



Assessment of Newborn Care Facilities in District Lakhisarai, Bihar

Guided By:
Dr P.R Sodani

Presented by:
Bhawna Agarwal
0551

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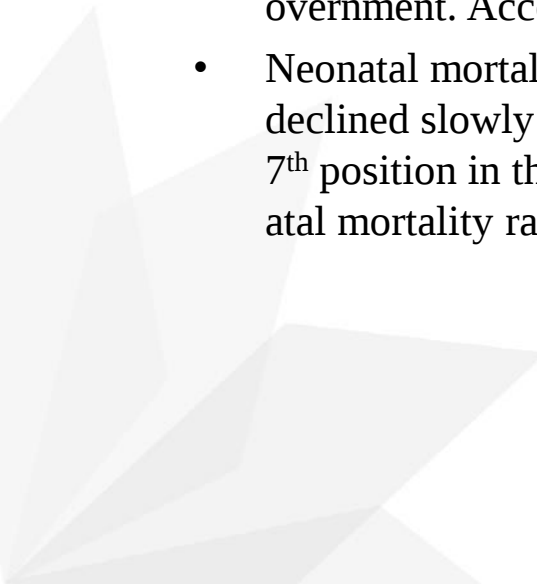
INTRODUCTION

In India, 26 million babies born every year but 940,000 babies die before completing their one month of life. The neonatal period is 28 days: yet, with a neonatal mortality rate (NMR) of 24/1000 live births (SRS 2016), neonatal deaths contributes to about two-thirds of all infant deaths (Infant mortality rate 34/1000 live births(SRS 2016) and about half of all deaths in children younger than 5 year of age (Under 5 mortality rate 39/1000 live births (SRS 2016).Infant mortality rate (IMR) in India has steadily declined from 58/1000 live births in 2004 to 34/1000 live births in 2016. However, there is slow progress in reduction of NMR which declined from 37 in 2004 to 25 in 2015.

Bihar is a state considered to be a part of Eastern as well as Northern India. It is the 13th-largest state of India according to area with IMR 38/1000 live births; NMR 28/1000 live births (SRS 2016). Preventable morbidities such as hypothermia, asphyxia, infections and respiratory distress continue to be the main causes of mortality in neonatal period.

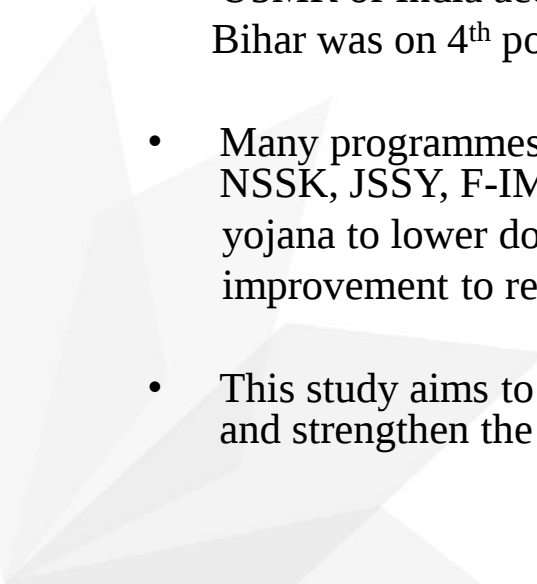
RATIONALE



- In India, around lakhs of newborns 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. Infant mortality rate and neonatal mortality rate in India has been the major concern of the government. According to SRS
 - Neonatal mortality of India in the year 2011 was 31 per thousand live birth (SRS 2011) and it declined slowly to 28 per thousand live birth in the year 2013 (SRS 2013)(2). Bihar being on 7th position in the year 2013 had infant mortality rate as 43 per thousand live birth and neonatal mortality rate as 28 per thousand live birth (SRS 2013)(2).
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RATIONALE



- Morbidities such as hypothermia, birth asphyxia, neonatal jaundice, respiratory distress and infection were found out to be the main cause of infant mortality and neonatal mortality in India. All these morbidities are preventable if proper care is taken of the newborn infant
 - U5MR of India according to NFHS-4(2015-16) was 50/1000 live birth whereas Bihar was on 4th position with U5MR of 58/1000 live birth as per NFHS-4(2015-16)
 - Many programmes / Scheme had been started specially for newborn by government such as NSSK, JSSY, F-IMNCI, Facility Based Newborn and Child Care, Janani and Bal Suraksha yojana to lower down the infant and neonatal mortality rate. But there has been minimal improvement to reduce IMR and NMR.
 - This study aims to ensure that the Newborn healthcare facility in Bihar follow the guidelines and strengthen the facility to reduce the neonatal mortality.
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OBJECTIVES FOR ASSESSMENT OF NEWBORN CARE FACILITY

GENERAL OBJECTIVE

To assess new-born care Facilities in Lakhisarai district of Bihar.

SPECIFIC OBJECTIVE

- To assess the human resource of the newborn care Facilities
- To assess the infrastructure of the newborn care facilities
- To check the record registers of the newborn care facilities
- To assess the availability of essential equipment in the newborn care facilities
- To assess the availability of drugs in the newborn care facilities
- To make recommendation to strengthen the Newborn Care facilities in Lakhisarai district of Bihar.

RESEARCH QUESTION

What gaps are to be fulfilled to strengthen the existing newborn care facility in Lakhisarai district of Bihar?

METHODOLOGY

STUDY DESIGN

An cross sectional study involving the functional NBCC,NBSU and SNCUs of the Lakhisarai district, Bihar

DURATION OF THE STUDY

Study was conducted during 3 month period of dissertation,4THFebruary 2019 to 4TH May 2019

METHODOLOGY

DATA COLLECTION TOOL

Primary data collection:-primary data collection was done through structure questionnaire from all the Newborn care facility in Lakhisarai district of Bihar.

SAMPLE SIZE

Study has been done in 8 Newborn care facilities available in district hospital, first referral unit Unit, Community health centre and primary health centre.

METHOD OF DATA COLLECTION

Data collection was done by observing and interaction with MOIC and Nursing staff of Newborn Care Facility (NBCC,NBSU and S NCU) through structure questionnaire

STUDY AREA

Study was carried out in the Lakhisarai district including all the newborn care facilities available in district hospital,FRU,CHC,PHC

LEVEL	HEALTH FACILITY	NEWBORNCARE FACILITY AVAILABLE
District	District Hospital Lakhisarai	SNCU,NBCC
Block	First Referral Unit Barhaiya	NBSU,NBCC
Block	Community Health Centre, Surayagarha	NBCC
Block	Primary Health Centre, Ramgarhchawk	NBCC
Block	Primary Health Centre, Halsi	NBCC
Block	Primary Health Centre, Piperiya	NBCC



STUDY FINDING

The slide features decorative geometric shapes. In the top right corner, there is a cluster of overlapping triangles in light blue, green, and red. In the bottom left corner, there are several overlapping, semi-transparent light gray triangles.

ASSESSMENT OF HUMAN RESOURCE IN NEWBORN CARE FACILITY



ASSESSMENT OF HUMAN RESOURCE AT SNCU

	Number as per standard	Availability	Gaps
Paediatricians	3	1	2

ASSESSMENT OF HUMAN RESOURCE AT NBSU

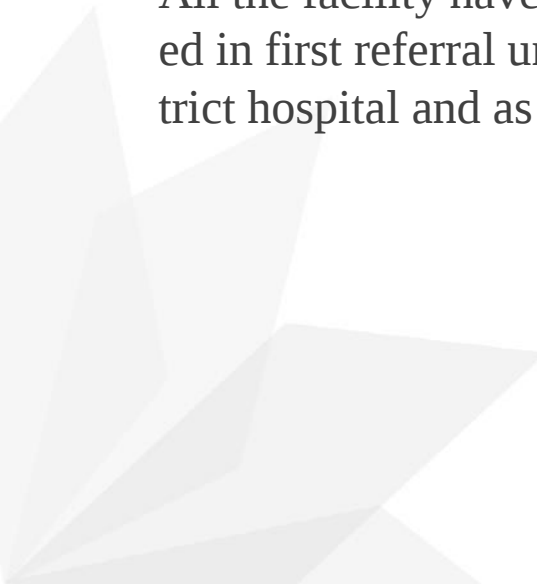
	Available	Gaps
<u>Paediatrician</u>	<u>1</u>	<u>0</u>

ASSESSMENT OF HUMAN RESOURCE AT NBCC

FACILITY	PAEDIATRICIAN AVAILABLE	GAPS
District Hospital Lakhisarai	1	0
First Referral Unit Barhaiya	1	0
Community Health Centre, Surayagarha	0	1
Primary Health Centre, Ramgarhchawk	0	1
Primary Health Centre, Halsi	0	1
Primary Health Centre, Piperiya	0	1



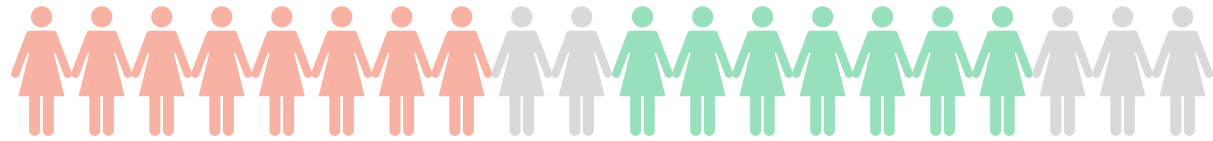
ASSESSMENT OF INFRASTRUCTURE OF NEW BORN CARE FACILITY



All the facility have NBCC in labor room as per guidelines and NBSU is established in first referral unit Barhaiya and SNCU is established within the campus of district hospital and as per guideline it is at 100meter distance from labor room.



ASSESSMENT OF RECORDS IN NEWBORN CARE FACILITY



AVAILABILITY OF RECORDS IN SNCU



RECORDS AND REGISTER IN SNCU	AVAILABLE	NOT AVAILABLE
Cash record/ sheet	Yes	
Doctor progress record	Yes	
Nurse's monitoring record	Yes	
treatment sheet	Yes	
discharge card	Yes	
investigation slip	Yes	
Death certificate		Yes
Indent register	Yes	
Phototherapy register	Yes	
Oxygen register	Yes	
Lanundry/ linen register		Yes
handover and take ovrdrforequipment/consu mable	Yes	
Referral card	Yes	

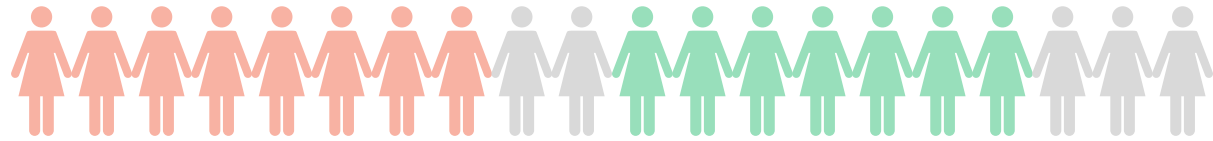
AVAILABILITY OF RECORDS IN NBSU



Records and Register	Available	Not Available
Case record / Sheet	Yes	
Doctor's Progress record		Yes
Nurse's monitoring record	Yes	
Treatment Sheet		Yes
Discharge card		Yes
Investigation slip		Yes
Death certificate		Yes
Indent Register		Yes
Phototherapy register		Yes
Oxygen register		Yes



ASSESSMENT OF EQUIPMENT AVAILABILITY IN NEWBORN CARE FACILITY



EQUIPMENTS AVAILABLE IN SNCU



EQUIPMENTS

	AVAILABLE	NOT AVAILABLE
Radiant warmer	YES	
Focus Light		YES
Oxygen concentrator	YES	
Single surface phototherapy	YES	
Double surface phototherapy		YES
Electric suction machine	YES	
Air conditioner	YES	

AVAILABILITY OF EQUIPMENTS IN NBSU



	REQUIRED	AVAILABLE	NON-FUNCTIONAL
RADIANT WARMER	3	3	1
FOCUS LIGHT	4	0	
PHOTOTHERAPY	1	1	0
AIR CONDITIONER	1	1	0
OXYGEN CONCENTRATOTR	3	2	1
SYRINGE HUB CUTTER	1	0	0

EQUIPMENTS IN NBSU

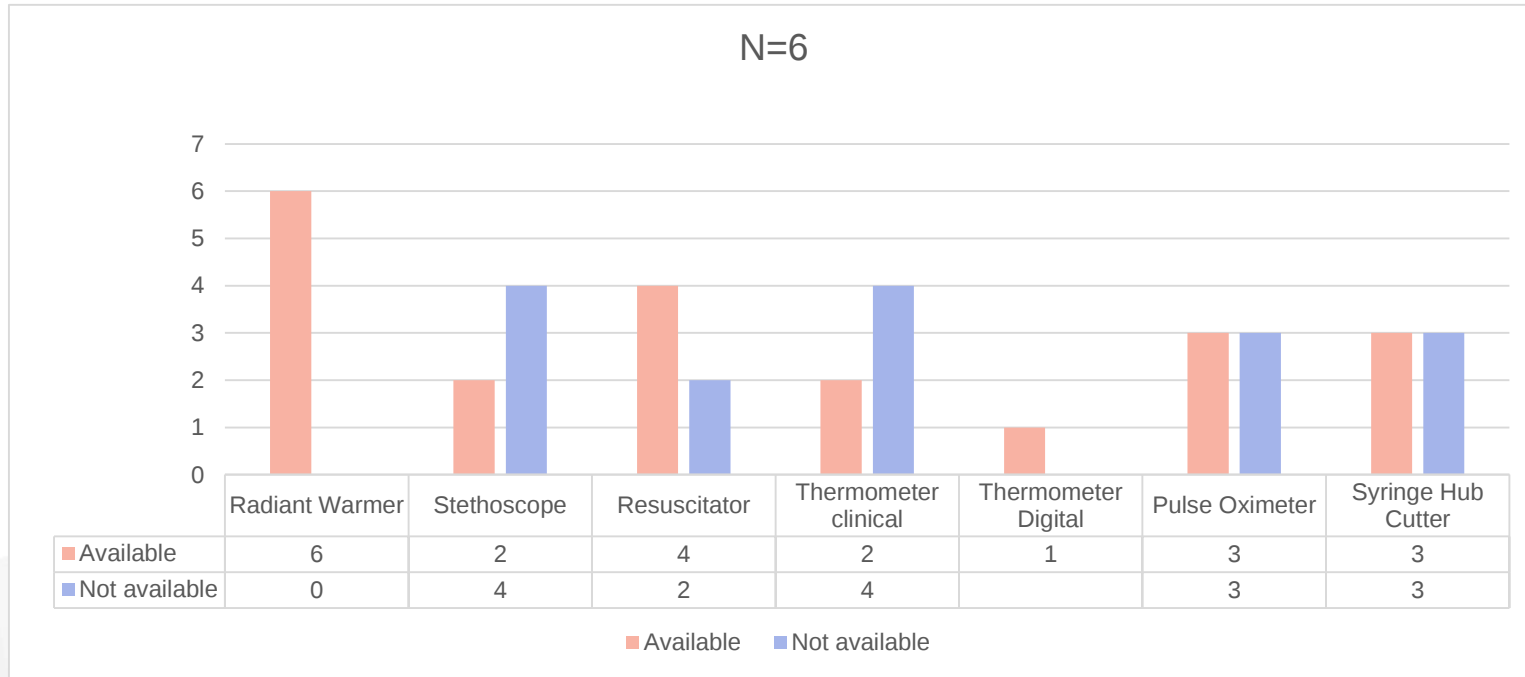
	AVAILABLE	NOT AVAILABLE
Ambu Bag (500ml)		YES
Ambu Mask (size 0)	YES	
Ambu Mask (Size 1)	YES	
Boiler		YES
Baby weighing scale Digital/ Manual	YES	
BP Apparatus with paedia cuff Digital/ Manual		YES
Electric Suction Machine		YES
Suction machine (Foot operated/ Electrical)		YES
Glucometer with strip		YES
Hub Cutter		

EQUIPMENTS IN NBSU



	AVAILABLE	NOT AVAILABLE
Needle Burner		YES
Infanto Meter		YES
Infusion Pump		YES
Laryngoscope set (Neonate)	YES	
Pulse Oximeter (Infant)		YES
Thermometer (Digital)	YES	
Thermometer (Clinical)		YES
Thermometer (Room)		YES
Syringe Pump		YES
Oxygen Cylinder	YES	
Oxygen Cylinder with humidifier	YES	

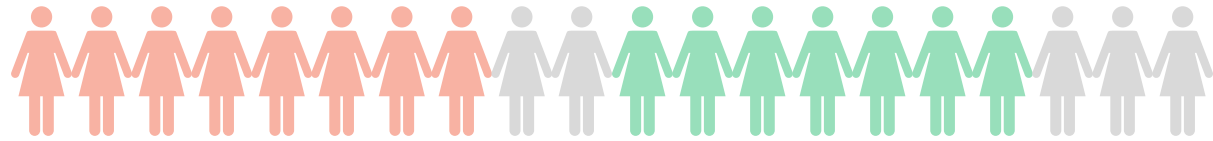
EQUIPMENT AVAILABILITY IN NBCC



Total number of each equipments should be available in SNCU is 6. Out of the total surveys done only radiant warmer is available in all place, 2 Stethoscope, 4 Resuscitator, 2 clinical Thermometer, 1 digital thermometer, 3 Pulse Oximeter and 3 Syringe hub cutter. There is some shortage of equipments which must be recovered.



ASSESSMENT OF DRUGS AVAILABILITY IN NEWBORN CARE FACILITY



DRUGS AVAILABILITY IN SNCU



IV FLUIDS

	AVAILABLE	NOT AVAILABLE
5% DEXTROSE		
10%DEXTROSE	YES	
RINGER LACTATE		
NORMAL SALINE	YES	
ISOLYTE P		
25% DEXTROSE VIALS		
GLUCOSE 50%		

ANTIBIOTICS



	AVAILABLE	NON AVAILABLE
Inj. Ampicillin		Yes
Inj. Cefotaxime	Yes	
Inj. Gentamicin		Yes
Inj. Amikacin	Yes	
Inj. Amoxycillin +cloxacillin		
Inj. Vitamin K1	Yes	Yes

DRUGS AVAILABILITY IN NBSU



	AVAILABLE	NON-AVAILABLE
Inj. Amikacin		Yes
Inj. Amoxycillin	Yes	
Inj. Ampicillin		Yes
Inj. Calcium Gluconate		Yes
Inj. Ceftriaxone		Yes
Inj. Dexamethasone Sodium Phosphate		Yes
Inj. Gentamycin		Yes
Inj. Phenobarbitone		Yes
Inj. Vit K1(Phytonadione)	Yes	

DRUGS AVAILABILITY IN NBSU



	AVAILABLE	NON AVAILABLE
Dextrose 10% IV Fluid		Yes
Dextrose 05% IV Fluid		Yes
Isolyte P IV fluid		Yes
Ringer Lactate (RL)		Yes
Normal Saline		Yes
Water for Injection(2ML)		Yes
Water for Injection(5ML)		Yes
Isoniazid		Yes
Syrup Paracetamol		Yes

CONSUMABLES SUPPLY

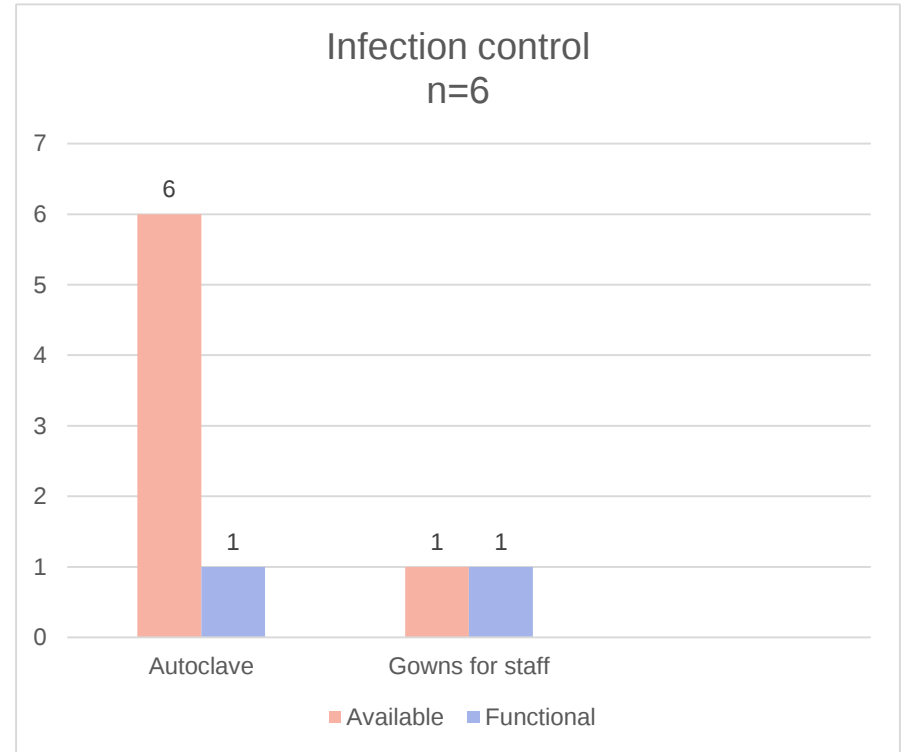


	AVAILABLE	NOT AVAILABLE
Meconium aspirator	Yes	
Infusion pump line	Yes	
Multistix urline 5parameter, glu		Yes
Prot, eryt, spc, grav, Ph	Yes	
Cuvettes		Yes
Vacuum tube		Yes
Needle for vacuum tube 22g	Yes	
Lancet		Yes

INFECTION CONTROL



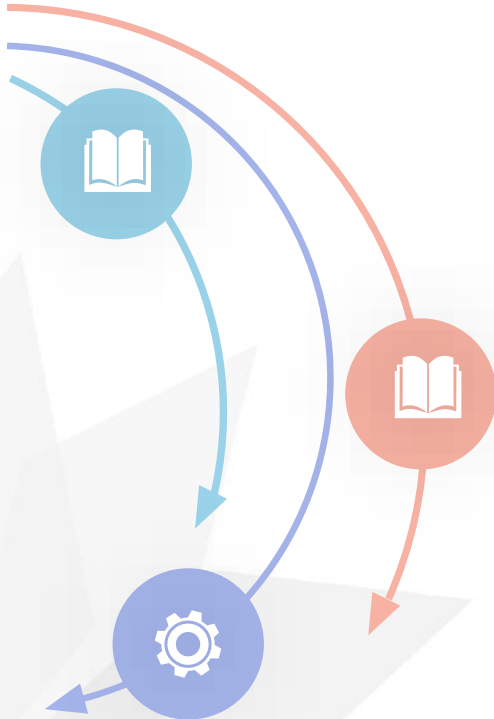
Autoclave is most essential infection control equipment's. Out of the 6 provided Autoclave only 1 is functioning whereas only one gown was provided and it's in good condition rest 5 don't have gown.



CONCLUSION



- In Bihar, majority of institutional deliveries are conducted in public facilities (HMIS 2018-19). According to global reviews, roughly 15% of new-born require facility based care (NIPI SNCU brochure). Thus, NBCC, NBSU and SNCU in these facilities must be able to provide special care to neonates to improve neonatal health indicators.
- Basic infrastructure including availability of equipment's and essential drugs must be ensured for quality services at Newborn care facility. 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 procedures must be followed strictly to reduce sepsis and infection related mortality
- There is also a need to review the quality of intrapartum care in labor rooms and quality of care at functional NBCC .Periodic inspection and audit are required to assess the availability and functioning of these units. This will help in channelizing resources more efficiently.



RECOMMENDATION

- Human resource is a big issue for every health facility to provide service round the clock. Promoting partnership with private sector in providing human resource.
- Improve the skills and motivation of the care providers.
- Lab services should be provided at the SNCUs. .
- Ensure the quality of care and follow up of the babies after discharge from the SNCU
- Most of the essential drugs such as antibiotic injections were unavailable that should be available in NBSU.
- There was acute shortage of all the important equipment needed in an NBSU. Essential consumables were also missing in majority of the NBSU
- There was improper maintenance of record and registers which are essential for any health facility.

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Thank you