Assessment of New Born Care Area in District Kasganj, Uttar Pradesh

- PRESENTED BY:

DR SUCHETA SHARMA

MBA-HM 23 BATCH

ENROLLMENT NUMBER- 0845

Guided By:

Arindam Das, PhD

Associate Professor

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INTRODUCTION

In India, 26 million babies born every year and out of that 940,000 neonates die before completing their one month of life. The neonatal period is 28 days with a neonatal mortality rate (NMR) of 23/1000 live births (SRS Bulletin 2017), neonatal death contribute to about two-thirds of infant deaths (Infant Mortality Rate) 41/1000 live births (NFHS4) and “about half of all the deaths in children younger than 5 years” of age (Under 5 mortality rate) 50/1000 Live births (NFHS 4). Infant Mortality Rate has declined in India from 58/1000 live births in 2004 to 41/1000 Live births in 2020 However, there is slow progress in reduction of NMR which declined from 37/1000 live births in 2004 to 23/1000 live birth. Reduction in death in the first week of life has shown least progress..

U.P is a state of northern India with highest population with IMR 64/1000 live birth, NMR 30/1000 Live births. Preventable morbidities such as hypothermia, asphyxia, infection and respiratory distress continue to be the main cause of mortality in neonatal period.

RATIONALE

In India, around lakhs of newborn die every year due to various reasons such as delivery in home, infections, lack of antenatal and postnatal care etc. without completing one year of life. IMR and NMR in India has been the major concern of the government.

The neonatal period is 28 days with a neonatal mortality rate (NMR) of 30/1000 live births (SRS Bulletin 2017), neonatal death contribute to about two-thirds of infant deaths (Infant Mortality Rate) 41/1000 live births (NFHS4) and “about half of all the deaths in children younger than 5 years” of age (Under 5 mortality rate) 50/1000 Live births (NFHS 4). SDG target is to achieve NMR 12per 1000 live births by 2030.

RATIONALE

- Morbidities such as hypothermia, birth asphyxia, preterm, Low birth weight, infection or sepsis are the main cause of neonatal mortality. All these morbidities are preventable if proper care is taken of the new born.

- Many programmers' or schemes such as NSSK, JSY, JSSK, HBNC, F-IMCI and more has been launched by GOI to reduce neonatal mortality rate.

- This study aims to ensure that the New Born Care Area in the public health facility of U.P. follow the guidelines and strengthen the NBCA to reduce NMR.

RESEARCH QUESTION

What gaps are to be full filled to strengthen the existing Newborn Care Area in Kasganj district of Uttar Pradesh?

OBJECTIVES FOR ASSESSMENT OF NEW BORN CARE AREA

GENERAL OBJECTIVE

- To assess the NBCA in public heath facilities of district Kasganj.

SPECIFIC OBJECTIVE

- To assess the human resource of NBCA.
- To assess the availability of essential equipment's in NBCA.
- To assess the availability of drugs in NBCA.
- To assess the record register in NBCA.
- To make recommendations to strengthen the NBCA in Kasganj district of U.P.

METHODOLOGY

STUDY DESIGN

A cross sectional study involving the functional NBCC in 7 blocks of Kasganj district of U.P was done.

DURATION OF STUDY

Study was conducted for 3 months period of dissertation 3rd Feb 2020 to 3rd May 2020.

TOOLS AND TECHNIQUES FOR DATA COLLECTION

Primary data collection was collected using a structured questionnaire from all the public health facilities of Kasganj district.

SAMPLE SIZE

Study has been conducted in all eight NBCC facilities namely district hospital, CHC-FRU, CHCs and BPHCs.

METHOD OF DATA COLLECTION

Data collection was carried by observation technique and interviewing SNs and MOICs of the health facilities through structured questionnaire.

STUDY AREA

A study was conducted in all the facilities of district Kasganj.

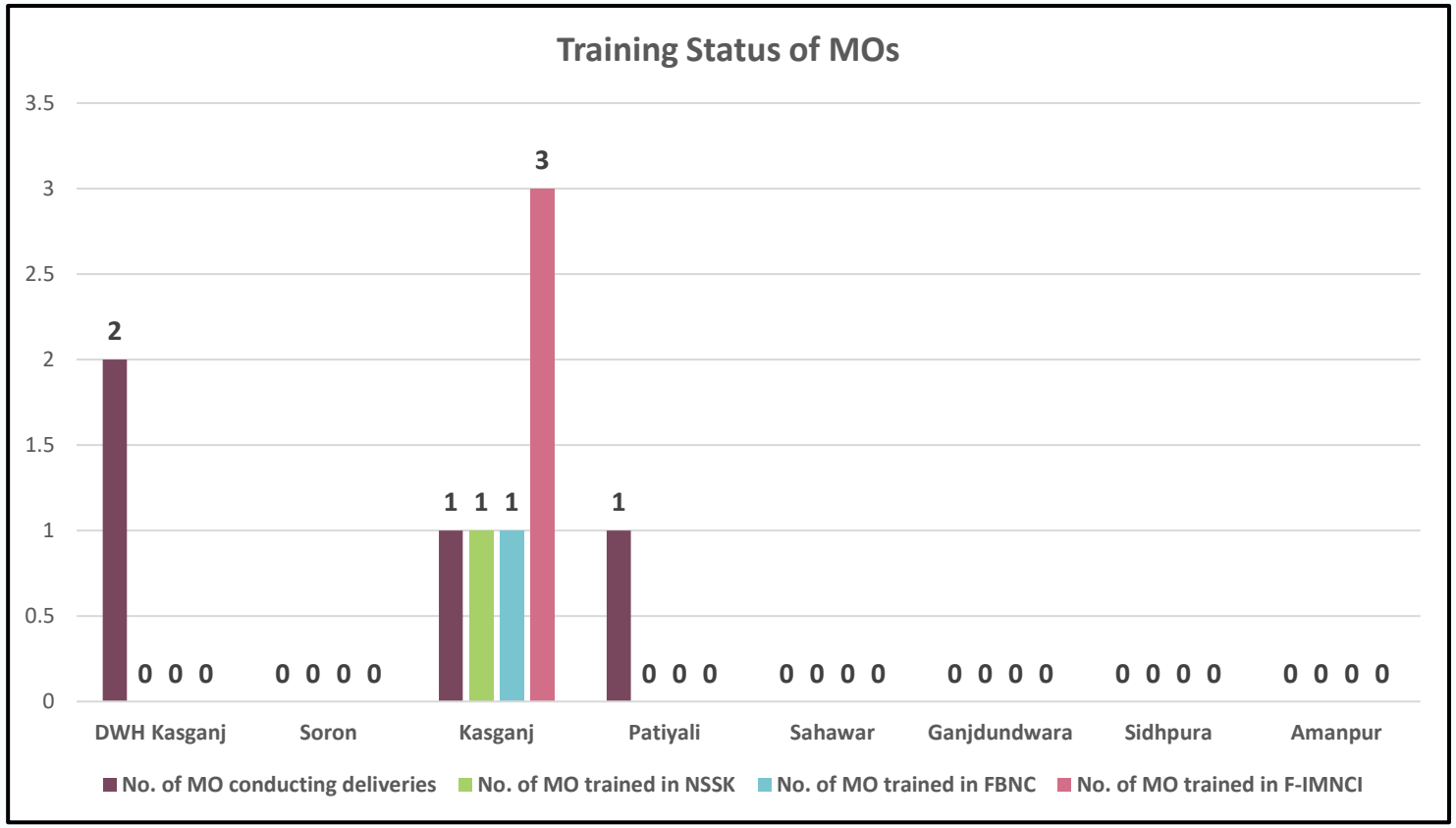
Level	Health Facility	Newborn care facility
District	District Women Hospital	NBCC
Block	CHC-FRU Kasganj	NBCC
Block	CHC Soron	NBCC
Block	CHC Ganjdundwara	NBCC
Block	BCHC Sidhpura	NBCC
Block	BCHC Amanpur	NBCC
Block	CHC Sahawar	NBCC
Block	CHC Patiyali	NBCC

STUDY FINDINGS

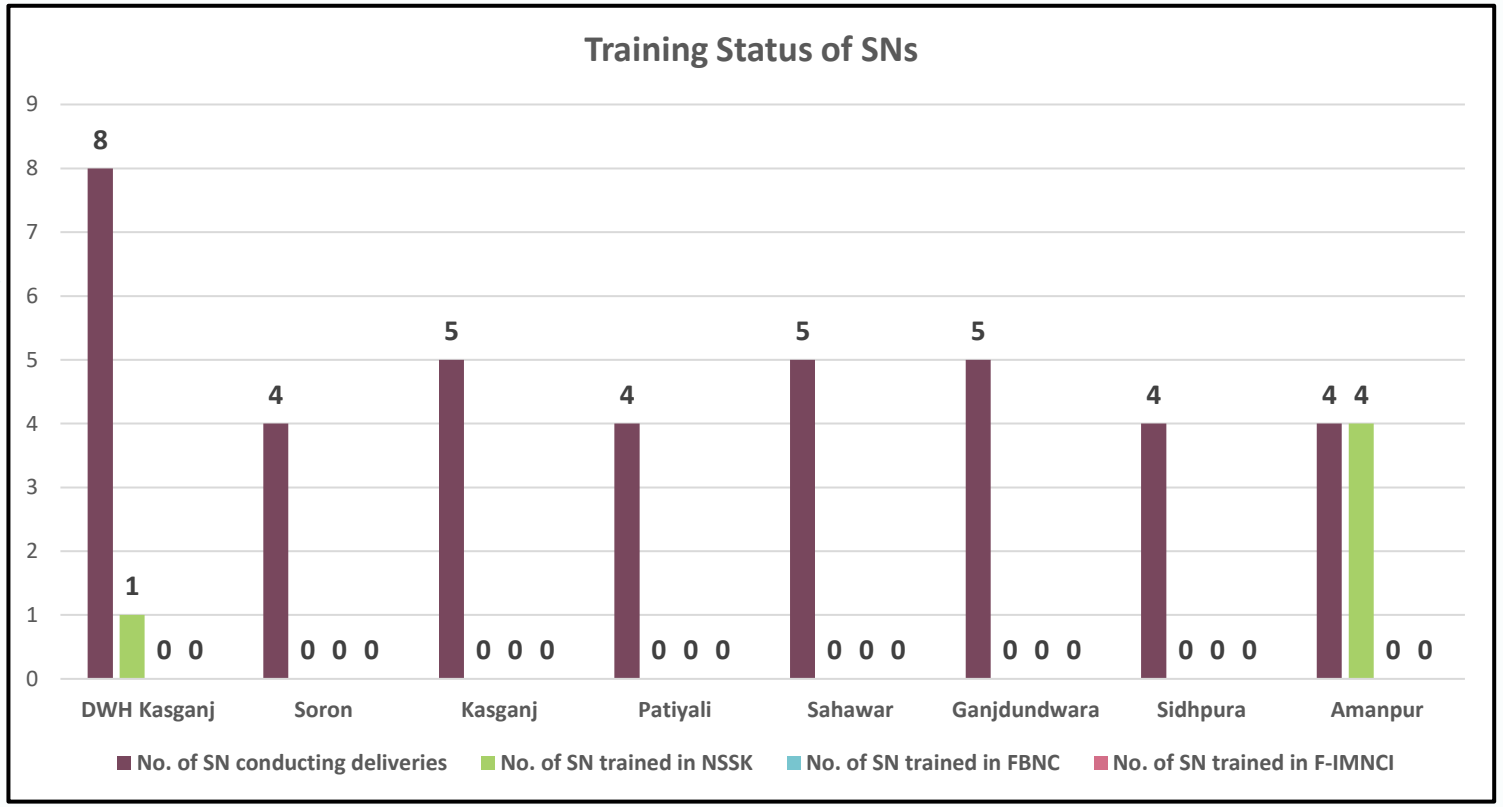
ASSESSMENT OF HUMAN RESOURCE AT NBCA

	Number as per standard	Availability	Gap
Medical Officer	1 per facility, Total 8	1	7
Staff Nurse	1per facility, Total 8	0	8

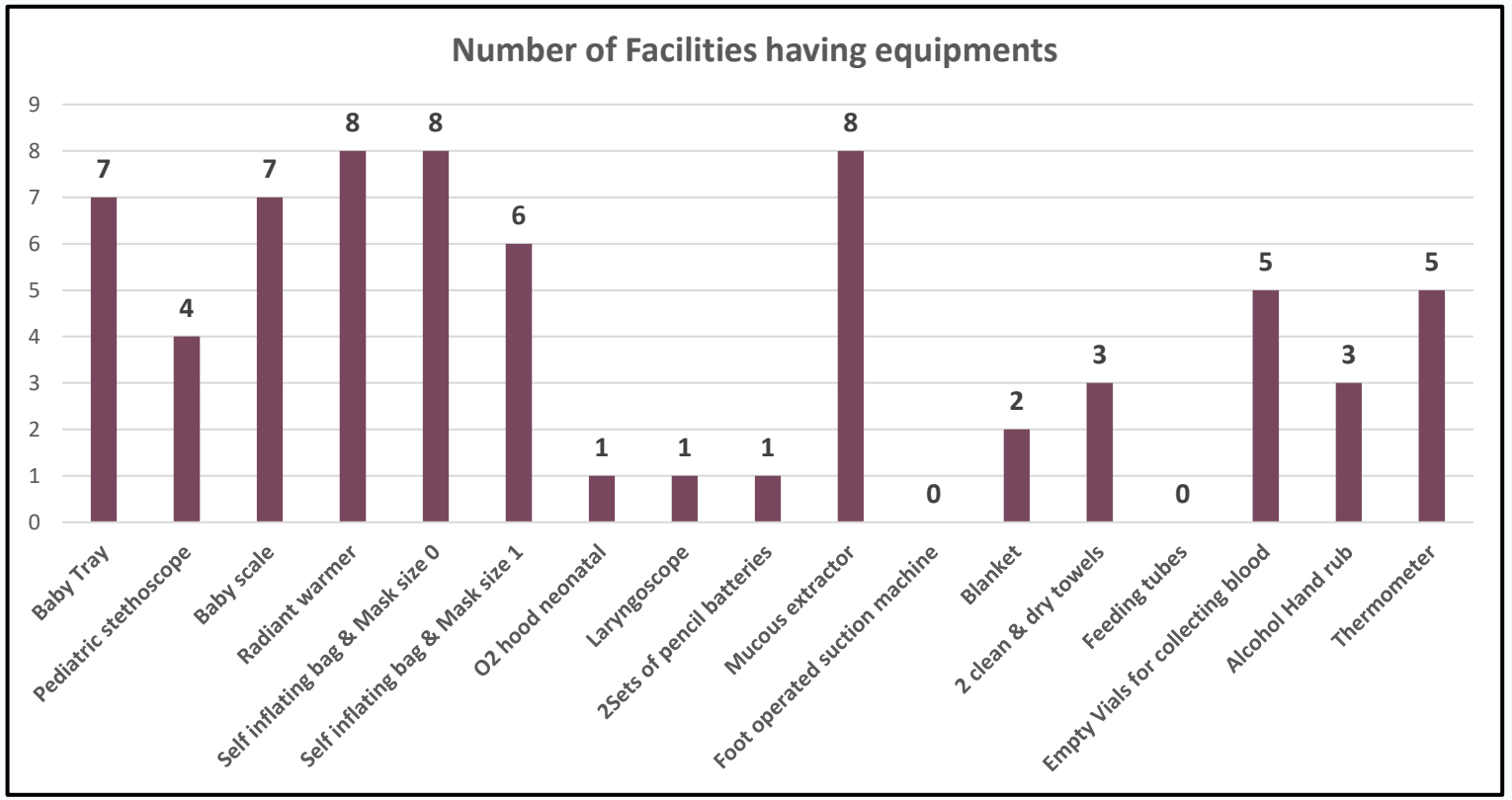
ASSESSMENT OF TRAINING STATUS OF MOs



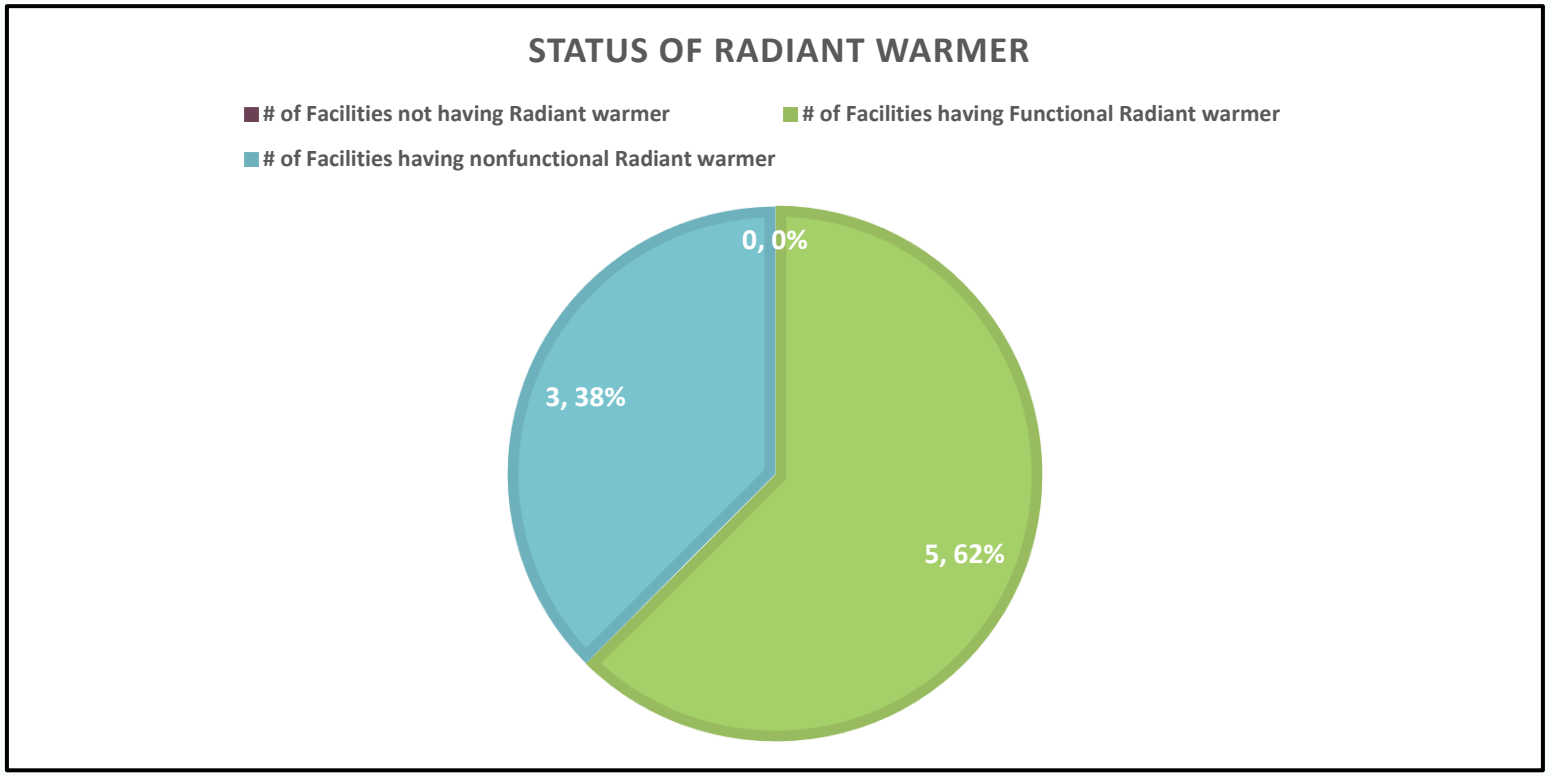
ASSESSMENT OF TRAINING STATUS OF SNs



ASSESSMENT OF EQUIPMENT AVAILIBILITY IN NBCA



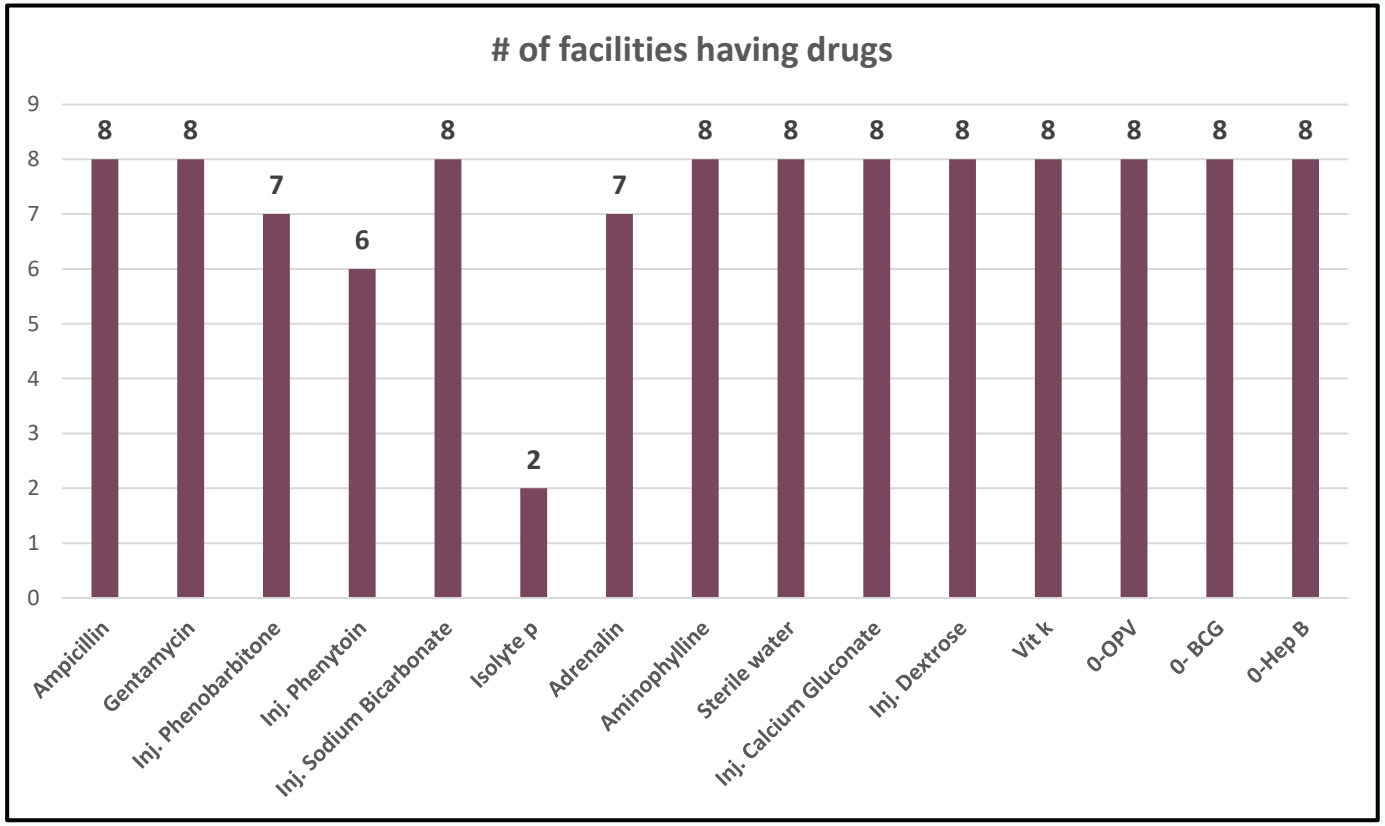
ASSESSMENT OF FUNCTIONALITY OF RADIANT WARMER



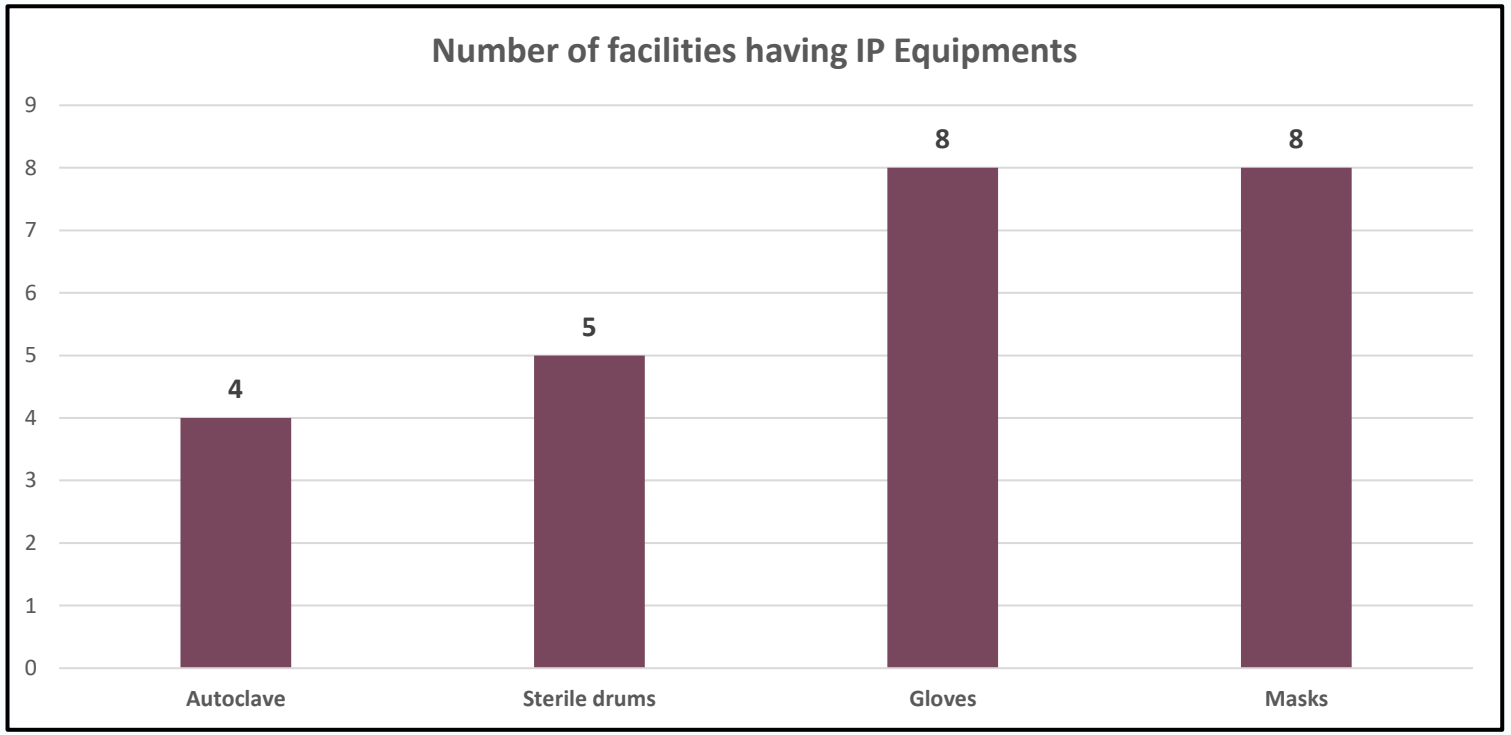
EQUIPMENT BREAKDOWN RATE

Block	No. of days radiant warmer remain nonfunctional in a month	Equipment breakdown rate in each month
Soron	30	1
Amanpur	30	1
Ganjdundwara	10	0.33

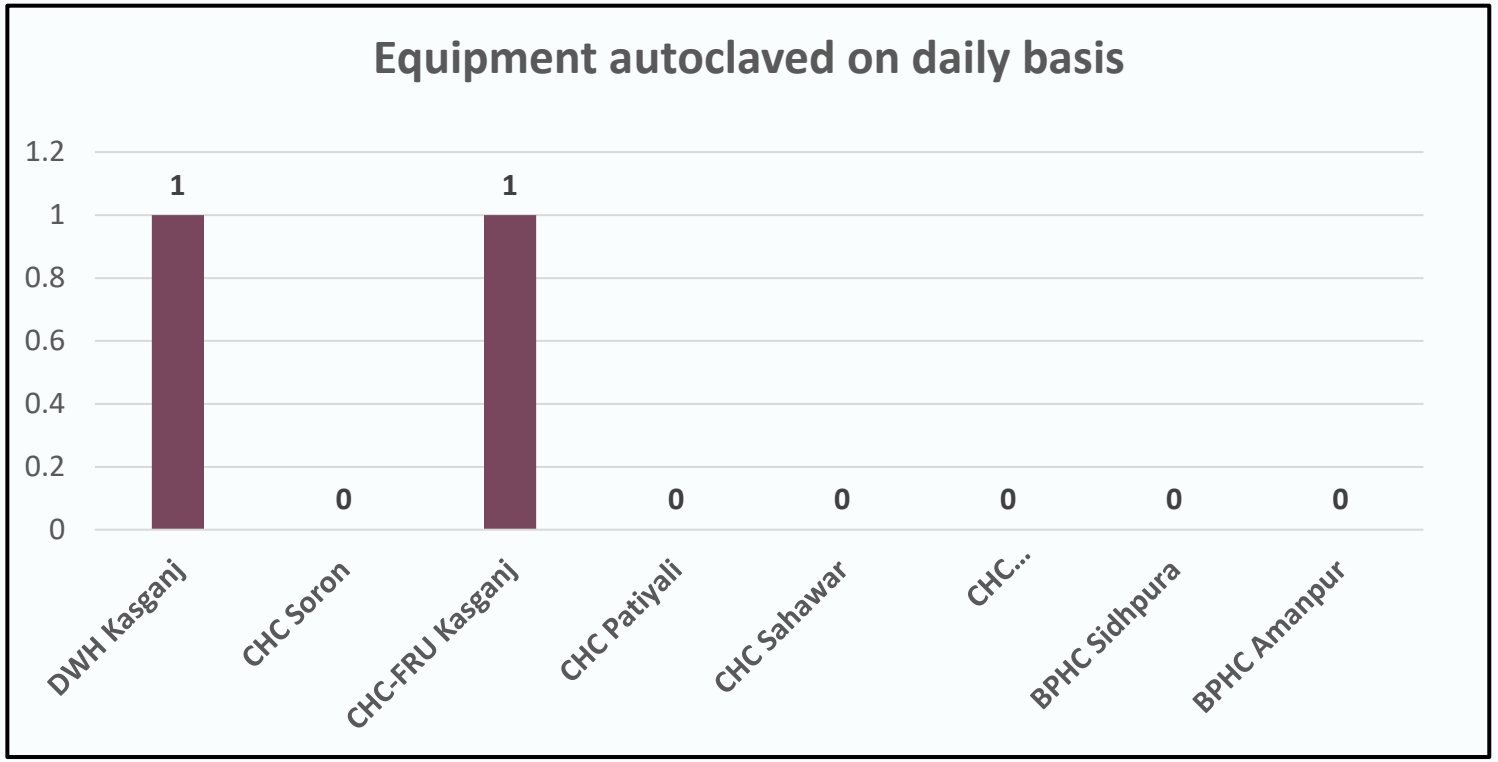
ASSESSMENT OF AVAILIBILITY OF DRUGS



ASSESSMENT OF IP PRACTICES



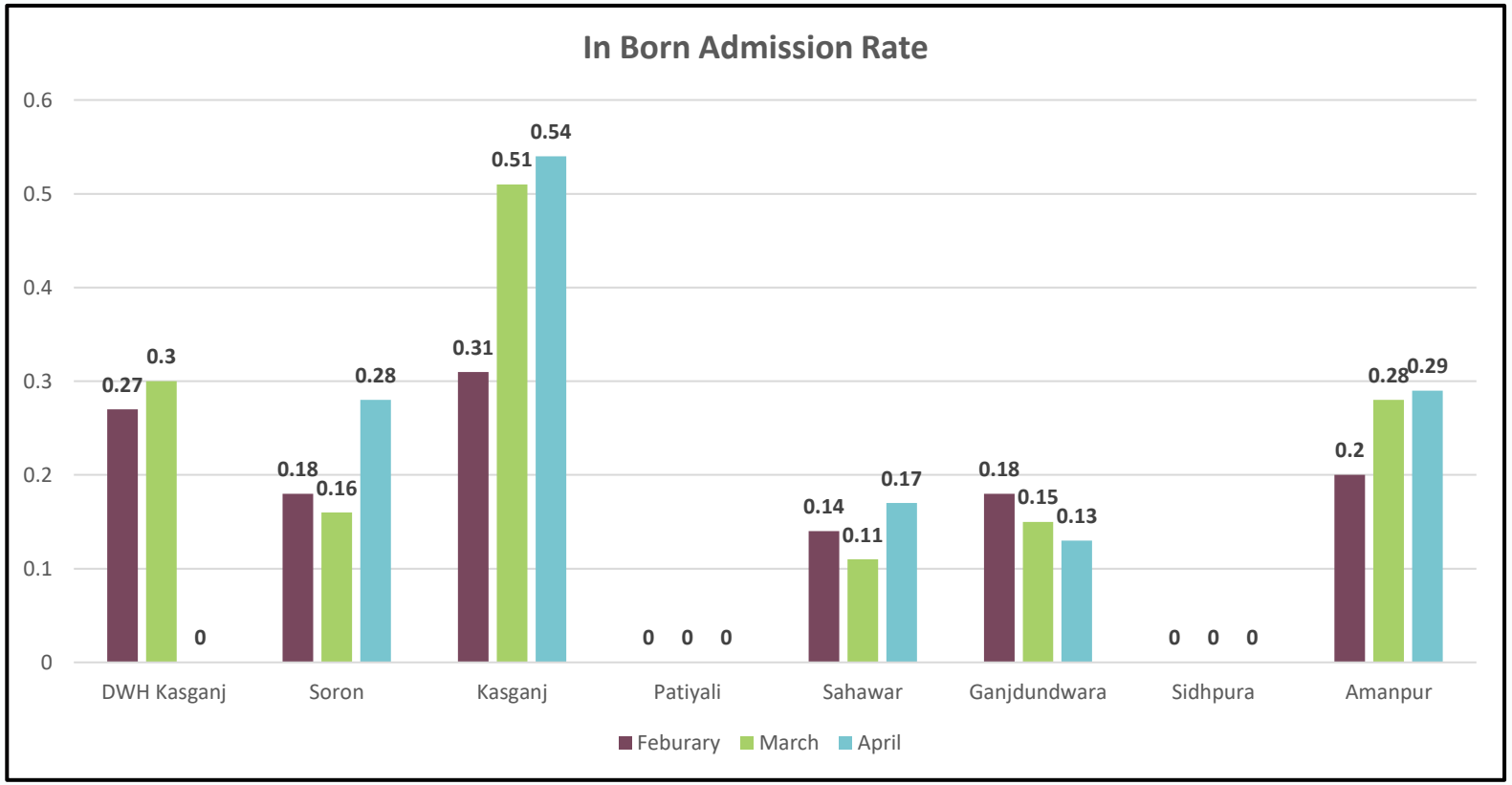
AUTOCLAVING OF EQUIPMENTS



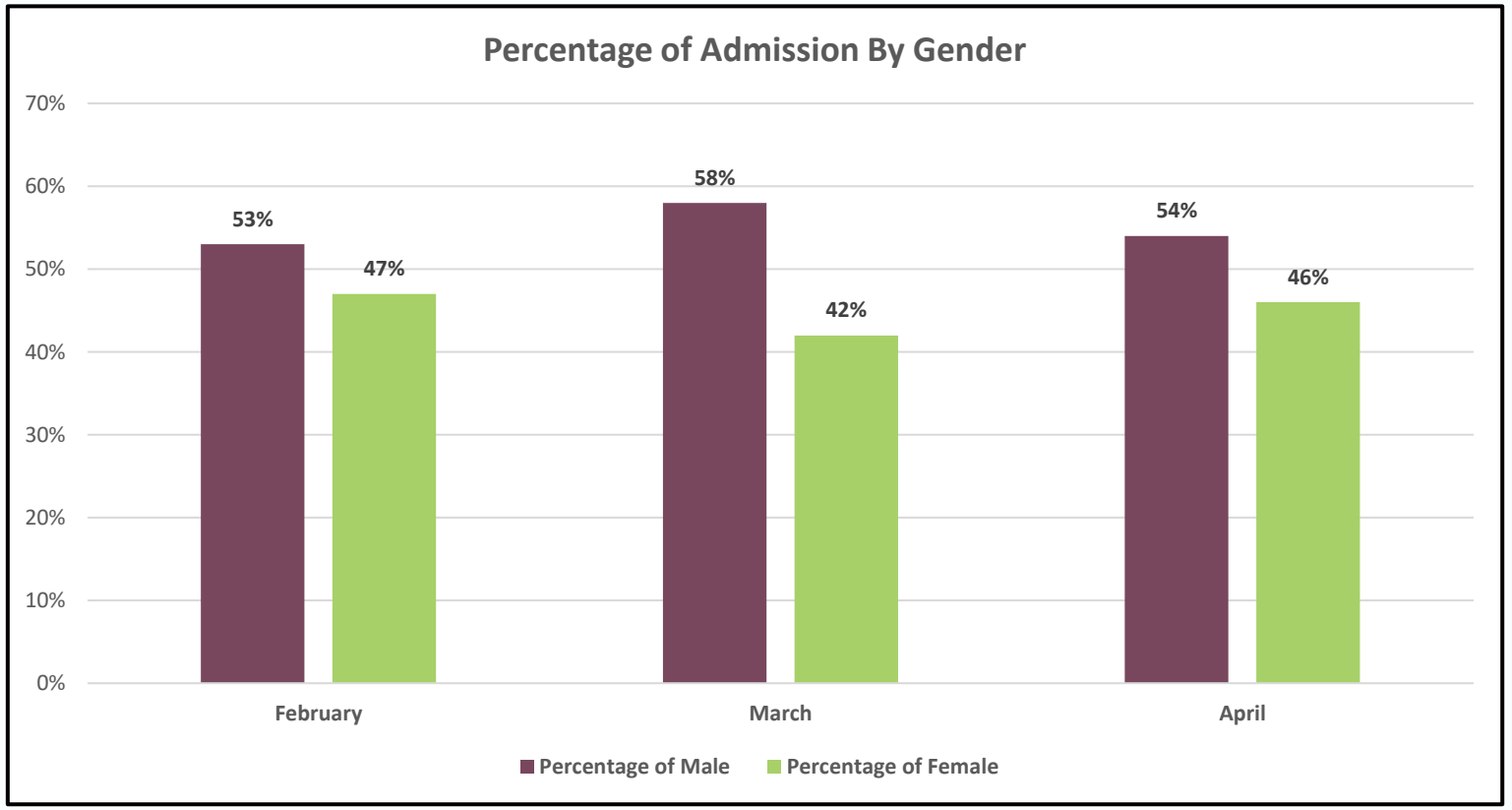
ASSESSMENT OF AVAILIBILITY OF NBCC REGISTER

Name of Facility	NBCC Register	Records updated till April 2020.
DWH Kasganj	Yes	Yes
CHC-FRU Kasganj	Yes	Yes
CHC Soron	Yes	Yes
CHC Ganjdundwara	Yes	Yes
CHC Sidhpura	Yes	No
CHC Sahawar	No	Yes
CHC Patiyali	No	No
BPHC Amanpur	Yes	Yes

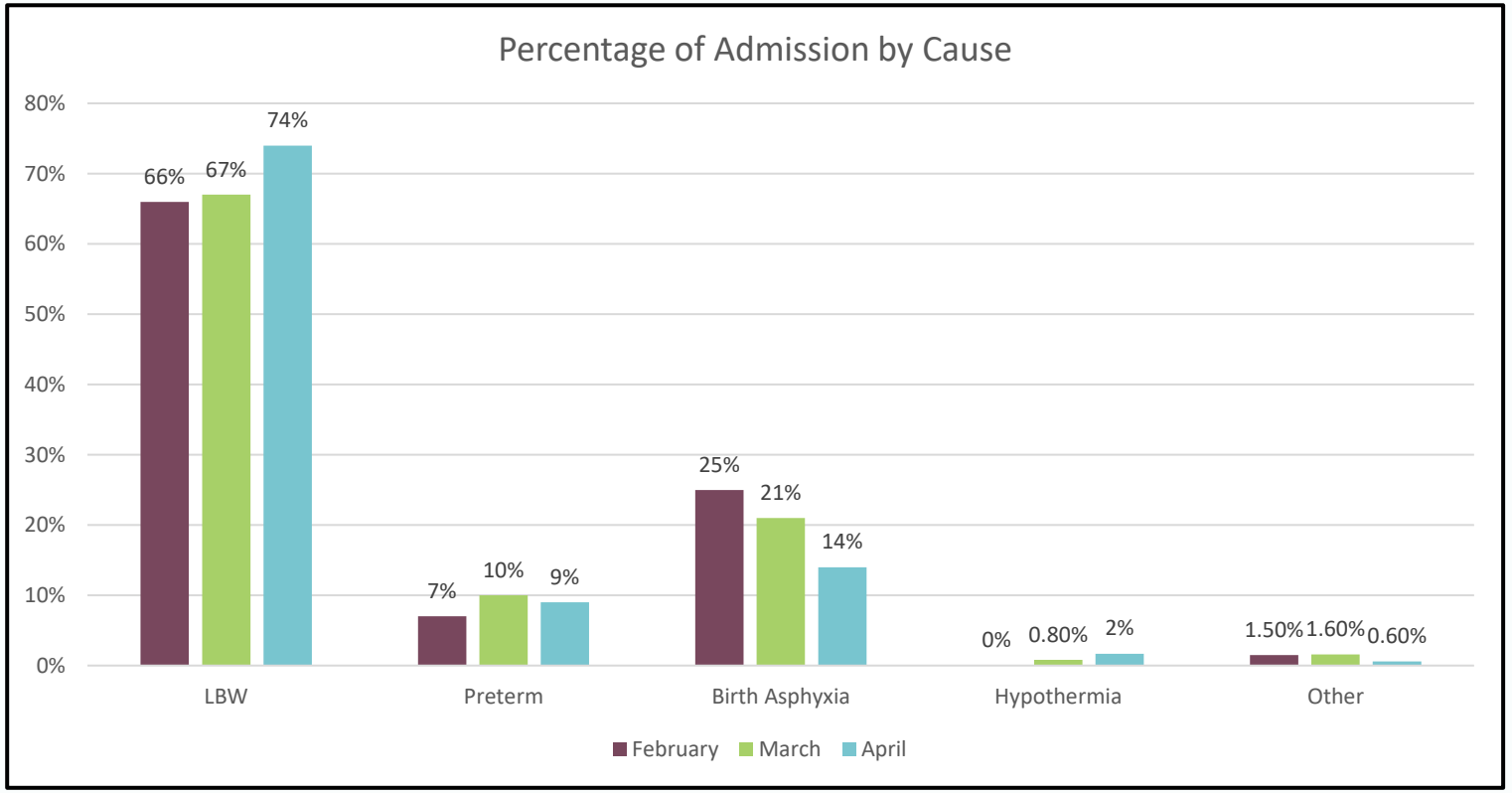
INBORN ADMISSION RATE



ASSESSMENT OF ADMISSION IN NBCC BY GENDER



PERCENTAGE OF ADMISSION BY CAUSE



CONCLUSION

- In Uttar Pradesh majority of institutional deliveries are conducted in public health facilities. According to global review around 15-20% newborns require facility-based care. Thus, NBCC must be able to provide all basic services to stabilize the baby before referral in case of sick newborn.

- It is clear from the study that there is lack of enough HR required in NBCC. NSSK training of all the staff who are conducting deliveries is not completed in all the blocks. All the essential 17 equipment's are not available in the NBCC. Radiant warmer is the essential requirement of NBCC, but radiant warmer of 3 blocks namely Soron, Ganjdundwara and Amanpur are not working properly.

- Infection prevention is one of the most important requirements in the health setup. 50% of the blocks were not having autoclave to sterilize the equipment. 25% blocks are doing autoclaving of equipment on daily basis.

CONCLUSION

- It is important to maintain the record register and documentation of the newborn who are admitted in NBCC. But 2 blocks Shawar and Patiyali were not having any NBCC register. Sidhpura block was not updating the NBCC register on regular basis.

- NBCC must be able to provide care to neonates to improve neonatal health indicators. Basic infrastructure including availability of equipment's and essential drugs must be ensured for quality service at NBCC. Quality indicators should be strictly adhered to provide best possible services. Institutional delivery should be encouraged to reduce birth related complications and associated mortality. Similarly, Aseptic procedure must be strictly followed to reduce sepsis and infection related mortality.

- Periodic inspection and audit are required to assess the availability and functioning of these units. This will help in channelizing resources more efficiently.

CHALLENGES

- Staff Nurses especially night duty SNs forget or missed to fill the admission cases in NBCC register.
- Unavailability of baby clothes at block level facility.
- Staff Nurses do not record temperature of the newborn baby so, hypothermia cases are not identified.
- 3rd day follow up of the newborn is not done. So, the follow up column of the NBCC register is not filled by the staff nurses.
- Cord clamp is not available in one of the facilities due to this there is a delay in tying the cord especially in asphyxiated newborn.
- Power backup is the major issue. Radiant warmer sometimes not functional on inverter due to large amount of load.
- In NBCC register Staff nurses are mentioning only LBW or Birth Asphyxia as a complication. Rest preterm, hypothermia and others are mentioned very rarely.

CHALLENGES

- Oxygen hood unavailability is a major issue, due to unavailability of oxygen hood Oxygen is provided by mask to newborn. This leads to leakage of oxygen along the sides of mask and proper oxygen is not provided to the newborn.
- Staff Nurses do not admit the preterm baby to NBCC. They directly shift the baby along with mother to PNC ward to start skin to skin contact and breast feeding.
- Unavailability of warm towels and sterile cotton leads the baby to hypothermia.
- Some of the staff nurses not able to identify the birth asphyxia cases on time.
- Staff nurses perform PSDSR but do not mention in the NBCC register.
- Lack of empathy in the staff towards newborn care during golden 1 minute.
- Radiant warmer and AMBU bag are not cleaned on daily basis.
- Complications of newborns are not managed by Medical officers.

RECOMMENDATIONS

- Centralized oxygen supply in the labor room because staff nurse face problem in opening the oxygen cylinder and to avoid delay in oxygen supply to newborn.
- NBCC tray should be maintained separately for drugs, pediatric stethoscope and thermometer.
- Separate staff for the NBCC is to be ensured because sometime in LR only 1 staff is available so it will be difficult for the single staff to manage the newborn and mother at the same time.
- Mentoring of all the staff nurses to be done on proper filling the NBCC register, admission criteria in NBCC, referral of newborn to NBSU in case of severity and follow up of the newborn on 3rd day.
- Local purchase of logistics like baby towel, cotton etc. to be done by MOIC in case of less supply from CMSB store.
- Different color-coded tags for newborn who are preterm, birth asphyxia, LBW and Hypothermia so that staff nurses can easily identify the problem.
- 1 NBSU staff can be posted in NBCC to guide the NBCC staff for complication identification and on time management of the complication.

RECOMMENDATIONS

- Need to sensitize all the staff by doctors and nurse mentors related to newborn care for golden 1 minute.
- NBCC demand register are to be maintained to avoid unavailability of equipment's and drugs.
- Need to clean and disinfect radiant warmer and AMBU bag daily and in between the admissions to avoid infection.
- Need to strengthen referral system of newborn from NBCC to NBSU on time and with oxygen supply for very low birth weight and asphyxia cases.
- Need to fill oxygen checklist on regular basis (use, filled and empty dates).
- Human resource is a major issue for every health facility to provide service round the clock. Promoting public private partnership in providing human resource can solve the issue of human resource.
- Ensure quality of care and ensure follow up of all the cases.

THANKYOU