

**Summer Training at
National Health Mission, Rajasthan**

**Assessment of Special Newborn Care Units Using on NNFI Accreditation
Tool**

**By
Arpita Dadhich**

**Under the guidance of
Dr. Ruchi Garg**

**MBA Hospital & Health Management
2017-2019**

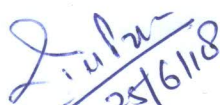

Institute of Health Management Research
The IIHMR University, Jaipur
2018

CERTIFICATE

This is to certify that **Ms. Arpita Dadhich** has undergone summer training in IIHMR University at **National Health Mission , Rajasthan** from **12th April 2018 to 2nd June 2018**.

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.


Dr. Ruchi Garg

Assistant Professor

IIHMR University, Jaipur


(Col. (Dr.) Ashok Kaushik)
for Col. (Dr.) Ashok Kaushik 25.6.18.

Dean (Academic & Student Affairs)

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Dated: - 04/06/18

CERTIFICATE

This is to certify that **Ms. Arpita Dadhich**, student of MBA Institute of Health Management Research (IIHMR, Jaipur) has successfully completed her Summer Training Program at NHM, Rajasthan from **12th April, 2018 to 2nd June, 2018**. She has worked on the project- **Special Newborn Care Units of Rajasthan**.

Her performance was found satisfactory. We extend her good wishes for a bright and successful career ahead.


Director-RCH

Acknowledgement

The internship opportunity I had with National Health Mission, Rajasthan was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this internship period.

Bearing in mind previous I am using this opportunity to express my deepest gratitude and special thanks to the MD NHM Shree Navin Jain who in spite of being extraordinarily busy with his duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my project at their esteemed organization and extending during the training.

I express my deepest thanks to Dr. Jalaj Vijay State (Programme Manager), Dr. Rommel Singh (Project director, Child Health), Dr. Kapil Joshi (consultant UNICEF) for taking part in useful decision & giving necessary advices and guidance and arranged all facilities to make my project easier. I choose this moment to acknowledge their contribution gratefully.

It is my radiant sentiment to place on record my best regards, deepest sense of gratitude to Dr. S.D Gupta, Director Indian Institute of Health Management & Research University, Dr. Ashok Kaushik, Dean Academics, and students Affairs, IIHMR University, Jaipur, and my mentor Dr. Ruchi Garg for their careful and precious guidance which were extremely valuable for my study both theoretically and practically.

I perceive as this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives. Hope to continue cooperation with all of you in the future. Sincerely,

Arpita Dadhich

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ACRONYMS

S. No.	ACRONYMS	FULL FORM
1.	ABG	Acid Blood Gas Analysis
2.	AIDS	Acquired immune deficiency syndrome
3.	ANM	Auxiliary nurse midwife
4.	ASHA	Accredited social health activist
5.	BMNO	Block medical nodal officer
6.	BMW	Bio- Medical Waste
7.	CBC	Complete Blood Count
8.	CHC	Community health center
9.	CME	Continued Medical Education
10.	CPAP	Continuous positive Airway Pressure
11.	DCH	Diploma in Child Health
12.	DM	Doctorate in Medicine
13.	DR- CPAP	Delivery room continuous Positive Airway pressure
14.	EBM	Expressed breast milk
15.	FBNC	Facility Based Newborn Care
16.	GNM	General nursing and Midwifery
17.	Hb	Hemoglobin
18.	IFA	Iron folic acid
19.	IMR	Infant mortality rate
20.	KMC	Kangaroo Mother Care
21.	LBW	Low Birth Weight
22.	MDR	Maternal death review
23.	MMR	Maternal mortality ratio
24.	NBCC	Newborn care corner
25.	NBSU	Newborn Stabilization unit
26.	NMR	Neonatal mortality rate
27.	NRP	Neonatal Resuscitation Protocol
28.	PDCH	Project director Child health
29.	PHC	Primary health center
30.	PICC	Peripherally Inserted Central Catheter
31.	ROP	Retinopathy of Prematurity
32.	SNCU	Special newborn care unit
33.	VAP	Ventilator associated Pneumonia
34.	VLBW	Very Low Birth Weight

ORGANIZATION PROFILE:

The National Health Mission (NHM) seeks to provide universal access to equitable, affordable and quality health care which is accountable, at the same time responsive, to the needs of the people, reduction of child and maternal deaths as well as population stabilization, gender and demographic balance.

Mission - Mission of NHM is to improve the quality of life of people by providing better Health Services. It strives to help people improve their productivity and reduce risks of diseases and injury in a cost – effective way.

Vision- NHM seeks to establish long term relationship with groups and individuals to enable them to continue to work to achieve optimal health. It delivers cost – competitive health promotion services with patient's satisfaction and accountability.

Duties of Health Department-

- Provide Promotive, Preventive, Curative and rehabilitative administrations to the group through primary health care delivery system.
- Provide evenhanded and quality medicinal services at essential, auxiliary, and tertiary level.
- Extension, development, and union of wellbeing foundation.
- Respond to the community group wellbeing needs and demand.
- Provide Reproductive and child Health Services with the target of lessening MMR and IMR.
- Provide inoculation administrations against immunization preventive illnesses of childhood as well as pregnant mothers against tetanus during child birth.
- Provide family welfare administrations.
- Provide basic obstetric care.

- Enforcement of PNDT Act to counteract sex Determination.

Focus Areas and Approach

The NHM essentially focuses on strengthening primary health care across the country. The emphasis is on strengthening health facilities and services up to the district level in urban and rural areas. The key approaches of NHM include augmentation of human resources, strengthening health infrastructure, flexible financing, decentralized planning through village health sanitation and nutrition committees and setting up of Rogi Kalyan Samitis, Medical Mobile Units to provide health service delivery especially in un-served and underserved areas, accredited social health activists (ASHA) who act as a link between community and health care facilities, the reproductive and child health (RCH) programme to improve the maternal and child health in the country, improved management capacity, robust monitoring and evaluation mechanisms, use of Information technology in health to improve services delivery and strengthening monitoring and mainstreaming of AYUSH.

Introduction

Globally around 3.1 million babies per year die in the first four weeks of life. 30 percent of the global neonatal deaths occur in India and little progress has been made in reducing it in the last one and half decade. India needs to address the problem of high newborn mortality to achieve MDG-4. Most of these deaths occur within the first week of life. Thus, serious, concerted efforts have to be made to address the needs of a newborn in its first days in order to reduce neonatal mortality in India. Meeting basic needs of all newborns such as Breastfeeding, Warmth, breathing and prevention of infection remain the corner-stone in tackling newborn mortality, an effective link between healthcare facilities and community based newborn care is needed.

Neonatal care at different levels under FBNC Program

Three levels of neonatal care under the FBNC program are as following:

Level 1 care incorporates referral of sick newborns from Primary Health Center's (PHCs) to higher focus' and care at Newborn Stabilization Units (NBSU) in the first referral units. Care in the NBSU incorporates Stabilization of sick newborns and care of low-birth Weight (LBW) babies not requiring concentrated care.

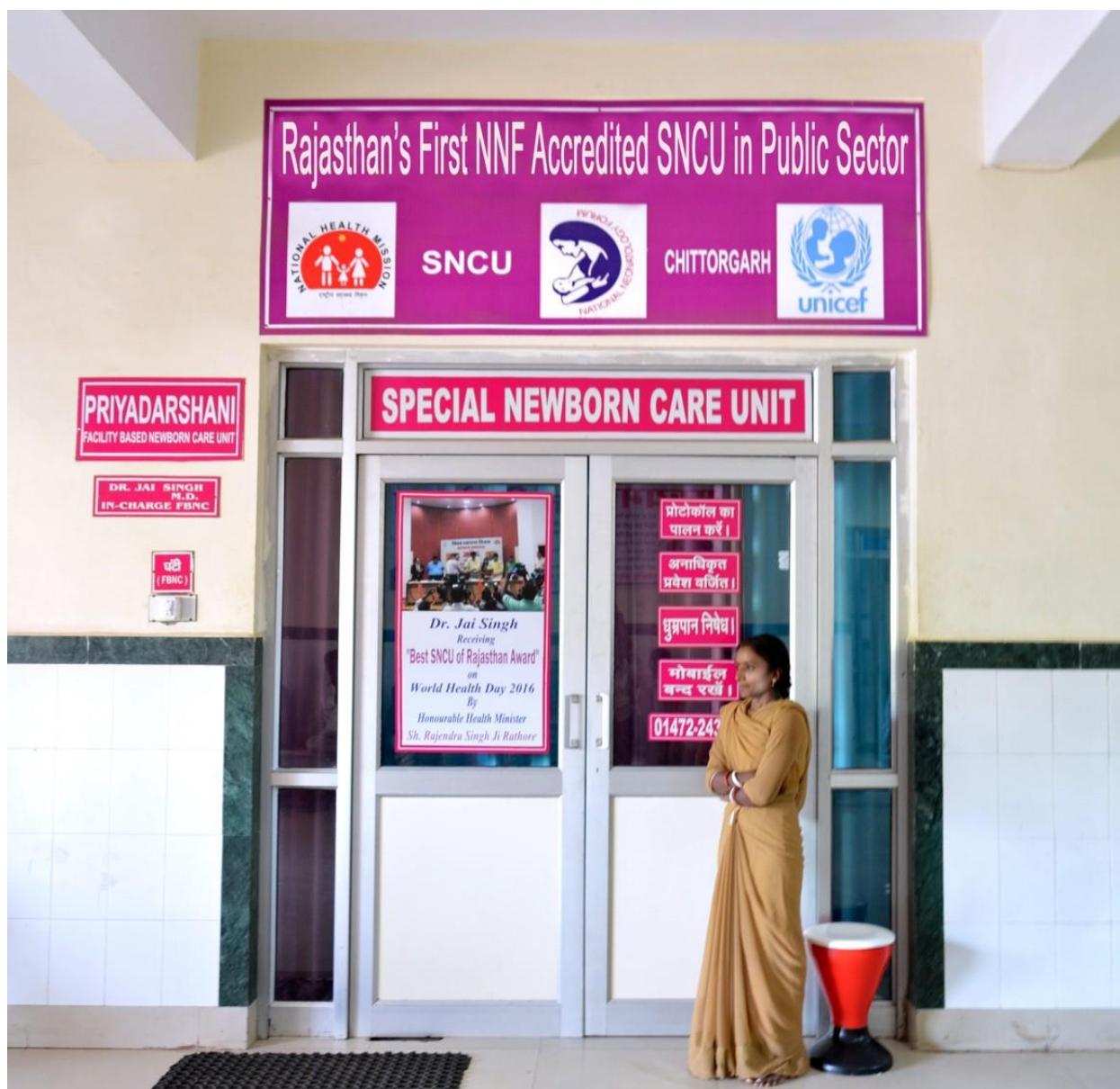
Level 2 Care incorporates working of Special Newborn Care Units (SNCUs) at the district hospital and some of the sub district hospital level. These units are being set up at any health facility where the conveyance stack is more than 3000 every year and are prepared to deal with sick newborns other than those who require ventilator support and surgical care. It has been assessed that around 15-20 % of all babies require level 2 care in rural settings.

Level 3 units are the neonatal intensive care units (NICUs) which provide all care including assisted ventilation and major surgery.

Under this initiative, MOHFW established Special Newborn care Unit (SNCU) in 2009-10 focusing on comprehensive care to a sick newborn.

Special Newborn Care Unit (SNCU)

SNCU is a neonatal unit in the vicinity of the labor room which provides level 2/3 care (all care except assisted ventilation and major surgery) for sick newborns. All district hospitals and sub – district hospitals with more than 3000 deliveries per year should have a SNCU.



Services to be provided at SNCU

Table 1: Expected services to be provided at SNCU		
Care at birth	Care of normal newborn	Care of sick newborn
Prevention of Infection Provision of warmth Resuscitation Early initiation of Breastfeeding Weighing the newborn	Breast – feeding / Feeding support	Managing of LBW babies under 1800 gm Managing all sick newborns (except those requiring mechanical ventilation and major surgical interventions)

		Post – Natal Care Follow- up of high- risk newborns Immunization services and referral services
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***(Source: facility based newborn care operational Guidelines 2011)**

Components of SNCU

- Patient care zone: for a unit of 12 beds, the patient care zone would be 600 sqft (50 sqft per bed). The patient care region can be intended to have two interconnected rooms isolated by transparent observation windows from the nurses' working spot in the middle. While one room can be utilized for intramural newborns (those born within the health facility), another room can be utilized for extramural newborns (those born outside the health facility).
- Ancillary territory: 600 sqft. Auxiliary territory ought to incorporate separate region for hand washing and gowning area at the passageway, nurses' work station, clean regions for blending intravenous liquids and solutions, specialist's duty room, computer station, mother's zone for expression of breast milk and learning mother crafts, unit store and side lab. It is desirable to have portable x-ray, boiling and autoclaving and laundry room.
- Step-down region: notwithstanding the patient care zone and ancillary space, the SNCU configuration ought to include the step-down unit. The step- down could be inside premises or in closeness.

Human resources for Special Newborn Care Unit

A 12 bedded unit (in addition to 4 beds for the step- down region) requires no less than one pediatrician or 4 trained MBBS specialists. It is purposed that one pediatrician trained in neonatology ought to be posted at the unit, supported by a few medical officers trained in FBNC. There ought to be three nurses in each shift, round the clock and adequate medical attendants enrolled to accommodate leave opening and possibility.

Devoted care staff ought to be accessible to clean the unit in any event once amid each shift and more regularly relying upon the need. A part-time lab professional, a counselor, and a data entry operator ought to likewise be posted at the unit

Criteria for admission in SNCU:

Any newborn with following criteria should be immediately admitted to the SNCU:

- Birth weight <1800gm or gestation <34 weeks
- Large baby (>4.0kg)
- Perinatal asphyxia
- Apnea or gasping
- Refusal to feed
- Respiratory distress (Rate >60 or grunt/retractions)
- Severe jaundice (Appears <24 hrs./stains palms and soles/lasts >2 weeks)
- Hypothermia <35.4-degree C or hyperthermia (>37.5 degree C)
- Central cyanosis
- Shock (Cold periphery with CFT>3 seconds and weak & fast pulse)
- Coma, convulsions, or encephalopathy
- Abdominal Distension
- Diarrhea / Dysentery
- Bleeding
- Major malformations

Criteria for discharge from SNCU:

- Baby can maintain temperature without radiant warmer
- Baby is hemodynamically stable (normal CFT, strong peripheral pulses)
- Baby accepting breast feeds well
- Baby has documented weight gain for 3 consecutive days, and the weight is more than 1.5 kg
- Primary illness has resolved

Training of SNCU staff on newborn care:

To ensure that the staff has the necessary skill to provide the appropriate level of care the medical and paramedical staff posted at SNCU need to undergo:

- **Navjaat Shishu Suraksha Karyakram (NSSK)**

NSSK address important interventions of care at birth that is basic newborn resuscitation, prevention of hypothermia, prevention of infection, early initiation feeding, and equips the staff with 2 days knowledge and skill-based training to provide essential newborn care in primary health care settings.

- **Facility based IMNCI (F-IMNCI) training:**

F-IMNCI is skill-based training, based on a participatory approach combining classroom sessions with hands- on clinical sessions. Medical officers and nurses not trained in IMNCI and working at health facilities should receive the full package of training with 11 days duration of training and 5 days for those already trained in IMNCI.

- **Facility based newborn care (FBNC) training:**

All doctors and nurses posted in SNCUs need to undergo a more intensive training programme at a recognized center. The training programme includes 4 days skill- based training on essential and special care. Besides skills on clinical management, additional training is provided on housekeeping and maintenance of the equipment.

- **Observer ship training:**

This programme includes 2-week training for all doctors and nurses posted in SNCU.

Equipment required for SNCU

- Radiant warmers
- Incubators
- Transport incubator
- Pulse oximeter
- Apnea monitor
- BP monitor
- Thermometer
- Weighing scale
- Transcutaneous Bilirubin meter
- Blood gas monitor
- Phototherapy unit
- Infusion pump
- Oxygen analyzer
- Flux meter
- CPAP machine
- Neonatal Ventilator
- Suction machine

- Breast pump
- Manual resuscitator

(htt1)

Review of Literature:

SNCU is a neonatal unit near the labor room which provide special care for sick newborns. According to the study, the impact of special care newborn units on routine neonatal care practices in central India, An observational study. There is evidence that the knowledge and awareness regarding the neonatal care is improved due to the SCNU and it also contributed to the reduction in neonatal mortality rate. Most of the mothers are satisfied with the services and follow-up, which shows that SCNU helps to improve neonatal care. Majority of staff are satisfied by the infrastructure and services in spite of insufficiency in the number of staff.

To evaluate the impact of creating a sick newborn care unit (SNCU) in a district hospital on neonatal mortality rate (NMR). This study was conducted in a district hospital with 6500 deliveries a year. A 14 bed SNCU that included controlled environment, individual warming and monitoring devices, infusion pump, central oxygen and oxygen concentrators, resuscitation and exchange transfusion, portable X-ray and in-house laboratory was created. Doctors and nursing personnel were trained. Baseline data for 10 months were compared with 2 years data of SNCU operation. A 14 bed SNCU that included controlled environment, individual warming and monitoring devices, infusion pump, central oxygen and oxygen concentrators, resuscitation and exchange transfusion, portable X-ray and in-house laboratory was created. Doctors and nursing personnel were trained. Baseline data for 10 months were compared with 2 years data of SNCU operation. Compared with the baseline neonatal mortality in the district hospital, neonatal mortality was reduced by 14% in the first year and by 21% in the second year after SNCU became functional. Estimated neonatal deaths averted were 329, which would reduce NMR of the district from 55 to 47 in 2 years.

Rationale:

According to SRS 2015, 85.8% deliveries are institutional in Rajasthan, with the help of programmes like JSY, JSSK and it is assumed that SNCUs play a key part in saving neonatal lives. As it provides all the care to child except assisted ventilation and major surgical interventions. And currently in Rajasthan 53 SNCU are functional. So, with the standard protocols and SOPs the SNCUs can accomplish best standards in neonatal care and survival.

This study can held to access the SNCUs on 159 Mandatory and 46 Essential fields on a standard tool, NNF. And by recognizing gaps so the corrective actions can be made promptly.

Objective:

1. To assess the compliance of quality services provided by Special Newborn Care Units (SNCU) in selected facilities of Rajasthan with the help of National neonatal forum (NNF) tool.
2. To identify gaps in the functioning of SNCUs in selected facilities of Rajasthan with help of national neonatal forum tool.

Method and Tools:

Study area- Special Newborn Care Unit of Rajasthan

11 District hospitals

2 Medical colleges

Study Design - Cross-sectional study.

Study period – April 12th to June 2nd, 2018

Study population- Special newborn care units

Sampling Frame – All Special newborn care units in Rajasthan (53)

Sample Size – 1/4th sampling as per convenience: 13 SNCUs

Study Tool – A pre-designed, pre-tested structured National Neonatology Forum India Accreditation Tool closed questionnaire

Data Collection Technique –Primary data collected from 13 SNCUs that are functional from past one year. NNF Self-Assessment Tool was used for primary data and secondary data was obtained from online software of SNCU. Then data was analyzed using MS excel.

Assessment tour table			
S.NO	Unit Name/ District	Unit In-charge Name	Date
1	SNCU Jaipuriya	Dr. Deependra Garg	27/04/2018
2	SNCU Mahila Chikitsalya	Dr. R N Sahera	01/05/2018
3	SNCU Karauli	Dr Mahendra Meena	02/05/2018
4	SNCU Churu	Dr Ikram Hussain	03/05/2018
5	SNCU DH Beawar	Dr. P. M Bohara	05/05/2018
6	SNCU Zanana Ajmer	Dr. Jai Prakash	05/05/2018
7	SNCU Sikar	Dr Ashok Kumar	06/05/2018
8	SNCU Jhunjhun	Dr V D Bajia	07/05/2018
9	SNCU Hindaun City	Dr Akshay	09/05/2018
10	SNCU Udaipur	Dr Ikram Hussain	15/05/2018
11	SNCU Sardarshahar	Dr Bulaki	11/05/2018
12	SNCU Hanumangarh	Dr. Vedpal Bijarnia	11/05/2018
13	SNCU Sri Gananagar	Dr. Sanjay Rathi	12/05/2018

SNCU Profile Table:

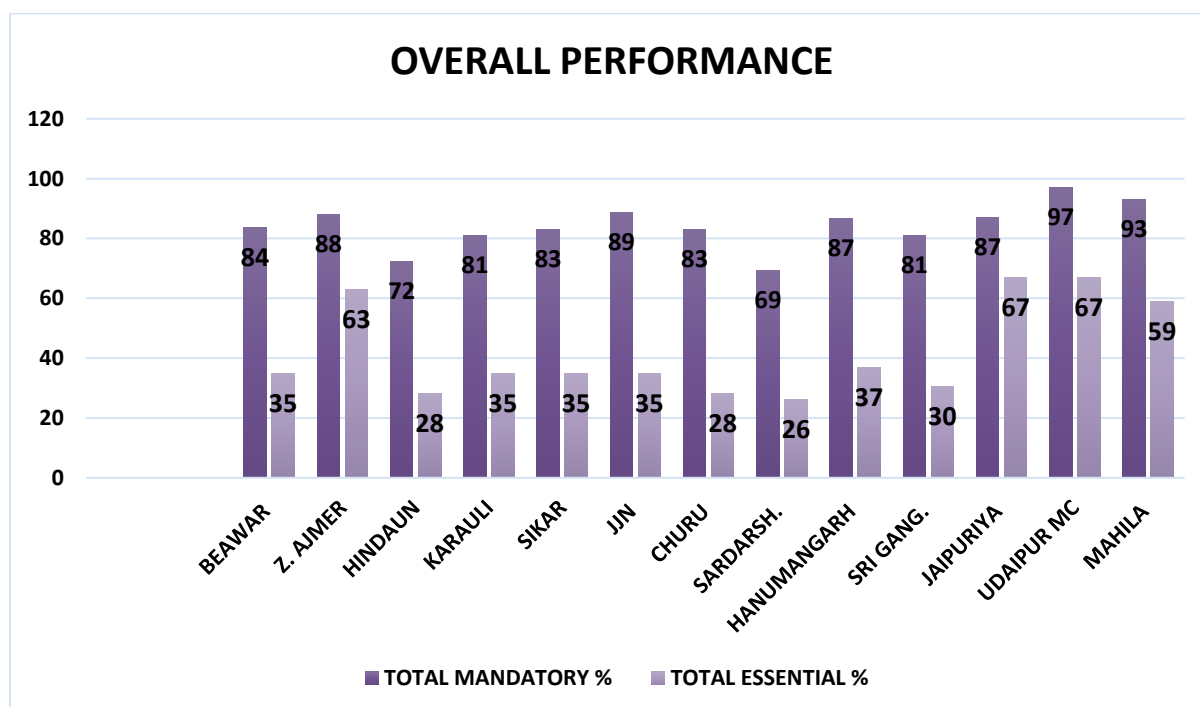
S. NO.	District / Unit Name	Total Admission value/ year	Lama	Referred	Mortality
1	SNCU Karauli	1739	18	233	148
2	SNCU Sri Ganganagar	1243	83	224	80
3	SNCU DH Beawar	1765	14	336	82
4	SNCU Zanana Ajmer	315	6	6	61

5	SNCU Udaipur	6494	149	15	1187
6	SNCU Hindaun City	678	8	201	14
7	SNCU Sikar	1276	40	192	116
8	SNCU Jhunjhunu				
9	SNCU Churu	2011	45	604	55
10	SNCU Sardarshahar	111	2	26	2
11	SNCU Hanumangarh	1632	105	374	159
12	SNCU Jaipuriya	582	32	58	24
13	SNCU Mahila Chikitsalya	1466	87	8	250

Overall Performance:

Overall Status of SNCUs:

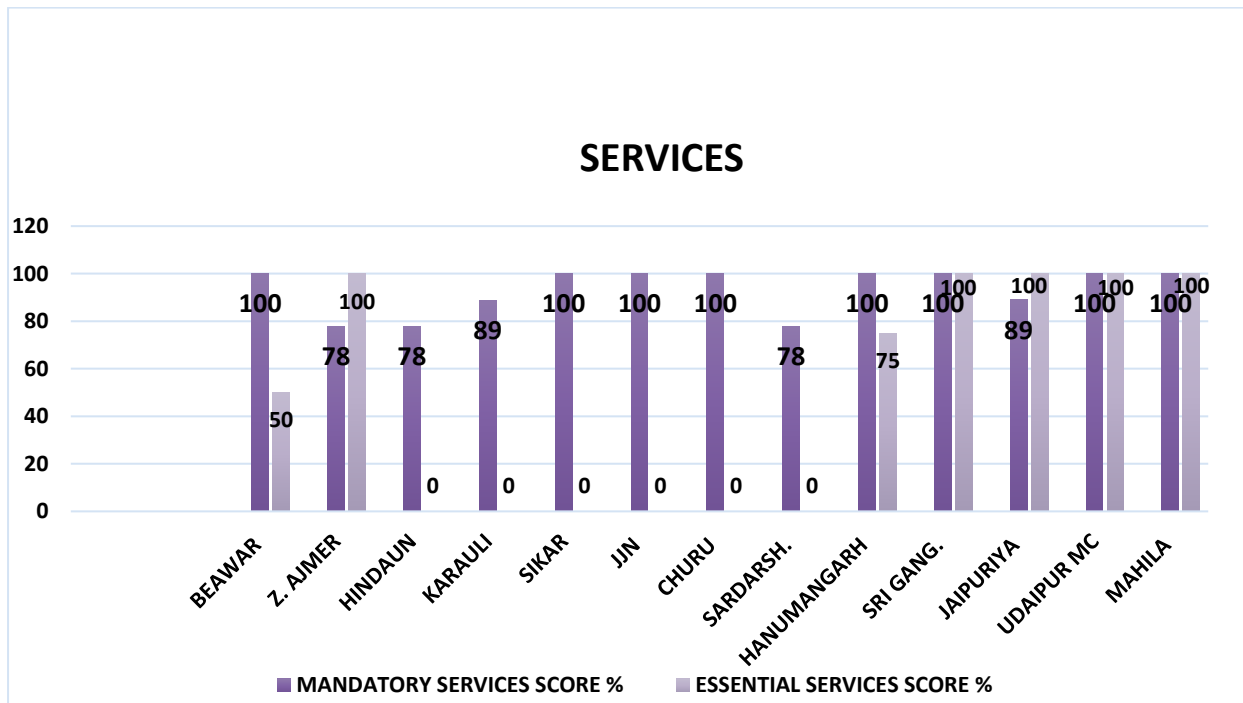
The graph shows that the overall status of SNCU in each district of as per mandatory and essential scoring. In which Udaipur MC scored mandatory 97% Essential 67 % is highest score in selected 13 SNCU and lowest scored Sardarshahar SNCU Mandatory 69 % and Essential 26% respectively. As seen in the graph improvement is required in all the districts regarding the achievement of Mandatory & essential criteria of accreditation.



Services

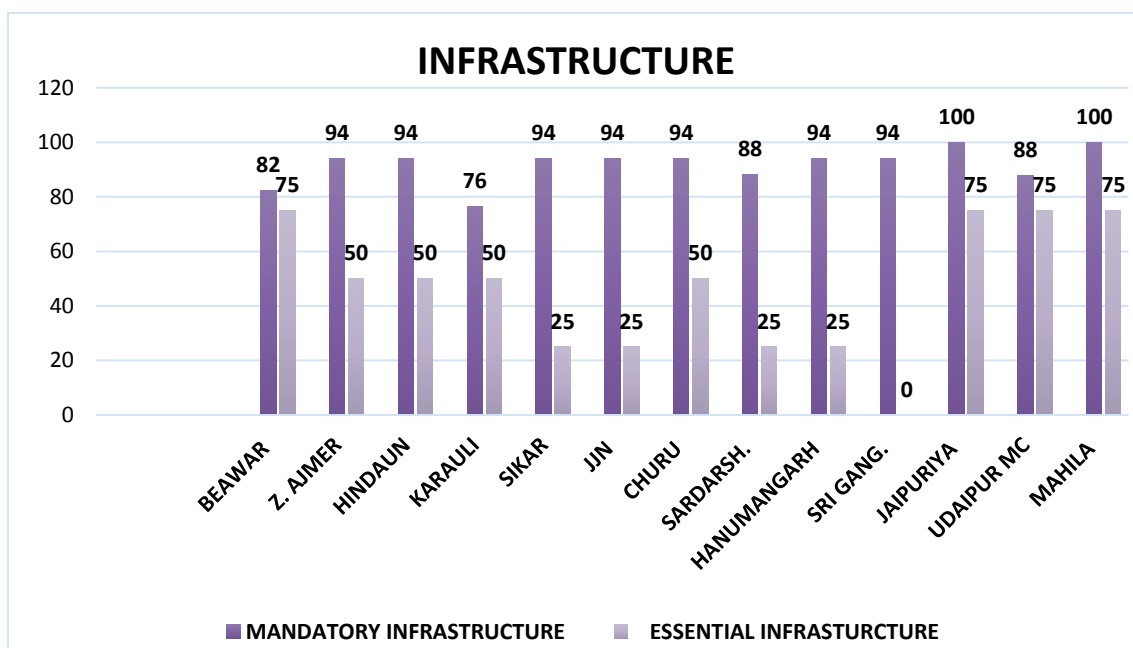
Performance of Services in SNCUs of Rajasthan State, 2018-

The Graph shows that most of SNCU has achieved around 100% mandatory except Sardarshahar and Hindaun City. Essential criteria score was very low in most of the districts. Improvement is needed in essential field in all SNCU and in Sardarshahar and Hindaun city in Mandatory field



Infrastructure:

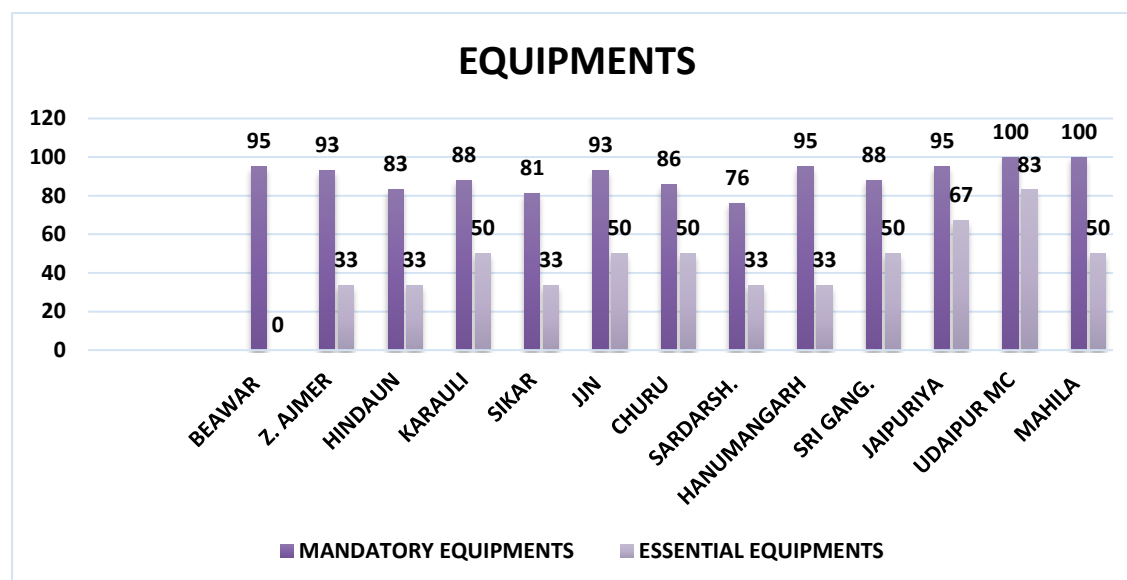
Performance of Infrastructure in SNCUs of Rajasthan State, 2018- Above graph show that only Jaipuriya and Mahila, Jaipur has achieved 100% mandatory criteria. So, improvement is needed in both mandatory and essential fields in all other selected SNCU.



Equipment:

Performance of Equipment in SNCUs of Rajasthan State, 2018-

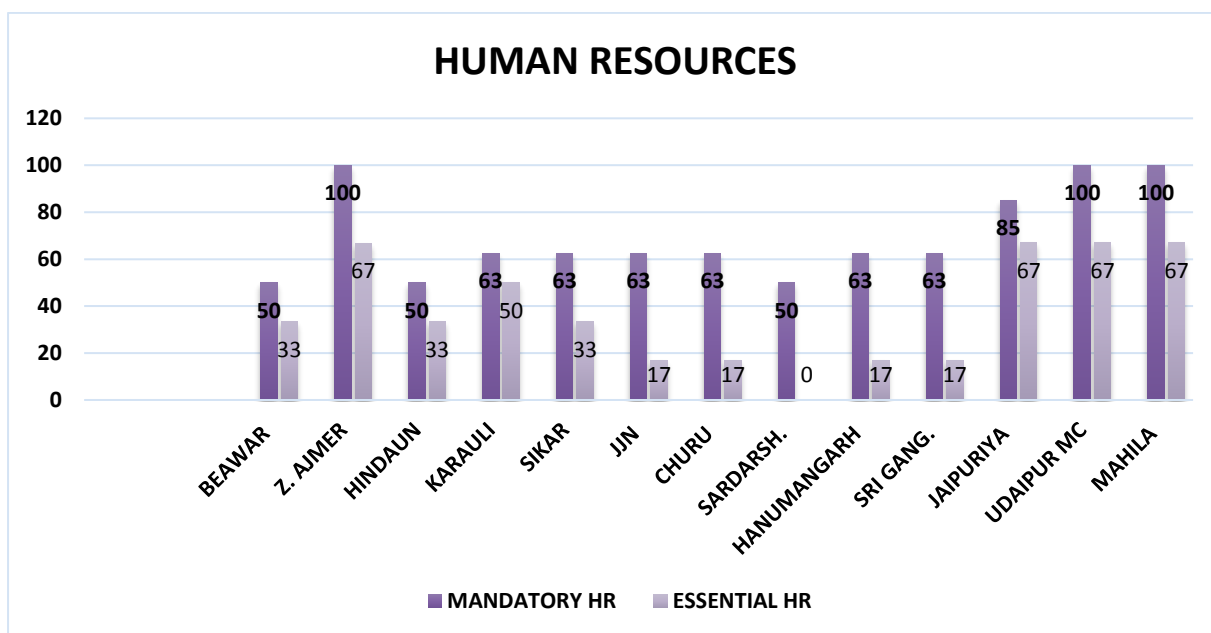
The graph show that only Mahila, Jaipur and Udaipur MC have achieved 100 % mandatory score, so Improvement is needed in all other districts and in essential field, there is a scope of improvement in all 13 selected SNCU.



HUMAN RESOURCES:

Performance of Human Resource in SNCUs of Rajasthan State, 2018-

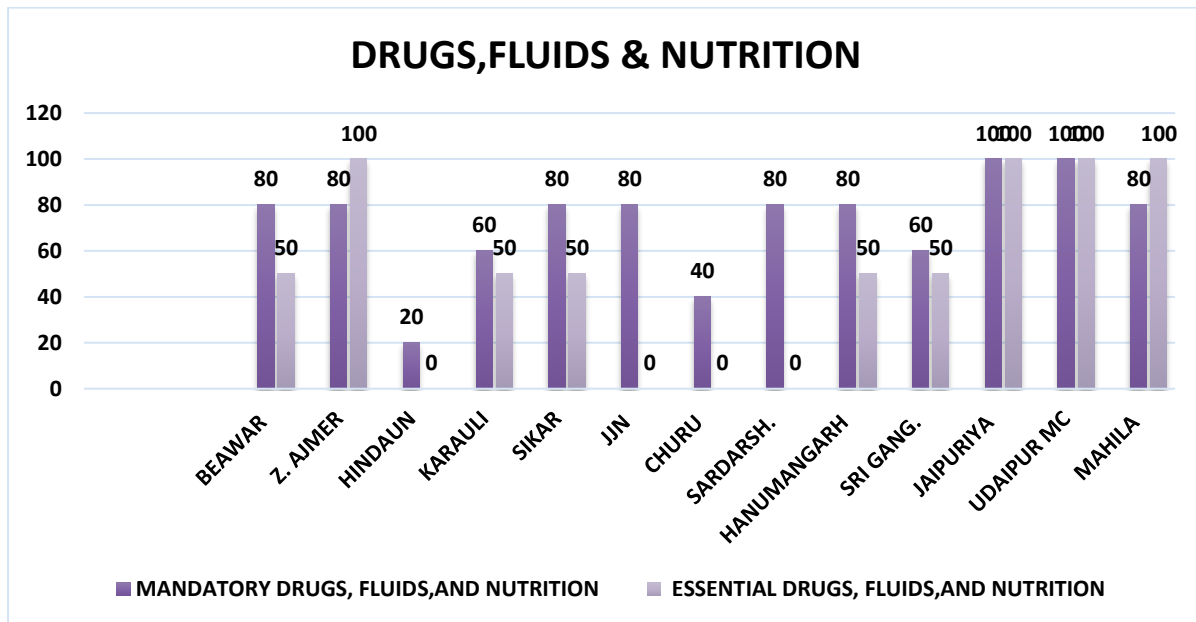
Above graph show that JLN Ajmer, Udaipur MC, Jaipuriya, Mahila Jaipur has achieved 100 % in the mandatory criteria. So great improvement is needed in mandatory fields in Ajmer, Sardarshahar, Beawar, and Hidaun City and for essential field in all 13 selected SNCU.



Drug, Fluid & Nutrition:

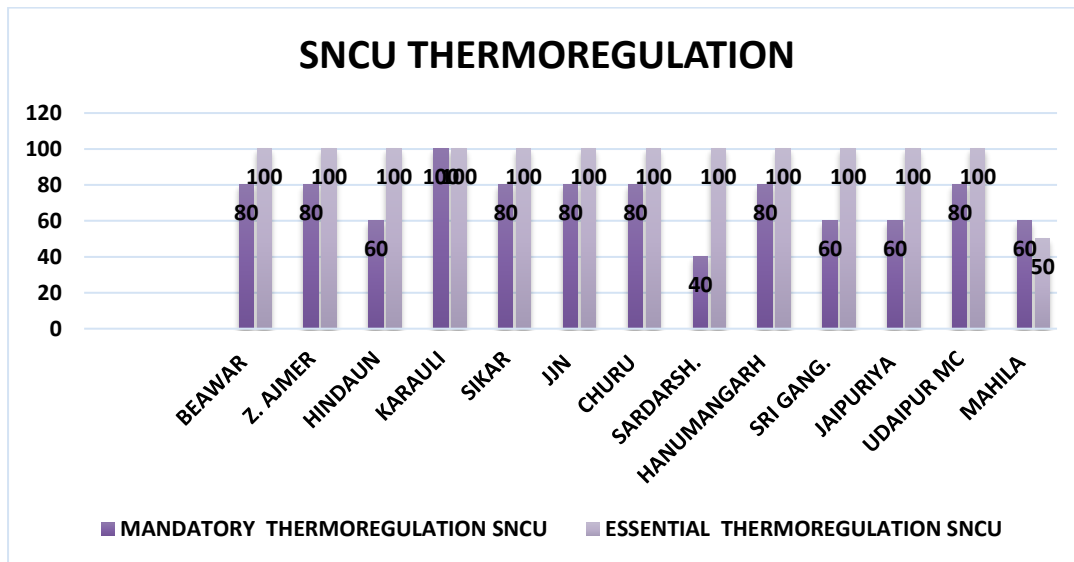
Performance of Drug, Fluid & Nutrition in SNCUs of Rajasthan State, 2018-

The graph show that only Jaipuriya, Mahila, Udaipur MC has achieved 100% score in Mandatory fields and Jaipuriya, Mahila Jaipur, Zanana Ajmer, Udaipur MC has achieved 100% score in Essential fields. So, improvement is needed in both mandatory and essential fields.



THERMOREGULATION:

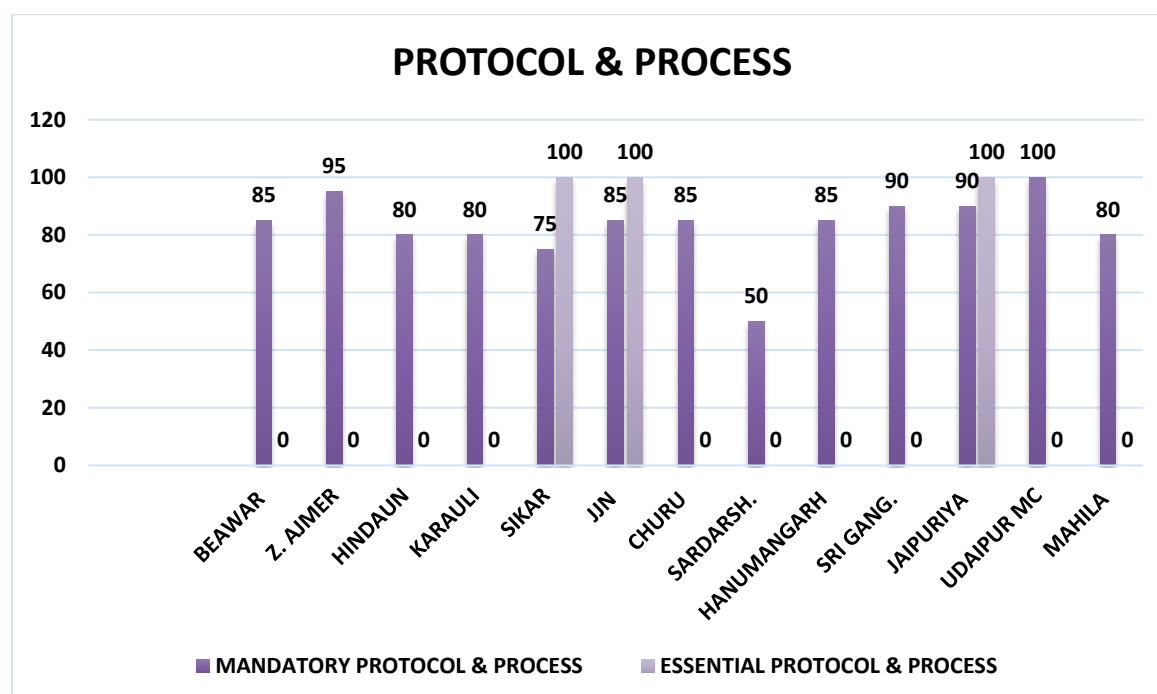
The graph shows that all the SNCUs score full in Mandatory fields and performing well in thermoregulation except Mahila Chikitsalya, Jaipur. Though there is still scope of improvement in Essential fields in SNCUs of Hindaun city, Sardarshahar, Sri Ganganagar, Jaipuriya and Mahila.



PROTOCOL & PROCESS:

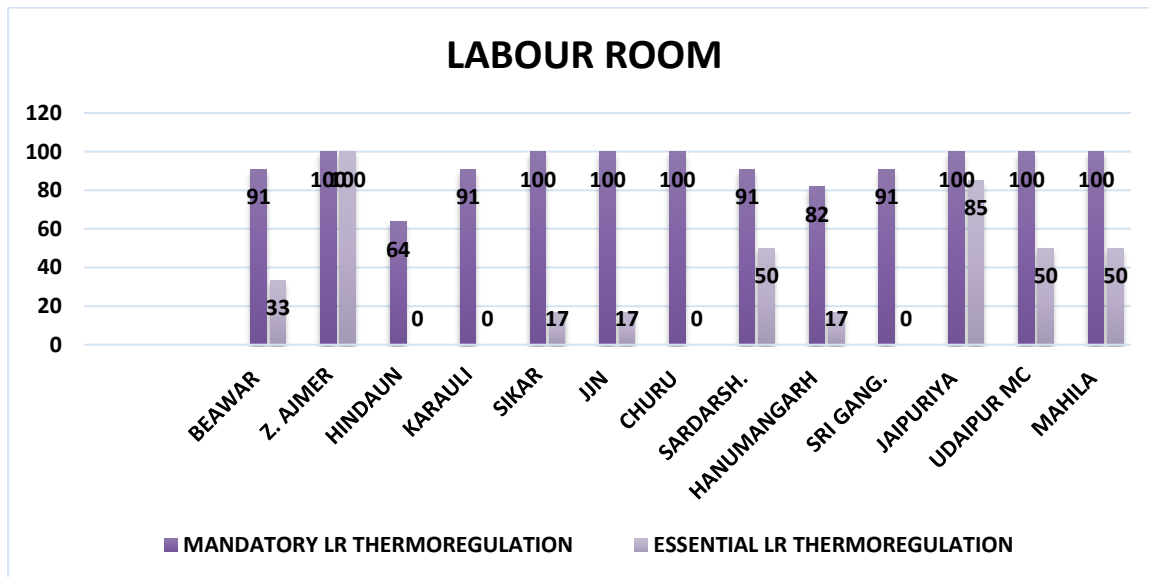
Performance of Protocol in SNCUs of Rajasthan State, 2018-

The graph show that only Jaipuriya, Sikar and Jhunjhunu achieved above 75 % essential criteria. Need of improvement in mandatory field is still there since, only Udaipur MC scores full in Protocol & Process rest below scores lower than required.



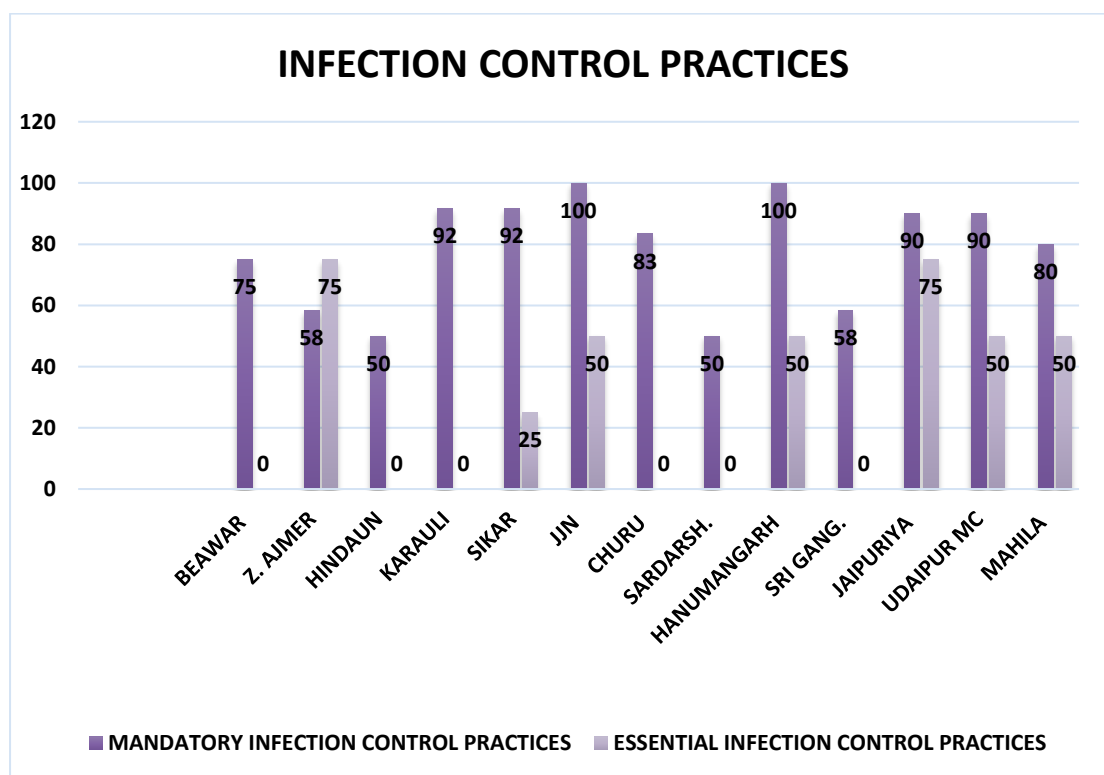
Labor Room:

The graph shows that most the SNCUs are performing well in Mandatory fields. Since they have scored a full 100%. But in Essential fields the Labor rooms are not showing good standards most of them are below 75%. So, there is a big need to work on Labor room.



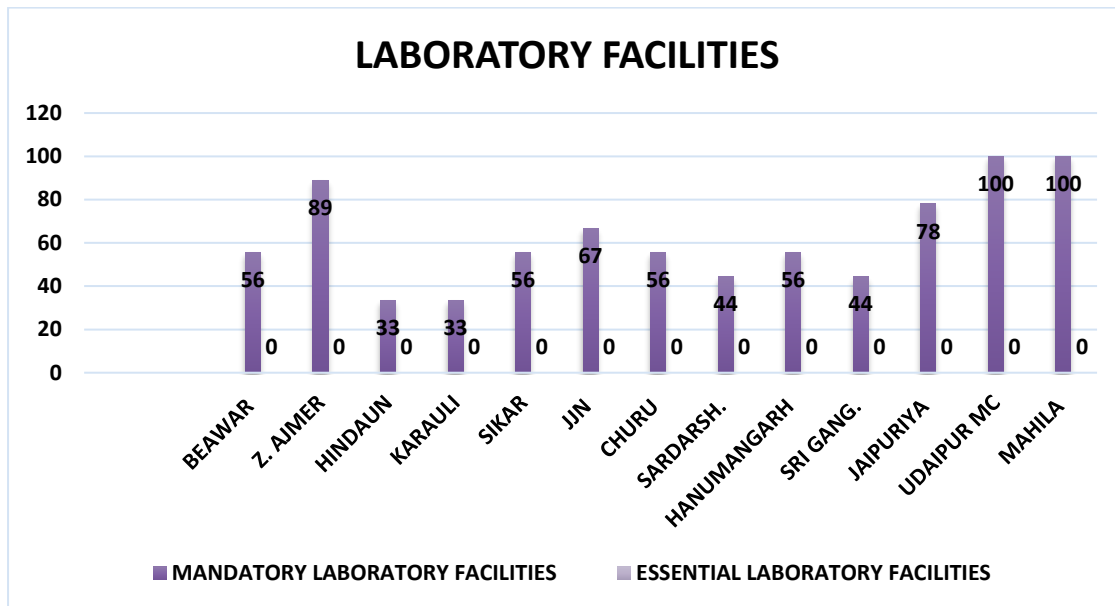
Infection Control Practices:

The SNCUs are not performing well in Infection Control Practices. Only Hanumangarh and Jhunjhunu are able to accomplish full Mandatory criteria, rest all are below and have scope of improvement. In Essential fields too the Infection control practices are not maintained well except in Jaipuriya and Zanana Ajmer.

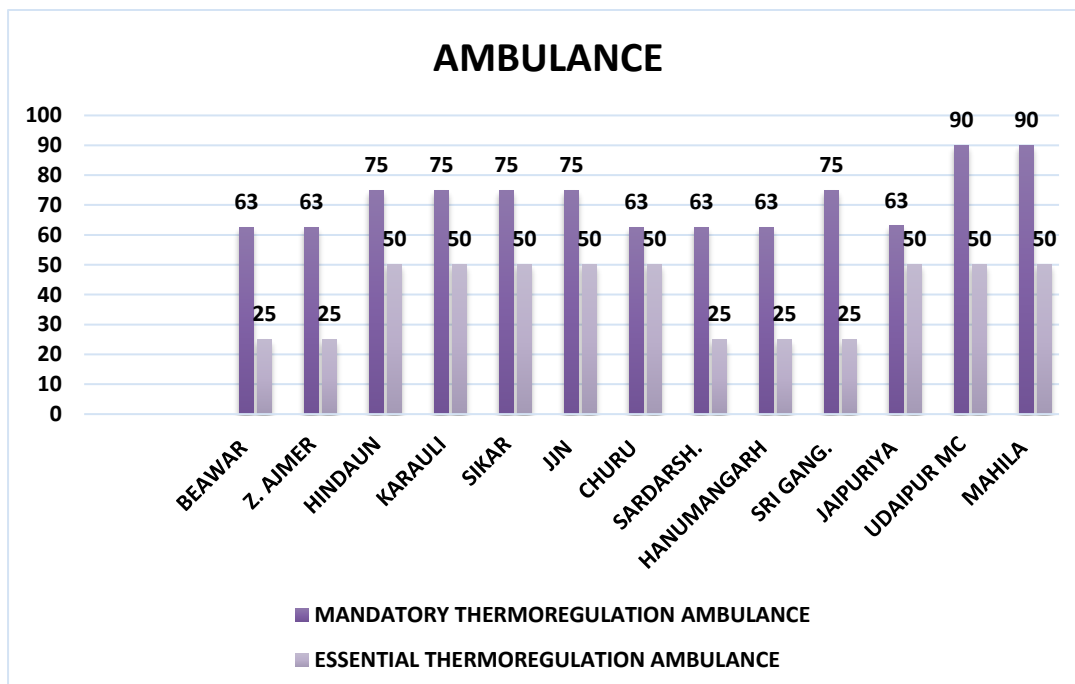


Laboratory Facilities:

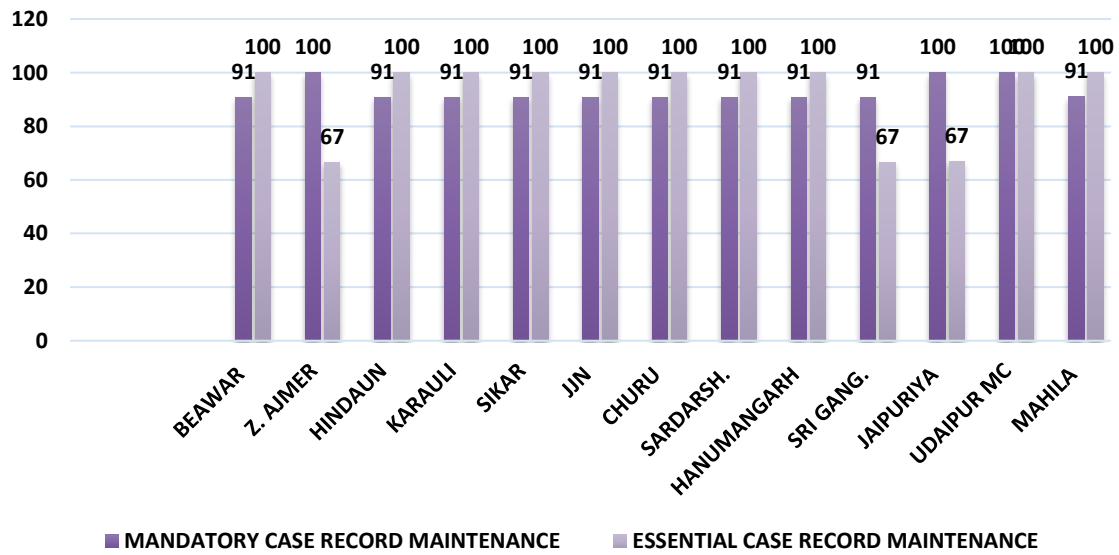
The essential Laboratory facilities in all the SNCUs is very poor. All the SNCUs scored 0%, So It needs a great focus to improve the laboratory facilities in SNCUs. As it is important to have convenient facilities to patients. In mandatory fields too there is a great need of improvement since only Udaipur MC and Mahila, Jaipur fulfils the mandatory criteria.



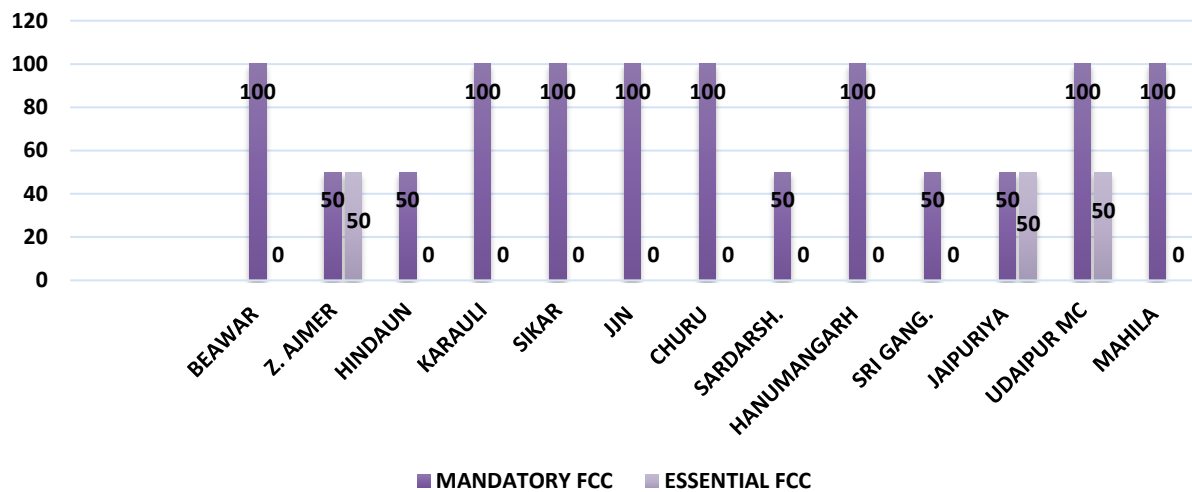
Miscellaneous:



Case Record Maintainance



FCC



Mandatory Fields lacking in most of the SNCU's

- One medical officer (post MBBS) for the unit in each shift not available in SNCU.
- One Stethoscope with each neonatal bed not available in SNCU.
- A log book with daily shift –wise recording of temperature is not maintained in SNCU.
- The neonatal nursing staff or trained doctors in all transports (documentary proof) not available in Ambulance.
- A separate emergency tray for every 4 babies not available in SNCU.
- Surgical instruments (suture/ SET) not available in SNCU.
- Protocol to screen all high-risk babies for ROP (Retinopathy of prematurity).
- Written instruction / guideline for units cleaning, disinfection routines.

CONCLUSION

A modern special newborn care facility created in a district hospital can contribute a role in reducing neonatal morbidity and mortality by setting up their uniform processes and SOP's.

SUGGESTIONS

- There is need of following the FBNC Operational Guidelines for standard protocols, admission, Discharge, follow up, antibiotics, housekeeping, BMW etc. for all newborn care facilities.
- Create awareness among community about all services provided at SNCU without any charges to save lives of newborns.
- As per observed from the field visits, It is suggested that there should be further state level monitoring of E-Upkaran, since it has been found that the maintenance of equipment is not satisfactory by E-Upkaran.
- All medical staff must be FBNC trained as early as possible after joining in SNCU and at least one FBNC trained MO must be available round the clock at the SNCU.
- Mechanism should be developed for screening of ROP/OAE/BERA for high risk newborn.

- It has been observed that there is no option of hand drying after wash. So, There should be autoclaved paper towels or even autoclaved old newspaper cut into square can be used for this
- It is observed that there is no guard available at night shift. So, it is suggested that there should be a guard present at all shifts.
- There must be separate routes for clean and dirty linen going in and out of the unit and housekeeping staff must do vacuum cleaning of the unit regularly

Annexure:

Gaps observed during SNCU Zanana Ajmer visit

S.No.	Gap identified
1	Stethoscopes are not adequate, and same stethoscope being used for babies on different bed.
2	Posters and Protocols not displayed in SNCU.
3	The Hand wash area was not clean, without any soap and display protocol of hand wash instructions
4	No monthly perinatal - neonatal meeting is being organized
5	No post referral analysis and proper data entry of HR - UPDATED AFTER VISIT.
6	No display of higher and lower referral contact details - UPDATED
7	Two babies were present on same cradle
8	No FCC room for mother.

Mandatory fields of lacking-

1.	One Stethoscope with each neonatal bed.
2.	Infantometer , plexi 3 1/2ft/105 cm
3.	Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
6.	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
7.	A log book with daily shift –wise recording of temperature of NICU is maintained
8.	A separate emergency tray for every 4 babies
9.	Provisions for hand washing instructions displayed in the wash area
10.	Is there a written down unit antibiotic policy ?
11.	Are there written instruction / guidelines for method of equipment cleaning and disinfection?
12.	Are there written instruction / guideline for units cleaning , disinfection routines ?
13.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
14.	ABG analysis
15.	Unit should have an adequately stocked library with audio –visual aids
16.	Display of contact details of higher and lower referral linkage of the unit
17.	Transport incubator available with the unit for use during transport of babies

ESSENTIAL FIELDS OF LACKING:

1. FACILITY of dimming of general lighting in the NICU for development care.
2. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
3. 2D ECHO Facility on call.
4. Cold light source for detection of pneumothorax
5. Flux meter
6. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
7. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
8. FACILITY FOR IEM screen including thyroid profile
9. Karyotyping / RFLP Studies
10. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
11. NEONATAL transport ventilator in the ambulance
12. MONTHLY perinatal – neonatal meeting with documented record of such discussions
13. Unit should have a community outreach programme
14. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
15. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)

GAPS OBSERVED DURING SNCU VISIT HINDAUN CITY

S.NO.	GAP IDENTIFIED
1.	No separate laundry in SNCU.
2.	NO separate kitchen facility for SNCU.
3.	No Security Guard in the premises of hospital.
4.	No Hand wash area present in the entire SNCU unit
5.	KMC, Temperature record not being maintained - UPDATED AFTER VISIT.
6.	No FCC room for mothers.
7.	Staff is not trained.
8.	Fumigation is not being done in SNCU
9.	No sepsis screening being done.
10.	There is default in SNCU construction, that is, the exhaust fan of washroom is fixed in wrong direction and directly opens in SNCU.
11.	Stethoscope

Mandatory fields of Lacking :

1. CPAP ventilation (non –invasive)
2. ONE STETHOSCOPE with each neonatal bed
3. One multi- para monitor for every two level 2B bed

4. A portable x- ray machine (in unit /in house) available round the clock
5. Acid blood gas analysis machine within unit or hospital premises
6. USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced
7. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
8. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis
9. One resident doctor (post MBBS) for the unit in each shift
10. There should be one nurse for every level 2B and one third of the staff is trained in FBNC and has undertaken 14-day NNF observer ship training or has work experience of at least 1 month in an NICU
11. At least one cleaner /helper should be present per shift
12. Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
13. Structured process to educate the mother of a normal as well as a LBW baby in the skill of home care with special reference to warmth , feeding, growth, immunization and identification of early signs of illness in the baby
14. Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
15. Protocol to screen all high risk babies for ROP
16. GROWTH chart used for day to day monitoring
17. A separate emergency tray for every 4 babies
18. All fluid administration by infusion pumps
19. Availability of a refrigerator exclusively for storing feeds/vaccines and drugs in baby care area
20. Display of the NRP Algorithm at all the birthing places
21. Availability of essential and emergency resuscitation drugs (e.g adrenaline, normal saline, etc)that is replenished on daily basis
22. Availability of umbilical vein cannulation sets to be used during resuscitation
23. The record sheets of resuscitation as per the NRP guideline /CPG guideline

24. Availability of a dedicated wash area with gown changing area , prior to entry into the NICU
25. Presence of at least one wash basin for every baby care area (room) shower tap (elbow or foot operated)
26. Provisions for hand washing instructions displayed in the wash area
27. Is there availability of alcohol – based hand rub – one between two beds ?
28. Is there a written down unit antibiotic policy ?
29. Disinfection & cleaning practices being followed and documented properly (verify logbook)
30. Serum Urea and Creatinine
31. Serum Electrolytes and Calcium
32. Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)
33. ABG analysis
34. TORCHES Screen
35. Coagulogram
36. Transport incubator available with the unit for use during transport of babies
37. Display of contact details of higher and lower referral linkage of the unit
38. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc
39. Unit should have an adequately stocked library with audio –visual aids

ESSENTIAL FIELDS OF LACKING:

1. SURFACTANT therapy
2. Partial parenteral nutrition

3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)
5. FACILITY of dimming of general lighting in the NICU for development care
6. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
7. Cold light source for detection of pneumothorax
8. 2D ECHO facility on call
9. Invasive BP monitoring for ventilated babies
10. Flux meter
11. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
12. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
13. Nursing staff trained in the developmental supportive care (certification & demonstration for same can be asked by assessor during assessment
14. Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)
15. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
16. PROTOCOL for partial parenteral nutrition defined and followed
17. Use of scientifically designed breast pumps (electronic /manual)
18. AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender
19. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
20. Availability of the T- piece resuscitator for the preterm babies
21. Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries
22. The facility for administration of surfactant (drug and logistics) in birthing place

23. A stand by CPAP machine for initiating DR-CPAP when indicated
24. Bundles for VAP prevention
25. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
26. Infection surveillance and audit of the unit is done on regular basis
27. Periodic bacteriological surveillance done of the unit by infection control committee
28. FACILITY FOR IEM screen including thyroid profile FACILITY FOR IEM screen including thyroid profile
29. Karyotyping / RFLP Studies
30. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
31. NEONATAL transport ventilator in the ambulance
32. THE unit should be undertaking short research in community –based neonatology /neonatology
33. Unit should have a community outreach programme

GAPS OBSERVED IN BEAWAR SNCU

S.NO.	GAP IDENTIFIED	PROBABLE SUGGESTION	LEVEL	RESPONSIBILITY AND TIME
1.	The Room temperature record is not being maintained. - UPDATED AFTER VISIT.			
2.	Laminar air flow is present but not functional.			
3.	The cleaner is not present on all shifts			
4.	Sepsis screening is not			

	being done before prescribing antibiotics.			
5.	OAE/Hearing screening is not being done.			
6.	Written disinfection policy is not there in SNCU.			

Mandatory fields in lacking :

1. One basic mechanical ventilation devices
2. Availability of compressed air facility
3. Surgical instruments (suture/ SET)
4. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
5. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis
6. One resident doctor (post MBBS) for the unit in each shift
7. At least one cleaner /helper should be present per shift
8. ROP Screening (in house)
9. Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
10. Protocol for universal hearing screen of all babies prior to discharge
11. A separate emergency tray for every 4 babies
12. Availability of umbilical vein cannulation sets to be used during resuscitation
13. Is there a written down unit antibiotic policy ?
14.Are there written instruction / guideline for units cleaning , disinfection routines ?
15.Disinfection & cleaning practices being followed and documented properly (verify logbook)
16. Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP,

etc)
17. ABG analysis
18. TORCHES Screen
19. Coagulogram
20. Transport incubator available with the unit for use during transport of babies
21. Display of contact details of higher and lower referral linkage of the unit
22. Outcome records of these referred patients/ follow-up of such patients
23. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Essential fields of lacking :

1. SURFACTANT therapy
2. Facility for carrying out exchange transfusion
3. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
4. STERILE fluid preparation area with laminar flow station
5. T-piece resuscitator in unit
6. Cold light source for detection of pneumothorax
7. 2D ECHO facility on call
8. Invasive BP monitoring for ventilated babies
9. Flux meter
10. An attached ophthalmologist for ROP screening
11. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)

12. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
13. Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)
14. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
15. PROTOCOL for partial parenteral nutrition defined and followed
16. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
17. Availability of the T- piece resuscitator for the preterm babies
18. The facility for administration of surfactant (drug and logistics) in birthing place
19. A stand by CPAP machine for initiating DR-CPAP when indicated
20. Bundles for VAP prevention Bundles for VAP prevention
21. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
22. Infection surveillance and audit of the unit is done on regular basis
23. Periodic bacteriological surveillance done of the unit by infection control committee
24. FACILITY FOR IEM screen including thyroid profile
25. Karyotyping / RFLP Studies
26. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
27. NEONATAL transport ventilator in the ambulance
28. THE unit should be undertaking short research in community –based neonatology /neonatology
29. Unit should have a community outreach programme

Gaps observed in KARAULI

S.No.	GAP IDENTIFIED
1.	There is no facility of autoclave in the SNCU
2.	The CPAP machine is not functional.
3.	The central nursing station doesn't have appropriate light and cooling facility, so the gates of inborn and outborn units were open for cooling and light.
4.	No security guard present in the hospital premises.
5.	The MCH wing doesn't have proper connectivity with the main hospital so there is no convenient blood bank, MRI, screening facility.

Mandatory fields of lacking :

1. CPAP ventilation (non –invasive)
2. One basic mechanical ventilation devices
3. Availability of compressed air facility
4. Blood bank /storage unit with component therapy 24*7 services in the hospital /conveniently outsourced
5. One pulse – oximeter for every two level 2-A beds one pulse – oximeter for every level 2B bed
6. Acid blood gas analysis machine within unit or hospital premises
7. USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced
8. Surgical instruments (suture/ SET)
9. One resident doctor (post MBBS) for the unit in each shift
10. At least one cleaner /helper should be present per shift
11. ROP Screening (in house)
12. Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
13. Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs

equipped & focused
14. Protocol to screen all high risk babies for ROP
15. Protocol for universal hearing screen of all babies prior to discharge
16. A separate emergency tray for every 4 babies
17. Availability of a refrigerator exclusively for storing feeds/vaccines and drugs in baby care area
18. The record sheets of resuscitation as per the NRP guideline /CPG guidelineThe record sheets of resuscitation as per the NRP guideline /CPG guideline
19. Availability of a dedicated wash area with gown changing area , prior to entry into the NICU
20. Serum Urea and Creatinine
21. Serum Electrolytes and Calcium
22. Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)
23. ABG analysis
24. TORCHES Screen
25. Coagulogram
26. Transport incubator available with the unit for use during transport of babies
27. Display of contact details of higher and lower referral linkage of the unit
28. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Essential fields of lacking :

1. SURFACTANT therapy
2. Partial parenteral nutrition

3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)
5. FACILITY of dimming of general lighting in the NICU for development care
6. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
7. Cold light source for detection of pneumothorax
8. 2D ECHO facility on call
9. Invasive BP monitoring for ventilated babies
10. An attached ophthalmologist for ROP screening
11. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
12. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
13. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
14. PROTOCOL for partial parenteral nutrition defined and followed
15. AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender
16. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
17. Availability of the T- piece resuscitator for the preterm babies
18. Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries
19. The facility for administration of surfactant (drug and logistics) in birthing place
20. A stand by CPAP machine for initiating DR-CPAP when indicated
21. Bundles for VAP prevention
22. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
23. Infection surveillance and audit of the unit is done on regular basis

24. Periodic bacteriological surveillance done of the unit by infection control committee
25.FACILITY FOR IEM screen including thyroid profile
26. Karyotyping / RFLP Studies
27. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
28. NEONATAL transport ventilator in the ambulance
29. THE unit should be undertaking short research in community –based neonatology /neonatology
30. Unit should have a community outreach programme

Gaps observed in Sikar

GAPS OBSERVED
The MCH wing is different from main hospital so there is no convenient blood bank, MRI, screening facility.
No laundry, kitchen facility in SNCU
No lactation counsellor.
No sepsis screening done before prescribing antibiotics

Mandatory fields of lacking

1. USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced
2. Surgical instruments (suture/ SET)

3. Sphygmomanometer, neonate electronic
4. Light for examination , (mobile) 220w-12 v
5. Washing machine with dryer with AMC for maintenance
6. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
7. Refrigerator
8. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis
9. One resident doctor (post MBBS) for the unit in each shift
10. ROP Screening (in house)
11. Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
12. Admission and discharge policy defined and displayed
13. Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
14. Protocol to screen all high risk babies for ROP
15. A separate emergency tray for every 4 babies
16. Are there written instruction / guidelines for method of equipment cleaning and disinfection
17. Plasma Glucose
18. ABG analysis
19. TORCHES Screen
20. Coagulogram
21. Transport incubator available with the unit for use during transport of babies
22. Display of contact details of higher and lower referral linkage of the unit
23. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Essential fields lacking -

1. SURFACTANT therapy
2. Partial parenteral nutrition
3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)
5. FACILITY of dimming of general lighting in the NICU for development care
6. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
7. There should be provision for contingency space/ room for shifting the unit in case of temporary closure of the unit due to epidemics
8. T-piece resuscitator in unit
9. Cold light source for detection of pneumothorax
10. 2D ECHO facility on call
11. Invasive BP monitoring for ventilated babies
12. An attached ophthalmologist for ROP screening
13. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
14. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
15. Use of scientifically designed breast pumps (electronic /manual)
16. AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender
17. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
18. Availability of the T- piece resuscitator for the preterm babies
19. Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries

20. A stand by CPAP machine for initiating DR-CPAP when indicated
21. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
22.FACILITY FOR IEM screen including thyroid profile
23. Karyotyping / RFLP Studies
24. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
25. NEONATAL transport ventilator in the ambulance
26. THE unit should be undertaking short research in community –based neonatology /neonatology
27. Unit should have a community outreach programme

Gaps observed during SNCU visit of JHUNJHUNU:

S.NO.	GAP OBSERVED	PROBABLE SUGGESTION	LEVEL	RESPONSIBILITY AND TIME
1.	Stethoscopes are not adequate			
2.	Security guard not present at night shift.			
3.	No lactation counsellor.			
4.	No ROP/ Hearing screening			

Mandatory fields lacking:

1. ONE STETHOSCOPE with each neonatal bed
2. Surgical instruments (suture/ SET)
3. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
4. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis
5. One resident doctor (post MBBS) for the unit in each shift
6. ROP Screening (in house)
7. Protocol to screen all high risk babies for ROP
8. Protocol for universal hearing screen of all babies prior to discharge
9. A log book with daily shift –wise recording of temperature of NICU is maintained
10. A separate emergency tray for every 4 babies
11. ABG analysis
12. TORCHES Screen
13. Coagulogram
14. Transport incubator available with the unit for use during transport of babies
15. Display of contact details of higher and lower referral linkage of the unit
16. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Essential fields Lacking:

1. SURFACTANT therapy
2. Partial parenteral nutrition
3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)

5. FACILITY of dimming of general lighting in the NICU for development care
6. Sound absorbent walls and ceiling of the NICU. background noise should not be more than 45 db and peak intensity should not be more than 80db
7. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
8. T-piece resuscitator in unit
9. Cold light source for detection of pneumothorax
10. Invasive BP monitoring for ventilated babies
11. An attached ophthalmologist for ROP screening
12. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
13. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
14. Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)
15. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
16. PROTOCOL for partial parenteral nutrition defined and followed
17. Use of scientifically designed breast pumps (electronic /manual)
18. AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender
19. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
20. Availability of the T- piece resuscitator for the preterm babies
21. The facility for administration of surfactant (drug and logistics) in birthing place
22. A stand by CPAP machine for initiating DR-CPAP when indicated
23. Bundles for VAP prevention
24. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)

25. FACILITY FOR IEM screen including thyroid profile
26. Karyotyping / RFLP Studies
27. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
28. NEONATAL transport ventilator in the ambulance
29. THE unit should be undertaking short research in community –based neonatology /neonatology
30. Unit should have a community outreach programme

Gaps observed in SNCU visit of Churu:

S.NO.	GAPS OBSERVED	PROBABLE SUGGESTION	LEVEL	RESPONSIBILITY AND TIME
1.	Different stethoscopes on each bed is not being used.			
2.	No ROP/hearing screening is being done.			
3.	Security personnel not present on each shift			
4.	Disinfection protocol not being displayed			

MANDATORY FIELDS OF LACKING:

1. ONE STETHOSCOPE with each neonatal bed
2. Surgical instruments (suture/ SET)
3. Sphygmomanometer, neonate electronic
4. Washing machine with dryer with AMC for maintenance
5. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
6. Spot lamps
7. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis
8. One nursing In charge – who should have at least 1 year experience of working in a neonatal unit on a non rotational basis
9. ROP Screening (in house)
10. Protocol to screen all high risk babies for ROP
11. Protocol for universal hearing screen of all babies prior to discharge
12. A log book with daily shift –wise recording of temperature of NICU is maintained
13. Disinfection & cleaning practices being followed and documented properly (verify logbook)
14. Plasma Glucose
15. ABG analysis
16. TORCHES Screen
17. Coagulogram
18. Transport incubator available with the unit for use during transport of babies
19. Display of contact details of higher and lower referral linkage of the unit
20. Outcome records of these referred patients/ follow-up of such patients
21. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Essential fields lacking:

1. SURFACTANT therapy
2. Partial parenteral nutrition
3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)
5. FACILITY of dimming of general lighting in the NICU for development care
6. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
7. T-piece resuscitator in unit
8. Cold light source for detection of pneumothorax
9. 2D ECHO facility on call
10. An attached ophthalmologist for ROP screening
11. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
12. Lactation counselor (in 9 am – 4 pm shift) for difficult case (who can be shared with maternal unit, if present with in the hospital)
13. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
14. Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)
15. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
16. PROTOCOL for partial parenteral nutrition defined and followed
17. Use of scientifically designed breast pumps (electronic /manual)
18. AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender
19. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
20. Availability of the T- piece resuscitator for the preterm babies

21. Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries
22. The facility for administration of surfactant (drug and logistics) in birthing place
23. A stand by CPAP machine for initiating DR-CPAP when indicated
24. Bundles for VAP prevention
25. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
26. Infection surveillance and audit of the unit is done on regular basis
27. Periodic bacteriological surveillance done of the unit by infection control committee
28. Karyotyping / RFLP Studies
29. FACILITY FOR IEM screen including thyroid profile
30. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU
31. NEONATAL transport ventilator in the ambulance
32. THE unit should be undertaking short research in community –based neonatology /neonatology
33. Unit should have a community outreach programme

Gaps observed in SNCU visit of Sardarshahar:

S.NO.	GAPS OBSERVED	PROBABLE SUGGESTION	LEVEL	RESPONSIBILITY AND TIME
1.	The HR is not sufficient. The Qualification of Nurse is 'GNM' instead of 'ANM'			
2.	The door of SNCU unit were open, and there was			

	only single door instead of three.			
3.	There were no posters and protocols displayed in the SNCU unit.			
4.	Same stethoscope is being used on all beds.			
5.	No Lactation counselor			
6.	The staff is being interchanged between Labour room and SNCU.			

Mandatory fields lacking:

1. CPAP ventilation (non –invasive)
2. Availability of compressed air facility
3. ONE STETHOSCOPE with each neonatal bed
4. A portable x- ray machine (in unit /in house) available round the clock
5. USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced
6. Surgical instruments (suture/ SET)
7. Basin, kidney, stainless steel , 825 ml
8. Tray, dressing, 300*200*30mm
9. Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor
10. Spot lamps
11. Wall clock with second hand
12. One resident doctor (post MBBS) for the unit in each shift
13. One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis

14. There should be one nurse for every level 2B and one third of the staff is trained in FBNC and has undertaken 14-day NNF observer ship training or has work experience of at least 1 month in an NICU
15. ROP Screening (in house)
16. Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
17. Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
18. Admission and discharge policy defined and displayed
19. Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
20. Protocol to screen all high risk babies for ROP
21. Availability of written protocols manual for FBNC in the unit
22. Written instruction for trouble shooting of individual equipment
23. Adequate number of functional room thermometers (at least one for each baby care room)
24. A log book for KMC to be maintained in unit (with documentation of mothers & baby details)
25. A log book with daily shift –wise recording of temperature of NICU is maintained
26. A separate emergency tray for every 4 babies
27. Display of the NRP Algorithm at all the birthing places
28. Availability of a dedicated wash area with gown changing area , prior to entry into the NICU
29. Provisions for hand washing instructions displayed in the wash area
30. Is there a written down unit antibiotic policy ?
31. Are there written instruction / guidelines for method of equipment cleaning and disinfection
32. Are there written instruction / guideline for units cleaning , disinfection routines ?
33. Disinfection & cleaning practices being followed and documented properly (verify

logbook)
34. Plasma Glucose
35. Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)
36. ABG analysis
37. TORCHES Screen
38. Coagulogram
39. Transport incubator available with the unit for use during transport of babies
40. Display of contact details of higher and lower referral linkage of the unit
41. Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc
42. Unit should have an adequately stocked library with audio –visual aids

Essential field lacking:

1. SURFACTANT therapy
2. Partial parenteral nutrition
3. Facility for carrying out exchange transfusion
4. Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)
5. FACILITY of dimming of general lighting in the NICU for development care
6. Has there been a power audit of the unit to ascertain if electrical load of the unit was calculated and accordingly electrical wiring and installations done
7. There should be provision for contingency space/ room for shifting the unit in case of temporary closure of the unit due to epidemics
8. STERILE fluid preparation area with laminar flow station
9. T-piece resuscitator in unit

10. Cold light source for detection of pneumothorax
11. 2D ECHO facility on call
12. An attached ophthalmologist for ROP screening
13. ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)
14. Lactation counselor (in 9 am – 4 pm shift) for difficult case (who can be shared with maternal unit, if present with in the hospital)
15. Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)
16. Nursing staff trained in the developmental supportive care (certification & demonstration for same can be asked by assessor during assessment
17. Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)
18. Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES
19. PROTOCOL for partial parenteral nutrition defined and followed
20. Use of scientifically designed breast pumps (electronic /manual)
21. Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)
22. Availability of the T- piece resuscitator for the preterm babies
23. A stand by CPAP machine for initiating DR-CPAP when indicated
24. Bundles for VAP prevention
25. Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)
26. Infection surveillance and audit of the unit is done on regular basis
27. Periodic bacteriological surveillance done of the unit by infection control committee
28. FACILITY FOR IEM screen including thyroid profile
29. Karyotyping / RFLP Studies
30. A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with

an intensive bed akin to one in the NICU
31. NEONATAL transport ventilator in the ambulance
32. THE unit should be undertaking short research in community –based neonatology /neonatology
33. Unit should have a community outreach programme

GAPS OBSERVED IN OBSERVED VISIT OF HANUMANGARH

S.NO.	GAPS OBSERVED
1.	No Laundry and Kitchen services in SNCU unit.
2.	No Lactation Counsellor
3.	No ROP/Hearing screening is being done
4.	No sepsis screening done before prescribing antibiotics.
5.	A logbook of temperature is not being maintained.

References

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