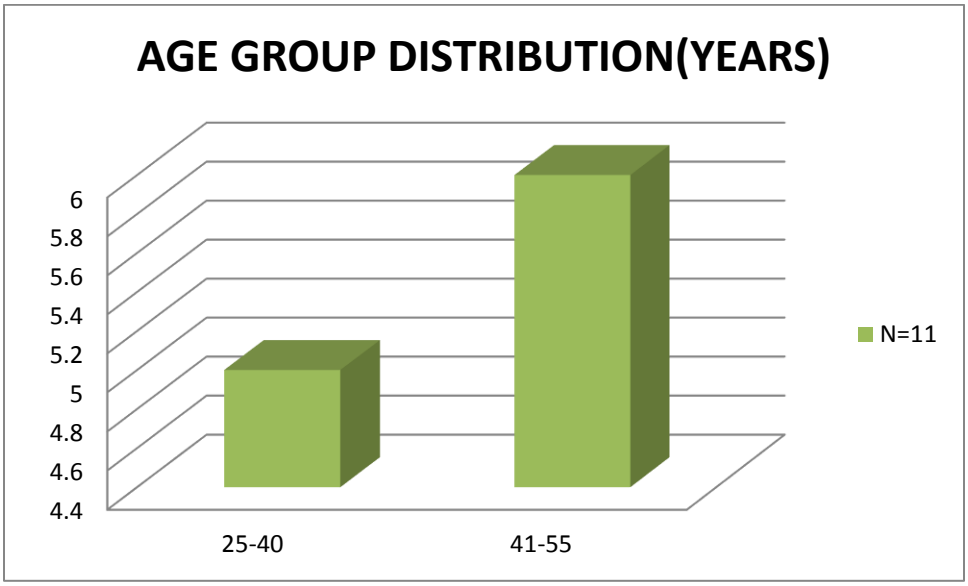
Gogunda, jhadol and sarada –these blocks of Udaipur District were covered under study.

5 ANMs from Sarada &Jhadol and 1 from Gogunda Block were taken under study.

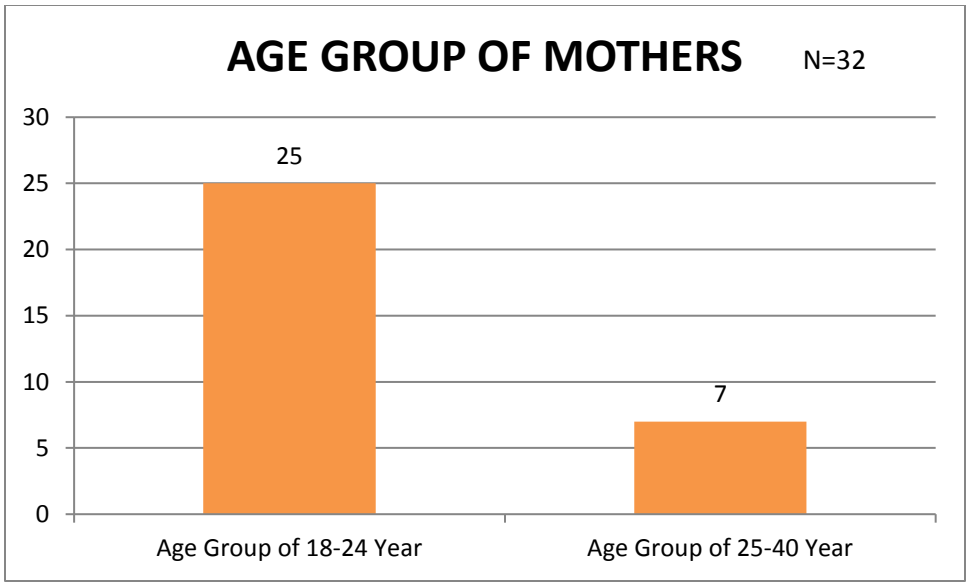
PROFILE:

Many different domains were observed while study but some of the important ones are:

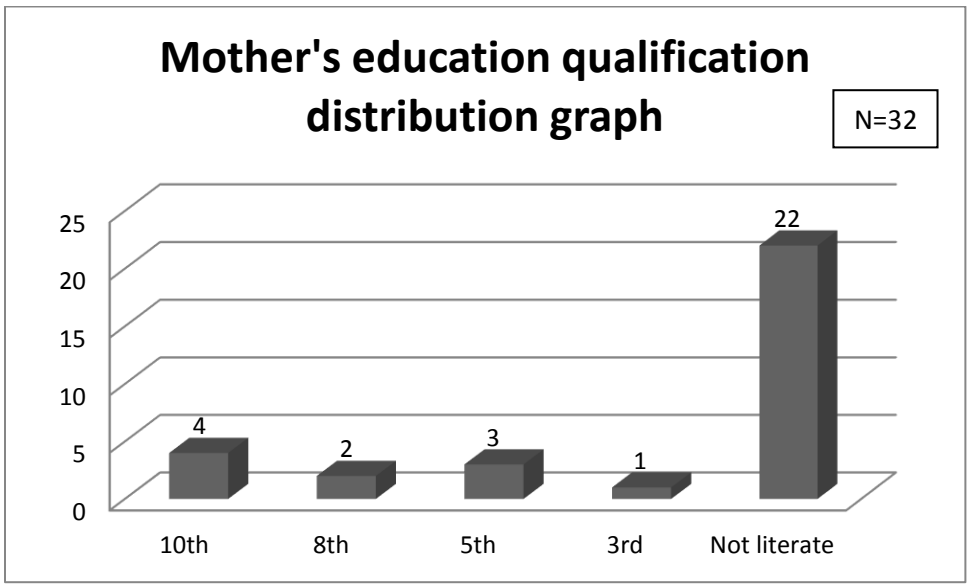
- **AGE GROUP**: 5 ANMs out of 11 were between age group 25-40 years and 6 ANMs were between Age group 41-55 years.



- **AGE GROUP OFMOTHERS:** 25 respondents are found between the age group of 18-24 years and 7 respondents are found between the age group of 25-40 years.



- **EDUCATIONAL QUALIFICATION:**



- **SUPPLY STATUS OF IFA**

  To understand what currently the status of IFA , we had to ask them about the conditions of supply of medicines.

  One of the ANM said that supply condition is very worse, we cannot help it. We don't get the medicines even after complaining thrice.

  Another ANM responded –"I have not got IFA from past one year and we can only complain. We get HB equipment from our funds received by the Government."

  Other ANM said, "Condition is same in supply, supply issues occurs within 4-5 months."

6 ANMs said that IFA supply was proper out of 11 ANM. In Sarada, IFA supply is an issue from past 6 months; in spite of this 2 ANMs said that supply is proper.

- **KB WHATSAPP GROUP HELPS IN ENSURING PROPER SUPPLY OF IFA:**
  Out of 11 ANMs, 6 responded negatively towards KB whatsapp group for proper supply of IFA and equipments while 5 responded positively towards this section.

ANM says that *"Yes, Khushi Baby has helped in this issue.*

Once, Supply was short then they immediately contact the concerned official and after that supply was available. "

Other ANM says that," *I do not think so, as it is a Government process, it will take its own time"*

- **IMPROVEMENTS IN SUPPLY SIDE:**
  We asked ANMs that is there a improvement in supply side of IFA then One of the

ANMs say that they face a lot of supply problems and they write queries to higher officials regarding the same. There is no such improvement in supply side.

"*I have written application to LHV, and also told them during block meetings. But no change."*

"IFA supply is an issue from past one year, i have to arrange for some other option to give Iron tablets to mothers"

' *There is no such improvement, supply side condition is very bad, we write applications to higher officials and we tell our query in block meetings.*

"*We don't have supply from past one year and we do have to enter wrong information on KB app as our supervisor won't allow us to enter right information.*"

- **SUBSTITUTION OF IFA WHEN SUPPLY IS NOT AVAILABLE**
  9 out of 11 ANMs said that they substitute IFA by other options.

5 said that they give nothing to mothers if they don't have IFA tablets with them, 3 said that they refer mothers to CHC and Government hospitals and 1 said that they make arrangements for IFA like sometimes from JSY, and some medicines from Adolescents scheme.At times, when supply is short, ANM do have to manage about that. They either make arrangements or give nothing to mothers.

"We cannot help it; we do not give anything to them"

"If we know they are at high risk or severely anemic, we refer them to PHC /CHC or make some arrangements by taking the IFAs from JSY, or from adolescent group stock."

"If we get tablets, we later on make them available to mothers through ASHA"

- **ROLE OF ASHAs:**

They themselves go to each and every house to tell mothers to take IFA tablets and visit for ANC checkups. ASHAs frequently goes to houses in 15 days on an average and also before MCHN camps but sometimes she makes phone calls for IFA reminders and ANC checkups as she finds it difficult to travel at long distances . They make them aware but still they can't force mothers to have IFA regularly as prescribed. ASHA checks their leaflets to track whether they consumed it or not. No other tracking system has been observed other than this.

ANM agreed that ASHAs do make calls from AganwadiCentres to call mothers for ANC Checkups and also to track mother's consumption of IFA tablets.

ANM says that, "*ASHA do visits houses frequently to tell them to come for ANC checkups and also she sometimes track the consumption by checking the leaflets."*

Mothers**:** 26 out of 32 mothers said that ASHA visits their house and 9 out of these 26 mothers said that ASHA do ask about IFA consumption.

- **AWARENESS AFTER KHUSHI BABY FOR IFA CONSUMPTION IN MOTHERS:**

  We wanted to check whether Khushi Baby has somewhere helped ANMs to increase awareness regarding IFA consumption among pregnant mothers. This will further help in making some efforts in this direction so ultimately there will be a better compliance among pregnant mothers. As khushi baby pendant helps as a reminder to mothers somewhere it has also helped in IFA uptake.

  More than half of the ANMs said yes there is an improvement in pregnant mothers as they take IFA tablets regularly or better than before times.

One of the ANMs said "Yes, there is an improvement in pregnant mothers after KB App and Pendant. They themselves ask about when to come next for ANC Checkups, and also in IFA consumption."

Another ANM said "NO, the situation is same as before, no such improvements."

Other ANM said "NO, we have to tell them every time about IFA tablets and HB test; no such improvements and we have got a lot of work to do during MCHN camps as well."
5 ANMs out of 11 responded positively that there is an improvement in Mothers after Khushi baby and while 6 said that there is no such thing, the situation is same as before

- **AWARENESS ABOUT CONSUMPTION OF IFA TABLETS**
  We asked about their knowledge of consumption of IFA tablets, because in our initial interviews we came across responses including "we are not aware about what medicines you are asking about".
  Out of 32 mothers, 22 were not aware about why do they take IFA tablets and 10 were aware about it.

Majority responded that they are not aware and very few said that yes.

Like one of the mother said that yes,'*I know about it, we take it for Stronger body and health*.'

Other one said that,'*we get rid of weakness if we eat IFA tablets.*'

And also one replied that, '*I think we take it because we are iron deficient'*

- Almost half of the mothers did not consume the tablets and more than half of these were not aware of Consumption of IFA
- - Reasons given by the mothers for non consumption included nausea, vomiting and also supply shortage.
- *"I do not consume them as I feel nauseous."*
- *"Yes, I have stopped consuming it, because of vomiting"*
- *"Sometimes ANM do not give IFA tablets due to non- availability."*

This domain emerged as one of the most important because this seems as very first step towards taking some action.

Here, awareness is very important because if they are not aware about what they are consuming and why it is important for their health, they will not comply with that particular action.

- **EDUCATION AND ROLE OF ANMs**

  We asked about basic qualification of the mothers and also asked them about the awareness related to IFA, so majorly those who were not literate found to be less aware about the advantages of IFA, why to consume IFA

  So, in total out of 22 mothers those were not literate, 17 mothers said 'no' to awareness regarding IFA consumption and 5 said 'yes' they are aware of it. Educational qualifications up to standard 10^{th}, 8^{th}, 5^{th} and 3^{rd} were found.

These factors emerged out as an important findings in spreading awareness about consumption of IFA in mothers.

Although we cannot conclude wholly those educational criteria should be related to the awareness but we have jotted down some quotes given by the particular mothers during the interview.

"I know about why we consume IFA tablets so that to get rid of iron deficiency. I have completed my studies of 10^{th} standard. I know this as I was taught about the same in school."

We observe that there are cases where ANM explains about the importance of taking IFA tablets and other health related information to mothers like about their diet plan, intake of other medicines and regular health checkups.

Key observation is that we can create a relation between awareness and whether ANM explains about this to mothers or not.

So, 16 mothers who are not aware responded that ANM has not explained to them about the importance. On the other side, 5 mothers who are aware responded that they were not explained

by the ANM. Majority here reflects that possibly if ANM explains to them about taking IFA, there are better chances of Awareness and then proper behavioral action. If ANM would have told the importance about IFA, we would be more aware and would consume them for our health.

One of the mothers said that *Yes, we asked to ANM but did not remember what she told to us about.'*

- But Role of ANMs is important and it can also contributes to awareness for IFA consumption in Mothers.

"*Yes, I am aware of IFA tablets and Anemia. We take medicines to stay stronger and for our child health. I am not educated but I know this. I know this as ANM have told me about this"*

-ANM reach out to mothers for increasing awareness about consumption is also important.

"*I would have consumed it if I would have known about the importance"*

ANMs play an important part in spreading awareness about IFA consumption. They help in motivating them through telling them about the importance.

" You should consume them as it is important for your health and as well as for your child."

"It is for decreasing Iron deficiency. You should take it as it will make your body stronger"

- **REASONS OF MOTHER DENIAL TOWARDS CONSUMPTION OF IFA TABLETS:**

There are many reasons why mothers were not complying towards taking IFA tablets regularly.

Reasons mentioned by mothers are listed as

- Nausea and vomiting
- Nausea
- Forgetfulness
- Only vomiting

Majority of them responded that they feel nauseous when they consume IFA tablets therefore they don't continue taking them. Another important reason was vomiting

One of the mother said that, I don't feel good, I feel nauseous while taking the tablets therefore I have stopped taking i

- **CALL REMINDERS:**
  There are call reminders for ANC Checkups from both Khushi Baby as well as from Aganwadi, 16 mothers said that they receive calls from Khushi baby while 4 said no call reminders from any and finally 8 said reminders from Aganwadi.

There are only 8 mothers who said they receive call reminders from ASHA for IFA consumption and tracking, and 25 mothers said NO to such call reminders.

There were no calls from Khushi Baby but mothers do receive phone calls from ASHA regarding the IFA consumption and awareness.

"I *do receive calls from ASHA for IFA* "

We can clearly see that there are call reminders for ANC checkups but not for IFA tracking and consumption.

Call reminders could be very important and helpful in spreading awareness about benefits of IFA and Anemia knowledge to mothers so that the health of mothers and children will be better.

STIGMA:

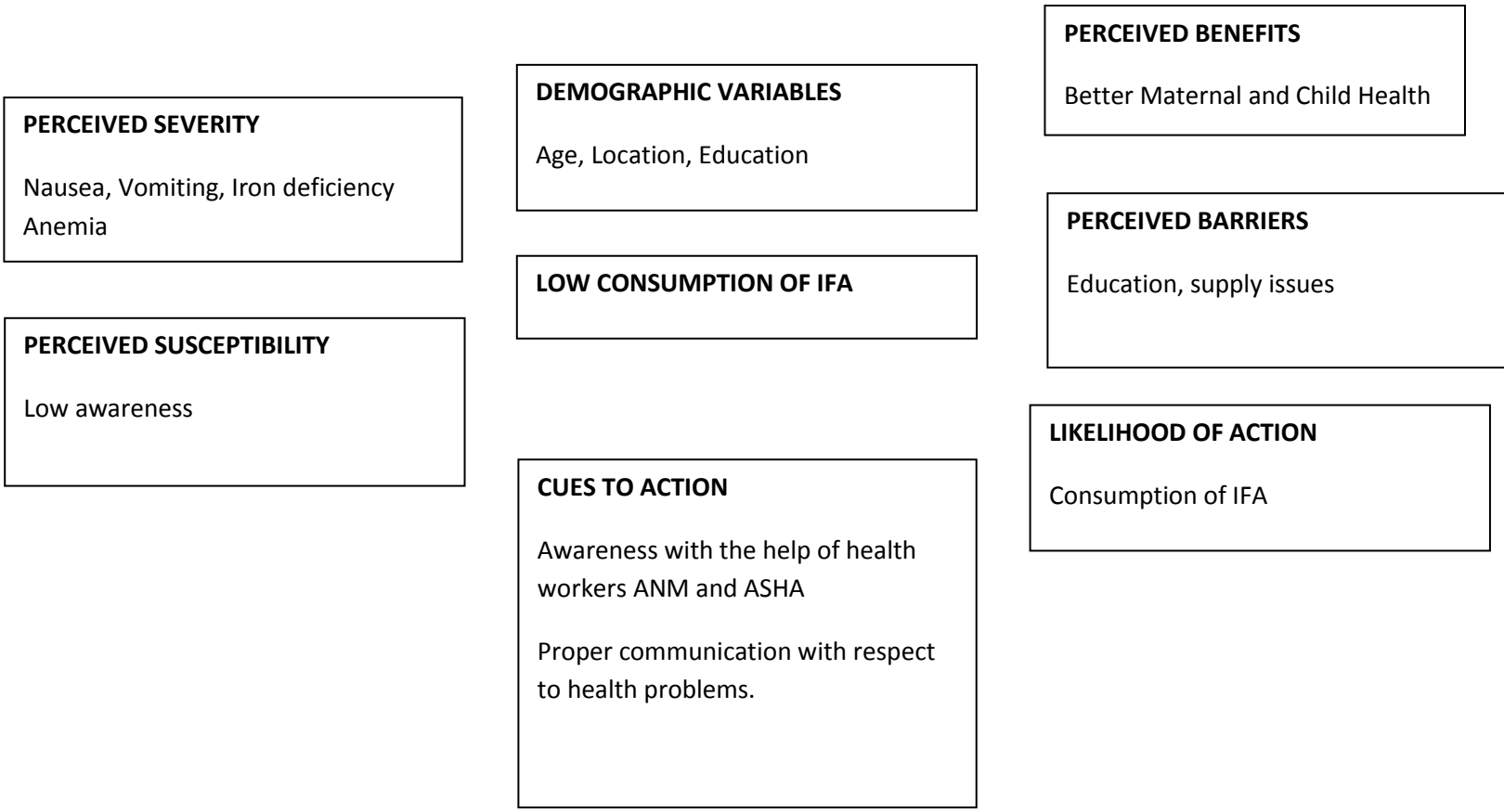
Major observation was that there was no social stigma attached to the compliance of IFA consumption.

. None of the mother responded that their family members stop them from consumption of IFA tablets.

"My *Family does not stop me from consuming."*

RECOMMENDATIONS:

HEALTH BELIEF MODEL FOR IFA COMPLIANCE



Health Belief Model is a psychological model which attempts to bring a change in one's behavior. It is based on the attitudes and beliefs of the people. Concerning about Low IFA Consumption, these are the following observations obtained from the project.

Perceived susceptibility should be increased as women are not aware about how low consumption can lead to further health consequences. Perceived benefits here are good maternal and child health, this need to be increased as well. Talking about Perceived Severity, this has also found to be low among women as they are not aware of the bad consequences of non-consumption of IFA, but they know they don't consume the tablets due to issues like nausea and vomiting. These issues could arise due to pregnancy related effects, which could not come as clear through this project. So we should increase the

severity perceived by women. Demographic variables here are Age, Location and Education which affects the likelihood of action .i.e. Consumption. Perceived barriers are supply issues and education, these two are very important to overcome as they directly affect the action. We could focus on reducing these barriers for future prospects.

Cues to Action include strengthening the awareness regarding IFA consumption with the help of Health Workers and also to tackle the issue of communication regarding health problems.

There should be IEC material available at the time of ANC Checkups so that ANM can give a pamphlet to mothers about taking IFA tablets and importance of anemia. There should be a proper training of ASHAs and ANMs on this matter, especially ASHAs because they are the ones who visit mothers frequently. ASHAs can be given incentives for distribution of IFA posters at homes during her visits. We understood the whole issue is of awareness because even when mothers know that IFA consumption causes them to vomit and make them nauseous, they will comply to it if they would know the importance. Role of ANM is very important in this issue because they can influence pregnant mothers towards such compliance. They should tell about IFA during Checkups. Khushi baby can monitors over ANMs entering other denials on Khushi baby app by cross checking it with the concerned mother. This can be done by an option on the dashboard as well as on the app which displays details about mothers who do not receive IFA during a camp and these mothers could be following up through phone calls asking relevant information OR there could be a cross check on ANMs by adding an option on app which generates alert on denials for IFA (includes both mother as we Out of stock denials), then the ANMs list will generated who chose denial option over IFA and then they can be questioned about the situation during block meetings or individually at sub centers. There are no call reminders from Khushi Baby for IFA so they should start ones with a message of motivation and awareness for anemia; about the consequences of not consuming IFA tablets.Whatsapp group KB responsiveness should be increased and this can increase only when personally all the MOICs and all the officers are motivated for the good cause of Khushi baby towards child and maternal health. This will definitely take time.

AUDIO CALL REMINDERS FOR IFA AWARENESS:

नमस्कार! अपने आने वाले बच्चे और खुदके अच्छे स्वास्थ्य के लिए iron की लाल गोलियां हर दिन खाना चाहिए, डरिए मत, ताकत के लिए जरुरी है यह दवाई.

हर बार anm सिस्टर से सलाह ले,इसके बारे मे पूछिए.

अपने बच्चे के ताकतवर भविष्य के लिए आज ही शुरू करदे दवाई लेना.

ताकत कि लाल गोलियां !

“ ताकत कि यह लाल गोलियां ,आपकी सेहत कि यह लाल गोलियां
आपके बच्चे कि ताकत कि यह लाल गोलियां,
आपके उज्जवल और स्वस्थ्यपूर्ण भविष्य कि यह लाल गोलियां!”

CONCLUSION:

Low awareness in mothers regarding IFA and anemia, so steps towards increasing this can clearly improve our motive of full IFA consumption among pregnant mothers which is very important to decrease iron deficiency anemia and improve the child and maternal deaths. There is no improvement in supply side after Khushi baby, supply side undergoes in its way under government, and there are very less positive results on this matter.ANM should definitely mentions about IFA importance during Checkups and even ASHA plays a major role in awareness of mothers. Call reminders can be very instrumental towards IFA compliance. There is no proper tracking system to check mothers are consuming the IFA or not, as it is very difficult to measure. More IEC materials need to be developed.Major reason for non- consumption towards IFA in mothers is nausea and vomiting. But we don’t know whether IFA causes nausea and vomiting as a side effect or they are just due to pregnancy.

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Iron and Folic Acid Consumption by the Ante-natal Mothers in a Rural Area of India in 2010

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Identifying bottlenecks in the iron and folic acid supply chain in Bihar, India: a mixed-methods study Amanda S. Wendt1,2* , Rob Stephenson3,4, Melissa F. Young4 , Pankaj Verma5 , Sridhar Srikantiah5 , Amy Webb-Girard2,4, Carol J. Hogue6 , Usha Ramakrishnan2,4 and Reynaldo Martorell2,4

. https://www.bitgiving.com/khushibaby

ANNEXURE:

QUESTIONNAIRE PART 1:

QUESTIONS

What is your name?
what is your husband's name?
what is your age?
Number of children

Have you visited Sub centre before for ANC checkups?
How many ANC checkups have been done till now?
When was your last ANC?
Do you receive IFA tablets ?
IF not what is the reason?(Is there anyone who stops you from taking medicines?)

How many tablets have you received till now?
How many tablets do you consume daily?
How many tablets have you received during last ANC checkup?
How many tablets have you consumed totally from the last ANC checkup?
Do you know why are they given for?
Have you ever asked about it to the ANM?
Do you get your blood test done during ANC?
If not, what is the reason?

Is there anyone who stops you from going to checkup?
If yes, what do they say?
Does ASHA visits your home for ANC Checkup reminders?
Does she tells you about IFA tablets?
Was there any time when ANM did not give you tablets?
Reason?
Does ANM tells you about the importance of IFA and HB test?
Do you receive call reminders for ANC?(KB Or other)

Do you receive any call reminder for IFA tablets ?(KB or others)
Have these reminders(KB) helped you in being more aware about your health checkups?

QUESTIONNAIRE PART 2:

QUESTIONS FOR
ANM

Block

subcentre

name

number

How the supply of IFA comes to you?

Do you know the flow of supply of IFA and HB to subcentre?

How do you collect it?(IFA)

Do you collect them on weekly/monthly basis?

How do you do weekly/monthly reporting of status of IFA tablets left to higher officials?

How do you do weekly/monthly reporting of status of HB equipments available left to higher officials?

If the tablets are not available, what do you give to the mother?

If the tablets are not available, who do you inform first?

If the equipments are not available, who do you inform first?

How many times it has happened that IFA tablets were not available during the camp?

How many times it has happened that equipmentswere(HB) not available during the camp?

Do you think, that after KB you could better inform mothers about health awareness?

Do you think, that after KB you have aware mothers about IFA consumption?

Are there any improvements in supply side of IFA ?

Are there any improvements in supply side of HB or other equipments ?

How whatsapp group of KB has helped you in ensuring proper supply system?(posiive/negative)