IIHMR UNIVERSITY

Action Plan for the strengthening of the existing newborn care corner and newborn stabilization unit

- **Presented by**
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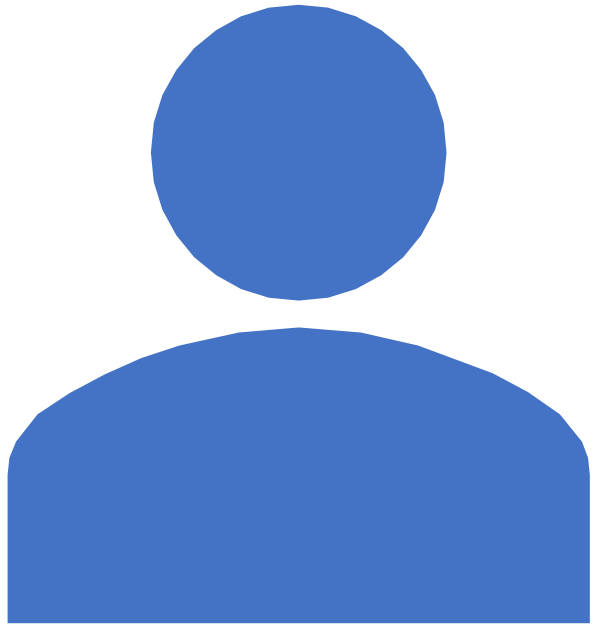


Organization Details

Uttar Pradesh Technical Support Unit – IHAT

Post

District Specialist – Technical/clinical

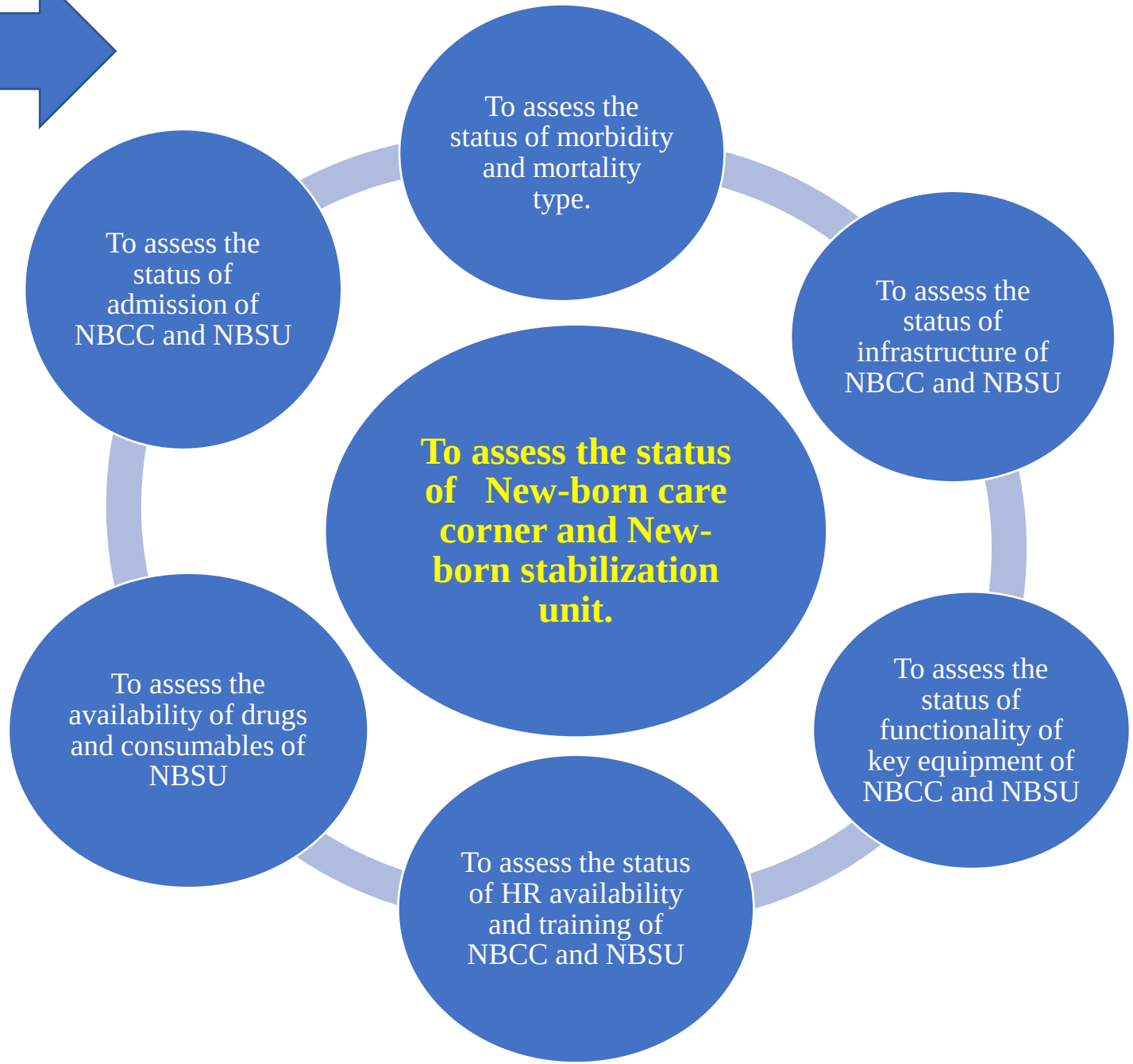
Industry Mentor

Dr. Sanjeev Kumar
(Sr. Deputy Director)

AIM

Action Plan for the strengthening of the existing newborn care corners and newborn stabilization units of Prayagraj district, Uttar Pradesh

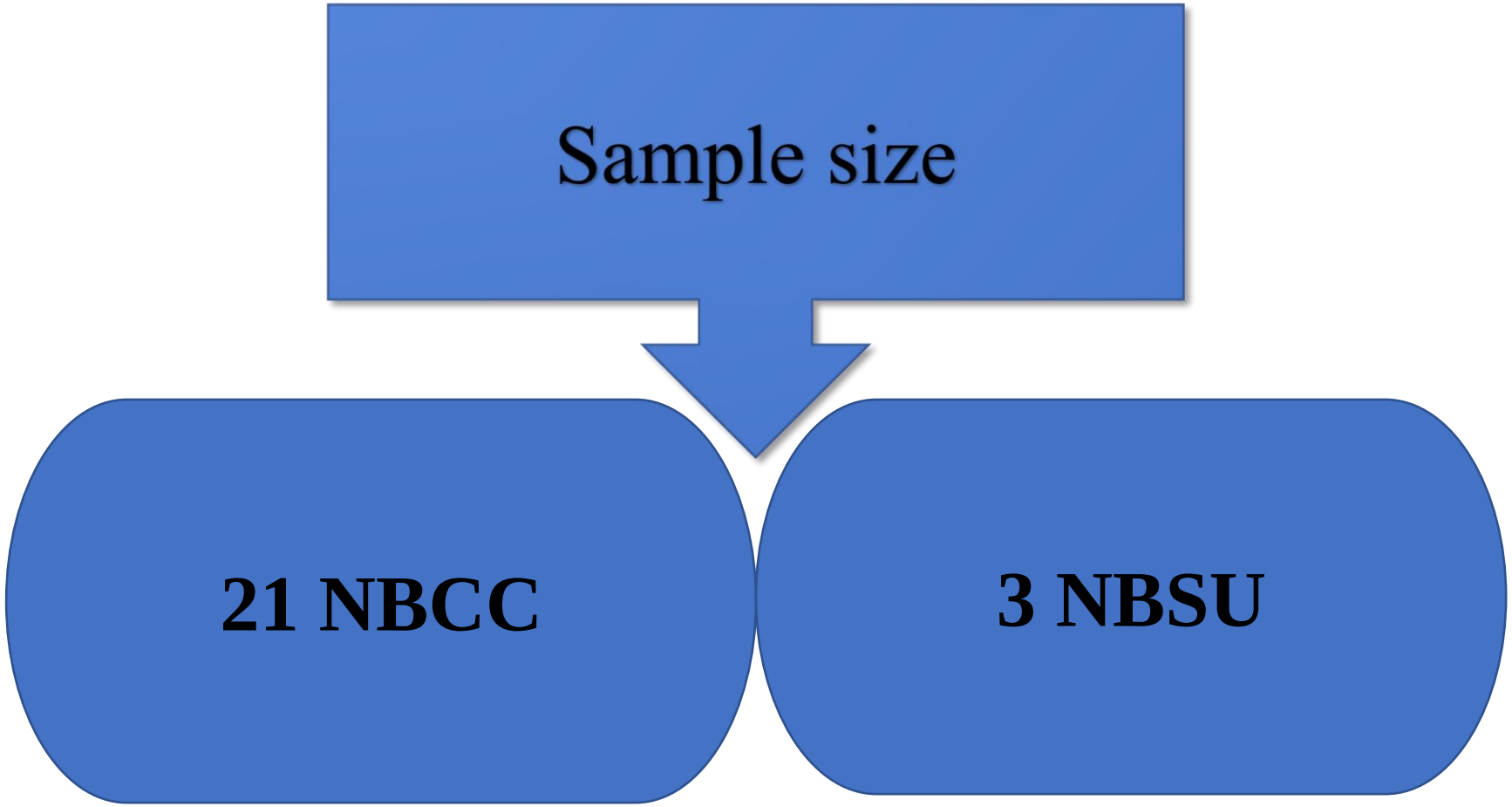
Objectives


To assess the status of morbidity and mortality type.
To assess the status of infrastructure of NBCC and NBSU
To assess the status of functionality of key equipment of NBCC and NBSU
To assess the status of HR availability and training of NBCC and NBSU
To assess the availability of drugs and consumables of NBSU
To assess the status of admission of NBCC and NBSU
To assess the status of New-born care corner and New-born stabilization unit.

Research Methodology

Research Question

What gaps are to be improved to strengthen existing newborn care corners and Newborn Stabilization Units of Prayagraj district?


Sample size
21 NBCC
3 NBSU

Study area

Sl No.	Facility Name	Type of facility	Newborn services
1	CHC Baheria	CHC	NBCC
2	CHC Chaka	CHC	NBCC
3	CHC Dhanupur	CHC	NBCC
4	CHC Handiya	FRU	NBCC
5	CHC Holagarh	CHC	NBCC
6	CHC Jasra	FRU	NBSU, NBCC
7	CHC Karchana	FRU	NBCC
8	CHC Kaundhiara	CHC	NBCC
9	CHC Kaurihar	FRU	NBCC
10	CHC Koraon	CHC	NBCC
11	CHC Kotwa	CHC	NBCC
12	CHC Manda	CHC	NBCC
13	CHC Mauima	CHC	NBCC
14	CHC Meja	CHC	NBSU, NBCC
15	CHC Phoolpur	FRU	NBCC
16	CHC Pratappur	CHC	NBCC
17	CHC Ramnagar	CHC	NBCC
18	CHC Saidabad	CHC	NBCC
19	CHC Shankargar	CHC	NBCC
20	CHC Soraon	FRU	NBSU, NBCC
21	District Women Hospital	DH/FRU	NBCC/SNCU

Study type	• Quantitative study
Study design	• Cross-sectional study
Sampling	• Convenience sampling

STUDY TOOL

STRUCTURED OBSERVATIONAL SCHEDULE

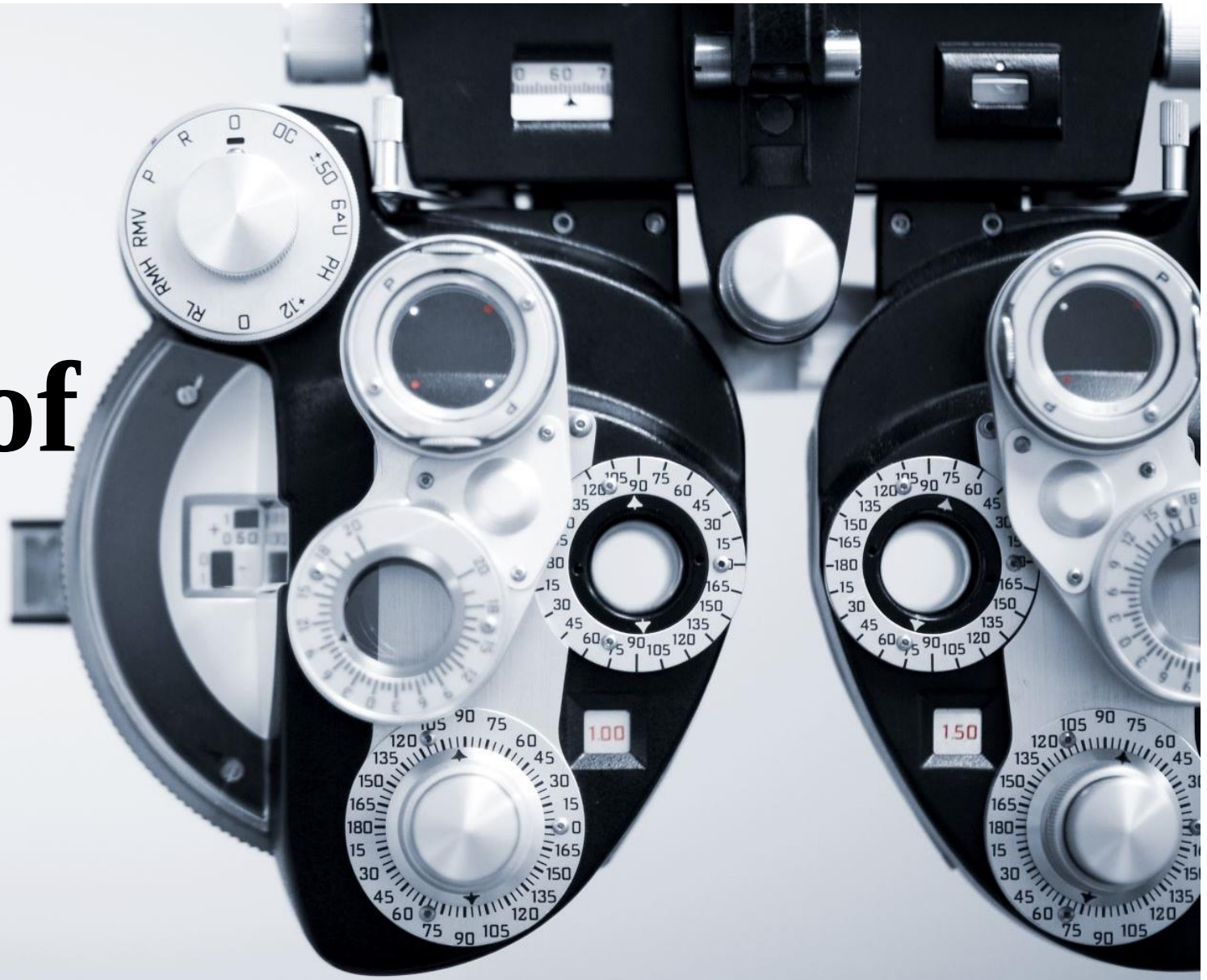
DATA COLLECTION

PRIMARY DATA HAS BEEN COLLECTED USING THE NBCC AND NBSU (NHM, GOVT, OF INDIA) TOOL AND UPHMIS DATA.

PLAN OF ANALYSIS

THE ANALYSIS HAS BEEN DONE USING THE NBCC AND NBSU TOOL AND DATA ANALYSIS IS DONE USING MS EXCEL..

Assessment of NBSU



Assessment of availability of Pediatrician and Staff Nurse

NBSU Name	No of availability Pediatrician	Gaps
FRU Soraon	0	1
FRU Phoolpur	1	0
FRU Jasra	1	0

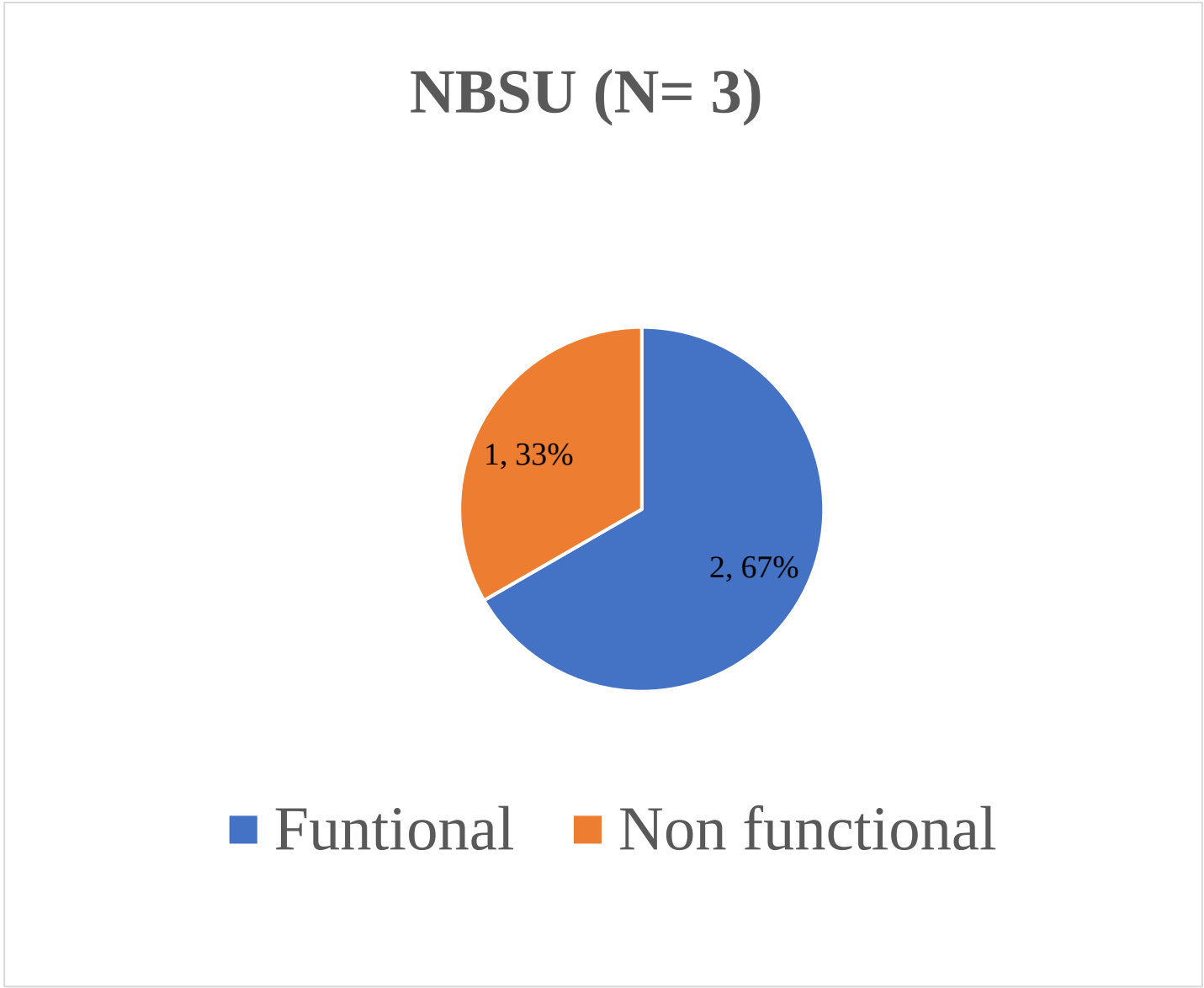
NBSU Name	No of availability Staff nurse	Gaps
FRU Soraon	3	1
FRU Phoolpur	3	1
FRU Jasra	0	4

Assessment of Training Status of NBSU Staff

NBSU Name	F-IMNCI Trained	
	Doctors	Staff Nurses
Soraon	1	0
Phoolpur	0	0
Jasra	0	0

NBSU Name	FBNC/RRTC Trained	
	Doctors	Staff Nurses
Soraon	0	0
Phoolpur	0	0
Jasra	0	0

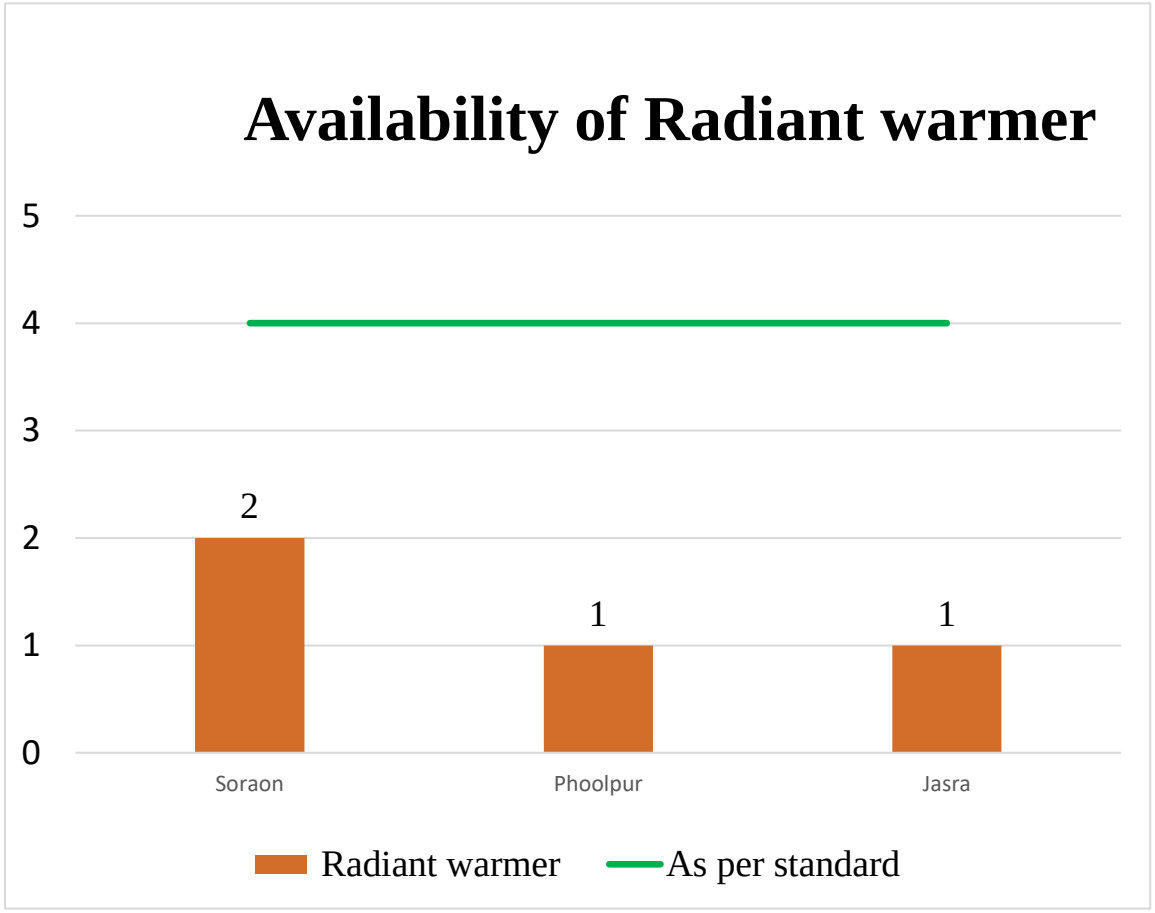
Functionality status of NBSU (Soraon, Phoolpur, Jasra)

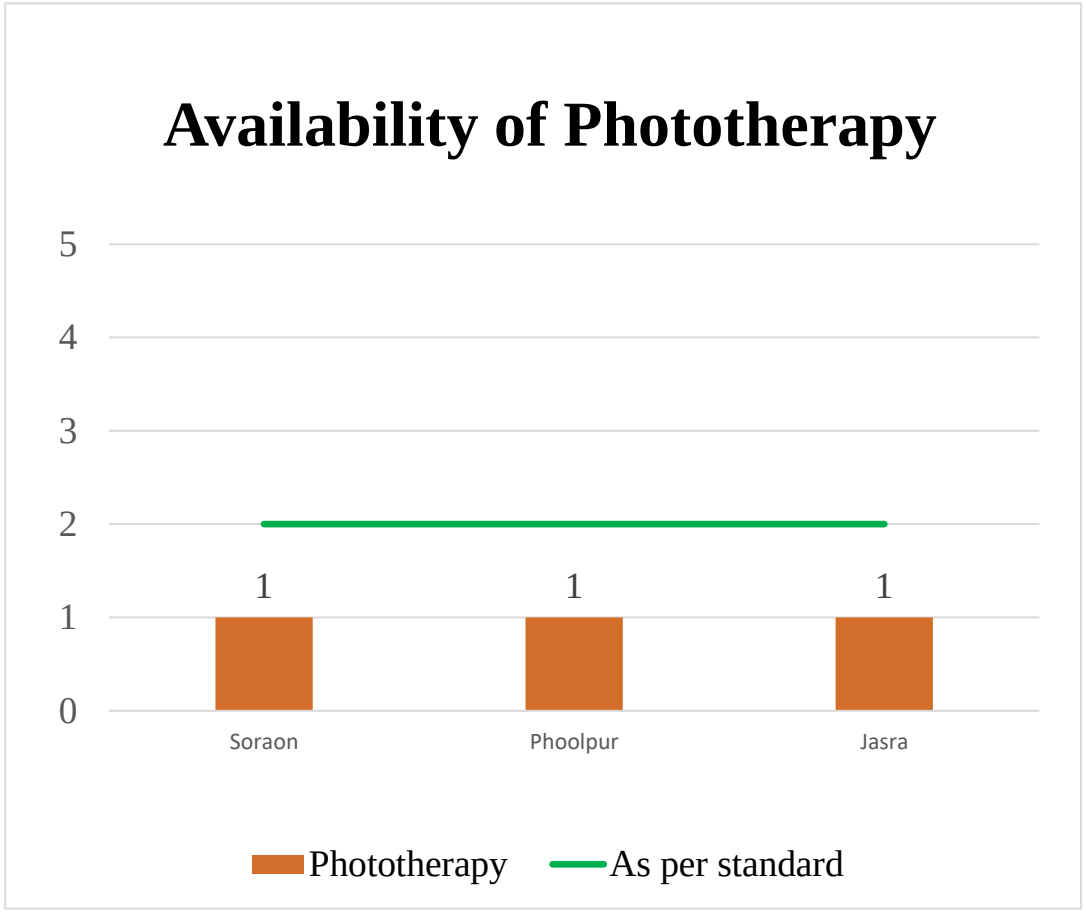


Status of total floor area and availability of beds of NBSU

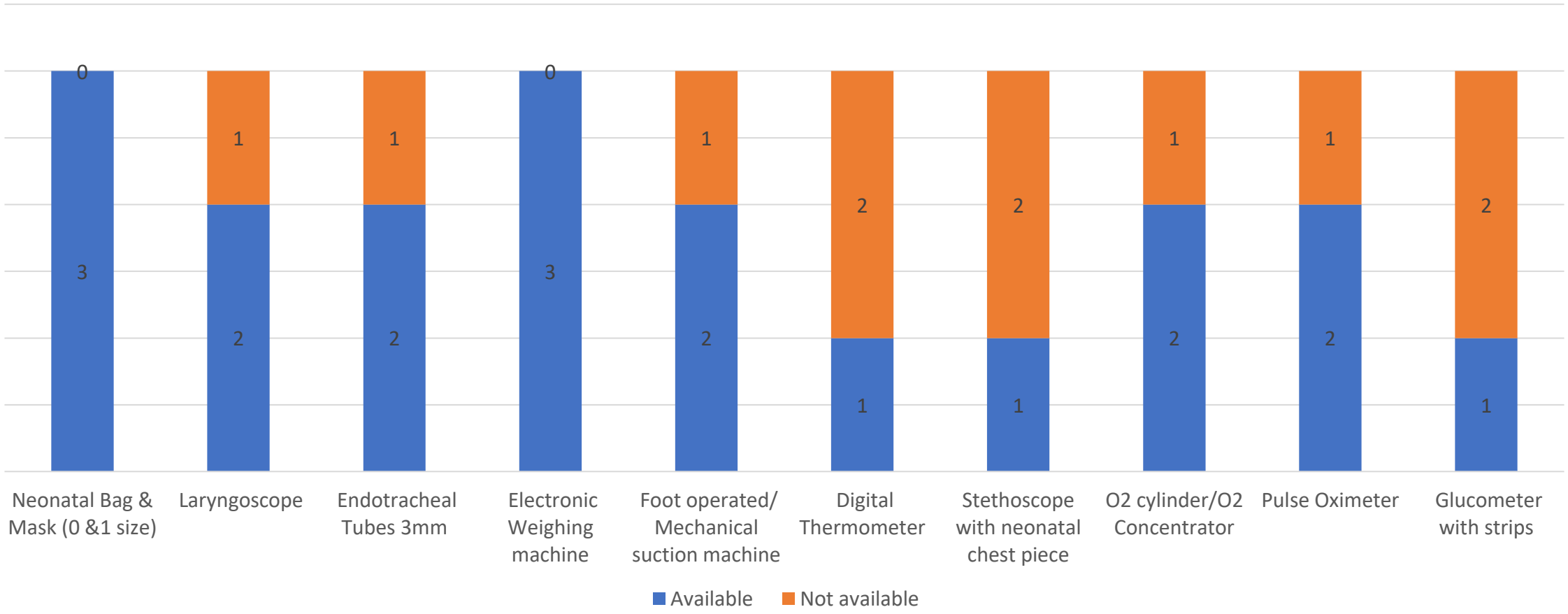
NBSU NAME	TOTAL FLOOR AREA (IN SQ. FT) < 200	TOTAL FLOOR AREA (IN SQ. FT) ≥ 200	BEDS <4	BEDS ≥4
Soraon	√	×	√	×
Phoolpur	√	×	√	×
Jasra	×	√	√	×

Availability status of Radiant warmer & Phototherapy

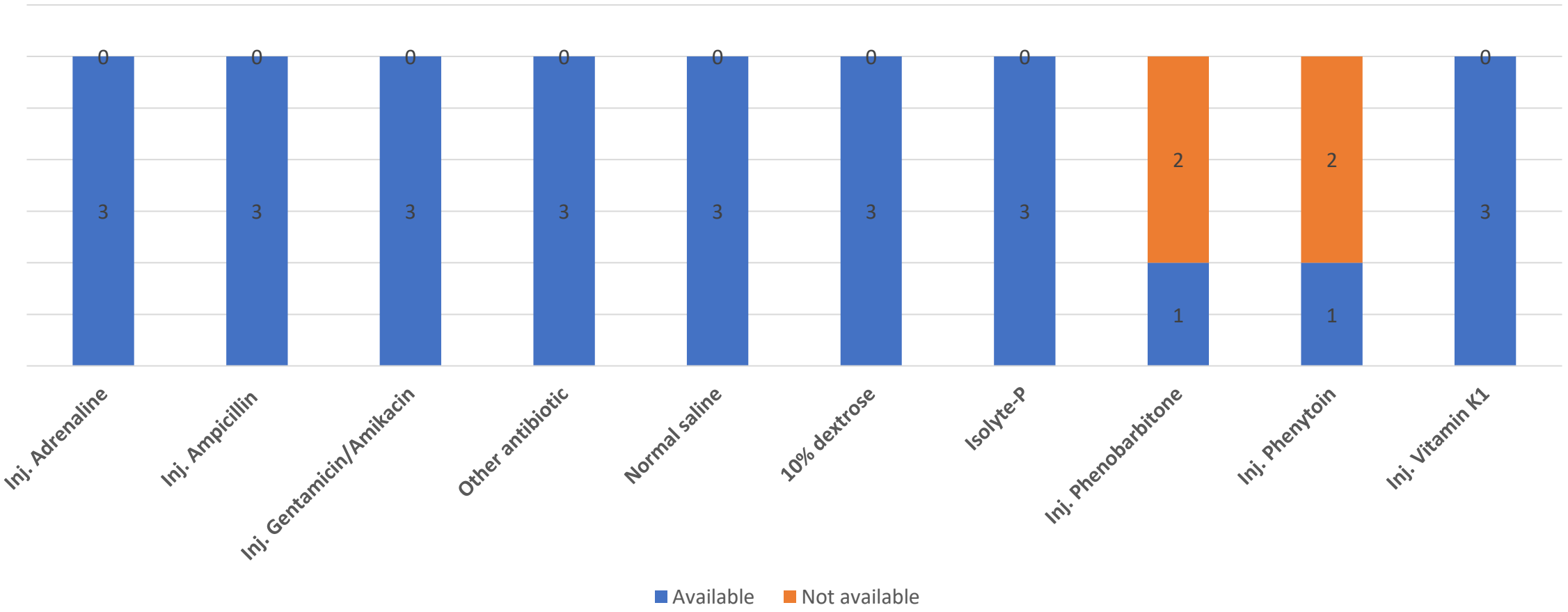




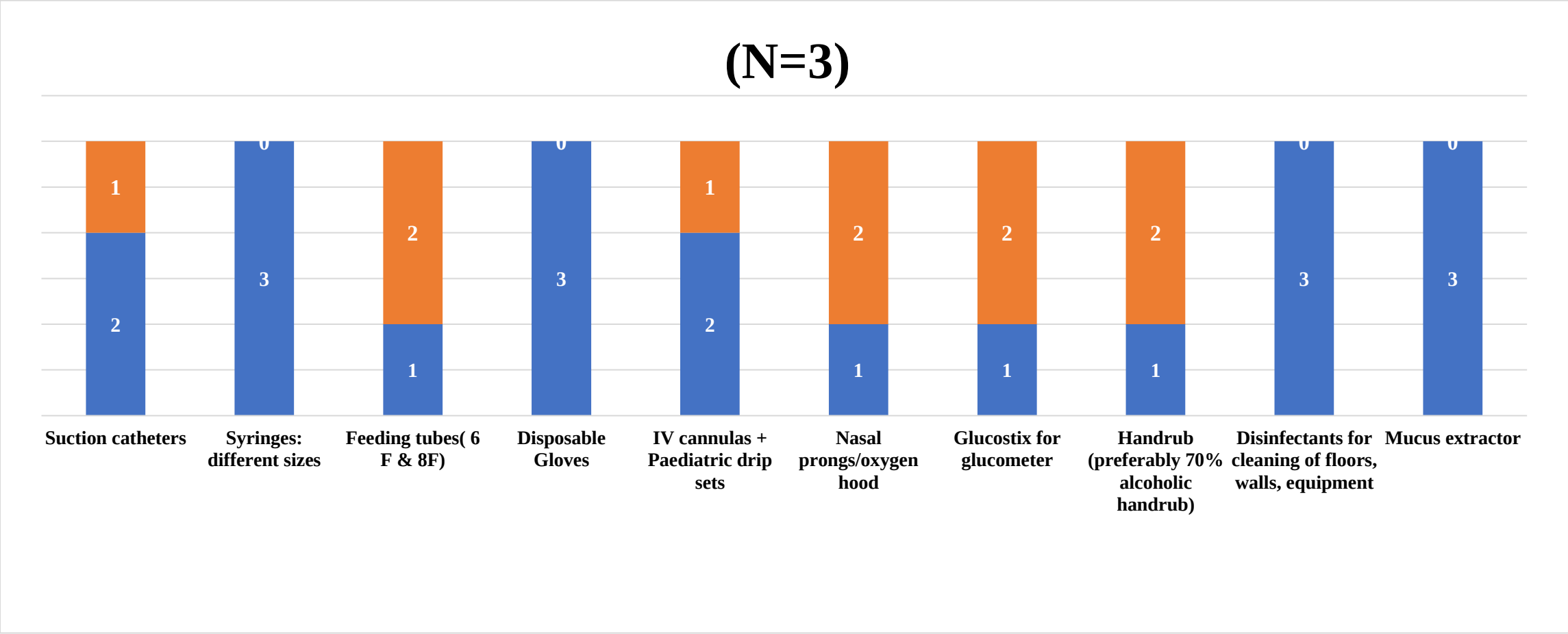
Assessment of availability of equipment



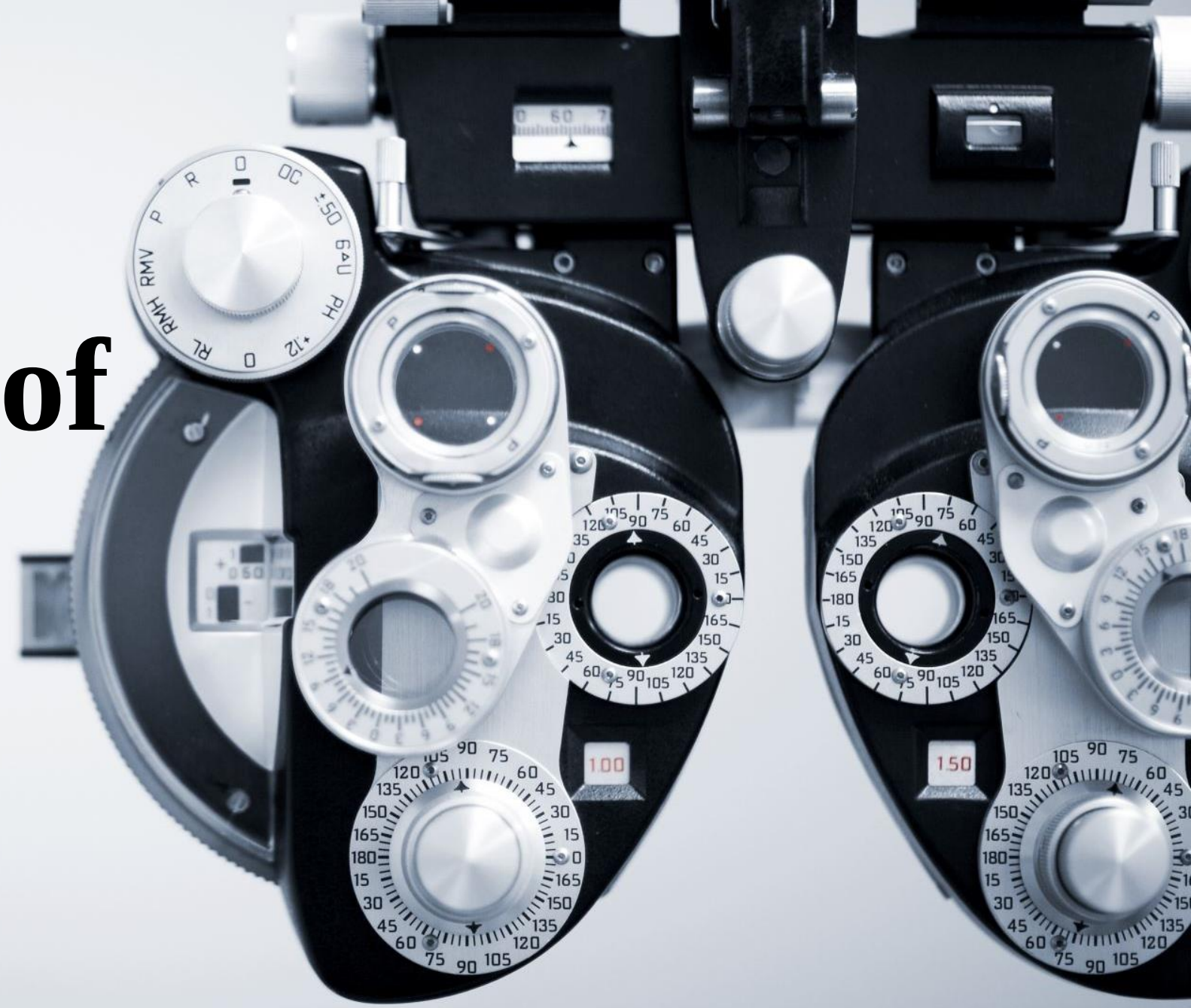
Assessment of the availability of drugs of NBSU



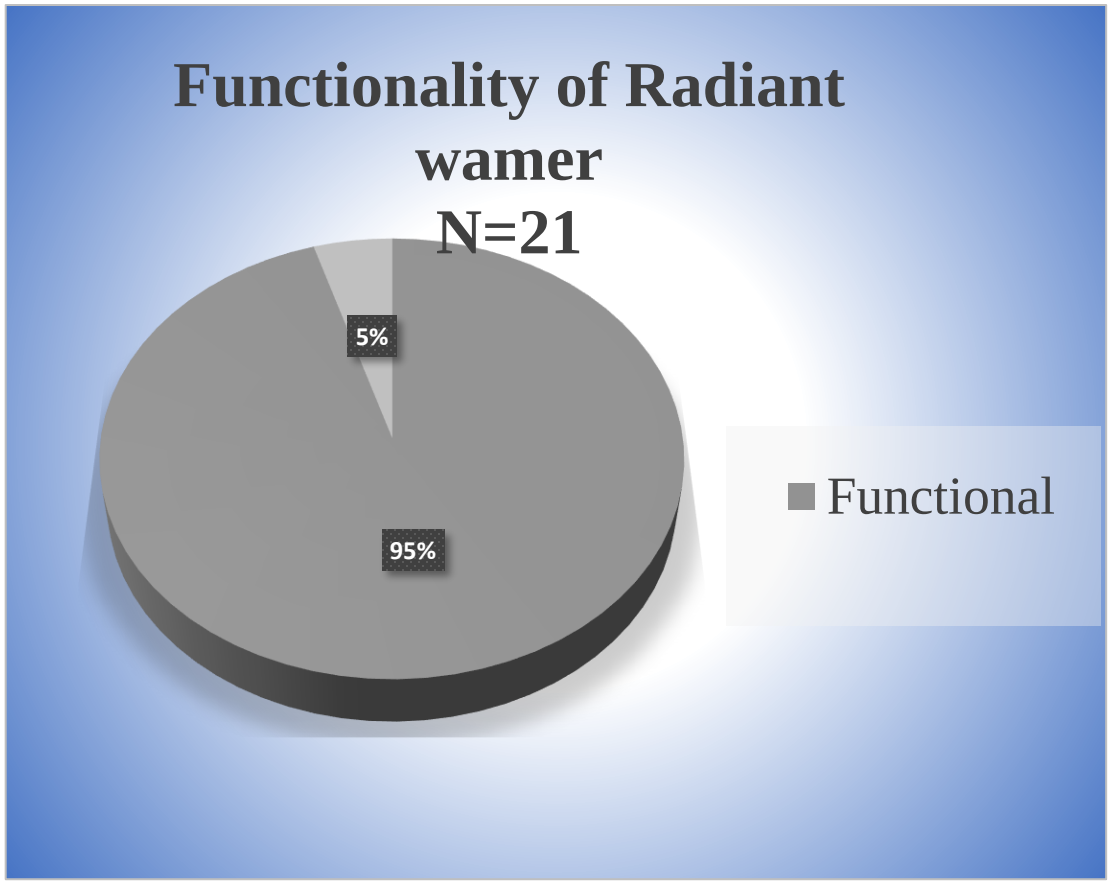
Assessment of the availability of consumables of NBSU

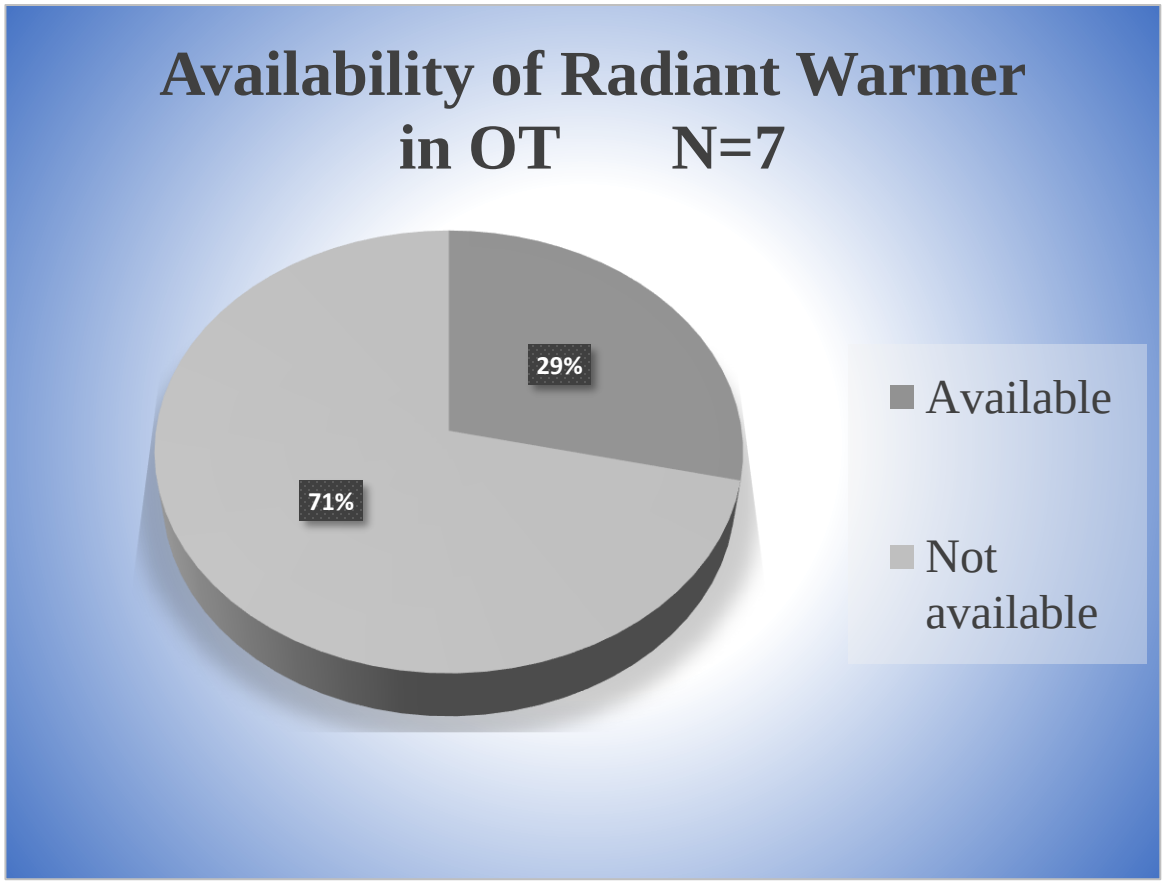


Assessment of NBCC

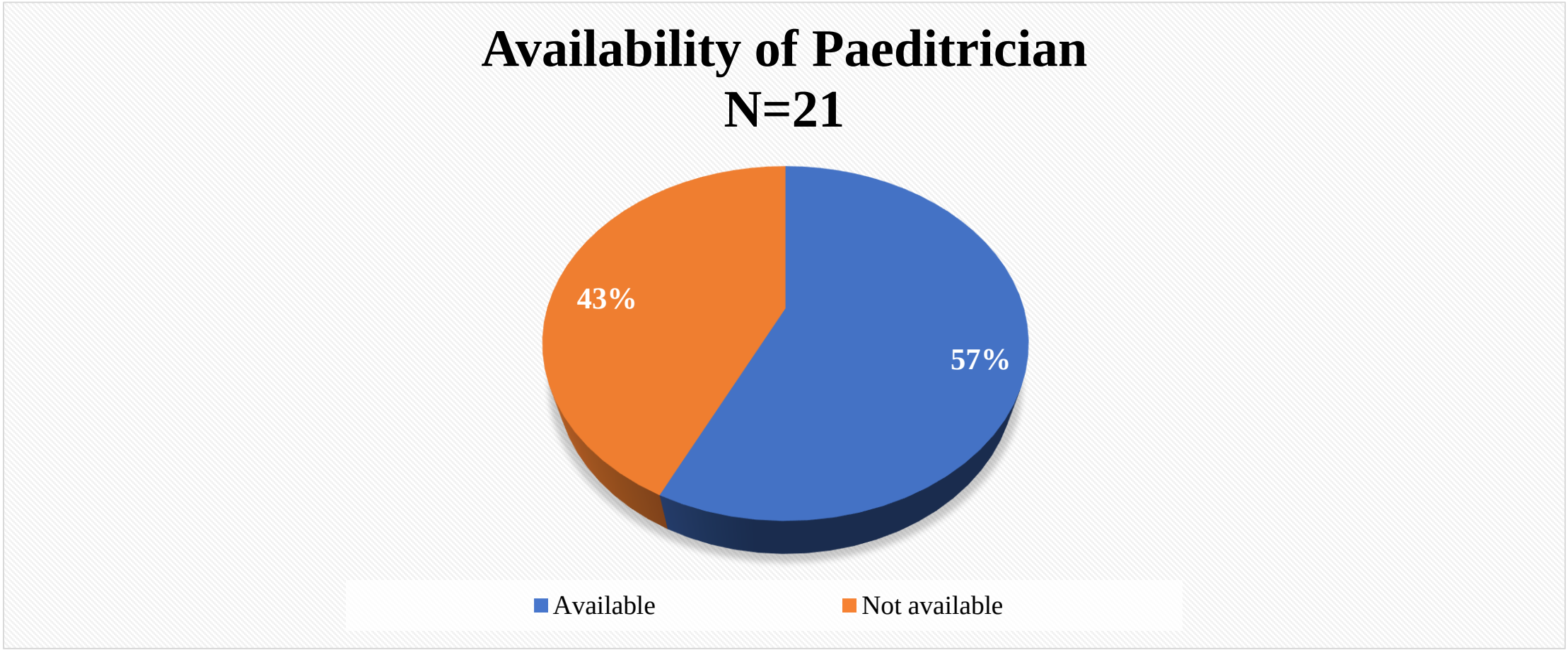


Assessment of functionality of Radiant warmer in LR & OT

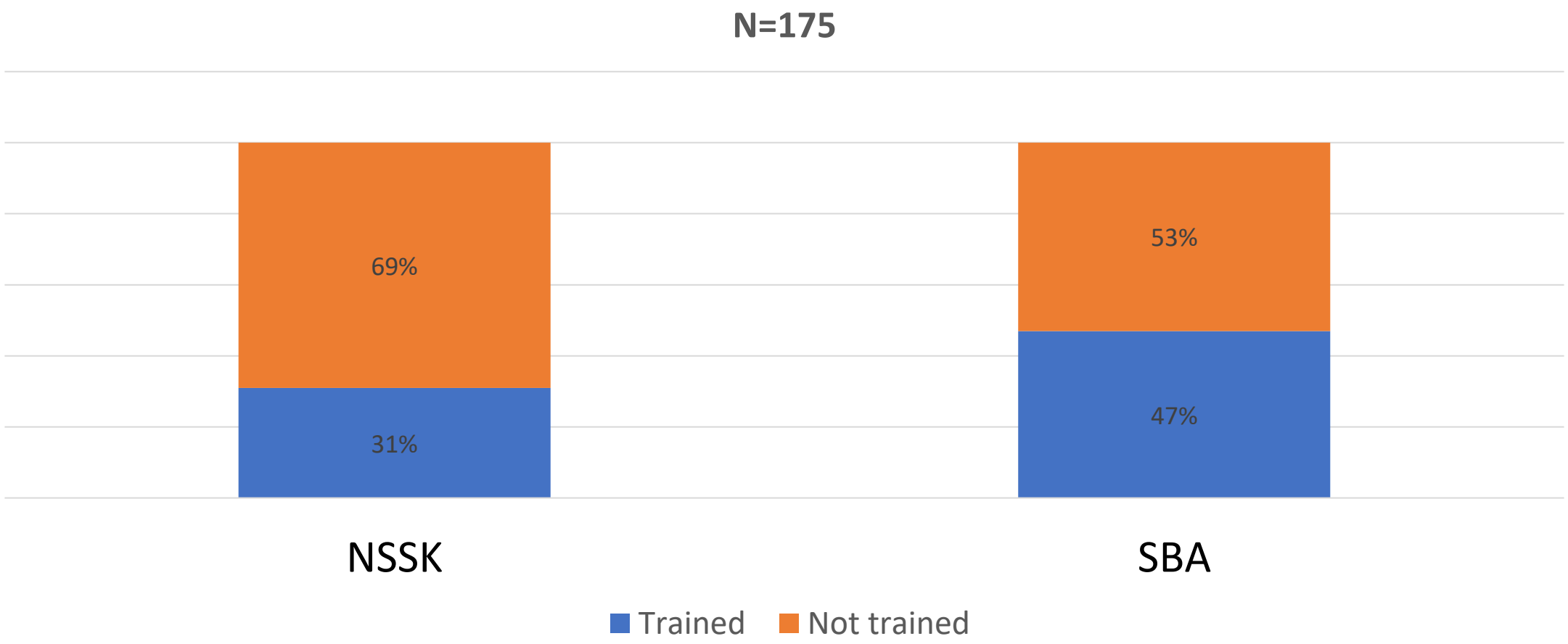




Assessment of HR



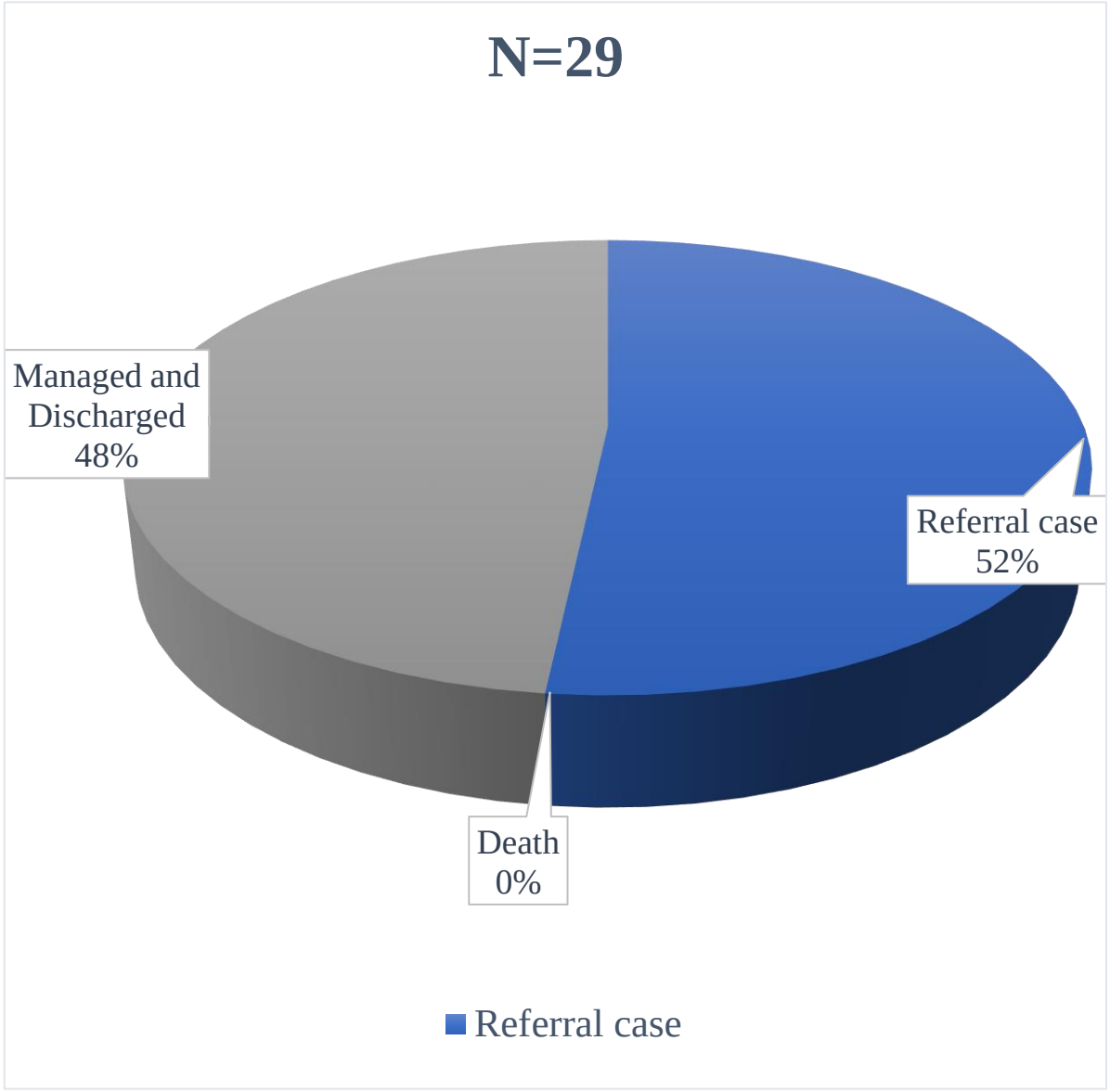
Assessment of training status of Staff nurse



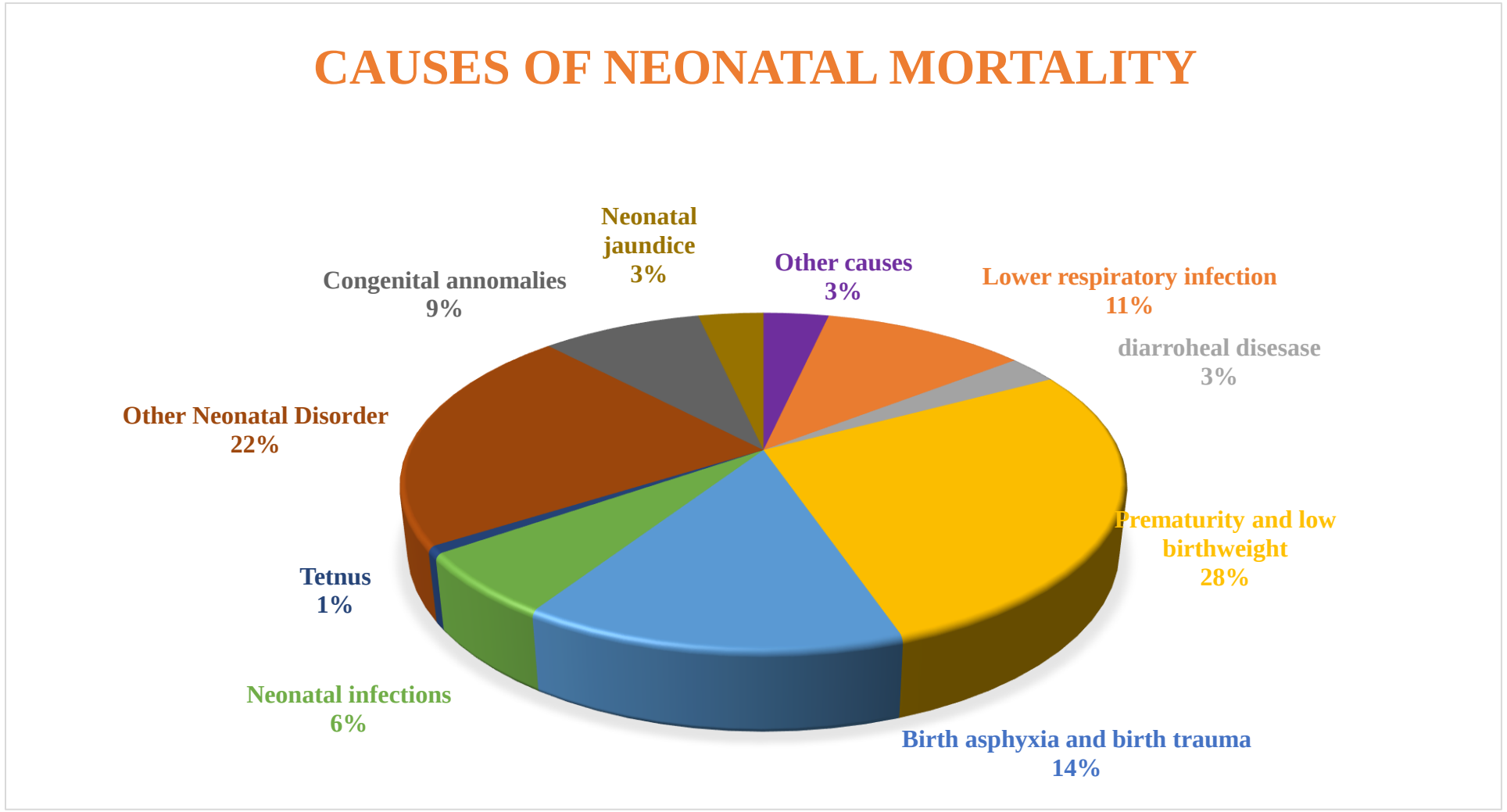
Admission Status

3 months admission Status of NBSU

- Represents total admission status of February, March, and April in functional NBSU Soraon and Phoolpur where 29 infants was admitted and 52% of admission was referral case which is high and only 48% case was managed and sent home healthy. Admission status is very low and need to improve functionality and clinical management



Assessment of Mortality type of newborn(India)

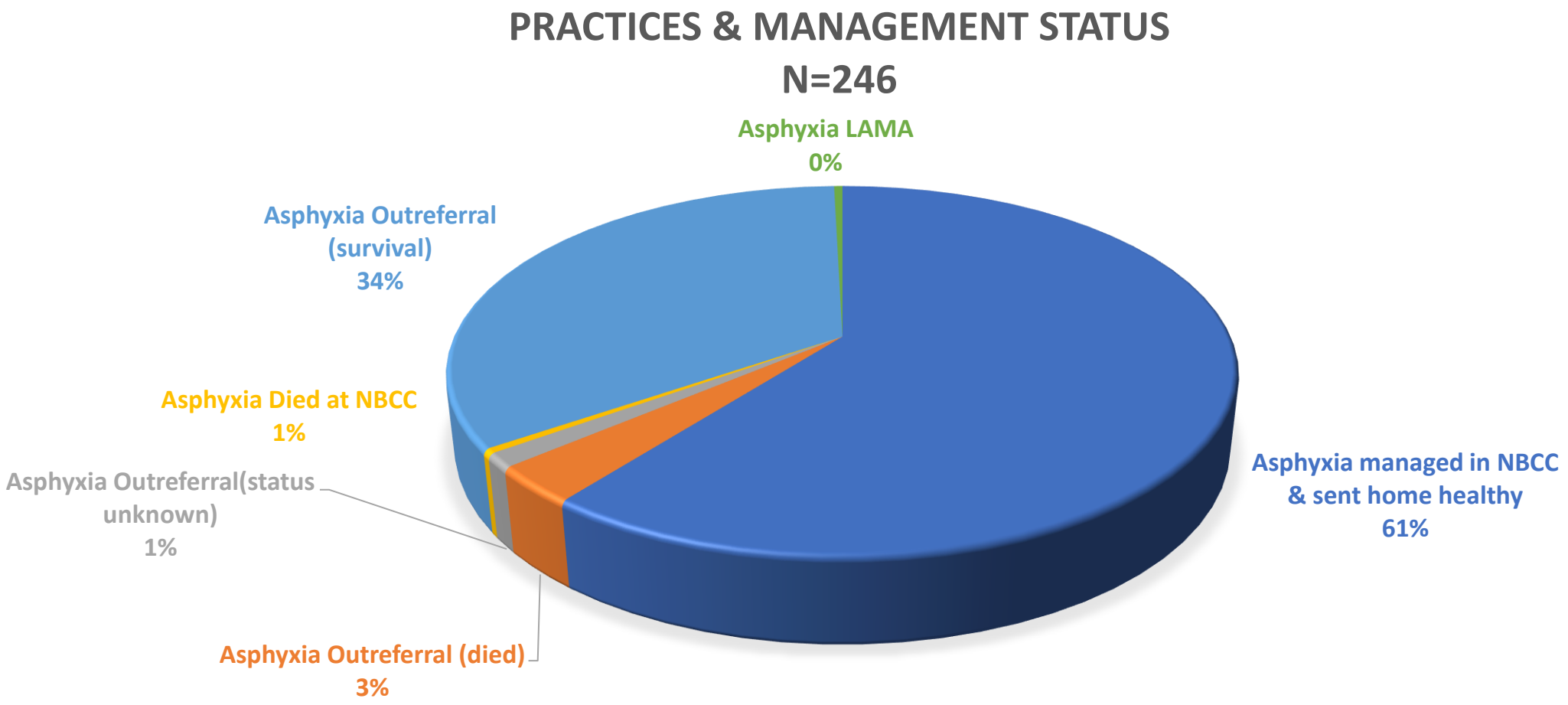


SOURCE- LANCHET (12TH MAY 2020)

UPHMIS DATA						
Period / Data	Asphyxia Died at facility	Birth anomalies Died at facility	Infection / sepsis (NB) Died at facility	Low birth weight (<2500 grams) Died at facility	Preterm birth (<37 weeks gestation) Died at facility	Live Birth
Apr 2019 to Mar 2020	5	1	0	0	6	78417

Neonatal mortality of Prayagraj District

Admission status and Birth asphyxia management of 21 NBCC



Suggestions

HR availability: Human resource is a big challenge for every public health facility to provide timely service. Promoting partnership with private organization or health institution in providing HR
Training: Provide essential training to all staff who are working in NBSU,NBCC and LR to improve their practices and confidences.
Knowledge skill practices improvement: Improve knowledge skills and practices of care providers with the help of nurse mentoring program of UPTSU. Improve clinical practices and motivate care providers for right practices and respectful maternity care on time. Observing the existing practices.
Follow up of Newborn: Ensure of quality care and proper follow up of all newborn after discharge or referral from NBCC or NBSU.
Availability of logistics: There was acute shortage of all essential equipment needed in NBSU. Important daily usable consumables are not available in NBCC and NBSU.
Functionality Status: Functionality of NBSU is very poor. Being a newborn stabilizing unit the radiant warmer and the phototherapy need to be improved for proper functioning of the new born unit.
Quality care: Providing awareness and education to all staffs, implementation of standardized guideline and Quality improvement initiative. Govt. must work on patient trust, most of the parents do not rely on public health facility services.
Protocol: Set Protocol for regular monitoring of the NBSU of each public health facilities.

Conclusion

Management of critically ill infants has become a major concern, as they are continuously exposed to various risk factors. As most of these causes are preventable, it is important to adopt various proven quality improvement initiatives to improve neonatal care outcomes. Thus, NBCC and NBSU must be able to provide special care to neonates to improve neonatal health indicators.

Gaps, we found for strengthening of NBSU is crucial to address neonatal mortality and infant mortality. This study emphasized an utmost need of high skill building training of health personal posted in NBSU with practice of skills in resuscitation is also critical. Availability of functional equipment, optimal skills to use equipment will be important to reducing neonatal mortality rate. Essential equipment and facility-based care are proven intervention for reducing neonatal mortality rate. Similarly, aseptic procedure must be followed to strictly to reduced sepsis and other infection related mortality.

There is also a need to review the quality of intrapartum care in labour rooms and quality of care at functional newborn care corner. Periodic inspection and audit are required to access the availability and functioning of these units this will help in channelizing resources more efficiently.

NBSU TOOL

NBSU Assessment Form

I. GENERAL INFORMATION

Name of the State: _____ Name of the District: _____

Name of the block: _____ Name of the facility: _____

Address of facility	
Type of designated facility	DH ☐ SDH ☐ FRU ☐ CHC ☐ 24X7 PHC ☐
Number of beds in the facility	
Is there 24-hour coverage for delivery and newborn?	YES ☐ NO ☐

II. INFRASTRUCTURE

A. NBS unit functional/operational since: ……/……/ ..... (DD/MM/YY)

B. Total floor area of NBSU (in sq. feet) ☐

C. Nu ☐ beds in NBSU

D. Availability of Newborn Care Corner

- Within labour Room: YES ☐ NO ☐
- Within operation theatre: YES ☐ NO ☐

E. Is the labour room in close proximity to NBSU: YES ☐ NO ☐

If no, give remarks _____

F. Where does the mother stay while the newborn is admitted to NBSU _____

G. Is a room thermometer available in NBSU? YES ☐ NO ☐

H. Is the temperature maintained in NBSU? YES ☐ NO ☐

I. Is the unit walled with washable tiles up to 7 feet YES ☐ NO ☐

J. Is continuous water supply available to the NBSU? YES ☐ NO ☐

If YES check

K. If NO, no. of hours of water supply to NBSU.....hrs.

- Is there a dedicated overhead tank for water? YES ☐ NO ☐

K. If NO, no. of hours of water supply to NBSU.....hrs.

- Is there a dedicated overhead tank for water? YES ☐ NO ☐
- Is a dedicated hand washing area available? YES ☐ NO ☐
- Is a wash-basin with elbow operated tap available YES ☐ NO ☐
- Is there 24*7 electrical Supply: YES ☐ NO ☐

If yes check

L. Is the day-light visible in the NBSU? YES ☐ NO ☐

M. Is the NBSU well lit? YES ☐ NO ☐

N. Is there a power supply YES ☐ NO ☐

O. Provision of stabilized power back-up YES ☐ NO ☐

			If available			If not functional	
	Equipment	Available	Number	Capacity	Functional	Since when	
Provision of Power back-up	Generator	Y ☐ N ☐			Y ☐ N ☐		
	Inverter	Y ☐ N ☐			Y ☐ N ☐		
Provision of safety of electrical devices and equipments	Centralized servo stabilizer	Y ☐ N ☐			Y ☐ N ☐		
	Voltage stabilizer	Y ☐ N ☐			Y ☐ N ☐		

Overall rating:

Criteria	Score		
	0	**1**	**2**
Total floor area (in sq. ft)	< 200		≥ 200
24*7 water supply	**Not available**	**Available at facility but not in Unit**	**Available in unit**
24*7 electrical supply	**Not available**	**Available at facility but not in Unit**	**Available in unit**
Number of beds	< **4**		≥ **4**

HUMAN RESOURCE

A. How many posts of staff nurses have been sanctioned for the NBSU? ……

B. How many staff nurses are deployed at the NBSU? ……

- Regular staff nurses ……
- Contractual staff nurses ……

C. The average number of staff nurses deployed at NBSU during the last one month or how frequently they are rotated within the facility?

A. Check the duty roster for number of staff nurses available and note their names as below:

Name	Full time/part time for NBSU	At facility since	Training		Training dates/ Duration
			FIMNCI	FBNC	

Paediatricians / Medical Officers engaged with NBSU

SN	Name MO	Qualification Degree /Dip.	Designated for NBSU	At facility since when	Medical officer	Training		Training dates /Duration
					On call / residing in the campus	FIMNCI	FBNC	
1								
2								
3								

Overall rating:

Criteria	Score		
	0	1	2
24*7 availability of manpower	No system	Nurses and MO available during day time only	24*7 availability of nurses with MO on call
Number of dedicated nurses posted at NBSU	None	< 4	≥ 4
Availability of MO & training status	Not available	Available but not F-IMNCI/FBNC trained	F-IMNCI/FBNC trained MO or Paediatrician
Training of Nurses	Not trained	At least 50% trained	All (100%) trained

Data	Last 3 months						Total
	1st Month		2nd Month		3rd Month		
	Inborn	Outborn	Inborn	Outborn	Inborn	Outborn	
Total number of deliveries in facility							
Total number of Caesarean sections							
Total number of live births							
• < 1000 gm							
• 1000 – 1499 gm							
• 1500 – 2499 gm							
• ≥ 2500 gm							
Total number of LBW newborns							
Number of still births							
Total no. of admissions in NBSU							
Male							
Female							
Total No. of cases admitted to NBSU							
• Birth weight ≥ 2500 gm							
• 1500 – 2499 gm							
• 1000 – 1499 gm							
• < 1000 gm							
Morbidity Profile (Primary diagnosis)							
• Neonatal sepsis							
• Birth asphyxia							
• Pre-maturity/LBW							
• Hypothermia							
• Jaundice							
• Any other - specify							
Management (no. of babies who received)							
• Oxygen							
• Antibiotics							
• Gavage feeding							
• IV fluid							
• Phototherapy							
• Enteral feed							
Outcome							
• Discharge							
• Referral							
• Left against medical advice (LAMA)							
• Died							
Cause of death							
• Neonatal sepsis							
• Birth asphyxia							
• Pre-maturity/LBW							
• Hypothermia							
• Jaundice							
• Any other - specify							

DRUGS & EQUIPMENT

A. Drugs

Name of Drug	Availability at time of visit (Yes / No)	Adequacy of stock (Yes / No)	Any stock out in last 6 months (Yes / No)	Remarks
Drugs				
Inj. Adrenaline				
Inj. Ampicillin				
Inj. Gentamycin				
Other antibiotics				
Inj. Calcium gluconate				
Normal saline				
10% dextrose				
Isolyte-P				
Inj. Phenobarbitone				
Inj. Vitamin K				
Disinfectants				
Soap				
Handrub (Alcohol-based)				
Spirit				
10% Betadine				
Gluteraldehyde				
Surface disinfectant				
Floordisinfectant (Lysol 5%)				
Slippers				

DRUGS & EQUIPMENT

Consumables / Disposables				
Gloves				
Different colour polythene				
I/V cannulas (24)				
Needles				
Syringes				
Feeding tubes				
Endotracheal tube				

Nasal prongs				
O2 Hood				
Pedia set				
Suction catheter				
Glucostix				

EQUIPMENT

S. N.	Equipment	Available Number	Functional YES/NO (Check functionality)	If not functional since when	Use of equipment in last 1 month *(Determined by used for number of babies and no. Of days)*
1	Radiant warmer				
2	Phototherapy CFL/Conventional				
3	Neonatal Bag & Mask (0 & 1 size)				
4	Laryngoscope				
5	Weighing machine				
6	Foot operated/ Mechanical suction machine				
7	Thermometer				
8	Mobile examination light				
9	Hub cutter				
	Stethoscope with neonatal chest piece				
11	Oxygen cylinder				
12	Oxygen concentrator				

NBCC TOOL

NBCC ASSESSMENT FORM

Instruction Sheet

The assessment of NBCC should be done at the Labour Room and OT where the LSCS are performed.

GENERAL INFORMATION*(note when assessing only NBCC)

Name of the State: _____ Name of the District: _____

Name of the block: _____Name of the facility: _____

Address of facility	
Type of designated facility	DH☐ SDH ☐ FRU ☐ CHC ☐ 24*7 ☐ Others ☐ (Other specify.....)

A. Human Resource

A. How many posts of staff nurses are designated for labour room? .....
B. How many staff nurses are deployed at LR? .....
   a. Regular staff nurses .....
   b. Contractual staff nurses .....
C. Training Status

S. No.	Health Personnel	Number Available	Number trained		
			SBA	NSSK	FIMNCI
1	Medical Officer				
2	Staff Nurse				
3	ANM				
4	Others				

A. Logistics

S. No.	Logistics	Availability at time of visit (Yes / No)	Adequacy of stock (Yes / No)	Remarks
1	Wall clock (with seconds hand)			
2	Clean dry sheets			
3	Clean towels			
4	Mucus extractor			
5	Disposable gloves			
6	Clean blade			
7	Clean cord ties /staples			
8	Clean Cotton and gauze			
9	IVF (NS)			
10	Inj. Vitamin K			
11	Syringes			

Newborn Care Corner in Labour Room

A. Infrastructure

1. Is Newborn Care Corner available within Labour Room ? YES ☐ NO ☐
2. Is 20-30 sq ft` area earmarked / dedicated for NBCC? YES ☐ NO ☐

B. Equipment

S. No.	Equipment	Availability Yes / No	Available Number	Functional YES/NO (Check functionality)*	If not functional since when
1	Radiant warmer				
2	Self Inflating Bag (250ml,500 ml)				
3	Face mask (No. 0 and 1)				
4	Weighing Scale				
5	Room Thermometer				
6	Low Reading Clinical (32-34C) Thermometer				
7	Light for Examination				
8	Mucus Extractor				
9	Suction Machine				
10	Feeding Tubes				
11	Oxygen Cylinder				
12	Syringe Hub Cutter				

A. Assessment of practices

1	Are all babies after delivery kept in the warmer?	YES ☐ NO ☐
2	Are babies kept on the mothers abdomen immediately after birth	YES ☐ NO ☐
3	Is breast feeding started immediately after birth?	YES ☐ NO ☐
4	Is hand washing done before handling each baby?	YES ☐ NO ☐
5	Are sterile sheets used for the baby? If yes are the sheets pre warmed?	YES ☐ NO ☐ YES ☐ NO ☐
6	Frequency of cleaning of general equipments	Once a day ☐ Once a week ☐ During Fumigation ☐ Not done ☐
7	Disinfection of baby care equipment	After each use ☐ Daily ☐ When visibly soiled ☐ Not done ☐
8	Waste segregation and disposal *(Mention type you seen)*	Appropriate ☐ Not appropriate ☐

Overall rating:

Criteria	Score		
	0	**1**	**2**
Separate area for NBCC	No separate area	Separate area but <20 sq. ft.	20 – 30 sq. ft. separate area
Radiant warmer	Not available	Available but not functional	Available & functional
Bag & Mask	Not available	Available but not functional	Available & functional
Training of nurses (SBA, NSSK)	Not trained	50% trained	100% trained
Hand washing	Not done	Sometime	Regular

Newborn care corner in OT

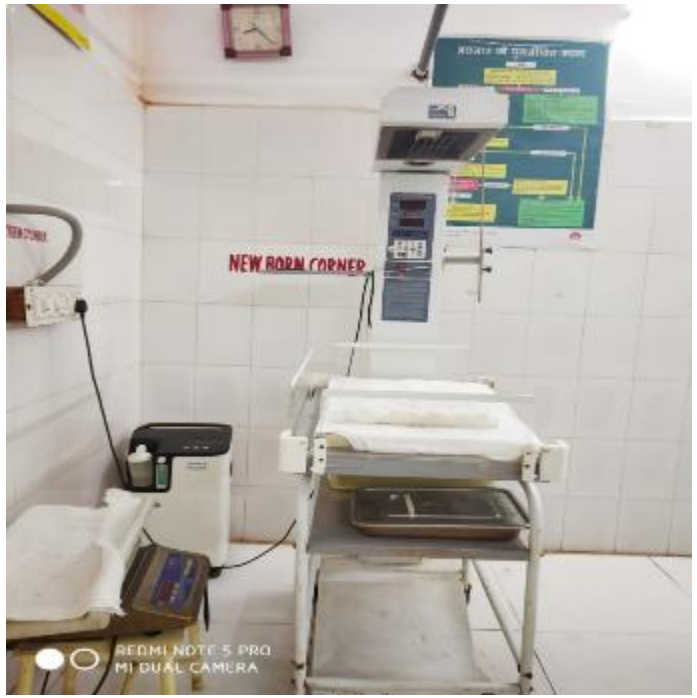
A. Infrastructure

1. Is Newborn Care Corner available within Labour Room ? YES ☐ NO ☐
2. Is 20-30 sq ft` area earmarked / dedicated for NBCC? YES ☐ NO ☐

B. Equipments

S. No.	Equipment	Availability Yes / No	Available Number	Functional YES/NO (Check functionality)	If not functional since when
1	Radiant warmer (E)				
2	Self Inflating Bag (500 ml)				
3	Face mask (No. 0 and 1)				
4	Weighing Scale				
5	Room Thermometer				
6	Low Reading Clinical Thermometer				
7	Light for Examination				
8	Mucus Extractor				
9	Suction Machine				
10	Feeding Tubes				
11	Oxygen Cylinder				
12	Syringe Hub Cutter				

NBCC Photos



NBSU Photos


REDMI NOTE 5 PRO
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Thank you