KAP study on ANM and MAMTA Regarding Weak Newborn Care, East Champaran, Bihar

By

Suraiya Khan

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2018-2020

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To be obtained on official stationary

The certificate is awarded to

Suraiya Khan

In recognition of having successfully completed her dissertation in the department of

HEALTH-Bihar Technical Support Program

and has successfully completed her Project on

KAP study on ANM and Mamta regarding weak newborn care, East champaran, Bihar

Date 5th May,2020

CARE India

She comes across as a committed, sincere & diligent person who has a strong drive and zeal for learning

We wish him/her all the best for future endeavours

Organization Supervisor **Human Resources**

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **KAP study on ANM and Mamta regarding weak newborn care, East Champaran, Bihar** and submitted by **Suraiya Khan** Enrolment No:0849 under the supervision of Shweta Aggarwal for award of **MBA in Hospital and Health Management** of the University carried out during the period from **February to March** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

(Suraiya Khan)

MBA-Hospital & Health Management

Abstract

This study has been conducted to assess the quality of care provided to the weak newborn at the block levels facilities of East Champaran district of Bihar. The study was conducted at 10 blocks selected on the basis of delivery load among 40 respondents who were ANMs, 49 Mamta and 120 beneficiary(mothers with weak newborn child born at those 10 facilities). It was done to measure the effectiveness and efficiency of the health care providers at the facility i.e. Auxiliary Nursing Midwives and Mamta(also known as Yashoda in states other than Bihar) whose primary responsibility is the identification, management and referral of the weak newborn and counselling regarding special care to be given to the weak newborn like Kangaroo mother care, Exclusive breastfeeding (EBF), Delayed bathing and Cord care. By assessing their knowledge levels and their attitude towards such babies and implementation via practices, we can prevent 68-75% of infant deaths as this much of neonatal deaths account for the total infant mortality. By identifying the gaps in different levels i.e. facility, skills of ANMs and attitude of mothers/families towards special care of weak newborns we can formulate interventions specific to the gap and achieve overall reduction in the preventable neonatal deaths. Quality is a broad spectrum. Quality healthcare service is the amalgamation of knowledge, skills and practices along with external support like infrastructure, equipment and drugs. The absence of either one of these results in the barrier to achieving quality of care. This cannot be achieved by solely by infrastructure improvement or imparting knowledge to our care givers as one of the significant problems faced by our care givers is the attitude and perception of the beneficiary towards care he/she receives which plays a crucial role as the attitude is influenced by factors like socio-cultural norms. For example – tradition of feeding the baby something sweet like honey after birth is a norm that needs to be addressed through counselling and behaviour change communication and the importance of EBF needs to be explained. No matter how much of expenditure is made towards development of the facility or trainings of the ANMs if the knowledge is not exercised in practice, no improvement will be achieved. Hence it is important to analyse the problem from a broader perspective rather than a conservative and confined approach.

ACKNOWLEDGEMENT

Dissertation I had with CARE India, Bihar was a great chance for learning and professional development. I am using this opportunity to express my gratitude to all those who provided me the possibility to compete this report, during Dissertation, acquainted me with the practical aspect of the course and implementing of the theory in the real field.

I would like to acknowledge with much appreciation the crucial role of my organization guide Mr. Abhay Kumar Bhagat (State Program Manager, CARE India, Bihar) under whose guidance my dissertation and training was fledged with knowledge and skills related to healthcare management and who despite of other pre-occupations and busy schedule was there to guide me throughout the period and whose stimulating suggestions and encouragement helped me complete my dissertation..

I express sincere gratitude and respectful regards to my academic mentor Dr. Shweta Aggarwal (Assistant professor, Institute of Health Management Research, Jaipur) for her guidance, useful suggestions and her constant support which helped me in completing the project work

Last not least, I thank my family & friends for their constant support and for keeping me motivated throughout my journey

Sincerely,

Suraiya Khan

MBA-HM23

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ACRONYMS/ABBREVIATIONS

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
EBF	Early initiation of Breast Feeding
KMC	Kangaroo Mother Care
EIBF	Early Initiation of Breast Feeding
FLW	Front Line Workers
STSC	Skin to Skin Care
LBW	Low Birth Weight
WHO	World Health Organization
MLCC	Midwife Led Continuity of Care
NBCC	Newborn Care Corner
EDD	Expected Date of Delivery
DOM	Date Of Maturity
LMP	Last Menstrual Period
ANC	Ante Natal Checkup
BCC	Behavior Change Communication
IEC	Information, Education and Communication
WNB	Weak newborn
MCP	Mother Child Protection
BPL	Below Poverty Level
APL	Above Poverty Level
GoB	Government of Bihar
AMANAT	Apatkalin Matritva evam Navjat Tatparta

1. Background

Every year an estimated 26 million children are born in India and reducing neonatal mortality is one of the major problem in public health for India. The major causes of child mortality in India as per the SRS reports (2010-13) are: Prematurity & low birth weight (29.8%) Neonatal period is the first 28 days of child life and it is the most critical phase of child life which contributes maximum number of deaths. Bihar itself contributes to 56% of total neonatal deaths in India. As per NFHS-4 the infant mortality rate of Bihar is 48 per 1000 live births which is an alarming number. According to WHO, 2.5 million children died globally in the first month of life in 2018, approx. 7,000 newborns die everyday and close to three quarters died within the first week of life. Children dying within 28 days of birth was due to conditions resulting with lack of quality of care at birth or skilled care and treatment immediately after birth in the first days of life. Women receiving Midwife Led Continuity of Care(MLCC) as per standards were 16% less likely to lose their baby.

The first 28 days of a newborns life is a critical window of opportunity for prevention and management of newborn complications, which can otherwise prove fatal. According to WHO such newborns require additional attention and care during hospitalization and at home to minimize their health risks. Hence it is crucial that identification of such babies is done and right measures are taken.

Neonatal mortality rate (NMR) and percentage share of neonatal deaths to infant death in India and Bihar (2012) is:

	NMR	%age of neonatal death to infant death
India	29	68.5
Bihar	28	64

Table 1. NMR of India and Bihar; SRS bullletin

There has been an increase in the rate of institutional deliveries from 38.7% in 2015 to 78.9% in 2016 resulting in the reduction of large number of infant deaths. However, there has been low or no infrastructural improvements with this increase in institutional deliveries.

The state of Bihar, was found to be the poorest region in all of South Asia in 2016 [12]. Based on the most recent census, Bihar had the highest crude birth rate in all of India at 27.7 and a NMR of 32 [6]. The majority of the basic obstetric and neonatal c are in Bihar is provided through primary health centers (PHCs), each of which serve

a population of approximately 190,000, Obstetric and newborn care at PHCs are large ly provided by nurses with an Auxiliary Nurse Midwife (ANM) qualification.

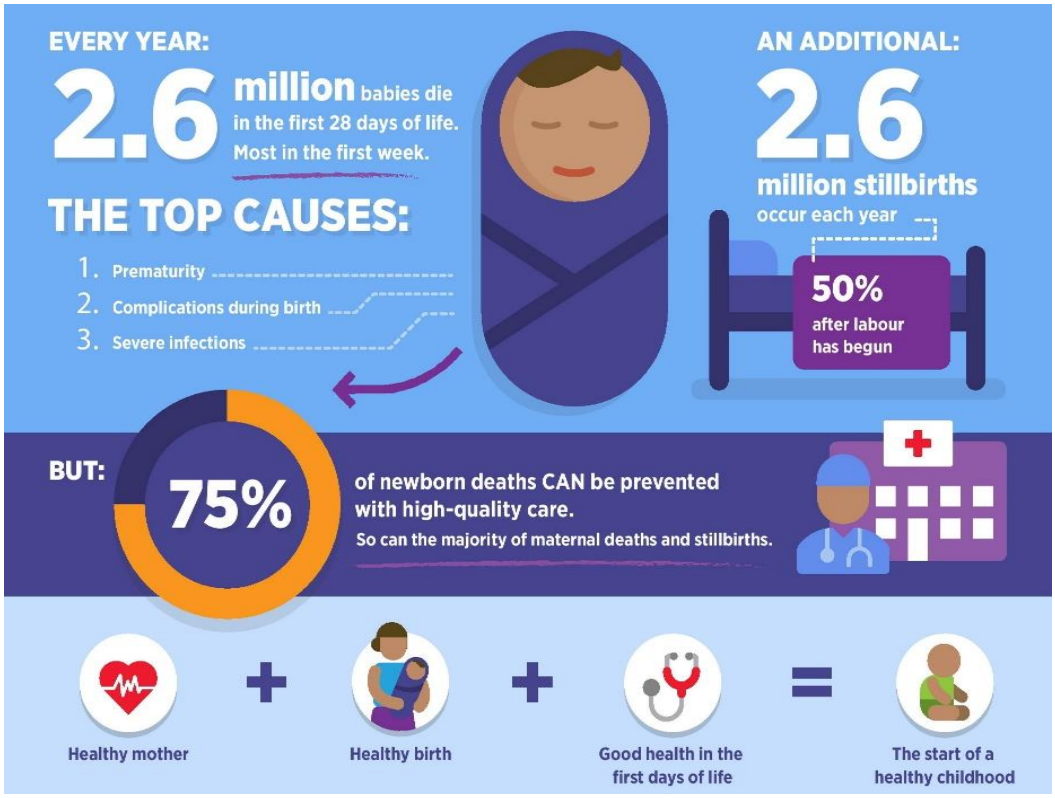

Fig1: Causes of neonatal deaths; UNICEF

Three most common preventable and treatable conditions that are attributed as the reason for neonatal deaths are Prematurity, Intrapartum deaths and Neonatal infections. There exists proven interventions which are cost effective too to prevent them. Improved quality of care at the time of birth by educated and equipped health workers will save the most lives.

In order to track, identify and care for the very low birth weight segment newborns, The Government of Bihar has partnership with CARE for new interventions towards this issue. A key part of this intervention is the use of a simple and affordable tool i.e. a digital scale. This will help the ANM to accurately measure the weight of newborns immediately after birth which will further help the low birth weight babies to get special care they need during the first critical weeks of their lives.

The project aims at reducing neonatal mortality by improving the quality of health services delivered by ANMs by training and mentoring through Nurse Mentoring Support (NMS) under *Apatkaleen Matritva evam Navjat Tatparta (*AMANAT) program, implemented by GoB and CARE to improve the quality of maternal and child health. Emergency obstetric and neonatal management training given to ANM/GNM mentees using simulation.

Prior to this joint government-CARE initiative, ANMs lacked the ability to identify small and weak babies and to manage their care.

Upon discharge from facilities, families are supported by tracking at the community level. Telephonic tracking by the ANM of the facility is done for 30 days. In addition to the tracking and support by ANMs, reporting and record-keeping of low birth newborns is also improving in the district.

1.1 Conceptual Framework

KAP study refers to Knowledge, Attitude and Practice. A KAP survey is a representative stu dy of a specific population to collect information on what is known, believed and done in rel ation to a particular topic.In most KAP surveys, data are collected orally by an interviewer u sing a structured, standardized questionnaire. These data then can be analysed quantitatively or qualitatively depending on the objectives and design of the study. A KAP survey can be d esigned specifically to gather information about general practices and beliefs.

Weak Newborn:-

Babies born too early or too small may not breastfeed well, have trouble staying war m, and are more at risk of infection. These issues often lead to serious illness and dea th even though simple evidence-
based practices exist to address them. In Bihar, India, these babies make up 35% of al l neonatal mortality. Most of these deaths happen during the first week of life. For sm all and weak newborns to survive and thrive in any context, trained medical personne l and other caregivers must be ready to properly respond to their needs beginning im mediately after birth. Within Bihar's public health system, frontline health workers (F LWs), including ASHAs, Auxiliary Nursing Midwives and Aganwadi workers (AW Ws) all provide basic health care for mothers and new-borns.

Weak newborn can be classified into three categories:-

- **Low Birth Weight (LBW)** i.e. children born with weight less than 2500 grams

According to UNICEF, the incidence of LBW neonates is 30% in India. Low birth w eight neonates are further classified as very low birth weight (<1500g) and extremely low birth weight (<1000g) infants. We are home to eight million LBW infants born e ach year and around three fourth of them are delivered at full term of gestation.

- **Preterm**

Preterm or premature baby is when a baby is born before 37 weeks of completed preg nancy. Preterm birth is a direct cause of 27% of the 4 million neonatal deaths that occ ur globally every year. Based on the gestational age preterm babies are classified as Preterm:-
These babies are born between 32 to 36 weeks of gestation and can usually be mana-ged safely at home with some extra care and support.

Very preterm:- babies born under 28-32 weeks of gestational period.

- **Poor suckling**

The babies who are not able to suck mother's milk after birth either due to Asphyxia, pre-term birth, or any other issue remain undernourished.

1.2 *Methodology*

A cross sectional study on the Public health facility of total 10 blocks of East Champaran district was selected. The list of total weak newborns identified in these facilities within the month of February and march was taken and further sampling was done. These facilities were visited for assessment of facility as well as the ANM and MAMTA. Data from beneficiary was collected through interview using structured questionnaire.

1.3 *Results*

Identification of WNB is low as per the WHO Report 2012, 10%-12% newborn out of total live births are WNB that reflects the lack of knowledge regarding identification and management of weak newborn among ANM and MAMTA, Gaps in the functioning of facility and services received by the beneficiary was identified. No follow up of 45% of identified cases was done and only in 9% of cases complete follow up was done.

1.4 *Comparative study*

According to a similar study conducted on 31 ANMs of selected sub centres of Ambala district, Haryana. The study found that most of the deliveries were conducted in the facilities and the pregnant women were registered however, unsafe and harmful newborn care practices was found common. Only a few reported about delay in bathing; Only one-third of the baby delivered were weighed after birth; Lack of hand hygiene practices (19.3%); Low status of use of clean string (22.5%) & clean blade (25.8%). Such unsafe Cord cutting and improper cord care practices can increase the risk of infection among the neonates ultimately leading to poor health or in a worse case scenario-Death.

2. INTRODUCTION

Previously Low levels of institutional deliveries were considered to be proportional to high neonatal mortality in the country. Even after a significant rise in the proportion of facility-based deliveries over the last decade, we have not achieved the desired reduction in neonatal mortality possibly due to low-skilled care at facilities. Neonatal death itself accounts for the two-third of the total Infant mortality in India. One of the four states identified with high neonatal mortality rate is Bihar.

It is important to assess the gaps that lies among the facilities, Healthcare providers, practices or any other factor contributing to these preventable neonatal deaths via the status of knowledge among the midwives and facility assessment regarding weak newborn care and by assessing the attitude and practices among the healthcare providers. This study will critically analyse the skills and practices among the healthcare providers with a motive to understand the gaps in the system that contributes to the unachieved goal of reducing infant mortality in the specific geographical area that will help to plan and implement an intervention to cater to the problem.

Specific objective of the assessment: -

- Assess the availability of basic infrastructure, equipment and drugs as per NBCC guidelines
- Assess the service utilization of the unit and the reporting systems
- Determine the quality of care by knowledge assessment of both ANM and Mamta
- Assessment of the level of essential newborn practices at facility levels
- Quantitative and Qualitative assessment of counselling provided to the mothers with weak newborn
- To understand the rate of follow up of these children by ANMs

Expected Outcome of the assessment:-

- Facility based strengths and gap analysis
- Knowledge and practice gap analysis
- Sharing of field findings with district and States officials
- Review of the current guidelines in light of the field findings for guiding future course of action towards strengthening of the system.

3. LITERATURE REVIEW

India hold the largest share of neonatal deaths in the world accounting for 25-30 per cent of neonatal deaths and 50 per cent of death occur within two days of birth. Approximately 4 million babies die in the first month of birth each year and India alone accounts for 0.76 billion neonatal deaths. Birth Asphyxia, sepsis, Prematurity and Low birth weight are significant causes of neonatal deaths. Globally 15.5 percent of babies born are low birth weight whereas in India 27 per cent of neonates are born low birth weight. The greatest success in any life saving intervention is achieved when hospitals and community-based activities are linked. If proven intervention are implemented successfully approximately 70-75 per cent of neonatal deaths can be prevented.

In response to Global Every Newborn Action plan (ENAP), GoI on 18 September 2014 launched India Action Newborn plan (INAP) with a vision and plan for India to reduce preventable deaths, speed up the progress and scale up cost effective and high impact interventions. It is expected from all stakeholders to work towards attainment of the goals of "single digit NMR by 2030" and "single digit still birth by 2030"(India Newborn Action Plan, 2014). In order to achieve this goal GoI is focused upon strengthening of newborn care at facility as well as outreach levels. The government has made provisions of newborn care corner at all delivery points i.e. NBCC is mandatory for all facility where delivery is conducted. In 1994, FBNC became functional in 26 districts and with its launch came into existence the inpatient care of sic and weak newborn in the public health system under 'National Rural Health Mission'.(B Neogi et.al,2016).

Studies conducted in various settings show the problems faced by facilities such as lack of qualified and trained staffs, lack of adherence to the hygiene protocols, equipment's maintenance and repair, Validation of available information were major concerns.
Global investments in training of midwives and ensuring that the midwives are properly trained ad funded to provide the full package of treatment my prevent 83 percent of all maternal deaths, stillbirths and newborn deaths as per a report of *Save the children* UK.

"Training and education needs to be scaled-up urgently to ensure midwives acquire the skills they need to provide quality care. When they are properly trained, empowered and supported, midwives in the community are the most cost-effective solution" (Celebrating midwives - an essential workforce, with a vital role, 2012) said ICM president and Alliance Board member, Francis Day-stirk. Periodic assessment of

knowledge gaps and empowering our ANMs with the skills can be cost-effective solution especially to country like India, specifically in rural India, where doctor patient ratio is too low.

A facility based cross sectional study on midwives regarding kangaroo mother care for the survival of preterm and low birth weight babies in Ethiopia concluded that overall knowledge and practice of KMC among midwives was considerably low and suggested to increase counselling and knowledge of KMC to be generated during ANC and after delivery to increase practice of KMC. The study also found a positive relation between the skilled birth attendants and knowledge of KMC therefore suggesting trainings to healthcare providers regarding importance of KMC in preterm and low birth weight babies. (Kassahun & Samuel, 2019)

4. METHODOLOGY

Research Question

What is the quality of care give to weak newborns at public facilities of East Champaran district of Bihar.

Broad Objective

To assess the gaps in public healthcare in providing quality of care to weak newborns.

Specific Objective

Assess the knowledge and practices among ANMs and MAMTAs towards weak newborn identification and care.

Study Design

It is a cross sectional descriptive study

Study Population and Setting

Total of 120 mothers of weak newborns were interviewed; 10 block level public health facilities were assessed and total 40 ANMs and 49 MAMTA's knowledge assessment was done via structured questionnaire and observation.

Study Tool

A facility checklist was developed to assess the availability of basic requirements for newborn care, specifically weak newborn at facility. This checklist assessed the facility based on the parameters that includes infrastructure, equipment, Drugs and consumables, adherence to protocol and record keeping..

A structured questionnaire was formed to assess the knowledge of ANM and MAMTA of the facility regarding Identification and Management of weak newborns.

Another structured questionnaire to assess the services provided by the facility and staffs to the beneficiary i.e. weak newborn and mother.

Data Collection Process

The structured questionnaire was filled in case of beneficiary interview as well as ANM and MAMTA knowledge assessment and the facility checklist was filled through observation of the facility.

Data Analysis

Data was entered in MS Excel. Both numerical & categorical variables were summarized using frequency, percentages & presented in suitable charts.

Type of Research

This study is based on primary data collected via personal and telephonic interviews and observations.

5. RESULTS

I. ANM Knowledge Assessment: -

Total 40 ANMs working in the 10 selected blocks were interviewed and based on their responses they were scored. Scoring was done in terms of 0,1 & 2. Where every incorrect answer would yield a 0 score, every partial correct answer would get score 1 and for every fully correct answer the ANM was given score 2. Below presented graph shows total number of ANM's scores against the indicator/question asked.

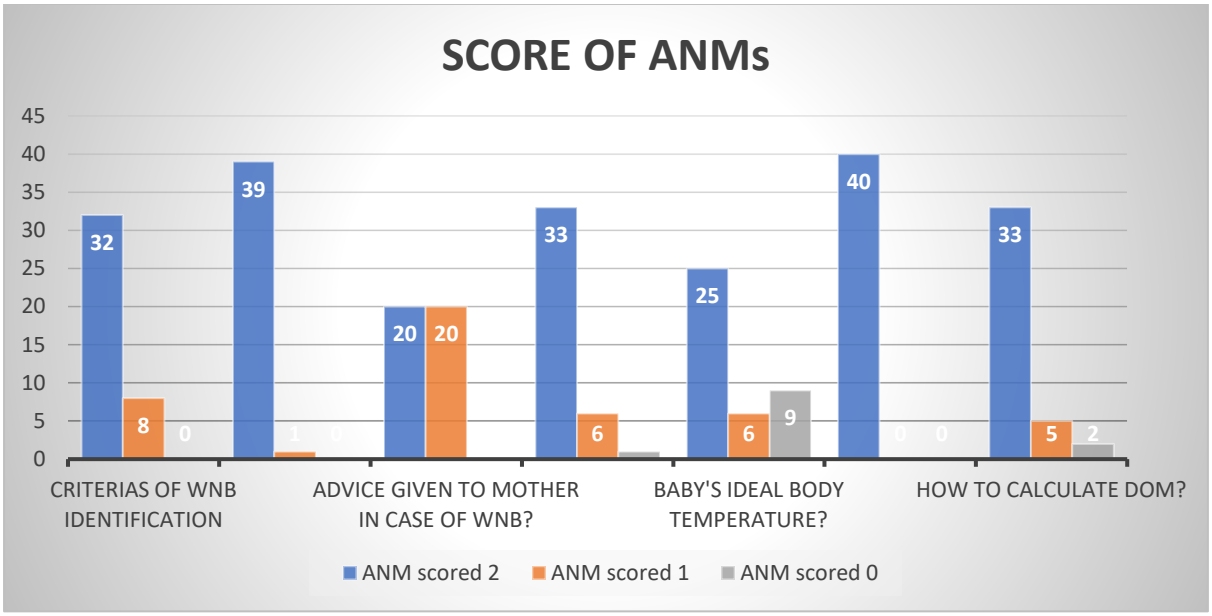

Fig. 2.-Scores earned by total ANMs for each question/indicator.

Talking of the extreme scores, highest fully correct answer was given of the question 'How to collect EDD from LMP' where 100% of the ANMs answered it correctly hence we conclude that they know how to calculate EDD. However, most were able to partially tell all the advices that are given to mother regarding weak newborn care as we can see only 50% answered it fully correct.

II. Mamta Knowledge Assessment

Total 49 MAMTA working in all 10 blocks were assessed based on four basic questions related to weak newborn. The scoring was done in similar manner as of ANM scoring in terms of 0, 1 & 2 and the criteria of scoring remains the same.

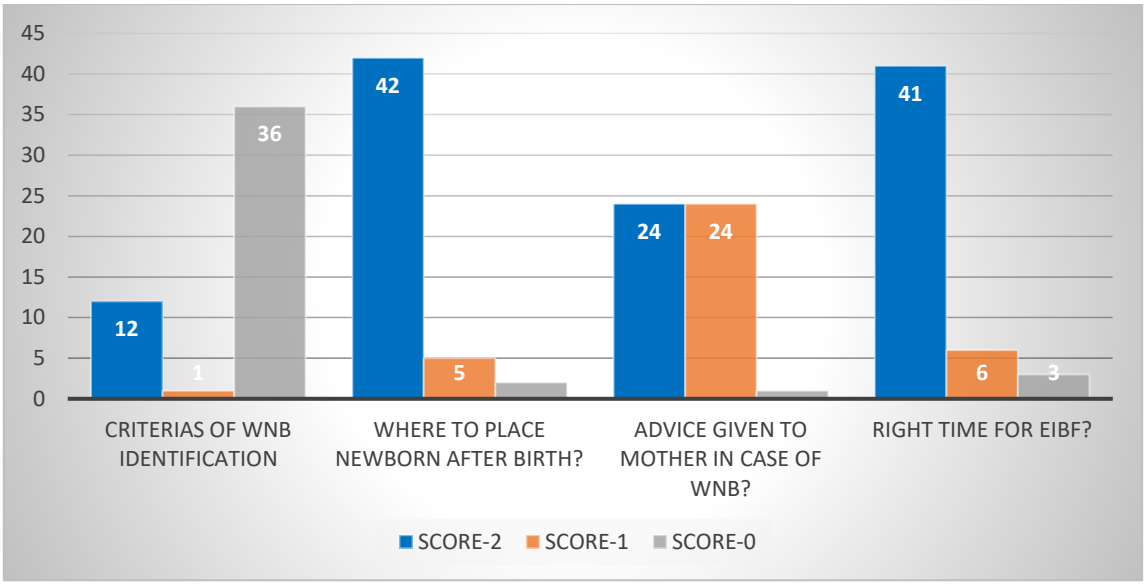

Fig. 3. Scores of all MAMTA for each question/Indicator

From the above presented data we can understand that majority of them cannot define the criterias of weak newborn identification as 73% of them did not answer the first question correctly or didn't know the answer. Whereas 85% correctly responded to the second question. The major role of Mamta in facility is to counselling of mothers regarding care of baby however, in my study in the third question related to counselling of mother regarding taking special care of baby in case of a weak newborn, only approx. 50% of the respondents answered it fully correct rest 50% were only partially correct.

III. Facility Based Newborn Care (FBNC)

The assessment of facility was done on the basis of a checklist and scoring for each criteria was given in the same format of 0, 1 & 2 for unavailable, partially available/partially functional and Available/fully functional respectively. The numbers are in percentages which has been calculated according to the total scores earned by all the facilities on a particular criteria divided by total marks for 10 blocks for that particular criteria.

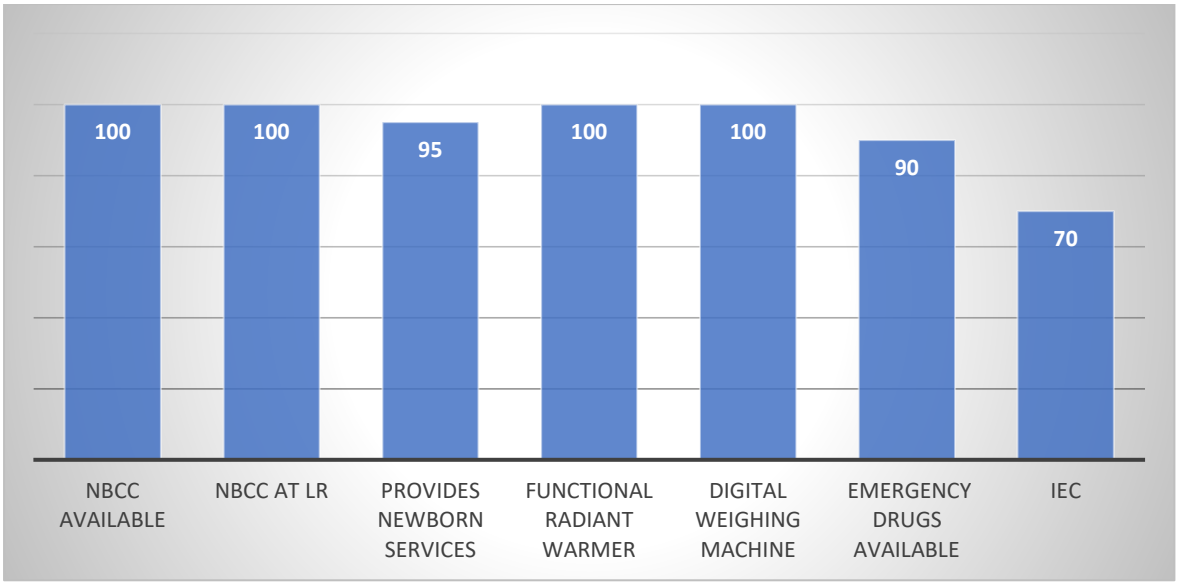

Fig 4. Facility Assessment based on above criterias (1)

From the above data it was found that all the blocks had a NBCC at their facility with 90% had all emergency drugs available whereas 10% had partial availability of drugs. Only 70% of total facilities had IEC materials displayed in the facility for BCC and counselling purpose. All the facilities had fully functional radiant warmers and digital weighing machines available.

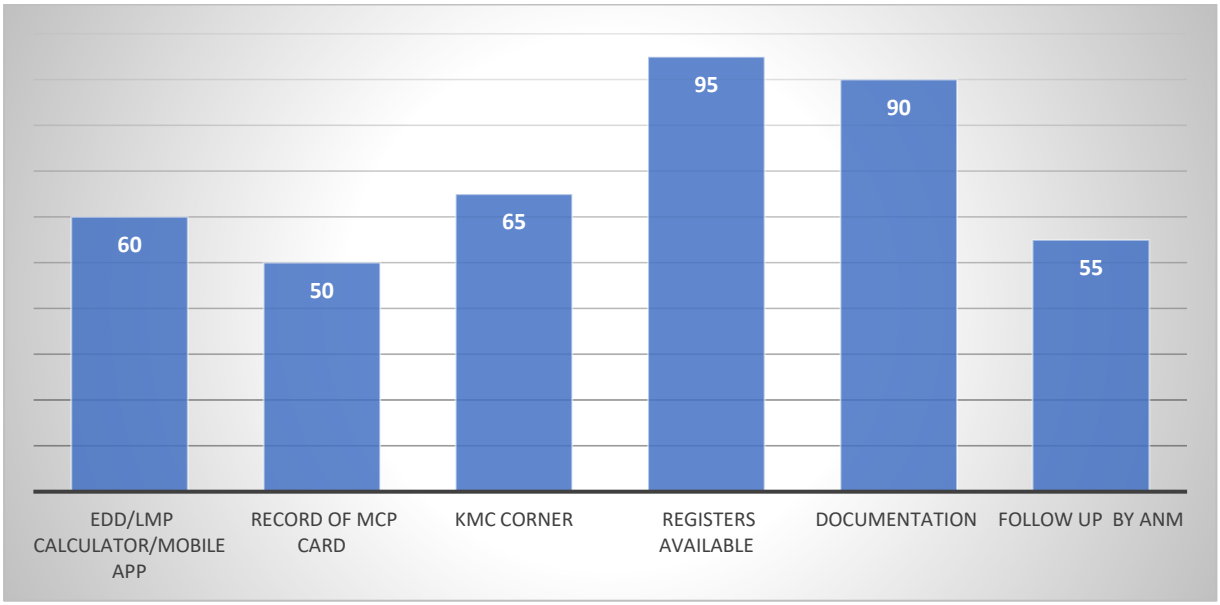

Fig. 5. Facility Assessment based on above criteria (2)

The above data suggests that only 60% of the facility had any tool or App to calculate EDD; only 50% kept the records of the beneficiaries coming with Mother and Child Protection(MCP)cards, to know the LMP in order to calculate accurate EDD; only 65% of the facility had a functional Kangaroo Mother Care Corner available; 95 % of the facilities had all the registers mandatory according to government norms available; 90% were maintaining the proper documentation; The ANM in the duty has to do telephonic follow up of the weak newborns identified for 7 days however, only 55% of total facility's ANMs complete this follow up which leaves the child untracked.

IV. Assessment of practices via Beneficiary interview.

➢ Personal Information

The assessment of care received by the weak newborn during her stay at the hospital and after her discharge was done through a questionnaire. Out of total WNB identified in each facility between the months of February and March, 120 weak newborn were selected through systemic random sampling and their contact information was recieved through weak new born register at the facility. The mothers belonged to the age group of 20-35 out of which 51% were primi gravida and 84.9% never had any abortion or miscarriage in the past.

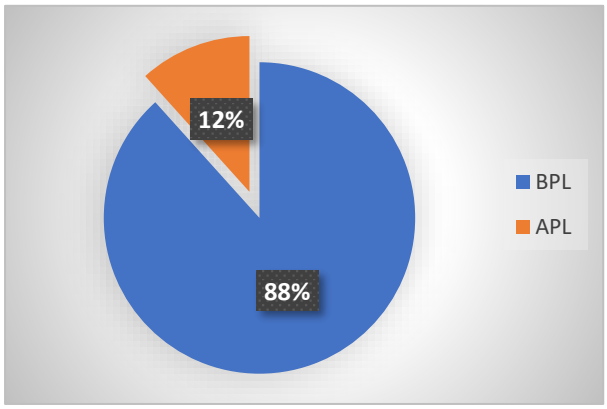

Fig. 6. Category/ Class

Interestingly, most of the weak newborns identified were born to women belonging to BPL category and belonged to Dalit, schedule castes, OBCs or other minority groups.

- **Beneficiaries receiving ANC during pregnancy.**

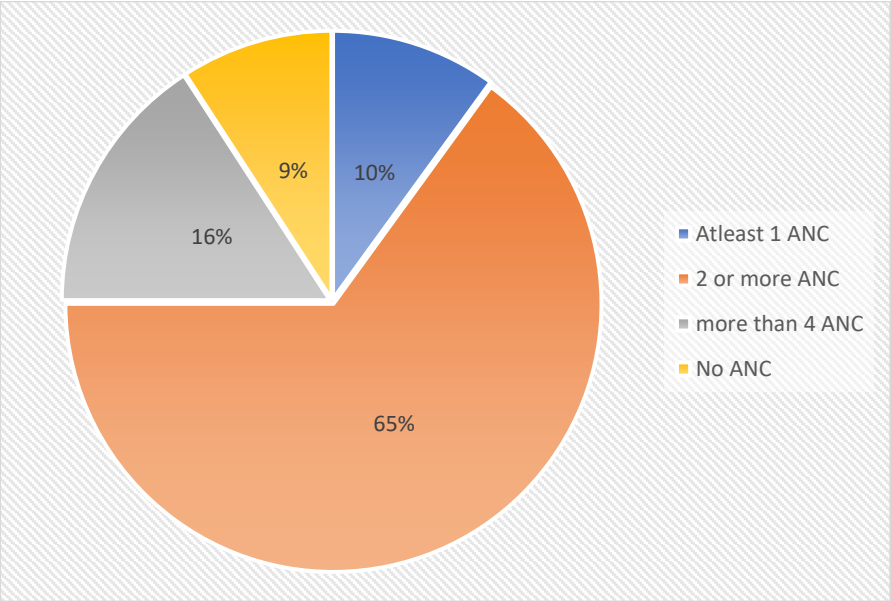

Fig. 7. percentage of women received ANC

According to norms of GoI every pregnant woman should receive atleast 4 ANCs during her pregnancy. Out of total women only 16% managed to get all 4 ANCs or more, whereas 65% received 2 or more ANCs ;10% had atleast 1 ANC and 9% of total women had no ANC at all.

- **Positioning of the baby right after birth and STSC at facility.**

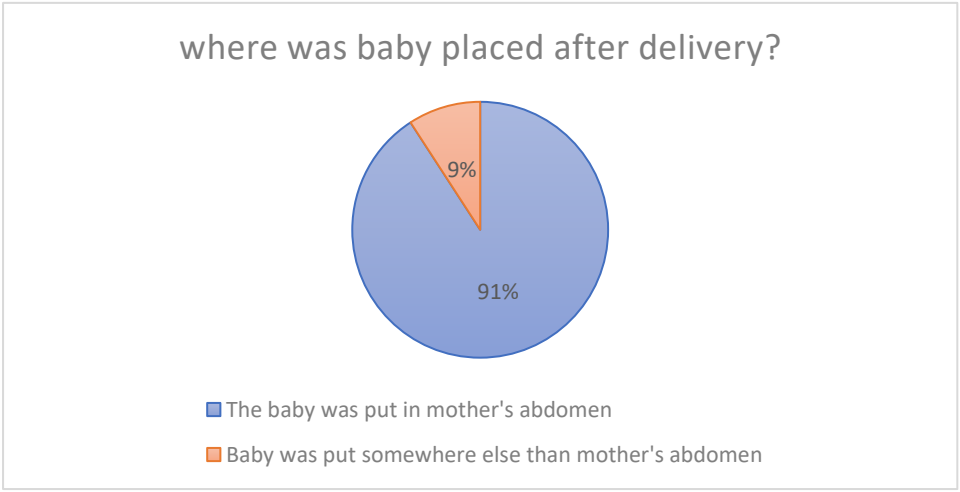

Fig. 8. Percentage of Baby placed at mother's abdomen

In my study 91% of the respondent said that the baby was placed at the abdomen after birth.

After identification of baby as WNB, baby is kept at the radiant warmer to provide warmth & prevent hypothermia and Skin to skin care is given to the child by placing the child on the bare chest of the mother. In case of any maternal complication it can be given by father or any other person too. In my study only 51% of the respondent's baby was kept in radiant warm and only 73% received STSC at hospital which signifies either negligence towards care of WNB or lack of information among the care providers

Question	YES	NO	Don't Know
Was the baby kept in radiant warmer	61	41	18
Skin to Skin care given at hospital	75	22	05

Table 2. NBCC and STSC practices at facility.

- **Information to the mother and family regarding health condition of the baby.**

Once the mother and baby is discharged, special care of WNB is to be taken to ensure healthy development of the baby. To achieve this counselling regarding the health condition of the baby and what essential measures should taken by the mother and family for its healthy growth is a necessary component. Regular counselling and follow up for atleast 30 days is required to be done. However in my study it was found that only 11% of the respondents were made aware that their child was weak and needed special care and only 69% of total respondents were given passport card at the time of discharge.

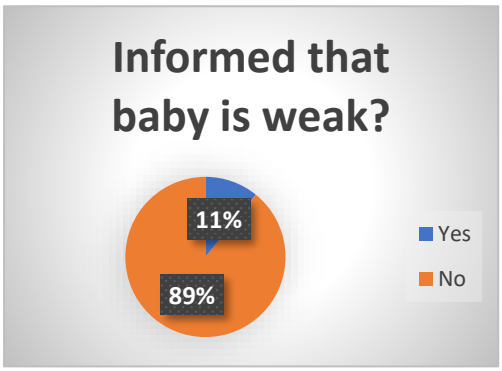

Fig. 9. Information

➢ Telephonic Follow up of the weak newborn

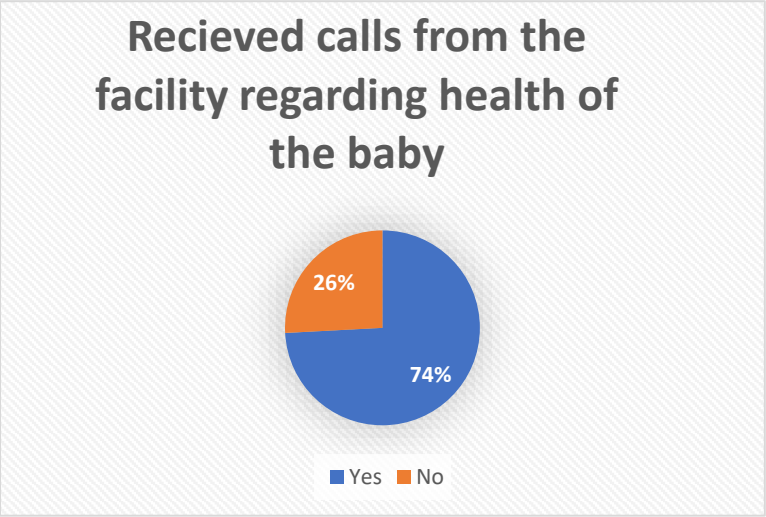

Fig. 10. Follow up by ANM

One of the most important components of WNB care after identification and management is follow up. ANMs are supposed to do follow up of every WNB child telephonically however in my study it was found that only 74% received some calls from the facility regarding health of the child rest 26% did not receive any calls at all.

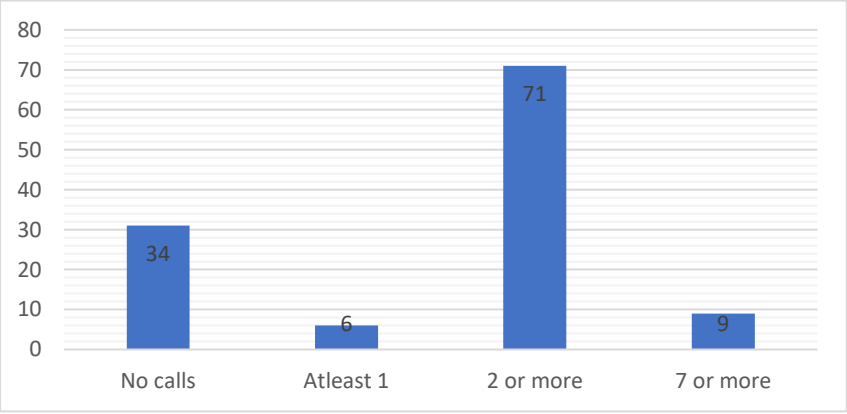

Fig. 11. Total calls received.

34 respondents out of 120 did not receive any call, 6 received atleast 1 call, 71 respondents were called 2 times or more but less than 7 times. Only 9 respondents were called 7 times or more regarding the care and follow up of the child health.

6. CONCLUSION

Most of the women to whom WNB child was born belonged to BPL category which relates the role of economic status with the health status of Newborn. Out of total women only 65% had an ANC during entire pregnancy period which means either lack of knowledge regarding importance of ANC or lack of services in the area. Lack of knowledge among surveyed MAMTA and ANM specifically regarding the advices given to the mothers for special care of weak newborn and identification of WNB among MAMTA was seen. Follow up of WNB by facility ANM was found to be significantly low. Availability of NBCC in every facility was seen however in some facilities there was unavailability of fully functional KMC corners and inadequate IEC materials for the counselling of mothers and family members. On the practices part majority of women were not informed about the condition of their baby and special care they needed. Rate of telephonic Follow up and Passport card distribution was also found to be low.

Appendix A. Beneficiary Data collection tool

IDENTIFICATION Date:-

STATE-
DISTRICT-
BLOCK-
CITY/TOWN/VILLAGE-
TYPE OF PSU (URBAN = 1, RURAL = 2)-
NAME OF ASHA-
AWC CODE-
AWW NAME-
NAME OF RESPONDENT-
RELATION WITH THE CHILD-
AGE OF MOTHER-
EDUCATION –
RELIGION-
CASTE-
CATEGORY (APL-1, BPL-2)-

Beneficiary Data

s.no.	Question	Response/coding	Remarks
1.	No. of pregnancy(Gravida)		
2.	No. of live birth/s		
3.	No. of abortions/miscarriage		
4.	Date of last delivery		
5.	Did you receive any Ante-natal check up during this pregnancy?	Yes ☐ No ☐	Skip to ques 8 if No.
6.	How many times did you get an ANC by a health professional?		
7.	Where did you go for an ANC check up?	HSC/ APHC ☐ PHC/CHC ☐ AWC/VHSND ☐ DH ☐ Pvt Clinic ☐ Other(specify)_____	
8.	Where was the baby placed right after the delivery?	Baby tray ☐ Mother's abdomen ☐ NBCC ☐ Delivery table ☐ Other._____	
9.	Was the baby was kept in Radiant Warmer after birth?	YES ☐ NO ☐ Don't Know ☐	
10.	Were you asked to breastfeed your child within an hour of birth?	YES ☐ NO ☐	

11.	Did you/your relative provide skin to skin care to the baby during your stay at the hospital?	YES ☐ NO ☐ Don't Remember ☐	
12.	Were you informed that the the baby is of low birth weight/ pre term/weak?	YES ☐ NO ☐	
13.	Were you advised any of these by the ANM before discharge?	Exclusive breast feeding ☐ KMC ☐ Cord Care ☐ Delayed bathing ☐ Maintaining hygiene ☐	
14.	Did ANM give you passport Card during discharge?	YES ☐ NO ☐	
15.	Did ASHA visit you after discharge from hospital?	YES ☐ NO ☐	Skip to Q19 if No.
16.	How many times did ASHA visit you?		
17.	What Were you advised by the ASHA?	Exclusive breast feeding ☐ KMC ☐ Cord Care ☐ Delayed bathing ☐ Maintaining hygiene ☐ Other_____	
18.	Did ASHA do any of these to the baby?	Weight measurement ☐ Temperature measurement ☐ Cord Checking ☐ Observe breastfeeding ☐ Observe KMC ☐	
19.	Did you receive any calls from the facility regarding the health of the child?	YES ☐ NO ☐	End the interview if No.
20.	If yes, How many calls did you receive?		

Appendix B. Facility Assessment Tool

FACILITY CHECK LIST

Name of the facility_____ Date_____

S.NO.	Measurable element	Check point	Scoring
1	Availability of functional NBCC at facility	Check for the availability of Radiant warmer, AMBU bag(size 0 &1), Mucus extractor, pediatric stethoscope,	
2	The NBCC is located near/at the labour room	Location and distance of NBCC from labour room	
3	The facility provides Newborn health Services	Availability of Newborn resuscitation	
4	Availability of functional Radiant warmer in NBCC	Radiant warmer is available or not. If present functional or not.	
5	Digital weighing machine	Availability of Digital weighing machine inside LR	
6	Availability of Emergency drugs	Check for Adrenaline, Vit.K1, Ampicillin inj, Gentamycin inj, Calcium gluconate inj, Dexamethasone inj, Aminophylline inj, Atropine inj, Glucose 25%, Dextrose 5%	
7	Patients & visitors are sensitized and educated through appropriate IEC / BCC approaches	IEC Material is displayed or not (Breast feeding, kangaroo care, family planning etc)	
8	Availability of EDD/LMP Calculator/Mobile App	Check if ANM has any tool to calculate EDD	
9	Record of beneficiaries with MCP card	Check for the mention of number of beneficiaries coming with MCP card	
10	Established KMC corner	Check for availability of KMC corner	
11	Availability of Registers for documentation	Check for WNB register, NBCC register, Passport, WNB facility reporting & Referral Register	
12	Documentation practices	Check for the registers being updated on daily basis.	
14	Follow up of WNB by ANM	Check if complete follow up of identified WNB is done by ANM	

Appendix C. ANM and Mamta knowledge assessment tool.

Questions	Responses	score	Remarks/skip
Name of the ANM/MAMTA			
Name of the facility: -			
What are the criteria of weak new born identification?	i. Weight less than 2500gms ☐ ii. Preterm (<37 weeks) ☐ iii. Poor suckling ☐ iv. Other_____		
Where do you place the child right after birth?	i. Baby tray ☐ ii. Delivery table ☐ iii. Next to mother ☐ iv. Mother's abdomen ☐ v. Radiant warmer ☐ vi. Other_____		
What advice is given the mother/family if child is WNB?	i. KMC ii. EBF iii. Maintaining Hygiene iv. Delayed bathing upto 7 days v. Cord Care vi. Other_____		
What is ideal body temperature of the baby?			Skip if respondent is Mamta
When is the right time to initiate breast feeding after birth?			
How to calculate EDD from LMP?			Skip if respondent is Mamta
How to calculate DOM?			Skip if respondent is Mamta

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