

Assessment of New Born Care Corner in Six TSU  
Focus Blocks of Faizabad District, Uttar Pradesh

*By*

M. Madhukara Madhava Rao

*Dissertation submitted for the partial fulfillment of the  
MBA Hospital and Health Management*

*Academic year, 2014-2016*



**The IIHMR University, Jaipur**

1, Prabhu Dayal Marg, Sanganer Airport  
Jaipur-302029, Rajasthan  
Ph: 0141 3924700, Fax: 3924738  
Website: [www.iihmr.edu.in](http://www.iihmr.edu.in)

**Internship Training**

**At**

**UP-TSU (Technical Support Unit)**

**Assessment of Newborn Care Corner in Six TSU focus blocks of  
Faizabad district, Uttar Pradesh**

**By**

**M.MadhukaraMadhavaRao**

Under the guidance of

**Alok Mathur**

**MBA in Hospital and Health Management**

**2014-2016**



**Institute of Health Management Research  
Jaipur**

**TO WHOMSOEVER MAY CONCERN**

This is to certify that M Madhukara Madhavarao student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at India Health Action Trust from 22-02-2016 to 10-05-2016.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



**Dr. S. D. Gupta**  
President  
The IIHMR University, Jaipur



**Dr. Alok Mathur** 13/5/2016  
Associate Professor  
The IIHMR University, Jaipur

## CERTIFICATE

To Whom It May Concern

This is to certify that **M. MADHUKARA MADHAVA RAO**, District Technical Specialist, Faizabad, UP has done his dissertation and summer internship in India Health Action Trust, Uttar Pradesh Technical Support Unit from 22-2-2016 to 10-5-2016. He has worked on the topic **Assessment of New born Care Corner in six TSU focus blocks of Faizabad district, Uttar Pradesh.**

He is hard working, sincere and a committed student and we wish him very best for all his future endeavors.



**Dr. Ashish Kumar Tiwari**  
**Zonal Technical Specialist**  
**Barabanki Zone**  
**UPTSU**



**INSTITUTE OF HEALTH MANAGEMENT RESEARCH, JAIPUR**

**CERTIFICATE BY SCHOLAR**

This is to certify that the dissertation titled **Assessment of Newborn Care Corner in Six TSU focus Blocks of Faizabad district, Uttar Pradesh**, and submitted by **Mr.M Madhukara Madhava Rao** Enrollment No.0163, under the supervision of Associate Professor **Alok Mathur** for award of MBA Hospital and Health Management of the university carried out during the period from **Feb 22, 2016 to May10, 2016** 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.

*M. Madhukara*

Signature

## **Acknowledgements:**

The success of any task would be incomplete without the expression of gratitude to the people who made it possible. I hereby take an opportunity to express my sincere gratitude towards everyone who helped directly or indirectly in completion of my Internship at UP-TSU.

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, and UP-TSU for believing in my abilities.

I express my gratitude and regards to my Guide, Associate Professor Alok Mathur for his able guidance and useful suggestions which helped me in completing the project work successfully. His guidance was tremendous right from the onset and at each step of the project. I would like to express my gratitude to Dr. Sanjiv Kumar (Team Leader- Technical) and Dr. Ashish Tiwari (ZTS-barabanki zone) who have shown faith upon me, and helping me at various stages of my project. I would like to thank all six Nurse Mentors for their extreme support throughout my tenure. I would also like to thank my faculty members without whom this project would have been a distant reality. My seniors and colleagues also hold a special mention here for believing in me and supporting me throughout internship. I would like to thank staff of all the facilities for their co-operation during my data collection.

M Madhukara Madhava Rao

IIHMR University Jaipur

## Table of Contents

| S. No.              | Contents                                  | Page No. |
|---------------------|-------------------------------------------|----------|
|                     | Acknowledgement                           | 6        |
|                     | List of Figures                           | 9        |
|                     | List of Tables                            | 9        |
|                     | List of Abbreviations                     | 10       |
| <b>Dissertation</b> |                                           |          |
| 1.1                 | Abstract                                  | 12       |
| 1.2                 | Introduction                              | 14       |
| 1.3                 | Review of Literature                      | 15       |
| 1.4                 | Problem Statement                         | 16       |
| 1.5                 | Rationale of the Study                    | 17       |
| 1.6                 | Research Questions                        | 17       |
| 1.7                 | Objectives                                | 17       |
| 1.8                 | Methodology                               |          |
| 1.8.1               | Study Design                              | 18       |
| 1.8.2               | Study Area                                | 18       |
| 1.8.3               | Study Participants                        | 18       |
| 1.8.4               | Sampling                                  | 18       |
| 1.8.5               | Methods and Instruments of Data Gathering | 18       |
| 1.9                 | Statistical Treatment                     | 19       |
| 1.10                | Ethical Consideration                     | 19       |
| 1.11                | Results                                   | 19       |
| 1.12                | Discussion                                | 33       |
| 1.13                | Conclusion                                | 35       |
| 1.14                | Limitations                               | 36       |
| 1.15                | References                                | 36       |
| 2                   | <b>Annexure</b>                           |          |
| 2.1                 | Questionnaire for ANM/SN                  | 37       |
| 2.2                 | Checklist for facility Assessment         | 47       |

## List of Figures

| Figure No | Title of the Figure                                          | Page No |
|-----------|--------------------------------------------------------------|---------|
| 1.1       | Knowledge of SN/ANM about Neonatal period                    | 21      |
| 1.2       | Knowledge about Major causes of Neonatal Mortality           | 22      |
| 1.3       | Knowledge about Normal weight of Newborn at birth            | 22      |
| 1.4       | Knowledge about Gestational age of full term baby            | 23      |
| 1.5       | Knowledge about Equipment and Accessories required at NBCC   | 25      |
| 1.6       | Knowledge about Danger Signs in Newborns                     | 26      |
| 1.7       | Knowledge about steps to be followed immediately after birth | 27      |
| 1.8       | Knowledge about signs and symptoms to refer a newborn        | 28      |
| 1.9       | Type of Facility assessed                                    | 28      |

## List of Tables

| Table No. | Title of the Table                                 | Page No. |
|-----------|----------------------------------------------------|----------|
| 1.1       | Shows Age and Experience of SN/ANM                 | 20       |
| 1.2       | Training Status of SN/ANM                          | 20       |
| 1.3       | Knowledge about Normal weight of New born at birth | 28       |
| 1.4       | Availability of human resource                     | 31       |

## **List of Abbreviations**

AAA : ANM, ASHA, ANGANWADI  
ANC : ANE NATAL CARE  
ANM : AUXILLARY NURSING MIDWIFE  
APHC : ADDITIONAL PRIMERY HEALTH CENTRE  
ARO : ASSISTANT RESEARCH OFFICER  
ASHA : ACCREDITED SOCIAL HEALTH ACTIVIST  
AWC : ANGANWADI CENTRE  
AWW : ANGANWADI WORKER  
BCG : BACILLUS CALMETTE GUERIN  
BCS : BLOCK COMMUNITY SUPERVISOR  
BPHC : BLOCK PRIMERY HEALTH CENTRE  
CHC : COMMUNITY HEALTH CENTRE  
CMO : CHIEF MEDICAL OFFICER  
CMS : CHIEF MEDICAL SUPERINTENDENT  
CRP : COMMUNITY RESOURCE PERSON  
DH : DISTRICT HOSPITAL  
DCS : DISTRICT COMMUNITY SPECIALIST  
DM&ES : DISTRICT MONITORING & EVALUATION SPECIALIST  
DPT: DIPHTHERIA PERTUSIS TETANUS  
GOI : GOVERNMENT OF INDIA  
HEO : HEALTH & EDUCATION OFFICER  
LMO : LADY MEDICAL OFFICER  
MCP : MOTHER & CHILD PROTECTION CARD  
MO : MEDICAL OFFICER  
MOIC : MEDICAL OFFICER IN CHARGE  
NBCC : NEW BORN CARE CORNER  
NM : NURSE MENTOR  
OPV: ORAL POLIO VACCINE  
OT : OPERATION THEATRE  
PHC : PRIMARY HEALTH CENTRE  
RI : ROUTINE IMMUNIZATION  
RMNCH+A : REPRODUCTIVE MATERNAL NEW BORN CHILD HEALTH +  
ADOLESCENTS  
SC : SUB CENTRE  
SDH : SUB DIVISIONAL HOSPITAL  
SN : STAFF NURSE  
SNCU : SPECIAL NEWBORN CARE UNIT  
UP-TSU : UTTAR PRADESH-TECHNICAL SUPPORT UNIT  
TT : TETANUS TOXOID  
SPSS : STATISICAL PACKAGE FOR SOCIAL SCIENCES  
VHND : VILLAGE HEALTH AND NUTRITION DAY

## **DISSERTATION**

### **Assessment of Newborn Care Corner in 6 TSU focus blocks of Faizabad district, Uttar Pradesh**

## **Abstract**

### **Assessment of Newborn Care Corner in Six TSU focus blocks of Faizabad district, Uttar Pradesh**

**By**

**Madhukara Madhava Rao**

#### **Background:**

Prevention of maternal and infant mortality is one of the prime responsibility of every nation. Given the Current Indian scenario and target of IMR and MMR (National, State and District). The MDG 4 aims to reduce child mortality. NMR contributes to nearly 66% of IMR and 50% of U5MR in India. Hence it is a major focus of GOI to reduce NMR. Four out of five newborn deaths result from three treatable conditions: Complications during childbirth (including birth asphyxia), newborn infections, and complications from prematurity. NBCC can help in achieving that.

#### **Objectives:**

- To observe the quality of care at Newborn Care Corner in six TSU focus blocks of Faizabad district (Uttar Pradesh), and compare some parameters with FBNC Operational guidelines by Ministry of Health & Family Welfare.
- To assess the knowledge of service provider (ANM & SN) regarding Newborn Health at the identified facilities.

#### **Methods:**

**Study design:** Descriptive cross sectional study

**Study location:** Faizabad district, Uttar Pradesh

**Sampling:** Random sampling

40 Delivery points of six TSU focus blocks were randomly selected. All ANM's & SN's of randomly selected delivery points were interviewed.

**Sample Size:** 40 for Facility Assessment & all SN/ANM's (52) of randomly selected delivery points were interviewed based on questionnaire.

**Data collection:** Checklist was used for the assessment of delivery points. A semi-structured questionnaire was used as a data collection tool through face to face interviews.

**Results:** Sixty five percent of the providers were NSSK trained and only seven percent of them were trained in IMNCI. Sixty seven percent SN/ANM said birth asphyxia to be the major cause of neonatal mortality. 27 percent said neonatal sepsis, two percent said birth trauma, 42 percent said Pneumonia, twenty one percent said diarrhea and two percent said Respiratory Distress as the major causes of Neonatal Mortality and ten percent of them don't know the reasons for neonatal mortality. About 60 percent of ANM/SN knows the use of Radiant Warmer, and 40 percent do not have any idea about Radiant Warmer. Sixty percent of providers were able to demonstrate how to operate Radiant Warmer correctly, and 40 percent were incorrect in their technique. Seventy five percent of respondents knows whom to give and how to give. 40 percent knows the benefits and 32 percent know correct dosage of Vit. K and the route. Sixty percent of the providers have heard about NBCC. When asked about equipment and accessories required at NBCC, 33 percent said Radiant Warmer, 38 percent said resuscitation pump, 10 percent said Phototherapy unit, 35 percent said Stethoscope, 33 percent said baby tray and 30 percent said towel. Nineteen percent of the respondents said they don't know.

### **Conclusion:**

All the SN and ANM of identified randomly selected delivery points were assessed for their knowledge regarding newborn care. Knowledge regarding Vit.K, management of Asphyxia, and danger signs of new born to referral was less in the service providers, whereas delivery points were not well equipped according to the requirements for NBCC. Hence, there is a need to enhance the knowledge of SN and ANM, as well as need to equip the delivery points with better facilities, which will ultimately improve the quality of care & the outcomes.

**Key words:** NBCC, FBNC, IMNCI, SNCU, NMR, IMR, TSU, ANM and SN.

## 1.2 Introduction:

As India moves ahead the Millennium Development Goals (MDGs) and looks ahead to the post-2015 era, progress in reducing neonatal mortality is an important frontier. In the past two decades, while there has been remarkable progress in the survival of mothers and children beyond the newborn period, newborn survival has lagged behind.

Prevention of maternal and infant mortality is one of the prime responsibility of every nation. Give the Current Indian scenario and target of IMR and MMR (National, State and District). The MDG 4 aims to reduce child mortality. NMR contributes to nearly 66% of IMR and 50% of U5MR in India. Hence it is a major focus of GOI to reduce NMR. NBCC can help in achieving that.

**Newborn Care Corner (NBCC)** is a space within the delivery room in any health facility where immediate care is provided to all newborns at birth. This area is mandatory for all health facilities where deliveries are conducted.

Expected services to be provided at Newborn care corner:

- Care at birth which includes prevention of infection, provision of warmth, Resuscitation, Early initiation of Breastfeeding and weighing the normal newborn.
- Care of normal newborn which includes breastfeeding/feeding support.
- Care of sick newborn which includes identification and prompt referral of ‘at risk’ and ‘sick’ newborn.
- Immunization services.

Though newborn care facilities are being set up under NRHM at each delivery point across the country to address the issue of high neonatal mortality and to ensure the provision specialized care to increasing load of newborn in line with rise in institutional delivery as

well as referrals from community, but there are some bottlenecks due to which quality of care is being neglected at newborn care facility.

This study will help in assessing Newborn care corner across the four TSU (Technical Support Unit) focus blocks of Faizabad district on the basis of FBNC operational guidelines given by Ministry of Health and Family Welfare to identify the bottlenecks in functioning of NBCC. Six blocks were selected by TSU based on the high case load & low case load in the district. There are 69 delivery points in 6 TSU focus blocks. Out of 68, there are 52 SC, 9 PHC (L1), 3 PHC (L2), 3 CHC and one FRU-CHC. Ten Delivery points of each focus would be selected randomly. Knowledge of ANM's at the identified NBCC's will also be assessed on the basis of prepared questionnaire.

### **1.3 Review of literature**

60% of infant deaths in occur during the first 28 days after birth. About 40%of these neonatal deaths occur on the first day of life, almost half within three days and nearly three-fourth in the first week of life. Nearly 50% of the neonatal deaths occur among the LBW newborn.

The purpose of Govt. to come up with newborn care facility is to reduce the neonatal mortality from preventable factors. The first SNCU was established in Purulia (West Bengal) in 2003.

There was a study done on “Assessment of essential newborn care services for low birth weight babies in rural Lucknow, India by Krishna Kumar Sahu, M. Z. Idris, Monika Agarwal, S. K Singh, Pratap Shankar, R. K. Dixit”The objective of the study was to assess the essential newborn care services for low birth weight babies in rural Lucknow. The facility based survey was conducted from Oct 2011 to May 2012 in rural area of Lucknow

district, Uttar Pradesh in 9 CHC's and 9 PHC's. Multistage random sampling was used for the reaching up to the PHCs. For facility assessment regarding neonatal care services for low birth weight infrastructure, manpower, equipment related to newborn care were assessed. Only four PHC's had separate labour room. About 11.1 percent PHCs had newborn care corner and adequate light in labour room. Only one PHC had regular electricity supply. Most of the PHC's (77.8%) had one general duty medical officer. availability of essential newborn care equipment was found to be grossly inadequate in almost all the PHC's. No PHC had baby weighing scale and radiant warmer. Majority of PHCs did not have suction pumps, resuscitation bags with masks, oxygen facilities and IV infusion facilities. There were inadequate neonatal care services at the primary health care level. For the improvement of the neonatal health, strengthening of the neonatal care services especially for low birth weight is required at primary health care level.

Another study was done on "Assessment of Essential Newborn Care services in Secondary Level Facilities from two districts of India by Sumit Malhotra, Sanjay P. Zodpey, Aishwarya L. Vidyasagan, Kavya Sharma, Sunil S. Raj, Sutapa B. Neogi, Garima Pathak, and AbhaySaraf" which examined newborn care services, with a focus on essential newborn care (ENC) in two districts, one each from two states in India. Nagaur district in Rajasthan and Chhatarpur district in Madhya Pradesh were included. Six secondary-level facilities from the districts- two district hospitals (DHs) and four community health centres (CHCs) were evaluated, where maximum institutional births within districts were taking place. The assessment included record review, facility observation, and competency assessment of service providers, using structured checklists and sets of questionnaire. The domains assessed for competency were: resuscitation, provision of warmth, breastfeeding, kangaroo mother care, and infection prevention.

## **1.4 Statement of the problem**

There is a gap in “FBNC operational guidelines” and actual scenario of NBCC in six TSU focus blocks of Faizabad District, Uttar Pradesh.

## **1.5 Rationale of the Study**

The country observed a paradigm shift in its approach towards health care by adopting the Reproductive, Maternal, Newborn, Child Health and Adolescent Health Strategy (RMNCH+A) in 2013. Newborn health occupies Centre-stage in the overall strategy as all the inter linkages between various components have the greatest impact on the mortality and morbidity rates of a newborn. Four out of five newborn deaths result from three treatable conditions: Complications during childbirth (including birth asphyxia), newborn infections, and complications from prematurity.

Hence this study was conducted to assess the quality of care at Newborn Care Corners. The quality was assessed on the basis of Infrastructure, Equipment, Training status & Knowledge of service providers at NBCC.

Faizabad district is among the High Priority Districts of the country. IMR of Faizabad is 88 (IMR of UP is 68), and NMR of Faizabad is 65 (NMR of UP is 49).

## **1.6 Research Question**

To what extent Newborn Care Corner follow “FBNC operational guidelines” in identified blocks of Faizabad district, Uttar Pradesh?

## **1.7 Objectives**

- To observe the quality of care at Newborn Care Corner in six TSU focus blocks of Faizabad district (Uttar Pradesh), and compare some parameters with FBNC Operational guidelines by Ministry of Health & Family Welfare.
- To assess the knowledge of service provider (ANM & SN) regarding Newborn Health at the identified facilities.

## **1.8 Methodology**

### **1.8.1 Study Design:**

This was an observational study (to assess NBCC based on checklist given by MoHFW) & descriptive cross sectional study (to assess the knowledge of ANM/SN posted at identified facilities).

### **1.8.2 Study Location:**

This study was conducted in Faizabad district, Uttar Pradesh.

### **1.8.3 Study Subjects:**

Staff nurses & ANM's of randomly selected Delivery points for knowledge assessment (by Questionnaire).

### **1.8.4 Sampling:**

Random sampling was done.

40 Delivery points of six focus blocks were randomly selected. All ANM's & SN's of randomly selected delivery points were interviewed.

Sample Size – 40 for Facility Assessment & all SN/ANM's (52) of randomly selected were interviewed based on questionnaire.

### **1.8.5 Methods and Instruments of Data Gathering**

Checklist was used for the assessment of delivery points.

A semi-structured questionnaire was used as a data collection tool through face to face interviews. This study was a questionnaire-based survey. The study population comprised of ANM/SN of the delivery points. A briefing was given about the nature of study, and the procedure of completing the questionnaire was explained. Sample of ANM/SN was taken.

### **1.9 Statistical Treatment**

Data (for Knowledge of ANM/SN & Facility assessment) was collected was cross checked for any incomplete or partial filling. By using MS excel version collected data was then be edited, coded, tabulated and organized into various frequency distributions.

### **1.10 Ethical Considerations**

Informed consent was taken before starting the interview. If anyone disagreed to become part of the data collection process they were not forced by any means. Prior information was given before visiting any health facility. Confidentiality was ensured to all participants.

### **1.11 Results**

#### **Results for Knowledge of ANM/SN**

##### **1.11.1 Basic Information about SN/ANM**

Out of 52 identified service provider, 42 were ANM & 10 were Staff Nurses. 13 percent were educated till middle school, 42 percent of them educated till secondary school and then undergone respective staff nurse or ANM training.

About 18 percent of identified providers were in age group up to 35 years, 36 percent were in age group 36 to 50 years and 45 percent were above 50 years of age.

Working experience of 18 percent of providers is upto 15 years, 76 percent were having experience of 15 to 30 years and five percent of providers having more than 30 years of experience.

**Table 1.1: Shows Age and Experience of SN/ANM (n=52)**

**AGE:**

| Characteristics     | Number | percentage |
|---------------------|--------|------------|
| up to 35            | 20     | 38         |
| <b>35 to 50</b>     | 12     | 23         |
| <b>50 and above</b> | 20     | 38         |

**EXPERIENCE:**

| Characteristics     | Number | percentage |
|---------------------|--------|------------|
| up to 35            | 20     | 38         |
| <b>35 to 50</b>     | 12     | 23         |
| <b>50 and above</b> | 20     | 38         |

**1.11.2 Training Status of SN/ANM:**

More than half (65 percent) of the providers were NSSK trained, and 35 percent of the providers have not received any training in Newborn Care. Only seven percent of the providers were trained in IMNCI.

**Table 1.2: Training Status of SN/ANM**

| S. No. | Characteristic                  | Percentage of Respondents |
|--------|---------------------------------|---------------------------|
| 1      | Training in Newborn Care (NSSK) | 65                        |
| 2      | Not trained in Newborn Care     | 35                        |

### 1.11.3 Neonatal Period:

Fifty percent of the respondents have knowledge about the Neonatal period, which is birth to 28 days, twelve percent of the respondents said neonatal period is from birth to one year of age, and 25 percent of respondents said they don't know.

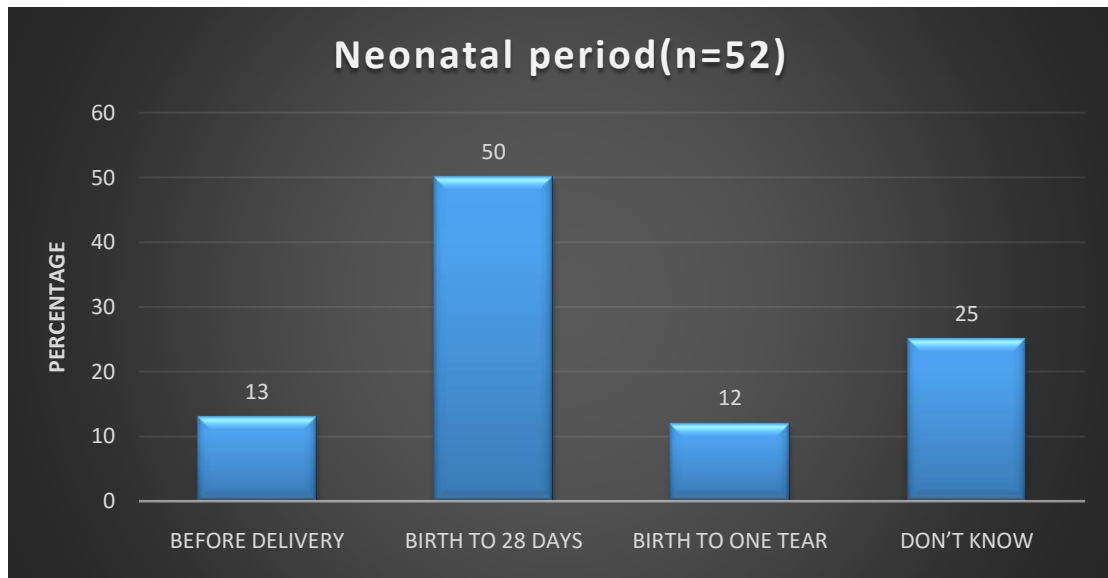


Figure 1.1: Knowledge of SN/ANM about Neonatal period

#### 1.11.4 Major causes of Neonatal Mortality:

Sixty seven percent SN/ANM said birth asphyxia to be the major cause of neonatal mortality. 27 percent said neonatal sepsis, two percent said birth trauma, 42 percent said Pneumonia, twenty one percent said diarrhea, 2percent said Respiratory Distress as the major causes of Neonatal Mortality. Ten percent of them don't know the reasons for neonatal mortality.

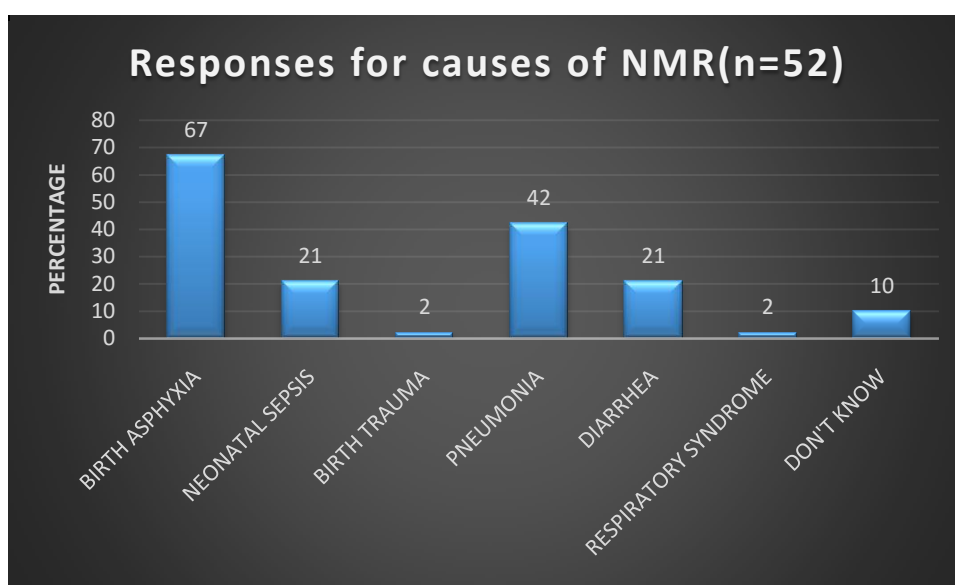


Figure 1.2: Knowledge about Major Causes of Neonatal mortality

#### 1.11.5 Weight of Normal Baby at Birth:

SN's and ANM's were asked about normal weight of Newborn at birth, 29 percent said 3kgs, 64 percent said 2.5kgs, two percent said 2kgs and five percent said others (few said 3.5 kgs to be normal weight and few said 4 kgs).

|         | NUMBER | PERCENTAGE |
|---------|--------|------------|
| 3000gms | 1      | 2          |
| 2500gms | 51     | 98         |

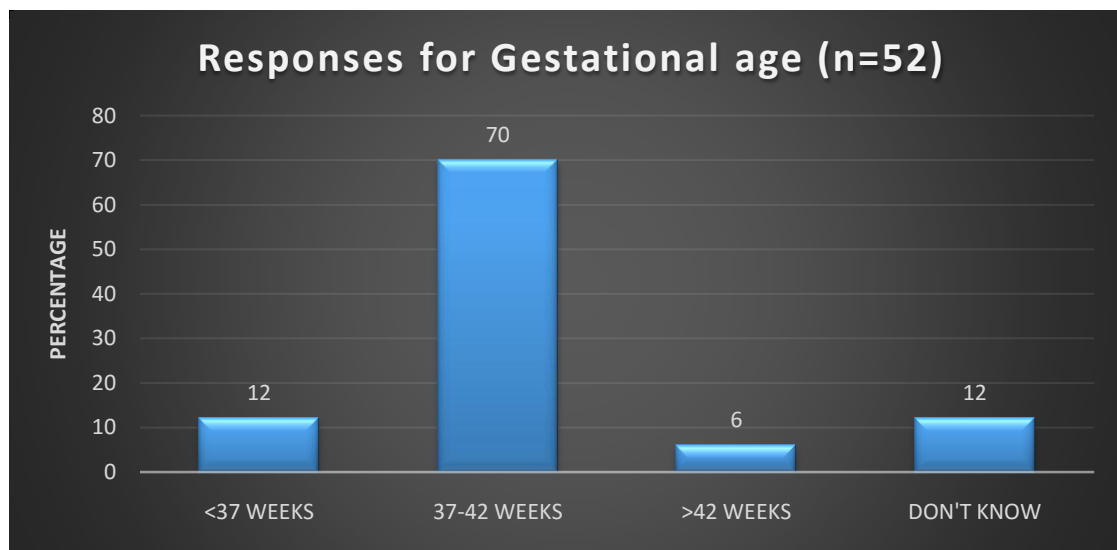
**Table 1.3: Knowledge about Normal weight of Newborn at birth**

#### **1.11.6 Demonstration to measure weight of newborn:**

SN's and ANM's were asked to demonstrate measuring weight of newborns on dummy, 92 percent were able to measure the weight correctly, and only eight percent were incorrect in measuring weight.

#### **1.11.7 Gestational age of full term newborn**

About 70 percent SN and ANM know the gestational age of full term baby, 12 percent don't know and 18 percent had other answers (few said 36-40 weeks and few said 39-42 weeks).



**Figure 1.3: Knowledge about Gestational age of full term baby**

#### **1.11.8 Normal temperature of Newborn:**

Only 62 percent of SN/ANM knows the normal temperature of Newborn, 12 percent does not know about temperature and fourteen percent said other temperatures (few said 36, few said 38 and few said 35.4).

#### **1.11.9 Demonstration to measure temperature of Newborn:**

Seventy three percent SN/ANM were able to correctly measure the temperature of Newborn, when they were asked to demonstrate, and 27 percent were incorrect in their technique of measurement.

#### **1.11.10 Knowledge about Radiant warmer:**

About 60 percent of ANM/SN knows the use of Radiant Warmer, and 40 percent do not have any idea about Radiant Warmer.

#### **1.11.11 Demonstration to use Radiant Warmer:**

Sixty percent of providers were able to demonstrate how to operate Radiant Warmer correctly, and 40 percent were incorrect in their technique.

#### **1.11.12 Knowledge about Kangaroo Mother Care (KMC):**

Ninety eight percent of the providers of randomly selected delivery points knew about KMC. Only 77 percent knew the correct technique when asked to demonstrate on dummy, and 33 percent were incorrect.

#### **1.11.13 Knowledge about Birth dose of Vaccines:**

All the providers of randomly selected delivery points have a good idea about Birth dose of all vaccines. Though Newborns were discharged without giving all three vaccines, since BCG vial is opened only when there are 5 or more Newborns at Delivery Points. Usually Immunization is done at VHND.

#### 1.11.14 Knowledge about Vitamin K (dosage, route of administration & benefits):

Seventy five percent of respondents knows whom to give and how to give Vit.K. 40 percent knows the benefits and 32 percent know correct dosage of Vit. K and the route.

#### 1.11.15 Equipment & accessories at NBCC:

Sixty percent of the providers have heard about NBCC. When asked about equipment and accessories required at NBCC, 33 percent said Radiant Warmer, 38 percent said resuscitation pump, 10 percent said Phototherapy unit, 35 percent said Stethoscope, 33 percent said baby tray and 30 percent said towel. Nineteen percent of the respondents said they don't know.

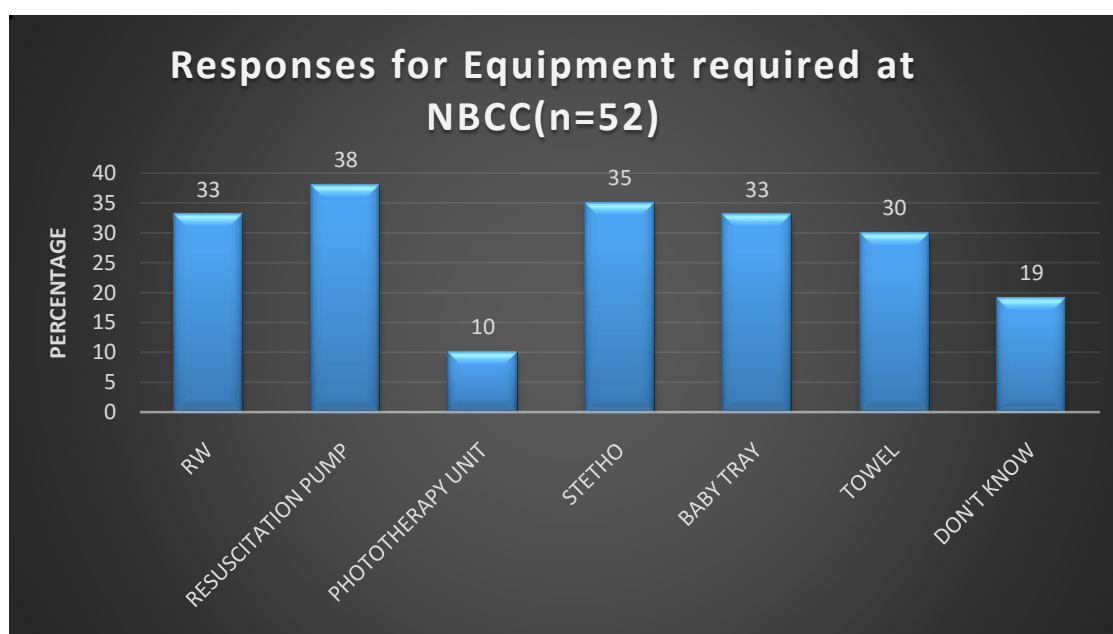


Figure 1.4: Knowledge about Equipment and Accessories required at NBCC

#### 1.11.16 Breastfeeding (Initiation of Breastfeeding and Exclusive Breastfeeding):

Seventy nine percent of the SN/ANM said early initiation of Breastfeeding starts as soon as possible and 96 percent of the respondents knows about Exclusive breastfeeding.

#### 1.11.17 Danger Signs of Newborn:

Knowledge of SN and ANM regarding danger signs of newborns was assessed. Thirteen percent said grunting as the danger sign, 23 percent said Chest In drawing, 48 percent said Fast Breathing, 17 percent said Nasal Flaring, 53 percent said Cyanosis, 62 percent said Hypothermia, 15 percent said Skin Pustules, 28 percent said Jaundice and 19 percent said lethargic as the Danger signs in Newborns. Only eight percent said they don't know the danger signs.

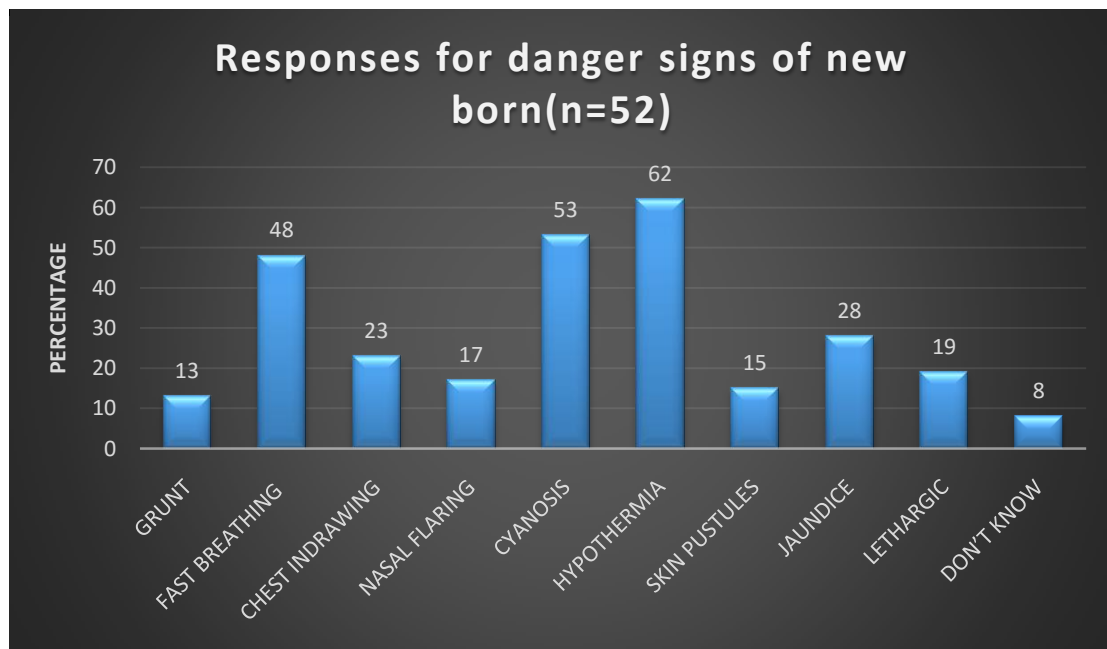


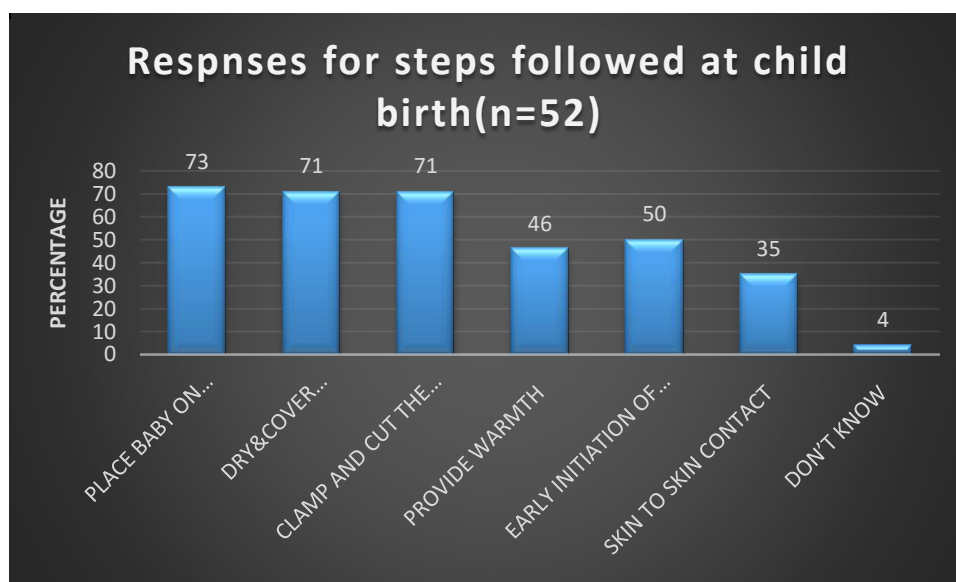
Figure 1.5: Knowledge about Danger Signs in Newborn

#### 1.11.18 Demonstration of management of Asphyxiated Newborn:

About 62 percent of SN and ANM said they have knowledge about Management of Asphyxiated Newborn. Only 15 percent were correctly able to demonstrate on dummy.

#### 1.11.19 Knowledge about steps to be followed immediately after birth:

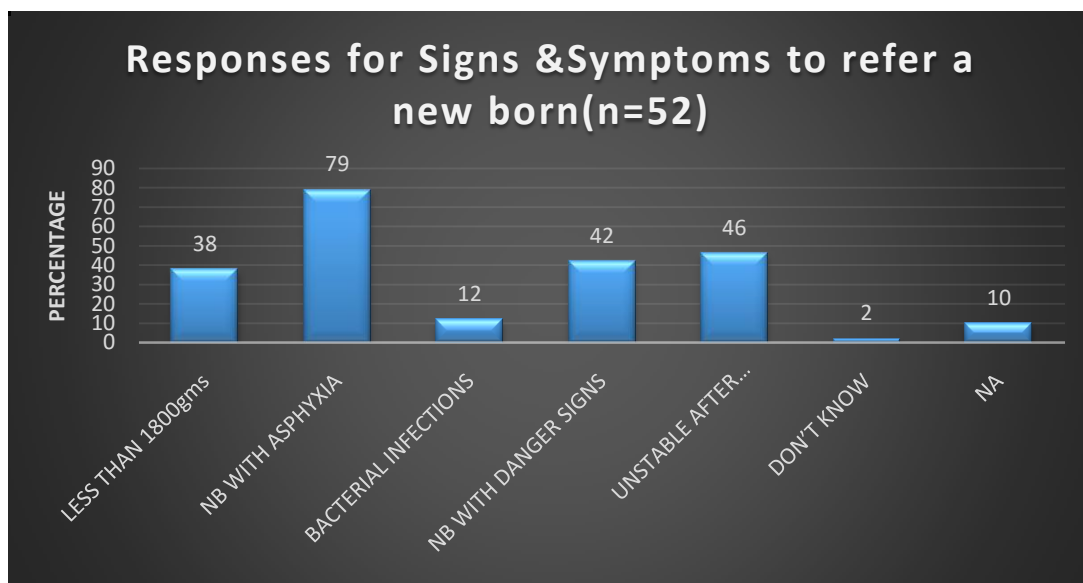
About 73 percent of Service providers said Place Baby on mother's Abdomen, 71 percent said Dry & cover mother & baby, 71 percent said Clamp and cut the cord, 46 percent said provide warmth, 50 percent said Early initiation of Breastfeeding and 35 percent said maintenance of Skin to skin contact.



**Figure 1.6: Knowledge about Steps followed immediately after Birth of Baby**

#### **1.11.20 Signs & Symptoms for Referral of newborn:**

About 90 percent of the respondents said they know about referral management of Newborns. When asked about signs & symptoms to refer newborns, 38 percent said newborn weighing less than 1800gms, 79 percent said Asphyxiated Newborn, 46 percent said unstable newborn after Resuscitation, 12 percent said bacterial infections, 42 percent said new born with danger signs and 2 percent of respondents they don't know the symptoms of new born for referral.

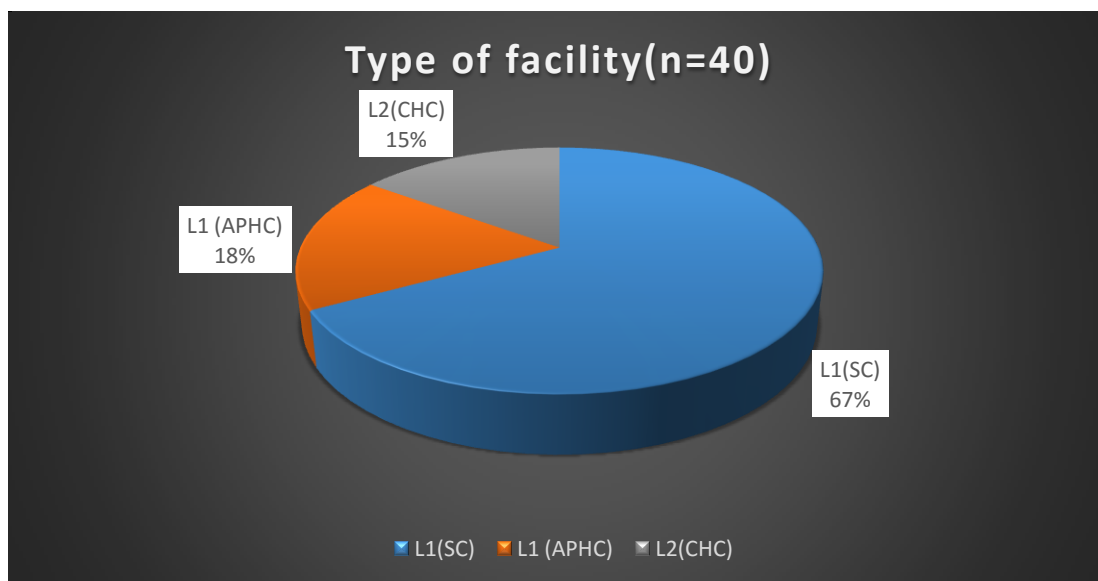


**Figure 1.7: Signs & Symptoms for referral of Newborn**

### **Results of Facility Assessment**

#### **1.11.21 Types of Facility visited:**

40 delivery points were visited in four TSU focus blocks. 15 percent were CHC (L2), 18 percent were PHC (L1), two percent were CHC and 67 percent were Subcenters.



**Figure 1.8: Type of Facility visited**

#### **1.11.22 Facility having Designated Newborn Care Corner:**

About 20 percent Delivery points have designated NBCC, with 20-30 ft space for Radiant Warmer, and 20 percent delivery points have appropriate power connection for plugging for Radiant Warmer.

**1.11.23 Electricity Supply:**

About 43 percent delivery points have Electricity Supply, only 23 percent have power backup or generator and 10 percent of them have fuel in their generator.

**1.11.24 Running water in Facility:**

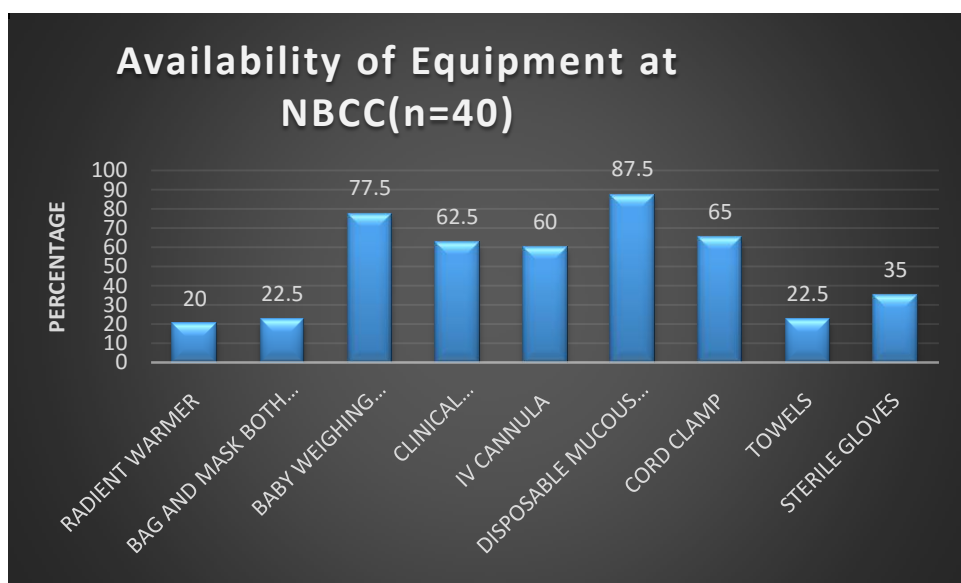
About 63 percent Delivery points have running water supply, five percent of them have elbow operated hand washing station.

**1.11.25 Protocols displayed in Newborn Care Corner:**

Only 33 percent have protocols displayed in their NBCC.

**1.11.26 Availability of Equipment:**

About 20 percent Delivery Points have Radiant Warmer, 23 percent have Bag and Mask, 77 percent have Baby weighing machine, 60 percent have IV Cannula, 88 percent have Mucous Extractor and Cord Clamp, 22 percent have towels for drying or wrapping the baby and 35 percent have sterile gloves.



**Figure 1.9: Availability of Equipment for NBCC**

#### **1.11.27 Availability of Human Resource:**

Thirty fivepercent Delivery points have Medical Officer, Thirteen percent have one SN and98 percent have ANM.

**Table 1.4: Availability of Human Resource**

|                 | NUMBER | PERCENTAGE |
|-----------------|--------|------------|
| MEDICAL OFFICER | 14     | 35         |
| STAFF NURSE     | 5      | 13         |
| ANM             | 39     | 98         |

## **1.12 Discussion**

The objective of study was to observe the quality of care at Newborn Care Corner in six TSU focus blocks of Faizabad district (Uttar Pradesh), and compare some parameters with FBNC Operational guidelines by Ministry of Health & Family Welfare, and to assess the knowledge of service provider (ANM & SN) regarding Newborn Health at the identified facilities.

The main focus was to assess the quality of care at Newborn Care Corners. The quality was assessed on the basis of Infrastructure, Equipment, Training status & Knowledge of service providers of NBCC at six TSU focus blocks of Faizabad district, which is among High Priority District for RMNCH+A activities UP, India.

The study was aimed to assess the quality of care at 40 randomly selected delivery points from 6 TSU focus blocks. 10 delivery points from each block was taken. DP's were assessed for their infrastructure, availability of Equipment and accessories, and Human Resource. All the SN and ANM of identified randomly selected delivery points were assessed for their knowledge regarding newborn care. 40 Delivery points were randomly selected among six blocks, which were assessed on the basis of Checklist. Knowledge of SN and ANM was assessed on the basis of semi-structured questionnaire through face to face interviews. In all 52 service providers were assessed in 40 randomly selected delivery points.

Sixty percent of the respondents were NSSK trained. 50 percent of the respondents said neonatal period is from birth to 28 days. When asked about the major causes of Neonatal Mortality, 67 percent said birth asphyxia, 42 percent said pneumonia and 21 percent said diarrhea.

They all have the knowledge about vaccines given at birth, but BCG was not given until there are 5 newborns at delivery points. BCG is given during VHND. 75 percent of

respondents knows whom to give and how to give. 40 percent knows the benefits and 32 percent know correct dosage of Vit.k the route. About 62 percent of SN and ANM said they have knowledge about Management of Asphyxiated Newborn. Only 15 percent were correctly able to demonstrate on dummy.

About 89 percent of the respondents said they know about referral management of Newborns. When asked about signs & symptoms to refer newborns, 96 percent said newborn weighing less than 1800gms, 85 percent said premature newborns, 4 percent said Asphyxiated Newborn, 2 percent said Unstable newborn after Resuscitation, and none of them said Newborns with Blood infections. Thirteen percent said grunting as the danger sign, 23 percent said Chest In drawing, 48 percent said Fast Breathing, 17 percent said Nasal Flaring, 53 percent said Cyanosis, 62 percent said Hypothermia, 15 percent said Skin Pustules, 28 percent said Jaundice and 19 percent said lethargic as the Danger signs in Newborns. Only eight percent said they don't know the danger signs.

About 73 percent of Service providers said Place Baby on mother's Abdomen, 71 percent said Dry & cover mother & baby, 71 percent said Clamp and cut the cord, 46 percent said provide warmth, 50 percent said Early initiation of Breastfeeding and 35 percent said maintenance of Skin to skin contact.

When we compare this study with the previous study done on "Assessment of essential newborn care services for low birth weight babies in rural Lucknow". 40 delivery points were visited in six TSU focus blocks. 15 percent were CHC (L2), 18 percent were PHC (L1), two percent were CHC and 67 percent were Sub centers. About 28 percent Delivery points have designated NBCC, 20 percent with 20-30 ft space for Radiant Warmer and 20 percent delivery points have appropriate power connection for plugging for Radiant

Warmer. About 43 percent delivery points have Electricity Supply, only 23 percent have power backup or generator and 10 percent of them have fuel in their generator.

About 20 percent Delivery Points have Radiant Warmer, 23 percent have Bag and Mask, 77 percent have Baby weighing machine, 60 percent have IV Cannula, 88 percent have Mucous Extractor and Cord Clamp, 22 percent have towels for drying or wrapping the baby and 35 percent have sterile gloves.

The results of the study may be useful in planning and developing suitable strategies for improving the quality of care at NBCC, which includes the knowledge of SN and ANM. This might include training as well as refresher training.

### **1.13 Conclusion**

The study was aimed to assess the quality of care at 40 randomly selected delivery points from 6 TSU focus blocks. DP's were assessed for their infrastructure, availability of Equipment and accessories, and Human Resource. All the SN and ANM of identified randomly selected delivery points were assessed for their knowledge regarding newborn care.

Knowledge regarding Vit. K, management of Asphyxia and danger signs was very less in the service providers, whereas delivery points were not equipped according to the requirements for NBCC.

Hence, there is a need to enhance the knowledge of SN and ANM, as well as need to equip the delivery points with better facilities, which will ultimately improve the quality of care & the outcomes.

### **1.14 Limitations of the Study**

This study was done in very small and focused area.

### 1.15 References:

- [1] Assessment of essential newborn care services for low birth weight babies in rural Lucknow, India by *Krishna Kumar Sahu, M. Z. Idris, Monika Agarwal, S. K Singh, Pratap Shankar, R. K. Dixit.*
- [2] Assessment of Essential Newborn Care services in Secondary Level Facilities from two districts of India by *Sumit Malhotra, Sanjay P. Zodpey, Aishwarya L. Vidyasagaran, Kavya Sharma, Sunil S. Raj, Sutapa B. Neogi, Garima Pathak, and AbhaySaraf.*
- [3] SNCU Toolkit
- [4] FBNC operational guidelines by Ministry of Health & Family welfare
- [5] Facility based newborn care: what works, what does not? (Dr.Pavitra Mohan, MD, MPH, Health Specialist, UNICEF India)

## **2. Annexures**

### **2.1 Questionnaire for SN/ANM**

Assessment of Newborn Care Corner in six TSU focus blocks of Faizabad  
district, Uttar Pradesh

#### **Interview Schedule**

**Informed Consent:** I would like to thank you for taking the time to meet me. My name is Madhukara Madhavarao from UP-TSU.

I would greatly appreciate your participation in this survey.

I would like to ask you some questions about your knowledge on Newborn care. The interview should take about 10 minutes. Information you provide will be kept strictly confidential and used only for research.

Participation in survey is voluntary. If you choose to participate, you may withdraw at any time. However we hope that you will take part in this interview since your participation is important. You don't have to talk about anything that you don't want to and you can end the interview at any time.

Do you have any questions about what I just explained?

Are you willing to participate in the interview?

Start time: \_\_\_\_\_

End time: \_\_\_\_\_

## Instruction Manual for Questionnaire:

- Ask the questions in their language.
- Instructions for marking responses are mentioned in front of each questions.
- Q.10: Check the baby weighing machine for its functionality.

Wash the hands before touching the baby.

If a sheet is placed below the newborn, first place the sheet & then set the calibration at 0gms.

Place the baby & measure the weight by placing the eye on the same level.

Measure the accurate weight.

- Q.12: Make sure that the thermometer is clean.

Wash your hands before touching the baby.

Shake it down, so that it reads less than 35<sup>0</sup> C.

Place the silver/red/bulb end of the thermometer under the baby's arm, in the middle of the armpit.

Gently hold the baby's arm against the body. Keep the thermometer in place for 3 minutes.

Remove the thermometer and read the temperature.

DO NOT add 0.5 or 1<sup>0</sup>C to this.

Keep thermometer in a sterile container after cleaning with spirit.

Record the temperature in the baby's case notes.

- Q.15: Push the skin sensor plug firmly into the front panel socket or plug the electrical connector of the single patient use temperature sensors into the reusable adaptor.

Push adapter firmly into socket.

When the baby arrives, place on the warmer mattress and correctly attach the skin sensor. Select Baby mode by pressing the Baby button.

Set the desired skin temperature between 34.5°C and 37.5°C by turning the control knob on the front panel.

The set temperature is displayed above the control knob.

With the skin sensor plug correctly inserted into the front panel socket and the skin sensor correctly positioned on the baby, the baby's skin temperature is displayed above the control knob.

The warmer will now automatically adjust the heater power to stabilize the baby's skin temperature at the desired set temperature.

- Q.18: Place baby between the mother's breasts in an upright position.

Head turned to one side and slightly extended.

Hips flexed and abducted in a "frog" position; arms flexed.

Baby's abdomen at mother's epigastrium.

Support baby's bottom.

- Q.23: 0.5mg for a newborn weighing less than 1500gm & 1mg for more than 1500gm.

- Q.31: Initial steps of Resuscitation

Provide Warmth

Position

Clear Airway as needed

Dry

Stimulate

Bag & Mask Ventilation: Squeeze bag with 2 fingers or whole hand, 2-3 times.

Observe for rise of chest.

IF CHEST IS NOT RISING:

Check seal.

Reposition the head.

Clear airway.

Squeeze harder.

Once good seal and chest rising, ventilate at 40 -60 squeezes per minute.

Check heart rate after 30 seconds.

Provide Chest Compressions

Administer medications.

- Q.34: Preterm birth

Severe low birth weight <1800 g

Asphyxia:

Respiration not restored with bag and mask ventilation for more than 30 seconds  
(OR)

APGAR < 7 at 5 minutes

Unstable newborn (after resuscitation)

Grunting

Respiratory rate > 60/ minute

Chest retraction

Blue or pale baby

Any malformation requiring immediate management-diaphragmatic hernia, esophageal atresia, blue baby (congenital heart disease).

Possible serious bacterial infection (sepsis):

Convulsions / Lethargic / unconscious

Fast breathing (>60 per minute)

Severe chest indrawing, Nasal flaring, Grunting

10 or more skin pustules or a big boil

Axillary temperature  $\geq 37.5$  C or  $\leq 35.5$  C

Less than normal movements

Not able to feed

Danger signs:

Persistent vomiting

Jaundice

Abdominal distension

Bleeding from any site

Diarrhea, not passing urine within 48 hours

Stiff or floppy baby

**Questions:**

| Q. No. | Questions                                               | Coding Categories             |    | Instruction                  | Response |
|--------|---------------------------------------------------------|-------------------------------|----|------------------------------|----------|
| 1      | What is your name?                                      |                               |    |                              |          |
| 2      | What is your Age?                                       |                               |    | Write in completed years     |          |
| 3      | Since how long are you working as ANM/SN?               |                               |    | Write in completed years     |          |
| 4      | What is your highest Educational level?                 | No Education                  | 1  |                              |          |
|        |                                                         | Primary (Up to grade 5)       | 2  |                              |          |
|        |                                                         | Middle (Up to grade-9)        | 3  |                              |          |
|        |                                                         | Secondary (Up to grade 10-12) | 4  |                              |          |
|        |                                                         | Graduation and above          | 5  |                              |          |
| 5      | Have you received any training in Newborn Health?       | Yes                           | 1  | If “2” skip to Q. 7          |          |
|        |                                                         | No                            | 2  |                              |          |
| 6      | Which training you have received?                       | NSSK (2 days)                 | 1  |                              |          |
|        |                                                         | IMNCI (8days)                 | 2  |                              |          |
|        |                                                         | Both                          | 3  |                              |          |
| 7      | Which period of life is referred to as Neonatal period? | Before delivery               | 1  | In case of 99 please specify |          |
|        |                                                         | Birth to 28 days              | 2  |                              |          |
|        |                                                         | Birth to one year             | 3  |                              |          |
|        |                                                         | Don't know                    | 98 |                              |          |
|        |                                                         | Other                         | 99 |                              |          |

|    |                                                                  |                               |    |                                                                                                                                                                                            |  |
|----|------------------------------------------------------------------|-------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 8  | Can you tell me what the major causes of Neonatal Mortality are? | Birth Asphyxia                | 1  | Multiple answer possible.<br>In case of 99 please specify                                                                                                                                  |  |
|    |                                                                  | Neonatal Sepsis               | 2  |                                                                                                                                                                                            |  |
|    |                                                                  | Birth Trauma                  | 3  |                                                                                                                                                                                            |  |
|    |                                                                  | Pneumonia                     | 4  |                                                                                                                                                                                            |  |
|    |                                                                  | Diarrhea                      | 5  |                                                                                                                                                                                            |  |
|    |                                                                  | Respiratory Distress Syndrome | 6  |                                                                                                                                                                                            |  |
|    |                                                                  | Don't know                    | 98 |                                                                                                                                                                                            |  |
|    |                                                                  | Other                         | 99 |                                                                                                                                                                                            |  |
| 9  | What should be the minimum weight of a normal Baby at birth?     | 3000gms                       | 1  | In case of 99 please specify                                                                                                                                                               |  |
|    |                                                                  | 2500gms                       | 2  |                                                                                                                                                                                            |  |
|    |                                                                  | 2000gms                       | 3  |                                                                                                                                                                                            |  |
|    |                                                                  | Don't know                    | 98 |                                                                                                                                                                                            |  |
|    |                                                                  | Other                         | 99 |                                                                                                                                                                                            |  |
| 10 | Can you demonstrate how to measure weight of a newborn?          | Correct                       | 1  | Ask SN/ANM to demonstrate weighing of a baby using dummy                                                                                                                                   |  |
|    |                                                                  | Incorrect                     | 2  |                                                                                                                                                                                            |  |
| 11 | What should be the gestational age of full term baby?            | Less than 37 weeks            | 1  | In case of 99 please specify                                                                                                                                                               |  |
|    |                                                                  | In between 37 to 42 weeks     | 2  |                                                                                                                                                                                            |  |
|    |                                                                  | Greater than 42 weeks         | 3  |                                                                                                                                                                                            |  |
|    |                                                                  | Don't know                    | 98 |                                                                                                                                                                                            |  |
|    |                                                                  | Other                         | 99 |                                                                                                                                                                                            |  |
| 12 | Does the ANM/SN knows how to measure the temperature of Newborn? | Correct                       | 1  | Ask SN/ANM to tell steps to measure the temperature of a child as per the availability of the type of thermometer. If she illustrate all steps correctly than consider answer as 'Correct' |  |
|    |                                                                  | Incorrect                     | 2  |                                                                                                                                                                                            |  |
| 13 | What is normal temperature of Newborn?                           | Less than 37.4 C              | 1  | In case of 99 please specify                                                                                                                                                               |  |
|    |                                                                  | 37.4                          | 2  |                                                                                                                                                                                            |  |
|    |                                                                  | More than 37.4 C              | 3  |                                                                                                                                                                                            |  |
|    |                                                                  | Don't know                    | 98 |                                                                                                                                                                                            |  |
|    |                                                                  | Other                         | 99 |                                                                                                                                                                                            |  |

|    |                                                                                      |                                             |    |                                                                       |  |
|----|--------------------------------------------------------------------------------------|---------------------------------------------|----|-----------------------------------------------------------------------|--|
| 14 | Do you know what Radiant Warmer is?                                                  | Yes                                         | 1  | In case of 2 skip to Q no.17                                          |  |
|    |                                                                                      | No                                          | 2  |                                                                       |  |
| 15 | Can you tell me the usage of Radiant Warmer?                                         | To Maintain the temperature of the new born | 1  | In case of 99 please specify                                          |  |
|    |                                                                                      | Use in treatment of jaundice                | 2  |                                                                       |  |
|    |                                                                                      | Don't Know                                  | 98 |                                                                       |  |
|    |                                                                                      | Other                                       | 99 |                                                                       |  |
| 16 | Can you demonstrate me how to use Radiant Warmer?                                    | Correct                                     | 1  | Ask SN/ANM to use Dummy if newborn is not available at Radiant warmer |  |
|    |                                                                                      | Incorrect                                   | 2  |                                                                       |  |
| 17 | Do you know what Kangaroo Mother Care is?                                            | Yes                                         | 1  | In case of 2 skip to Q no. 19                                         |  |
|    |                                                                                      | No                                          | 2  |                                                                       |  |
| 18 | Can you demonstrate how to perform Kangaroo Mother Care?                             | Correct                                     | 1  | Ask SN/ANM to use Dummy to demonstrate Kangaroo Mother Care           |  |
|    |                                                                                      | Incorrect                                   | 2  |                                                                       |  |
| 19 | Can you tell me about the essential vaccines we should give to the newborn at birth? | BCG                                         | 1  | Multiple responses possible<br>In case of 99 please specify           |  |
|    |                                                                                      | Hepatitis -B                                | 2  |                                                                       |  |
|    |                                                                                      | OPV                                         | 3  |                                                                       |  |
|    |                                                                                      | Don't Know                                  | 98 |                                                                       |  |
|    |                                                                                      | Other                                       | 99 |                                                                       |  |
| 20 | Do you know to whom we should give Vitamin-K injection?                              | Newborn                                     | 1  | In case of 99 please specify                                          |  |
|    |                                                                                      | Mother                                      | 2  |                                                                       |  |
|    |                                                                                      | Don't Know                                  | 98 |                                                                       |  |
|    |                                                                                      | Other                                       | 99 |                                                                       |  |
| 21 | Can you tell me the route of administration of Vitamin-K injection?                  | Intra Muscular                              | 1  | In case of 99 please specify                                          |  |
|    |                                                                                      | Intra Venous                                | 2  |                                                                       |  |
|    |                                                                                      | Sub-Cutaneous                               | 3  |                                                                       |  |
|    |                                                                                      | Don't Know                                  | 98 |                                                                       |  |
|    |                                                                                      | Other                                       | 99 |                                                                       |  |
| 22 | Can you tell me the benefits of vitamin-K to the newborn?                            | To Prevent Hemorrhagic disease              | 1  | In case of 99 please specify                                          |  |
|    |                                                                                      | For lung maturity                           | 2  |                                                                       |  |
|    |                                                                                      | Don't Know                                  | 98 |                                                                       |  |
|    |                                                                                      | Other                                       | 99 |                                                                       |  |
| 23 | Can you tell me the                                                                  | 0.25 mg                                     | 1  | In case of 99                                                         |  |

|    |                                                                            |                                                              |    |                                                           |  |
|----|----------------------------------------------------------------------------|--------------------------------------------------------------|----|-----------------------------------------------------------|--|
|    | dosage of vitamin-K should be given to a newborn?                          | 0.5 mg & 1mg                                                 | 2  | please specify                                            |  |
|    |                                                                            | Don't Know                                                   | 98 |                                                           |  |
|    |                                                                            | Other                                                        | 99 |                                                           |  |
| 24 | Do you know what NBCC is?                                                  | Yes                                                          | 1  | If answer is 2 than skip to 26                            |  |
|    |                                                                            | No                                                           | 2  |                                                           |  |
| 25 | Can you tell me what are the equipment and accessories required at NBCC?   | Radiant Warmer                                               | 1  | Multiple answer possible.<br>In case of 99 please specify |  |
|    |                                                                            | Resuscitation pump                                           | 2  |                                                           |  |
|    |                                                                            | Phototherapy Unit                                            | 3  |                                                           |  |
|    |                                                                            | Stethoscope                                                  | 4  |                                                           |  |
|    |                                                                            | Baby Tray                                                    | 5  |                                                           |  |
|    |                                                                            | Towel                                                        | 6  |                                                           |  |
|    |                                                                            | Don't Know                                                   | 98 |                                                           |  |
|    |                                                                            | Other                                                        | 99 |                                                           |  |
| 26 | According to you when we should initiate breastfeeding to a newborn child? | 1 hr after delivery                                          | 1  | In case of 99 please specify                              |  |
|    |                                                                            | 2 hr after delivery                                          | 2  |                                                           |  |
|    |                                                                            | 24 hrs after delivery                                        | 3  |                                                           |  |
|    |                                                                            | As soon as possible after delivery                           | 4  |                                                           |  |
|    |                                                                            | Don't know                                                   | 98 |                                                           |  |
|    |                                                                            | Other                                                        | 99 |                                                           |  |
| 27 | Do you know what exclusive breastfeeding is?                               | Yes                                                          | 1  | In case of response-2 skip to Q no.- 29                   |  |
|    |                                                                            | No                                                           | 2  |                                                           |  |
| 28 | Please tell me what is Exclusive breastfeeding?                            | Only breast milk till 6 months                               | 1  | In case of 99 please specify                              |  |
|    |                                                                            | Water & breast milk till 6 months                            | 2  |                                                           |  |
|    |                                                                            | Prelacteals can be given alongwith breast milk till 6 months | 3  |                                                           |  |
|    |                                                                            | Don't know                                                   | 98 |                                                           |  |
|    |                                                                            | Other                                                        | 99 |                                                           |  |
| 29 | What are the danger Signs in Newborns?                                     | Grunt                                                        | 1  | Multiple answer possible.<br>In case of 99 please specify |  |
|    |                                                                            | Fast Breathing                                               | 2  |                                                           |  |
|    |                                                                            | Chest Indrawing                                              | 3  |                                                           |  |
|    |                                                                            | Nasal flaring                                                | 4  |                                                           |  |
|    |                                                                            | Cyanosis (blue or Pale baby)                                 | 5  |                                                           |  |
|    |                                                                            | Hypothermia                                                  | 6  |                                                           |  |
|    |                                                                            | Skin Pustules                                                | 7  |                                                           |  |

|    |                                                                                                       |                                       |    |                                                                                          |  |
|----|-------------------------------------------------------------------------------------------------------|---------------------------------------|----|------------------------------------------------------------------------------------------|--|
|    |                                                                                                       | Jaundice                              | 8  |                                                                                          |  |
|    |                                                                                                       | Lethargic                             | 9  |                                                                                          |  |
|    |                                                                                                       | Don't know                            | 98 |                                                                                          |  |
|    |                                                                                                       | Other                                 | 99 |                                                                                          |  |
| 30 | Do you what is Asphyxiated Newborn?                                                                   | Yes                                   | 1  | If "2" skip to Q.32                                                                      |  |
|    |                                                                                                       | No                                    | 2  |                                                                                          |  |
| 31 | Can you demonstrate in to the dummy how to manage Asphyxiated Newborn?                                | Correct                               | 1  |                                                                                          |  |
|    |                                                                                                       | Incorrect                             | 2  |                                                                                          |  |
| 32 | Can you tell me the steps you are following during child birth?                                       | Place baby on mother's abdomen        | 1  | Multiple answer possible<br>In case of 99 please specify                                 |  |
|    |                                                                                                       | Dry & cover mother & baby             | 2  |                                                                                          |  |
|    |                                                                                                       | Clamp & cut the cord                  | 3  |                                                                                          |  |
|    |                                                                                                       | Provide Warmth                        | 4  |                                                                                          |  |
|    |                                                                                                       | Early Initiation of Breastfeeding     | 5  |                                                                                          |  |
|    |                                                                                                       | Skin to skin contact to mother        | 6  |                                                                                          |  |
|    |                                                                                                       | Don't know                            | 98 |                                                                                          |  |
|    |                                                                                                       | Other                                 | 99 |                                                                                          |  |
| 33 | Do you Know when there is need to refer a newborn?                                                    | Yes                                   | 1  | In case of -2 leave the question 34 and greet the respondent to participate in the study |  |
|    |                                                                                                       | No                                    | 2  |                                                                                          |  |
| 34 | Can you tell me when you should refer a newborn or what are the signs or symptoms to refer a newborn? | Newborn weight less than 1800 gm      | 1  | Multiple answer possible<br>In case of 99 please specify                                 |  |
|    |                                                                                                       | Newborn with Asphyxia                 | 2  |                                                                                          |  |
|    |                                                                                                       | Possible serious bacterial infections | 3  |                                                                                          |  |
|    |                                                                                                       | Newborn with danger signs             | 4  |                                                                                          |  |
|    |                                                                                                       | Unstable Newborn after Resuscitation  | 5  |                                                                                          |  |
|    |                                                                                                       | Don't know                            | 98 |                                                                                          |  |

|  |  |       |    |  |  |
|--|--|-------|----|--|--|
|  |  | Other | 99 |  |  |
|--|--|-------|----|--|--|

Thank you for your time and valuable contribution. Do you have any question for me?

Sign of Interviewer

## 2.2 Annexure

### Checklist for assessment of Delivery Point:

**Name of the facility:** \_\_\_\_\_

**Type of facility (DH/SDH/FRU CHC/CHC/24\*7PHC/APHC/SC):** \_\_\_\_\_

Mark Tick “√” for availability and mark cross “×” for unavailability.

#### **Infrastructure:**

| S. No. |                                                                        | Response | Remarks |
|--------|------------------------------------------------------------------------|----------|---------|
| 1      | Is there designated newborn care corner in delivery room?              |          |         |
| 2      | 20-30 ft in size (where Radiant warmer can be kept)?                   |          |         |
| 3      | Appropriate power connection for plugging in the radiant warmer?       |          |         |
| 4      | Is there regular electricity supply?                                   |          |         |
| 5      | Does this facility have a backup or standby generator for electricity? |          |         |
| 6      | Is generator having fuel?                                              |          |         |
| 7      | Is there availability of running water in the facility?                |          |         |
| 8      | Is there availability of Elbow operated Hand washing station?          |          |         |
| 9      | Protocols are displayed in Newborn Care Corner?                        |          |         |

#### **Equipment:**

| S. No. | Name of item                      | Unavailable | Available | Functional |
|--------|-----------------------------------|-------------|-----------|------------|
| 1      | Radiant Warmer                    |             |           |            |
| 2      | Bag and Mask, Neonate, 250-500 ml |             |           |            |
| 3      | Baby Weighing Machine             |             |           |            |
| 4      | Clinical thermometer              |             |           |            |
| 5      | I/V Cannula                       |             |           |            |

|   |                                             |  |  |  |
|---|---------------------------------------------|--|--|--|
| 6 | Mucous Extractor, 20ml, sterile, disposable |  |  |  |
| 7 | Cord Clamp                                  |  |  |  |
| 8 | Towels for drying and wrapping the baby     |  |  |  |
| 9 | Sterile gloves                              |  |  |  |

**Human Resource:**

| S. No. | Designation | Number | Remark |
|--------|-------------|--------|--------|
| 1      | MO          |        |        |
| 2      | SN          |        |        |
| 3      | ANM         |        |        |

**Training Status of Staff:**

| S. No. | Designation | NSSK (2days) | Remark |
|--------|-------------|--------------|--------|
| 1      | MO          |              |        |
| 2      | SN          |              |        |
| 3      | ANM         |              |        |