Summer Training at
National Health Mission, Rajasthan

Assessment of Special Newborn Care Units Using on NNFI Accreditation Tool

By
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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Dr. Shweta Jha** has undergone summer training in **National Health Mission, Rajasthan** from **2nd April 2018 to 2nd June 2018.**

The candidate herself completed the project assigned to her 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.

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No. F 2 (153) NHM/SPM/2017/ 401 Dated: - 04/06/18

CERTIFICATE

This is to certify that **Dr. Shweta Jha**, student of MBA Institute of Health Management Research (IIHMR, Jaipur) has successfully completed her Summer Training Program at NHM, Rajasthan from **2nd 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

ACKNOWLEDGMENT

The project was a success due to the help and support of many peoples. I would like to acknowledge the help of all people who contributed towards the completion of my project.

First, I would like to thank Secretary Govt. of Rajasthan cum MD NHM Shri Naveen Jain for providing me the opportunity to work in public health system.

I also like to thank Dr. Jalaj Vijay State Programme Manager, Dr. Rommel Singh (Project director, Child Health), Dr. Kapil Joshi consultant (UNICEF) for guiding me to proceed with the project.

Without the guidance and blessing of Dr. S.D Gupta, Director Indian Institute of Health Management & Research University, Jaipur would not have been possible for me. My special thanks to col. Dr. Ashok Kaushik, Dean Academics, and students Affairs, IIHMR University, Jaipur for being a continuous guiding source throughout the degree, I would also like to thank Dr. Sameer Phadnis Sir, IIHMR University, my mentor for providing me a support in making my project a success.

I would like to express gratitude and appreciation for all the people mentioned above to help me complete my study and make my project successful.

TABLE OF CONTENT

ACRONYMS

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

OBSERVATIONAL LEARNING

organization profile

The National Health Mission Seeks to give viable medicinal services to all populace all through the nation. It plans to attempt engineering adjustment of the wellbeing framework to empower to adequately deal with an expanded portion as guaranteed under the National Common Minimum Program. It has as its key segments arrangement of a female wellbeing lobbyist in every town, a town wellbeing design arranged through a nearby group headed by the Health and Sanitation Committee of the Panchayat. According to command under NHM, the State Health Society has been reconstituted under the Chairmanship of Chief Secretary, Rajasthan receiving Multi-office approach and inclusion of all partners.

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 a 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.

Data collection technique –At first facility based newborn care operational guideline was reviewed but some criteria did not fulfill according to the study objective, hence national neonatology forum accreditation tool was taken for data collection under the guidance of PDCH. 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 were analyzed using MS Excel.

Sncu profile table-

S. No	District / Unit Name	Total Admission value/ year	Lama	Referred	Mortality
1	SNCU DH Alwar	3606	284	519	356
2	SNCU MC Ajmer	2487	304	154	597
3	SNCU DH Beawar	1765	14	336	82
4	SNCU Zanana Ajmer	315	6	6	61
5	SNCU DH Dausa	858	6	166	21
6	SNCU Hidaun City	678	8	201	14
7	SNCU DH Sawai Madhopur	1837	62	162	168
8	SNCU DH Tonk	2494	155	373	107
9	SNCU MC Udaipur	6494	149	15	1187
10	SNCU DH Kishangarh	457	4	97	6
11	SNCU DH Bharatpur	3204	157	866	143
12	SNCU Jaipuriya	582	32	58	24
13	SNCU Mahila Chikitshalya	1466	87	8	250

General mandatory fields of lacking-

- One Stethoscope with each neonatal bed not available in SNCU.
- Clean and dirty utility area not designated.
- A log book with daily shift –wise recording of temperature is not maintained in SNCU.
- One resident doctor (post MBBS) for the unit in each shift not available 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.
- Breastfeeding policy is not available at SNCU.
- Surgical instruments (suture/ SET) not available in SNCU.
- Protocol to screen all high-risk babies for ROP

- Written instruction/guideline for units cleaning, disinfection routines.

PROJECT REPORT

Introduction

In India, nearly 26 Million infants are born each year and 940,000 children die before reaching one month of life, India conveys the single biggest offer around 25-30 % of Neonatal deaths in the world. The neonatal period is just 28 days; yet, Neonatal Mortality Rate (NMR) adds to around 66% of Infant Mortality Rate (IMR) and about a portion of under-5 Mortality Rate (U5MR).

There is a developing acknowledgment that to meet national objectives and the Millennium Development Goals (MDGs) to cut down childhood mortality, a significant lessening in Neonatal mortality rate is required, and decreasing deaths in the first seven day stretch of life is basic to gain ground. The Government of India is resolved to enhance the accessibility of affordable newborn care services in addition to putting efforts in providing quality health care for women, infants, and young children under the National Health Mission (NHM) and its Reproductive and Child Health Program.

The key strides toward this path is the foundation of Facility Based New Born Care (FBNC) administrations at various levels of healthcare facilities. FBNC has a huge potential for enhancing infant survival and decrease neonatal mortality by as much as 25-30 %.

Neonatal care at different levels under FBNC Program

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

Level 1 includes referral of sick newborns from Primary Health Center's (PHCs) to higher facility and providing 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 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 an 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**
• Infection control • Maintenance of body temperature • Stabilization • Early initiation of Breastfeeding by mother • 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

*(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 clear 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' workstation, clean regions for blending intravenous liquids and solutions, specialist's duty room, a computer station, mother's zone for expression of breast milk and learning mother crafts, unit store, and side lab. It is desirable to have a 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 on 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:

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

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:
  The training programme includes 4 days skill-based training on essential and special care. Besides skills in clinical management, additional training is provided on housekeeping and maintenance of the equipment.

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

Equipments required for SNCU

- Radiant warmers

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

Rationale of Study

- There is an expanding need to focus around newborn care and survival for a significant reduction in IMR and U5MR and reinforce the care of sick, premature, and low birth weight babies at the different levels of facilities ideal from the minute to birth through the neonatal period. Consequently, the need has risen to assess the general working of SNCUs in terms of geographical and ecological factors, treatment outcome, socio-demographic and clinical factors, and functionality, availability, and adequacy of the facilities at SNCU.

- As recognizing the gaps, it helps in the basic leadership process and the corrective actions can be made promptly.

- This examination can be held in the various areas of Rajasthan by Child Health Department, If State, through this tool, accomplishes a score of Mandatory >80 of every parameter in every one of its facilities, Rajasthan can accomplish the best Indian standards in Neonatal Care

- SNCUs are relied upon to assume a key part in saving newborn lives. Colossal investment is required, so it becomes essential to screen their working and affectivity.

- New RCH activities, for example, JSY, JSSK are making progress and thus SNCU organize should be all around reinforced.

- The Government of India (GOI) is resolved to enhance the accessibility of quality newborn care services in addition to renewing efforts in providing quality health care for women, infants, and young children under the National Rural Health Mission (NRHM) and its Reproductive and Child Health Programs (RCH II).

Review of Literature

Operational guide on FBNC has been developed to facilitate planning, establishment, operationalization, and monitoring of newborn care facilities at various levels of public health facilities. The guidelines have been put together based on recommendations of an expert group that was set up by the GoI and included experts from medical colleges, professional bodies-National Neonatology Forum (NNF)and Indian Academy of Pediatrics (IAP), and from UNICEF, WHO, USAID and NIPI.

1. The study was conducted to assess the functioning of SCNUs in eight rural districts of India. The evaluation was based on an analysis of secondary data from the eight units that had been functioning for at least one year. The rate of mortality among admitted neonates was taken as the key outcome variable to assess the performance of the units. Correlation coefficients were estimated to understand the possible association of case-fatality rate with factors, such as bed: doctor ratio, bed: nurse ratio, an average duration of stay, and bed occupancy rate, and the asepsis score was determined. The rates of admission increased from a median of 16.7 per 100 deliveries in 2008 to 19.5 per 100 deliveries in 2009. The case-fatality rate reduced from 4% to 40% within one year of their functioning. Proportional mortality due to sepsis and low birth weight (LBW) declined significantly over two years (LBW <2.5 kg). The major reasons for admission and the major causes of deaths were birth asphyxia, sepsis, and LBW/prematurity.

2. Evidence-based, cost-effective interventions: how many newborn babies can we save?
   Gary L Darmstadt, Zulfiqar A Bhutta, Simon Cousens, Taghreed Adam, Neff Walker, Luc de Bernis, for the Lancet Neonatal Survival Steering Team.

In this article of the neonatal survival series, we identify 16 interventions with proven efficacy (implementation under ideal conditions) for neonatal survival and combine them into packages for scaling up in health systems, according to three service delivery modes (outreach, family-community, and facility-based clinical care). Universal (99%) coverage of these interventions could avert an estimated 41–72% of neonatal deaths worldwide.

3. A study of neonatal admission into a newborn special care unit. Nigeria Journal of pediatric 1994:21:20: A retrospective study of newborn babies admitted over a period of six-year into the Newborn special care unit (NBSCU). The number of babies admitted was 5376 babies of LBW comprised 25.7 percent of total admission. There was a progressive annual increase in the admission of out born babies from 0.7 percent in 1982 to 21.4 in 1987. There similar annual increase in admission of babies of LBW from 17.3 to 51.8 percent. The overall mortality was high at 10.5 percent of the cases.

Objective:

"To assess the status of Special Newborn Care Units (SNCU) in Rajasthan state according to NNFI accreditation 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 2nd to June 1st, 2018

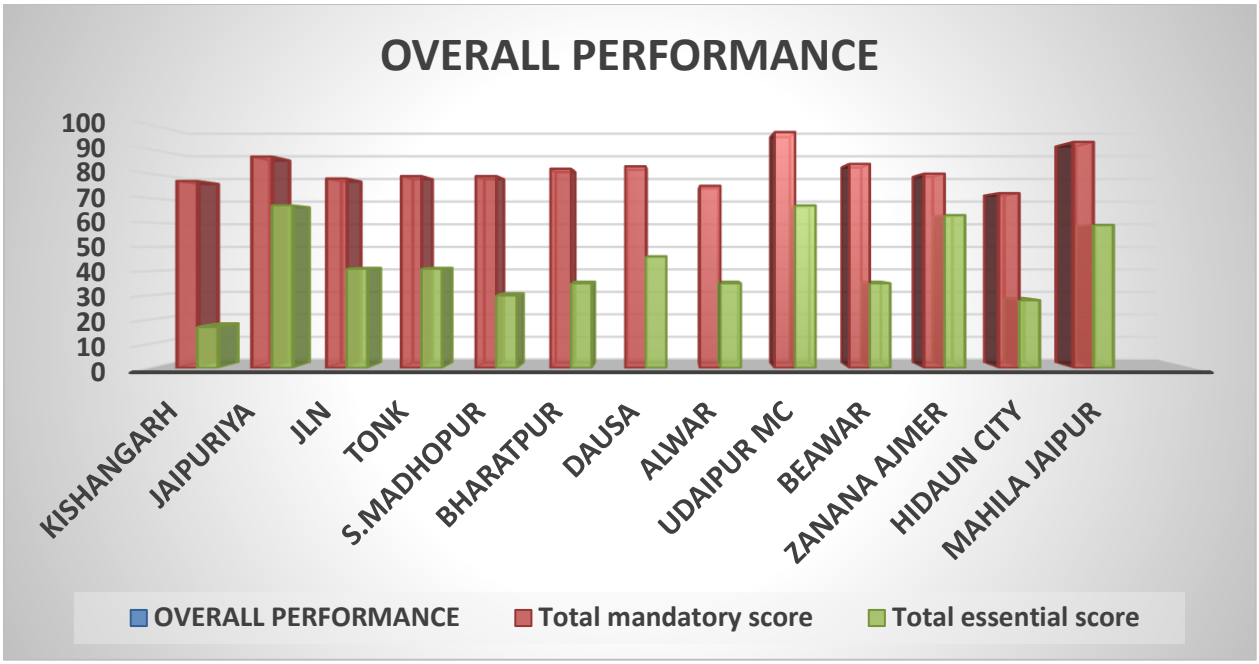
Study population- Special newborn care units

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

Sample Size – 1/3rd Sampling as per convenience: 13 SNCUs

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

Data Collection Technique – at first facility based newborn care operational guideline was reviewed but some criteria did not fulfill according to the study objective, hence national neonatology forum accreditation tool was taken for data collection under the guidance of PDCH. 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 were analyzed using MS Excel.

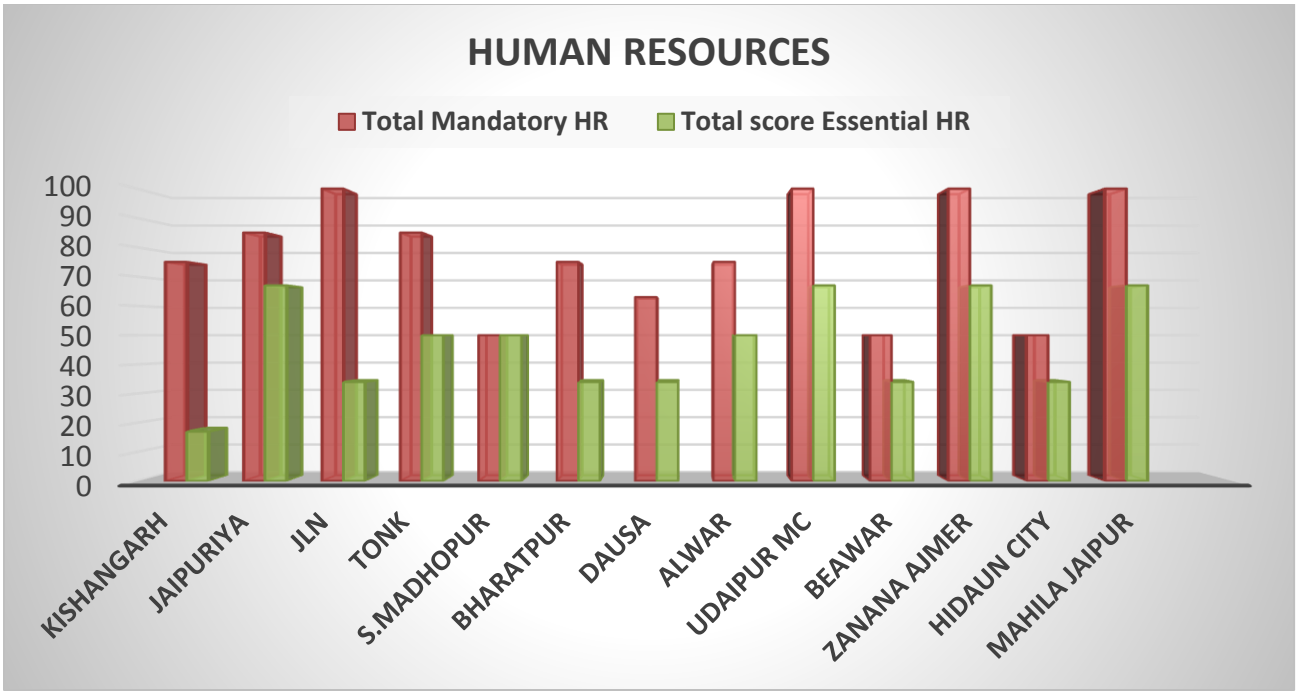


Overall Status of SNCUs:

Above graph show 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 the highest score in selected 13 SNCU and lowest scored Hidaun City Mandatory 72 % and Essential 28% respectively. The Scope of improvement is there in all the districts with Ajmer, Bharatpur, Mahila Jaipur, Alwar, Sawai Madhopur, Tonk, Jaipuriya Jaipur, Hidaun city, Udaipur, Dausa, Beawar, need more focus on both the mandatory and essential criteria. As seen in the graph improvement is required in all the districts regarding the achievement of Mandatory & essential criteria for accreditation

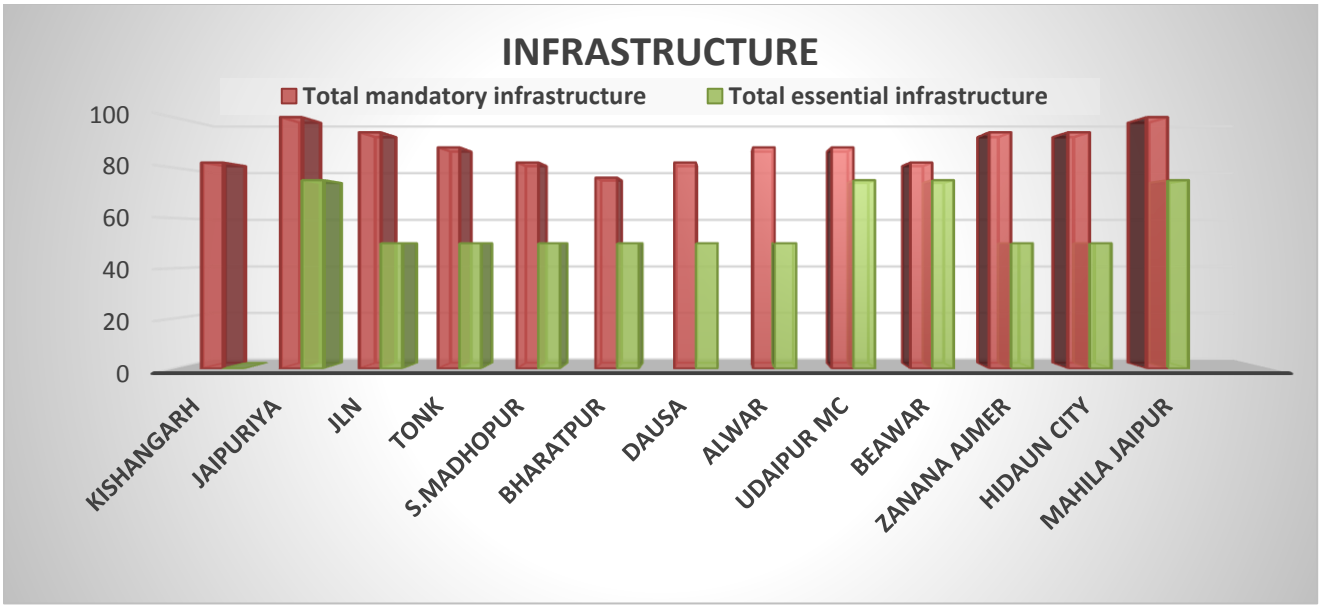
Performance of Services in SNCUs of Rajasthan State, 2018-

Above Graph shows that most of SNCU has achieved 90% in mandatory but Kishangarh, Hidaun city, not achieved 90% mandatory fields. Essential criteria score was very low in Kishangarh, Tonk, Sawai Madhopur, Bharatpur, Dausa, Hidaun city. Improvement is needed in the essential field in all SNCU and in Kishangarh, Hidaun city in the Mandatory field.

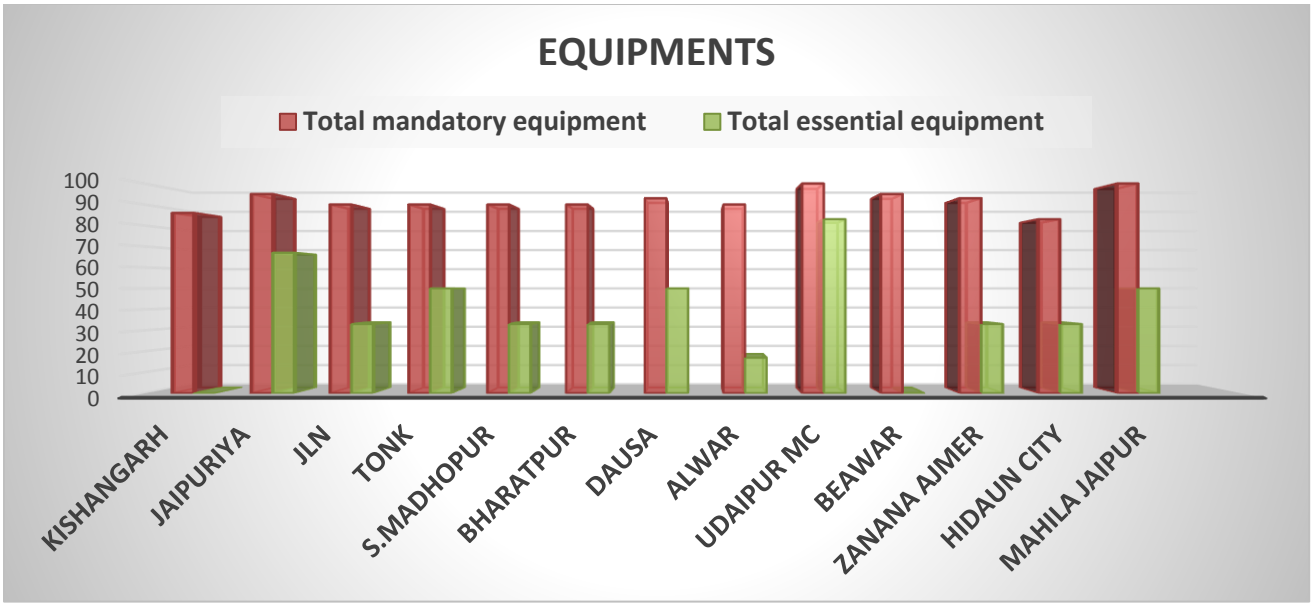


Performance of Human Resource in SNCUs of Rajasthan State, 2018-

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, Tonk, Dausa, Beawar, Hidaun City, Alwar, Sawai Madhopur, Bharatpur and for the essential field in all 13 selected SNCU.

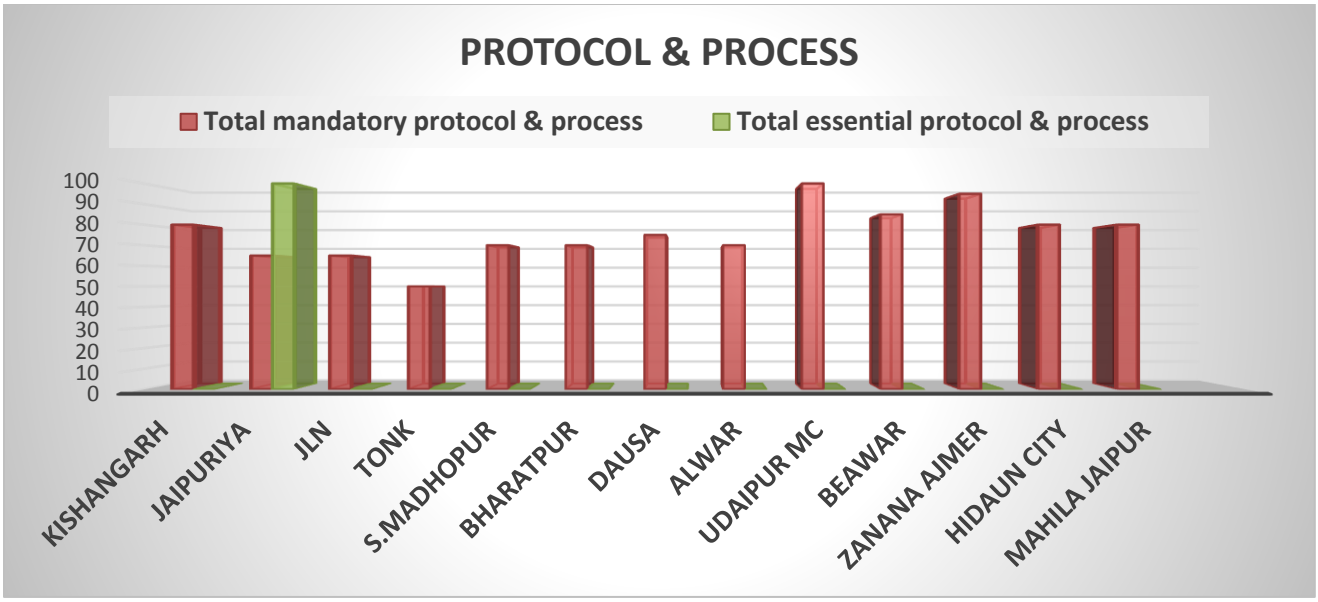


Performance of Infrastructure in SNCUs of Rajasthan State, 2018- Above graph show that only Jaipuriya and Mahila, Jaipur has achieved 100% mandatory criteria. So, improvement is needed in both the mandatory and the essential fields in all other selected SNCU.



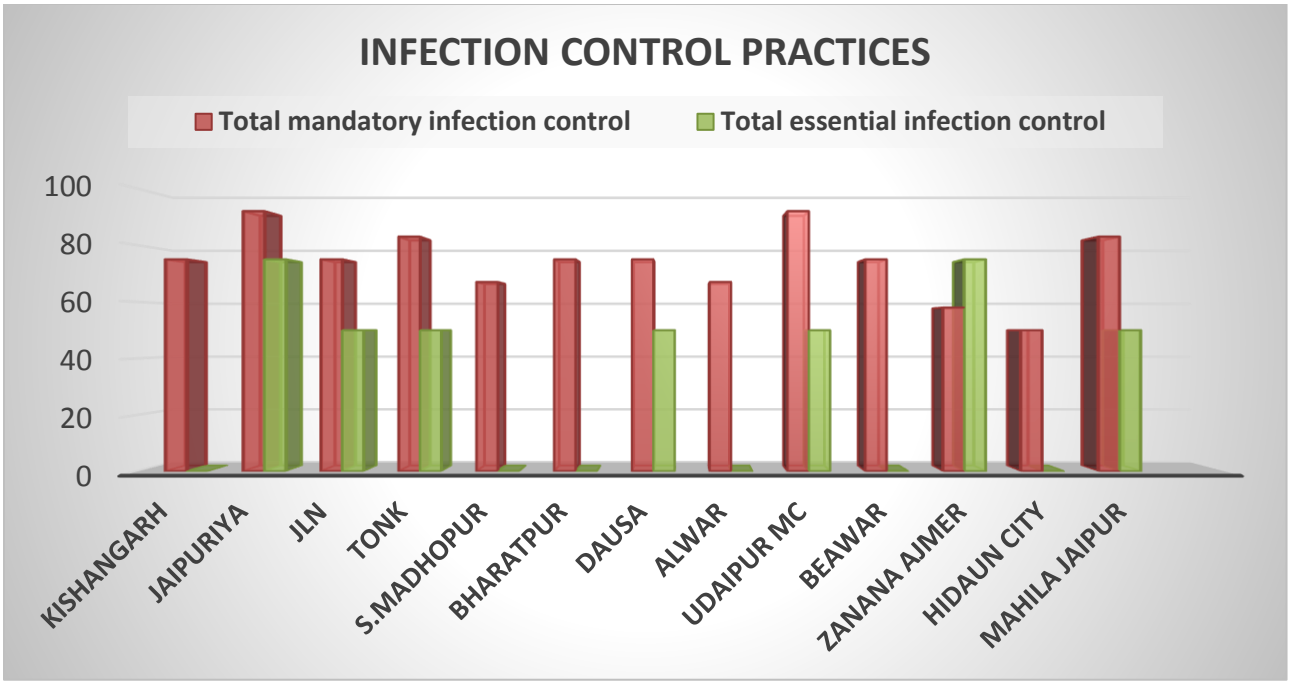
Performance of Equipment in SNCUs of Rajasthan State, 2018-

Above graph show that only Mahila, Jaipur and Udaipur MC have achieved 100 % mandatory score, so Improvement is needed in Ajmer, Tonk, Kishangarh, Hidaun city, Dausa, Beawar, Alwar, Sawai Madhopur, Bharatpur and int essential field, there is a scope of improvement in all 13 selected SNCU.



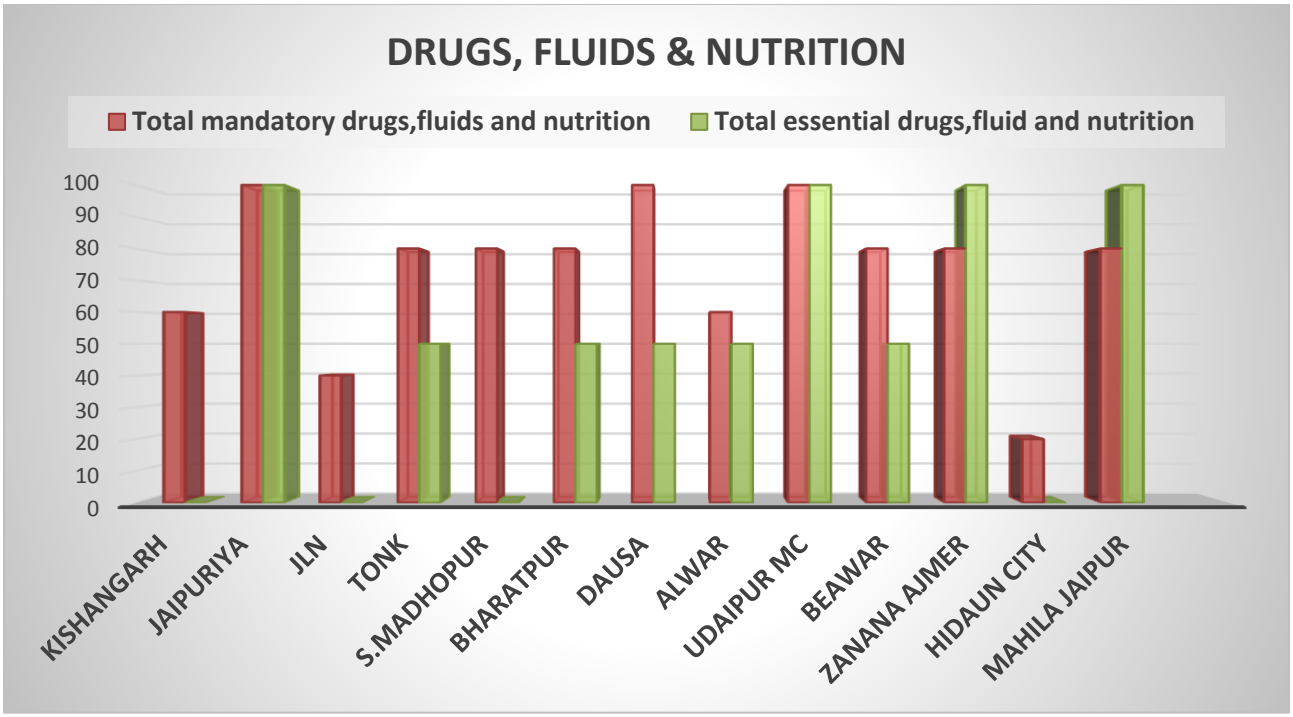
Performance of Protocol in SNCUs of Rajasthan State, 2018-

Above graph show that only Jaipuriya achieved above 75 % essential criteria. Need of improvement in mandatory field in Jaipuriya Ajmer, Udaipur, Tonk, Dausa, Beawar, Alwar, Sawai Madhopur, Kishangarh, Bharatpur, Hidaun City, Zanana Ajmer, Mahila Jaipur, JLN Ajmer and essential Ajmer, Udaipur, Tonk, Dausa, Beawar, Alwar, Sawai Madhopur, Kishangarh, Bharatpur, Hidaun City, Zanana Ajmer, Mahila Jaipur, JLN Ajmer.



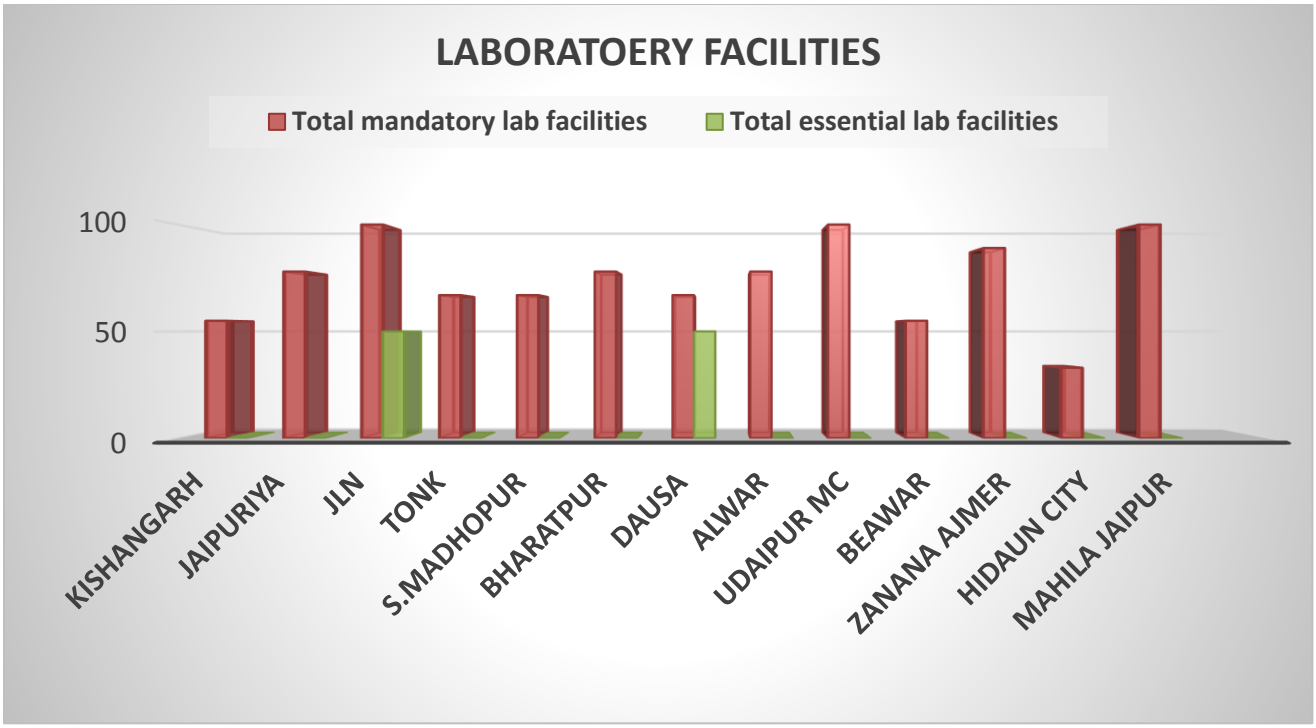
Performance of Infection Control Practices in SNCUs of Rajasthan State, 2018-

Above graph show that only Jaipuriya and Udaipur MC has achieved above 90 % mandatory score. So, improvement is needed in both Mandatory and essential fields in Ajmer, Tonk, Dausa, Beawar, Alwar, Sawai Madhopur, Zanana Ajmer, Kishangarh, Bharatpur, Jaipuriya, Udaipur MC, Hidaun city, Mahila Jaipur.



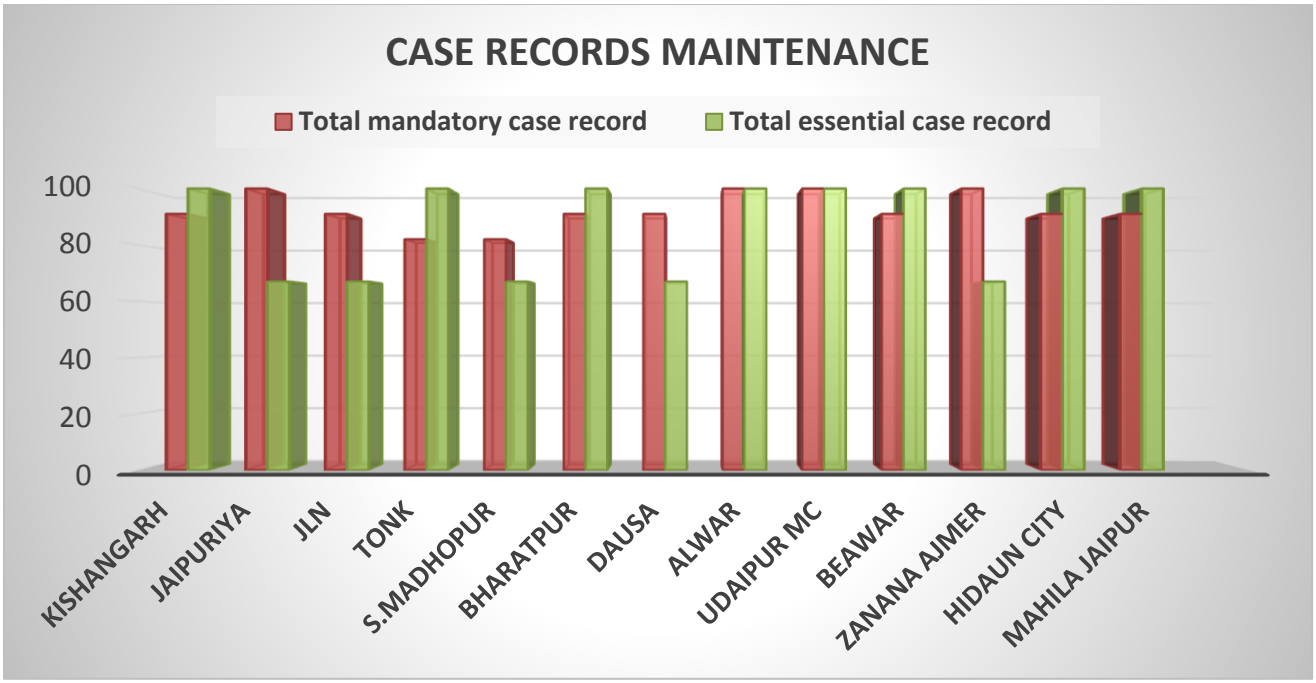
Performance of Drug, Fluid & Nutrition in SNCUs of Rajasthan State, 2018-

Above graph show that only Jaipuriya, Dausa, 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 field in Kishangarh, Beawar, JLN Ajmer, Bharatpur, Hidaun city, Tonk, Sawai Madhopur, Alwar. There is a scope of improvement in mandatory fields of Kishangarh, Beawar, JLN Ajmer, Bharatpur, Tonk, Sawai Madhopur, Alwar, Hidaun city, Mahila Jaipur and essential fields of Kishangarh, Beawar, Bharatpur, Tonk, Sawai Madhopur, Alwar, Hidaun city, Dausa, JLN Ajmer.



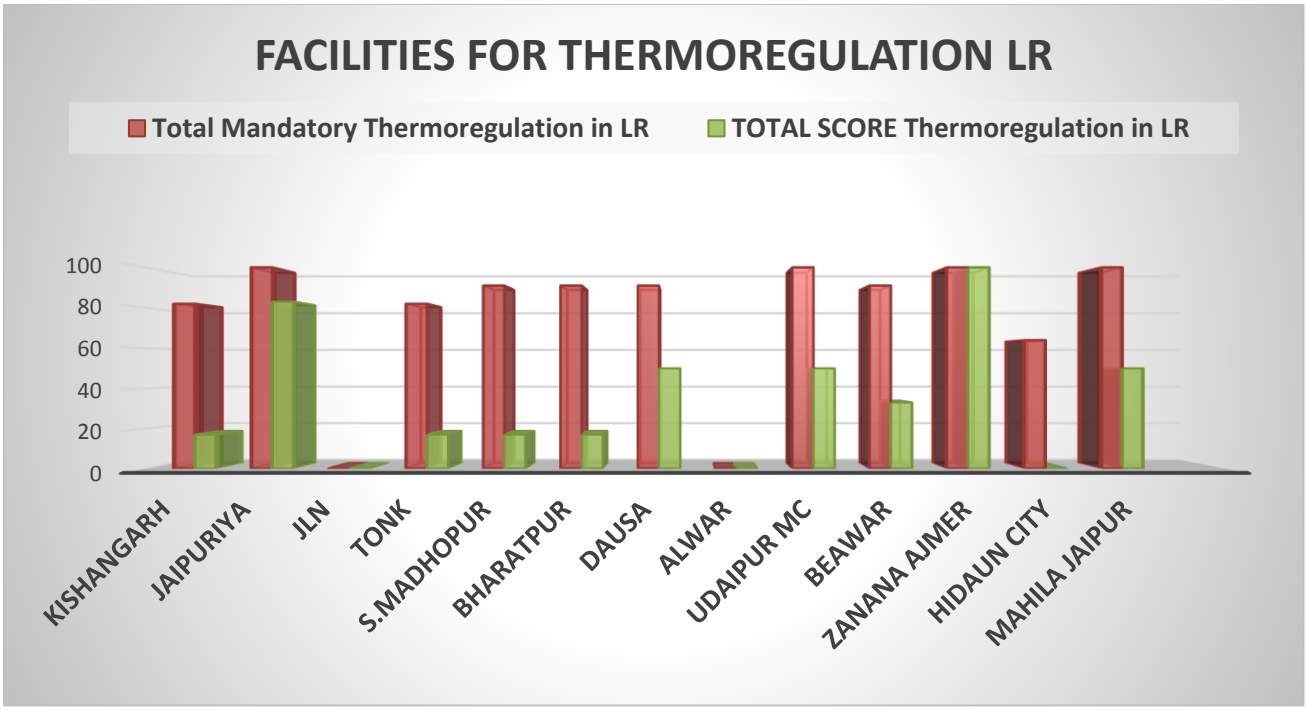
Performance of Laboratory Facilities in SNCUs of Rajasthan State, 2018-

Above group show that Udaipur, Mahila Jaipur, JLN Ajmer has achieved 100% in mandatory fields. So, improvement is needed in both Mandatory and essential fields of Kishangarh, Jaipuriya, Tonk, Sawai Madhopur, Bharatpur, Dausa, Alwar, Beawar, Zanana Ajmer, Hidaun City and in essential fields of Udaipur, Mahila Jaipur, JLN Ajmer.



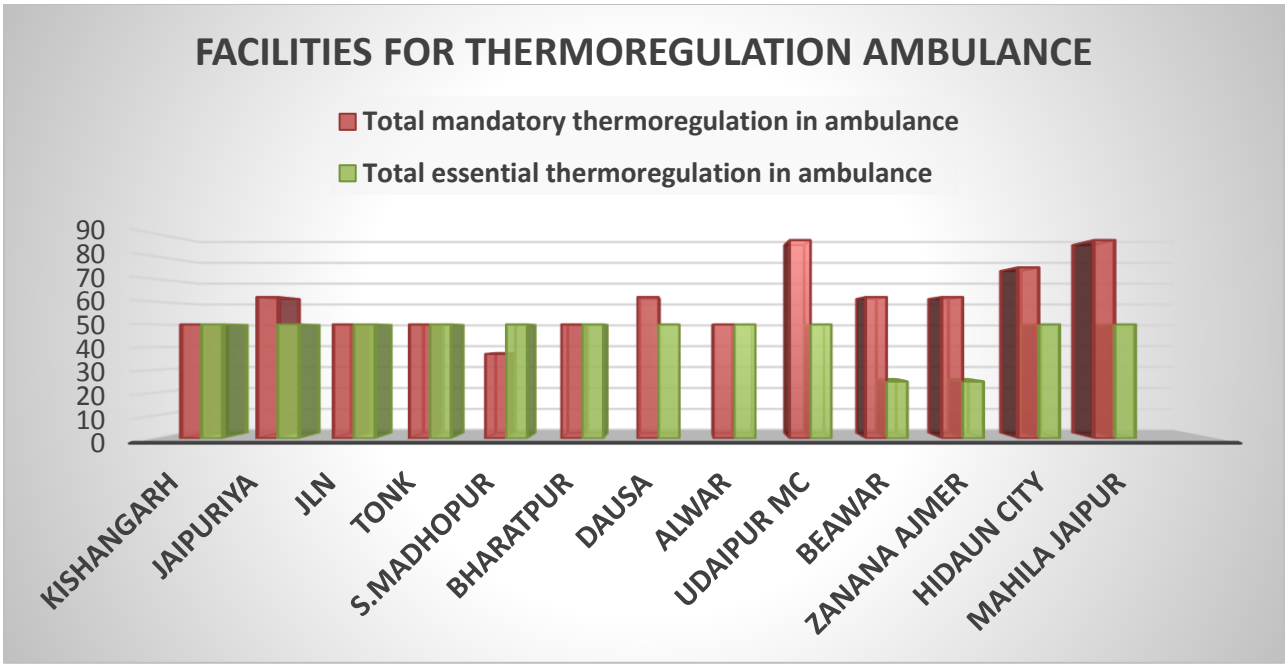
Performance of Case Record Maintenance in SNCUs of Rajasthan State, 2018-

Above graph show that Jaipuriya, Alwar, Udaipur, Zanana Ajmer have achieved 100% in mandatory fields and Kishangarh, Tonk, Bharatpur, Alwar, Udaipur MC, Beawar, Hidaun city, Mahila Jaipur have achieved 100 % in essential fields. So, improvement is needed in mandatory fields in Kishangarh, JLN, Tonk, Sawai Madhopur, Bharatpur, Dausa, Beawar, Hidaun city, Mahila Jaipur and Jaipuriya, JLN, S. Madhopur, Dausa, Zanana Ajmer in essential fields.



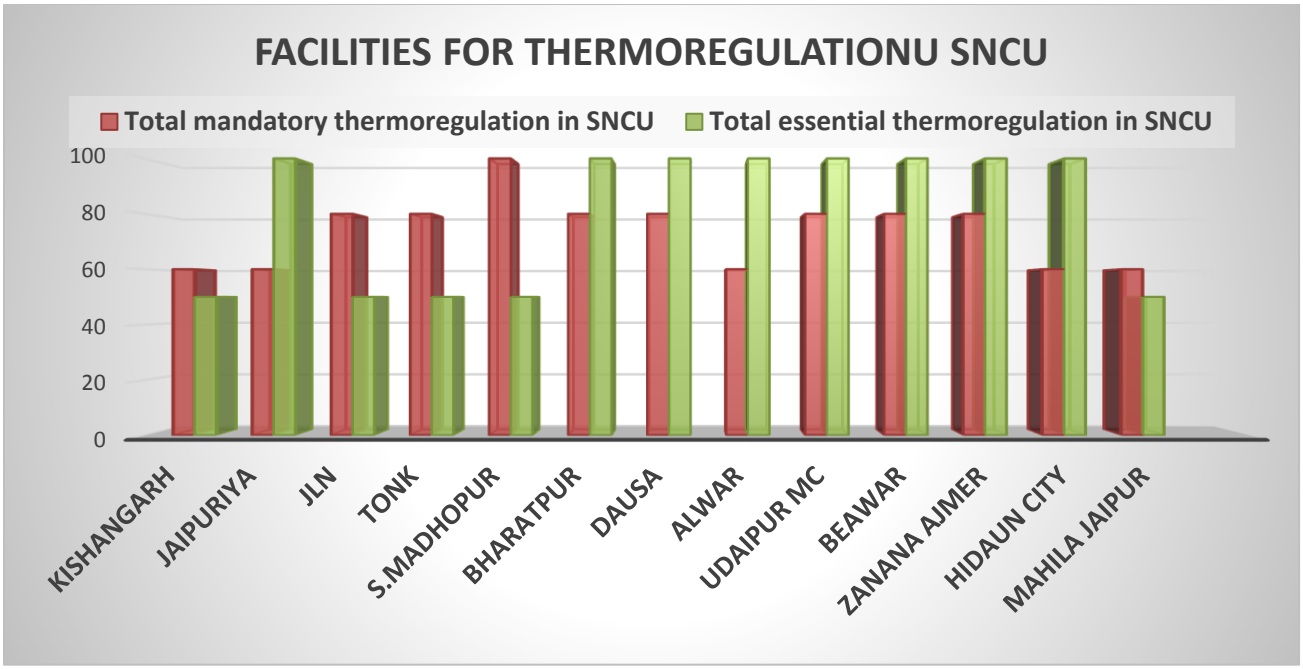
Performance of Labor room, O.T & Resuscitation in SNCUs of Rajasthan State, 2018-

Above graph show that Udaipur, Zanana Ajmer, Mahila Jaipur have achieved 100 % criteria in Mandatory fields and Zanana Ajmer have achieved 100 % essential. Great focus is needed in both mandatory and essential criteria in all selected SNCU. Alwar and J L N Ajmer 0% both mandatory and Essential because delivery not conducted by facility.



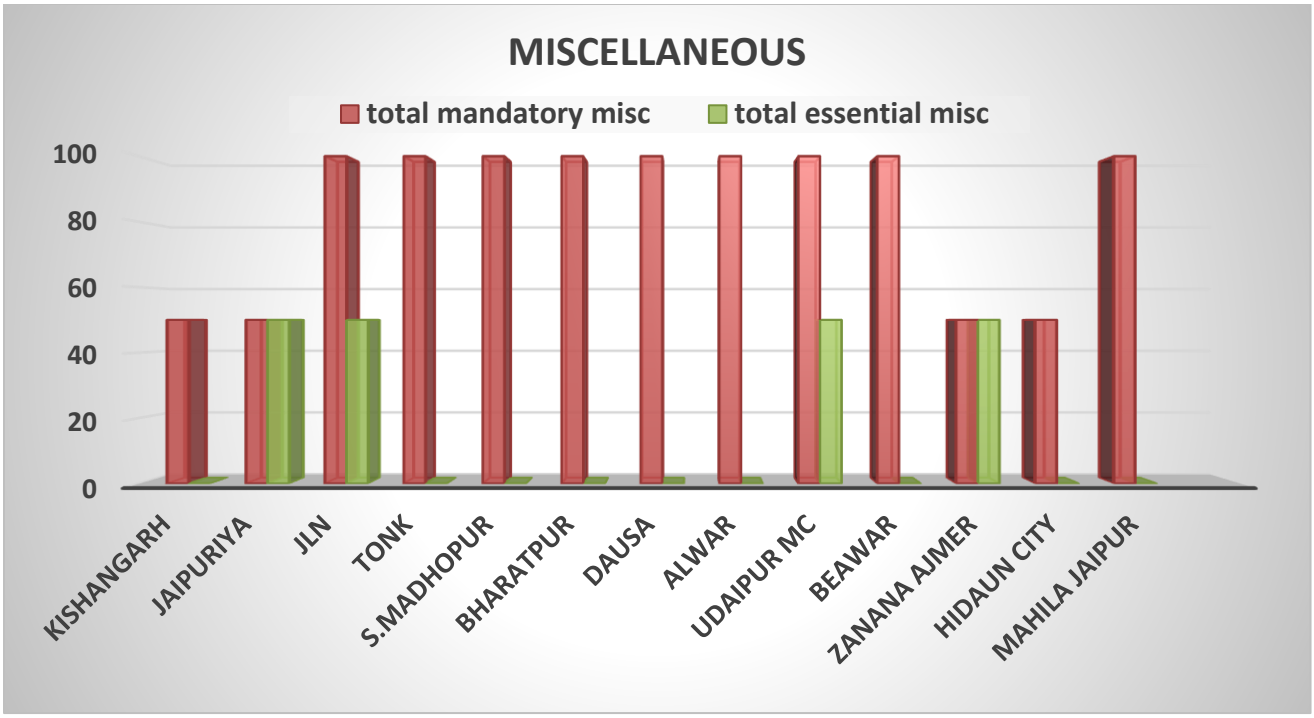
Performance of Facilities of Thermoregulation in Ambulance in SNCUs of Rajasthan State, 2018-

Above graph shows that none of selected SNCUs have reached 100% criteria in mandatory fields. So, great focus is needed in both mandatory and essential fields of 13 selected SNCUs of Rajasthan for maintaining thermoregulation in Ambulance.



Performance of Facilities of Thermoregulation in Ambulance in SNCUs of Rajasthan State, 2018-

Above graph shows only Sawai Madhopur have reached 100% criteria in mandatory field and Jaipuriya, Bharatpur, Dausa, Alwar, Udaipur, Beawar, Zanana Ajmer, Hidaun city have reached 100% essential fields. So, improvement is needed in mandatory fields of Kishangarh, Jaipuriya, JLN, Tonk, Bharatpur, Dausa, Alwar, Udaipur, Beawar, Hidaun city, Zanana Ajmer, Mahila Jaipur. And essential fields of Tonk, Sawai Madhopur, Mahila Jaipur, Kishangarh, JLN.



Performance of Miscellaneous in SNCUs of Rajasthan State, 2018-

Above graph shows JLN, Tonk, Sawai Madhopur, Dausa, Alwar, Udaipur, Beawar, Mahila Jaipur have reached 100% mandatory criteria. Great focus is needed in essential fields of all 13 selected SNCUs of Rajasthan and in mandatory fields of Kishangarh, Jaipuriya, Zanana Ajmer, Hidaun City.

Recommendation

Based on the analysis, an attempt has been made to present recommendations for strengthening SNCU's service delivery in Rajasthan.

- There is a need for following the FBNC Operational Guidelines for standard protocols, admission, discharge, follow-up, antibiotics, housekeeping, BMW, etc. for all newborn care facilities.
- 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.
- There should be OA/BERA screening for at least high-risk patients.
- Create awareness among the community about all services provided at SNCU without any charges to save lives of newborns.

- Create awareness among the group about free emergency vehicle benefit given by the government to referral.
- Sensitize staff of private doctor's facilities or nursing homes and fringe wellbeing facilities to allude debilitated babies at the earliest opportunity to close-by SNCU.
- Guidelines/composed guidelines/conventions must be shown in the unit for the unit's cleaning, sanitization, and fumigation schedules, for a technique for hardware cleaning and sterilization. Staff must take after these rules.
- There must be no less than one wash basin with cleanser having component which doesn't require utilization of washer's hands (e.g. elbow or foot worked taps) for every 5 beds. Notice close by washing ought to be shown at all hand washing stations.
- Lab facilities must be accessible at the unit. Facilities like blood culture, trade transfusion, CPAP, here and now ventilation, CT filter, echocardiography, convenient X-ray be accessible likewise at the unit to enhance the working of SNCU and furthermore to diminish referral rate.
- All therapeutic staff must be FBNC prepared as ahead of schedule as conceivable in the wake of participating in SNCU and no less than one FBNC prepared MO must be accessible around the time at the SNCU.

Conclusion

A modern sick newborn care facility created in a district hospital can substantially reduce hospital neonatal deaths and NMR of the district. This model might be a successful apparatus to diminish NMR of the nation. Mandatory Requirements and Facilities for Thermoregulation were not met by any of the SNCU. Udaipur, Mahila Jaipur, and Jaipuriya met Neonatal Resuscitation in Labor Rooms, Infection Control Practices, Protocols and processes, Human Resources, Drugs, IV Fluids Management and Nutrition, and Case Record Maintenance criteria whereas SNCU Kishangarh, Hidaun City, Bharatpur lacks in all.

Contingent on the NMR, SNCU's are abundantly required in each region to prevent the deaths of the infant.

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ANNEXURE-1

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 Chikitshalya	Dr R N Sahera	01/05/2018
3	SNCU DH Kishangarh	Dr Manmohan Sharma	02/05/2018
4	SNCU MC Ajmer	Dr Kanwar Singh	02/05/2018
5	SNCU DH Beawar	Dr P. M Bohara	02/05/2018
6	SNCU Zanana Ajmer	Dr Jai Prakash	02/05/2018
7	SNCU DH Tonk	Dr Vinod Parewariya	04/05/2018
8	SNCU DH Sawai Madhopur	Dr Sunil Sharma	04/05/2018
9	SNCU Hindaun City	Dr Akshay Deo	05/05/2018
10	SNCU MC Udaipur	Dr Pradeep Meena	07/05/2018
11	SNCU DH Alwar	Dr Mahesh Sharma	11/05/2018
12	SNCU DH Dausa	Dr Ravindar Sharma	11/05/2018
13	SNCU DH Bharatpur	Dr Laxmi Kant Mishra	14/05/2018

Gaps identified during SNCU Kishangarh visit

Date of visit: 02/05/2018

S.No.	Gaps identified	Probable suggestion
1	SNCU temperature log book was not being maintained.	SNCU in-charge should ensure use of room thermometers and maintenance of log book.
2	No written instruction/guidelines for	SNCU in-charge should ensure that

	cleaning, disinfection was displayed.	guidelines are displayed, and disinfection protocols are followed by staff in facility.
3	Post referral analysis was not being done in facility.	SNCU in charge should direct DEO to follow post referral status.
4	Step down unit not functional.	SNCU in-charge should start keeping newborns at step down unit.

Mandatory fields of lacking:

1.	CPAP ventilation (non –invasive)
2.	Short term basic mechanical ventilation (less than 24 hours)
3.	One basic mechanical ventilation devices
4.	Two devices for non – invasive ventilation (can be with above devices in M2 or separate)
5.	One multi- para monitor for every two level 2B bed
6.	A portable x- ray machine (in unit /in house) available round the clock
7.	Acid blood gas analysis machine within unit or hospital premises
8.	Resuscitator, hand- operated, neonate, 500 ml
9.	Surgical instruments (suture/ SET)
10.	Stand, infusion, double hook, on castors
11.	One resident doctor (post MBBS) for the unit in each shift
12.	ROP Screening (in house)
13.	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated
14.	Protocol to screen all high-risk babies for ROP
15.	Protocol for universal hearing screen of all babies prior to discharge

16.	Adequate number of functional room thermometers (at least one for each baby care room)
17.	A log book with daily shift –wise recording of temperature of NICU is maintained
18.	Separate containers with lids for storage of the EBM being used
19.	A separate emergency tray for every 4 babies
20.	A separate set of working infant laryngoscopes with all blade sizes (00,0 & 1) with all sizes ETT (2.5,3,3.5,4)
21.	Availability of umbilical vein cannulation sets to be used during resuscitation
22.	Is there written instruction / guideline for units cleaning, disinfection routines?
23.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
24.	Plasma Glucose
25.	ABG analysis
26.	TORCHES Screen
27.	Coagulogram
28.	Facility for provision of warmth, oxygenation, suction, and resuscitation kit in the ambulance
29.	Transport incubator available with the unit for use during transport of babies
30.	Display of contact details of higher and lower referral linkage of the unit
31.	Outcome records of these referred patients/ follow-up of such patients
32.	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc.
33.	Are there written instruction / guidelines for method of equipment cleaning and disinfection

Gaps identified during SNCU J.L.N Medical college (Ajmer) visit

Date of visit: 02/05/2018

S.No.	Gaps identified	Probable suggestion
1.	Separate step-down unit is not available in SNCU premises	Space should be identified, and step-down unit should be started with SNCU.
2.	As per guideline newborn should admitted either in born and out born unit. it is observed no separate unit are available in SNCU	Medical superintend should direct SNCU in charge to ensure to keep newborns in separate inborn and out born unit
3.	Gown changing room not available in facility.	In SNCU premises space available can be used to establish gown changing room
4.	Shoe rakes not installed at entrance of unit	Shoe rakes should be installed at entrance of facility
5.	Staff and mothers not wearing gowns, mask, cap	SNCU in charge should direct all staff to follow protocols at unit
6.	Hand washing practice is not being followed at facility by FCC care giver mothers	SNCU in charge should direct all nursing staff to ensure hand washing of all mothers and follow the protocol
7.	Less than 1/3rd of nursing staff are FBNC, NSSK trained	SNCU in-charge should ensure training of nursing staff

Mandatory fields of lacking:

1.	Are there designated areas for clean utility and dirty utility?
2.	Surgical instruments (suture/ SET)
3.	Washing machine with dryer with AMC for maintenance

4.	Gowns for staff and mothers
5.	Refrigerator
6.	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
7.	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
8.	Admission and discharge policy defined and displayed
9.	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated
10.	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
11.	Availability of written protocols manual for FBNC in the unit
12.	Written instruction for trouble shooting of individual equipment
13.	A log book with daily shift –wise recording of temperature of NICU is maintained
14.	Separate containers with lids for storage of the EBM being used
15.	A separate emergency tray for every 4 babies
16.	Are there written instruction / guidelines for method of equipment cleaning and disinfection
17.	Is there written instruction / guideline for units cleaning, disinfection routines?
18.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
19.	Growth chart used for day to day monitoring

20.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
21.	Facility for provision of warmth, oxygenation, suction, and resuscitation kit in the ambulance
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.

Gaps identified during SNCU Zanana Ajmer visit

Date of visit: 02/05/2018

S.No.	Gaps identified	Probable suggestion
1	Stethoscopes are not adequate and same stethoscope being used for babies on different bed.	In charge SNCU may direct nursing in charge to ensure availability of stethoscope in every radiant warmer in SNCU.
2	Posters and Protocols not displayed in SNCU.	SNCU in charge should direct all staff to follow protocols at unit.
3	The Hand wash area was not clean, without any soap and display protocol of hand wash instructions	SNCU in charge should direct all staff to follow protocols at unit.
4.	No display of higher and lower referral contact details.	SNCU in charge should direct all staff to follow protocols at unit.
5.	Two babies were present on same cradle	SNCU in-charge should follow the protocols at unit and ensure separate stay of each newborns.

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

Gaps identified during SNCU Beawar Visit

Date of visit: 02/05/2018

S.No.	Gaps identified	Probable suggestion
1.	The Room temperature record is not being maintained.	SNCU in charge should direct all staff to follow protocols at unit and maintain logbook.
2.	Laminar air flow is present but not functional.	PMO should direct in-charge to ensure functionality of machine.
3.	Sepsis screening is not being done before prescribing antibiotics.	SNCU in charge should direct all staff to follow protocols at unit.
4.	OAE/Hearing screening is not being done.	SNCU in charge should direct all staff to follow protocols at unit.
5.	Written disinfection policy is not there in SNCU.	SNCU in charge should direct all staff to follow protocols at unit.

Mandatory fields of 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

Gaps identified during SNCU Sawai Madhopur visit

Date of visit: 04/05/2018

S.No.	Gaps identified	Probable suggestion
1.	Post referral analysis was not being done in facility.	SNCU in charge should direct DEO to follow post referral status.
2.	ABG machine was not in use as it is not installed	PMO should direct in-charge to ensure installation of machine.
3.	Radiant heat warmer and multipara monitor were non-functional	PMO should direct in-charge to ensure functionality of machine.
4.	No designated area for clean and dirty utility	In SNCU premises space available can be used to establish room to store clean and dirty utility.
5.	Staff and mothers were not wearing gowns, mask, cap.	SNCU in charge may direct all staff to follow protocols at unit.

Mandatory fields of lacking:

1.	Short term basic mechanical ventilation (less than 24 hours)
2.	One basic mechanical ventilation devices
3.	Are there designated areas for clean utility and dirty utility?
4.	One Stethoscope with each neonatal bed
5.	Surgical instruments (suture/ SET)
6.	Washing machine with dryer with AMC for maintenance
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.	ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4) Security personnel 1 per shift with 20 % reserve (i.e. a 12-bed unit should have minimum 4)
12.	Admission and discharge policy defined and displayed
13.	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated
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.	Protocol for universal hearing screen of all babies prior to discharge
17.	Written instruction for trouble shooting of individual equipment
18.	Growth chart used for day to day monitoring
19.	Availability of umbilical vein cannulation sets to be used during resuscitation
20.	Availability of a dedicated wash area with gown changing area, prior to entry into the NICU
21.	Provisions for hand washing instructions displayed in the wash area
22.	Are there written instruction / guideline for units cleaning, disinfection routines?
23.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
24.	ABG analysis
25.	TORCHES Screen
26.	Coagulogram
27.	Facility for provision of warmth, oxygenation, suction andresuscitation kit in the ambulance
28.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
29.	Display of contact details of higher and lower referral linkage of the unit
30.	Outcome records of these referred patients/ follow-up of such patients
31.	Use of growth charts regularly in the unit especially for small babies
32.	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Gaps identified during SNCU Tonk visit

Date of visit: 04/05/2018

S.No.	Gaps identified	Probable suggestion
1.	As per guideline newborn should admitted either in born and out born unit. it is observed no separate unit are available in SNCU	PMO should direct SNCU in charge to ensure to keep newborns in separate inborn and out born unit
2.	ABG machine not in use in the facility	PMO should direct SNCU in charge to use ABG machine.

Mandatory fields of lacking:

1.	Short term basic mechanical ventilation (less than 24 hours)
2.	One basic mechanical ventilation devices
3.	Two devices for non – invasive ventilation (can be with above devices in M2 or separate)
4	Acid blood gas analysis machine within unit or hospital premises
5.	Surgical instruments (suture/ SET)
6.	Wall clock with second hand
7.	One Resident doctor / junior consultant with MD/DNB/DCH (MIN. 1.5 YR. Experience post –DCH)[non-rotational basis]
8.	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
9.	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
10.	Admission and discharge policy defined and displayed
11.	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated
12.	Protocol of orientation of new staff and refresher course (like CME) for existing staff

13.	Protocol for universal hearing screen of all babies prior to discharge
14.	Written instruction for trouble shooting of individual equipment
15.	A log book with daily shift –wise recording of temperature of NICU is maintained
16.	A separate emergency tray for every 4 babies A separate set of working infant laryngoscopes with all blade seizes (00,0 & 1) with all sizes ETT (2.5,3,3.5,4)
17.	Availability of umbilical vein cannulation sets to be used during resuscitation
18.	Are there written instruction / guidelines for method of equipment cleaning and disinfection
19.	Are there written instruction / guideline for units cleaning, disinfection routines?
20.	ABG analysis
21.	TORCHES Screen
22.	Coagulogram
23.	Facility for provision of warmth, oxygenation, suction, and resuscitation kit in the ambulance
24.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
25.	Points for pulse oximeter and the Infusion pumps in the ambulance
26..	Display of contact details of higher and lower referral linkage of the unit
27.	Use of growth charts regularly in the unit especially for small babies
28.	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc.

Gaps identified during SNCU Hindaun City Visit

Date of visit: 05/05/2018

S.No.	Gaps identified	Probable suggestion
1.	No Security Guard in the premises of hospital.	PMO should ensure availability of security guard by sanctioning the post at the facility.
2.	No Hand wash area present in the entire SNCU unit	In SNCU premises space available can be used to establish hand washing area.
3.	KMC, Temperature record not being maintained.	SNCU in-charge should direct all the staffs to follow protocols and maintain logbook.
4.	Staff is not trained.	SNCU in-charge should ensure training of nursing staff.

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

Gaps identified during SNCU Alwar visit

Date of visit: 11/05/2018

S.No.	Gaps identified	Probable suggestion
1.	KMC log book is not maintained	SNCU in-charge should ensure maintenance of KMC log book
2.	As per guideline newborn should admitted either in born and out born unit. it is observed no separate unit are available in SNCU.	PMO should direct SNCU in charge to ensure to keep newborns in separate inborn and out born unit
3.	Shoe rakes not installed at entrance of unit.	Shoe rakes should be installed at entrance of facility
4.	Step down unit not functional.	PMO should direct SNCU in charge to ensure to keep newborns in separate inborn and out born unit

Mandatory fields of lacking:

1.	Short term basic mechanical ventilation (less than 24 hours)
2.	One basic mechanical ventilation devices
3.	Two devices for non – invasive ventilation (can be with above devices in M2 or separate)
4.	Surgical instruments (suture/ SET)
5.	Gowns for staff and mothers
6.	Centrifuge, hematocrit, bench-top, up to 1200 rpm including rotor
7.	Wall clock with second hand
8.	One resident doctor (post MBBS) for the unit in each shift
9.	ROP Screening (in house)

10.	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
11.	Admission and discharge policy defined and displayed
12.	Protocol of orientation of new staff and refresher course (like CME) for existing staff
13.	Protocol to screen all high-risk babies for ROP
14.	Protocol for universal hearing screen of all babies prior to discharge
15.	Availability of written protocols manual for FBNC in the unit A log book for KMC to be maintained in unit (with documentation of mothers &baby details)
16.	A log book with daily shift –wise recording of temperature of NICU is maintained
17.	Growth chart used for day to day monitoring
18.	Separate containers with lids for storage of the EBM being used
19.	Availability of a dedicated wash area with gown changing area, prior to entry into the NICU
20.	Are there written instruction / guidelines for method of equipment cleaning and disinfection
21.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
22.	TORCHES Screen
23.	Coagulogram
24.	Facility for provision of warmth, oxygenation, suction, and resuscitation kit in the ambulance
25.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
26.	Points for pulse oximeter and the Infusion pumps in the ambulance
27.	Display of contact details of higher and lower referral linkage of the unit

Gaps identified during SNCU Dausa visit

Date of visit: 11/05/2018

S.No.	Gaps identified	Probable suggestion
1.	Gown changing room not available in facility.	In SNCU premises space available can be used to establish gown changing room
2.	No designated area for clean and dirty utility	In SNCU premises space available can be used to establish room to store clean and dirty utility.
3.	Staff and mothers were not wearing gowns, mask, cap.	SNCU in charge should direct all staff to follow protocols at unit.
4.	Infantometer not in use.	In charge SNCU should direct all staff to ensure use of infantometer and record detail on case sheet.

Mandatory fields of lacking:

1.	Short term basic mechanical ventilation (less than 24 hours)
2.	One basic mechanical ventilation devices
3.	Two devices for non – invasive ventilation (can be with above devices in M2 or separate)
4.	Are there designated areas for clean utility and dirty utility?
5.	Surgical instruments (suture/ SET)
6.	Basin, kidney, stainless steel, 825 ml
7.	Wall clock with second hand
8.	One Resident doctor / junior consultant with MD/DNB/DCH (MIN. 1.5 YR. Experience post –DCH) [non-rotational basis] Availability of a dedicated wash area with gown changing area, prior to entry into the NICU
9.	One resident doctor (post MBBS) for the unit in each shift

10.	ROP Screening (in house)
11.	Protocol of orientation of new staff and refresher course (like CME) for existing staff
12.	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
13.	Protocol to screen all high-risk babies for ROP
14.	Protocol for universal hearing screen of all babies prior to discharge
15.	A log book with daily shift –wise recording of temperature of NICU is maintained
16.	Availability of umbilical vein cannulation sets to be used during resuscitation
17.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
18.	Is there a defined protocol for handling and disposal of soiled linen?
19.	Microbiological lab facilities (inclusive of Blood Culture, fungal, culture, lab CRP, etc)
20.	ABG analysis
21.	Coagulogram
22.	Adequate number of ambulance drivers and / or paramedics (in – house / outsourced)
23.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
24.	Display of contact details of higher and lower referral linkage of the unit
25.	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc.

Gaps identified during SNCU Bharatpur visit

Date of visit: 14/05/2018

S.No.	Gaps identified	Probable suggestion
1.	Post referral analysis was not being done in facility.	SNCU in charge should direct DEO to follow post referral status.
2.	KMC log book is not maintained.	SNCU in-charge should ensure maintenance of KMC log book
3.	No designated area for clean and dirty utility	In SNCU premises space available can be used to establish room to store clean and dirty utility.
4.	Staff and mothers not wearing gowns, mask, cap.	SNCU in charge should direct all staff to follow protocols at unit.
5.	Shoe rakes not installed at entrance of unit.	Shoe rakes should be installed at entrance of facility
6.	As per guideline newborn should admitted either in born and out born unit. it is observed no separate unit are available in SNCU.	PMO may direct SNCU in charge ensure to separate inborn and out born unit

Mandatory fields of lacking:

1.	One basic mechanical ventilation devices
2.	Two devices for non – invasive ventilation (can be with above devices in M2 or separate)
3.	Every bed should have the space of 100 sq. Ft. (this is inclusive of 50 sq. ft of the ancillary areas)
4.	Blood bank /storage unit with component therapy 24*7 services in the hospital /conveniently outsourced

5.	One Stethoscope with each neonatal bed
6.	Surgical instruments (suture/ SET)
7.	Basin, kidney, stainless steel, 825 ml
8.	Gowns for staff and mothers
9.	One resident doctor (post MBBS) for the unit in each shift
10.	ROP Screening (in house)
11.	Admission and discharge policy defined and displayed
12.	Protocol of orientation of new staff and refresher course (like CME) for existing staff
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.	Availability of written protocols manual for FBNC in the unit
17.	A log book with daily shift –wise recording of temperature of NICU is maintained
18.	Availability of umbilical vein cannulation sets to be used during resuscitation
19.	Availability of a dedicated wash area with gown changing area, prior to entry into the NICU
20.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
21.	Is there a defined protocol for handling and disposal of soiled linen?
22.	TORCHES Screen
23.	Coagulogram
24.	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)
25.	Points for pulse oximeter and the Infusion pumps in the ambulance
26.	Display of contact details of higher and lower referral linkage of the unit
27.	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc

Gaps identified during SNCU Udaipur Medical College visit

Date of visit: 07/05/2018

S.No.	Gaps identified	Probable suggestion
1.	No designated area for clean and dirty utility	In SNCU premises space available can be used to establish room to store clean and dirty utility
2.	Gown changing room not available in facility	In SNCU premises space available can be used to establish gown changing room

Mandatory fields of lacking:

1.	Every bed should have the space of 100 sq.ft.(this is inclusive of 50 sq. ft of the ancillary areas
2.	Are there designated areas for clean utility and dirty utility?
3.	A log book with daily shift –wise recording of temperature of NICU is maintained
4.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
5.	Display of contact details of higher and lower referral linkage of the unit

Gaps identified during SNCU Mahila Chiktislaya, Jaipur visit

Date of visit: 01/05/2018

S.No.	Gaps identified	Probable suggestion
1.	KMC log book is not maintained.	SNCU in-charge should ensure maintenance of KMC log book.
2.	Two babies are kept in same baby nest.	SNCU in-charge should follow the protocols at unit and ensure separate stay of each newborns.
3.	Printer not available at the facility.	PMO should ensure availability of printer for use in facility.
4.	Step down unit not functional	In SNCU premises space available can be used to establish Step down unit.
5.	Less than 1/3rd of nursing staff are FBNC, NSSK trained.	SNCU in-charge must and ensure training of nursing staff.

Mandatory fields of lacking:

1.	Admission and discharge policy defined and displayed
2.	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused
3.	Protocol to screen all high-risk babies for ROP
4.	Availability of written protocols manual for FBNC in the unit
5.	A log book for KMC to be maintained in unit (with documentation of mothers and baby details)
6.	A log book with daily shift –wise recording of temperature of NICU is maintained
7.	A separate emergency tray for every 4 babies
8.	Are there written instruction / guidelines for method of equipment cleaning and disinfection?

9.	Are there written instruction / guideline for units cleaning, disinfection routines?
10.	Disinfection & cleaning practices being followed and documented properly (verify logbook)
11.	Transport incubator available with the unit for use during transport of babies
12.	Use of growth charts regularly in the unit especially for small babies

Gaps identified during SNCU Jaipuriya visit

Date of visit: 27/04/2018

S.No.	Gaps identified	Probable suggestion
1.	Post referral analysis was not being done in facility.	SNCU in charge should direct DEO to follow post referral status.

Mandatory fields of lacking:

1.	Acid blood gas analysis machine within unit or hospital premises
2.	Washing machine with dryer with AMC for maintenance
3.	ROP Screening (in house)
4	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative
5	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed
6.	Admission and discharge policy defined and displayed
7.	Protocol to screen all high-risk babies for ROP
8.	Written instruction for trouble shooting of individual equipment
9.	Protocol for universal hearing screen of all babies prior to discharge
10.	Availability of written protocols manual for FBNC in the unit
11.	A log book for KMC to be maintained in unit (with documentation of mothers &baby details)

12.	A log book with daily shift –wise recording of temperature of NICU is maintained
13.	Is there a written down unit antibiotic policy?
14.	ABG analysis
15.	Coagulogram
16.	Transport incubator available with the unit for use during transport of babies
17.	Display of contact details of higher and lower referral linkage of the unit
18.	Unit should have an adequately stocked library with audio –visual aids

ANNEXURE-2

NNF ACCREDITATION PROGRAM

Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B

A. s. no	UNITS PERFORMANCE DATA (Three years or since when unit in functioning) parameter	KISHANGARH	JAIPURIYA	AJMER(JLN)	TONK	S.MADHOPUR	BHARATPUR	DAUSA	ALWAR	UDAIPUR MC	BEAWAR	ZANANA AJMER	HIDAUN CITY	MAHILA(JAIPUR)
1	Total inborn and outborn babies admitted	457	582	2487	2494	1837	3204				1765	315	678	1436
2	Total number of babies admitted with LBW,VLBW,ELBW & their respective percentages		248,42.6%	1080(43.4%)	1019(40.8%)	886,48.2%	1516(47.3%)				774	129	240	
			60,10.3%	303(12.1%)	130(5.21%)	151,8.21%	313(9.76%)				147	37	36	
			11, 1.2%	92(3.7%)	29(19.4%)	26,1.41%	68(2.12%)				39	17	6	
3	Total number of babies referred –out for surgical & non surgical reasons (yearly)	97	58	154	213	162	866				336	6	201	8
4	Total number babies referred in (yearly)	168	91	154	160						318	1	454	0
5	Mortality figures – total , inborn and out born (yearly) and their group mortality %	6	24	597	107	168,9.1%	143,4.46%				82	61	14	250
6	Mortality in total , LBW,VLBW,ELBW babies (yearly) and their group mortality %		5 (20.8%), 9(37.5%), 4(16.6%)			66(39.2%),51(30.3), 22(13.0%)	57(39.8%),39(27.2%),27(18.8%)				3 2 2 , 1 4 , 1	20,18,12	5,2,4	
7	LAMA (left against medical advice) / DOR (discharge on request) rate in total ELBW,VLBW,ELBW babies (yearly) and their group %	4	32, 5.5%	304(12.2%)	155(6.2%)	62(3.37%)	157(4.9%)				14	6	8	87
8	Hospital acquired infection (HAI) rates		0	0	0	0	0	0	0	0	0	0	0	0
	VAP rates (ventilator associated pneumonia)and		0	0	0	0	0	0	0	0	0	0	0	0
	BSI rates (blood stream infections)		0	0	0	0	0	0	0	0	0	0	0	0
9	FIVE COMMONEST MAJOR DIAGNOSIS	BIRTH ASPHAXIA,VLBW, NEONATAL JAUNDICE,RDS,HYPERTHERMIA	JAUNDICE,SEPSIS,BIRTH ASPHXIA,PREMATURITY,VLBW	LBW,RDS,PREMATURITY,BIRTH ASPHXIA,SEPSIS	RDS, SEPSIS, BIRTH ASPHXIA, VLBW,PREMATURITY	RDS,MECONIUM ASPIRATION SYNDROME, SEPSIS,NEONATAL JAUNDICE, BIRTH ASPHYXIA	RDS, MECONIUM ASPIRATION SYNDROME,NEONATAL JAUNDICE, HYPOTHERMIA, MAJOR CONGENTIAL MALFORMATION				Jaundice,Prematurity,Birth Asphyxia, TTN	RDS,Jaundice, Asphyxia,Meconium aspiration Syndome, Sepsis	B. Asphyxia, Respiratory Distress,Sepsis,Jaundice	PREMATURITY,BIRTH ASPHXIA, VLBW, RDS, NEONATAL JAUNDICE
10	FIVE COMMONEST MAJOR MORTALITY CAUSES	RDS,MECONIUM ASPIRATION,PERINATAL ASPHXIA,SEPTICEMIA,PREMATURITY	PREMATURITY,SEPSIS,CONFENTIAL MALFORMATION,RDS,BIRTH ASPHXIA	PREMATURITY,BIRTH ASPHXIA,SEPSIS, RDS, NEONATAL JAUNDICE	PREMATURITY, VLBW, SEPSIS,SEVERE RDS,MECONIUM ASPIRATION	RDS, BIRTH ASPHXIA,SEPSIS, PREMATURITY, MAJOR CONGENTIAL MALFORMATION	BIRTH ASPHXIA, REMATURITRY, RDS, SEPSIS,NEONATAL JAUNDICE				Prematurity,B.Asphyxia,VLBW,Pneumonia,Sepsis	RDS,Prematuity, B. Asphyxia, Sepsis	Prematurity,Asphyxia, Meconium aspiration syndrme	BIRTH ASPHXIA,RDS,SEPSIS,PREMATURITY,VLBW
11	Any other important data													
12	Sign and seal of unit in charge													

NNF ACCREDITATION PROGRAM

Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B

B. CLINICAL SUPPORT SERVICES

S. NO	Services Mention whether services in available (yes) or not (no) (in col. 1). If yes ,then by which mode –in house rent /parent hospital /outsourced (mention in col. 2)													
1	Housekeeping services	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
2	Ambulance services	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
3	Autoclaving /CSSD (of parent hospital)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
4	Laundry	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES
5	Kitchen services	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES	NO	YES
6	Information technology (facilities in the unit but managed by parent hospital or by an outsourced agency)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
7	Maintenance of facility	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
8	Management of Bio –medical waste(BMW)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
9	Pharmacy	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
10	Security	NO	YES	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	YES
11	Supply chain management (drug , consumables and other material)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
12	Referral services(if yes, mention the name of the most commonly , referred to centre)	YES (Ajmer MC)	YES(JK LON)	YES	YES(JK LON)	YES	YES	YES	YES	YES	YES, JLN Medical College, Ajmer	YES, JLN Medical College,Ajmer	YES, JK LON	YES
13														

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Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B

C. ESSENTIAL \REGULATORY REQUIREMENTS

	REQUIREMENTS FACILITY should be aware of requirement and should know where and with whom documents for same are available .these could be in house (for stand –alone units) or with the parent hospital													
	1. REGISTRATION under clinical establishment act (or similar such act)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	2. Registration with local authorities	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	3. Building occupancy /completion certificate	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	4. Fire department (no objection certificate)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	5. Drug license	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	6. License for electrical installations	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	7. Pharmacy (if over multiple locations license for each of them separately)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	8. AERB approval for x-ray (including portable)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	DESIRABLE REGULATORY REQUIREMENTS :													YES
	D1. License for diesel storage (if using a generator)	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
	D2.license to storage compressed gas	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	YES	YES	YES
	D3. License for possession and use of methylated spirit , denatured spirit , and methyl alcohol	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	YES	YES	YES
	D4.license of possession of rectified spirit	YES	YES	YES	YES	YES	**YES**	YES	YES	YES	YES	YES	YES	YES
	D5.PNDT act registration (if USG is available)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

NNF ACCREDITATION PROGRAM

Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B

SECTION	ELEMENTS IN SECTION													
	SERVICES													
M	MANDATORY													
M1	Resuscitation at birth to all babies by NRP trained doctor preferably pediatrician	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	CARE of sick neonate including babies	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	CPAP ventilation (non –invasive)	0	1	1	1	1	1	1	1	1	1	1	0	1
M4	Short term basic mechanical ventilation (less then 24 hours)	0	1	1	0	0	1	0	0	1	1	1	1	1
M5	Stabilization of patients prior to referral	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Transport facility for higher level of care	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Follow-up of the high risk SNCU /NICU graduates	1	1	1	1	1	1	1	1	1	1	0	1	1
M8	The unit should be working / operational for at least 24 months before applying for accreditation	NA	NA	1	1	1	1	1	1	1	1	0	0	1
M9	Patient care load of at least 300 patients deserving admission in a level 2 unit / year	1	1	1	1	1	1	1	1	1	1	1	1	1
E	ESSENTIAL													
E1	SURFACTANT therapy	0	1	1	0	0	0	0	0	1	0	1	0	1
E2	Partial parenteral nutrition	0	1	1	1	1	1	1	1	1	1	1	0	1
E3	Facility for carrying out exchange transfusion	0	1	1	0	0	0	0	1	1	0	1	0	1
E4	Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)	0	1	1	0	0	0	0	0	1	1	1	0	1
	TOTAL SCORE	6	12	13	9	9	10	9	10	13	11	11	7	13
	INFRASTRUCTURE													
M	MANDATORY													

M1	Should have minimum 12 beds inclusive of 4 level 2-B beds .the unit may be bigger in the same proportion (for every 1 ventilated bed , there should be 4 non ventilated bed)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One basic mechanical ventilation devices	0	1	1	0	0	0	0	0	1	0	1	1	1
M3	Two devices for non – invassive ventilation (can be with above devices in M2 or separate)	0	1	1	0	0	0	0	0	1				1
M4	Every bed should have the space of 100 sq.ft.(this is inclusive of 50 sq. ft of the ancillary areas	1	1	1	1	1	0	1	1	0	1	1	1	1
M5	A separate marked area/room for expression of milk and breastfeeding	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Hospital must have a room for providing separate stay facility for all mothers babies within units / hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M7	Are there designated areas for clean utility and dirty utility	1	1	0	1	0	1	0	1	0	1	1	1	1
M8	Adequate measure for maintaining the ambient temperature of the baby care area , like use of area conditioning (hot climate) and of room warmers (cold climate)to maintain the temperature between the 26-28 degree Celsius range	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Availability of compressed air facility	1	1	1	1	1	1	1	1	1	0	1	1	1
M10	Availability of oxygen facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Availability of suction facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Well illuminated but adjustable day and night lighting .cool white	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	Reinforced light of 1000-1500 lux shadow free illumination for examination	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Availability of continuous water supply round the clock	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	There should be at least 4-6 sockets /beds of appropriate amperage as required by level 2A & 2B beds in the unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Blood bank /storage unit with component theraphy 24*7 services in the hospital /conveniently outsourced	1	1	1	1	1	0	1	1	1	1	1	1	1
M17	Uninterrupted availability of power supply through a generator / ups etc	1	1	1	1	1	1	1	1	1	1	1	1	1
E	ESSENTIAL													
E1	FACILITY of dimming of general lighting in the NICU for development care	0	1	1	1	1	1	1	1	1	1	0	0	1
E2	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	0	1	0	0	0	0	1	0	0	1	1	1	1
E3	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	0	1	1	0	0	0	0	0	1	0	0	0	0
E4	There should be provision for contingency space/ room for shifting the unit in case of temporary closure of the unit due to epidemics	0	0	0	1	1	1	0	1	1	1	1	1	1
	TOTAL SCORE	14	20	18	17	16	15	16	17	18	17	18	18	20
	EQUIPMENTS													
M	MANDATORY													
M1	ONE STETHOSCOPE with each neonatal bed	1	1	1	1	0	0	1	1	1	1	0	0	1
M2	All warmer (equivalent to the neonatal bed) should have temperature sensing with servo control	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	At least two electronic weighing machine with minimum 5 g sensitivity	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	One pulse – oximeter for every two level 2-A beds one pulse – oximeter for every level 2B bed	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	One multi- para monitor for every two level 2B bed	0	1	1	1	1	1	1	1	1	1	1	0	1
M6	A portable x- ray machine (in unit /in house) available round the clock	0	1	1	1	1	1	1	1	1	1	1	0	1
M7	Acid blood gas analysis machine within unit or hospital premises	0	0	1	0	1	1	1	1	1	1	1	0	1
M8	At least 2 gulcometer in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced	1	1	1	1	1	1	1	1	1	1	1	0	1
M10	Phototheraphy machine one for each 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Two infusion pumps for each level 2B beds and one for every level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Resuscitation equipment with all sizes of blades and mask , at least 4 such sets for each 12 level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	The following equipments should also be present in the unit: Open care system : radiant warmer , fixed height , with trolley ,drawers , oxygen humidifier	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Phototherapy unit , single head ,high intensity	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	Resuscitator , hand- operated, neonate, 250 ml	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Resuscitator , hand- operated, neonate, 500 ml	0	1	1	1	1	1	1	1	1	1	1	1	1
M17	Laryngoscope set, neonate	1	1	1	1	1	1	1	1	1	1	1	1	1
M18	Pump, suction , portable , 220 v and /or pump , suction , foot operated	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Surgical instruments (suture/ SET)	0	1	0	0	0	0	0	0	1	0	1	1	1
M20	Syringe pump ,10, 20, 50 ml , single phase	1	1	1	1	1	1	1	1	1	1	1	1	1
M21	Oxygen hood ,S and M , set of 3 each , including connecting tubes	1	1	1	1	1	1	1	1	1	1	1	1	1
M22	Thermometer, clinical ,digital, 32-43 C	1	1	1	1	1	1	1	1	1	1	1	1	1
M23	Scale, baby, electronic 10kg, 5 kg	1	1	1	1	1	1	1	1	1	1	1	1	1
M24	Pulse oximeter, bedside, neonatal	1	1	1	1	1	1	1	1	1	1	1	1	1
M25	Sphygmomanometer, neonate electronic	1	1	1	1	1	1	1	1	1	1	1	1	1
M26	Light for examination , (mobile) 220w-12 v	1	1	1	1	1	1	1	1	1	1	1	1	1
M27	Hub cutter, syringe	1	1	1	1	1	1	1	1	1	1	1	1	1
M28	Tape, measure, vinyl-coated, 1.5 m.	1	1	1	1	1	1	1	1	1	1	1	1	1
M29	Basin, kidney, stainless steel , 825 ml	1	1	1	1	1	0	0	1	1	1	1	1	1
M30	Tray, dressing, 300*200*30mm	1	1	1	1	1	1	1	1	1	1	1	1	1
M31	Stand, infusion, double hook ,on castors	0	1	1	1	1	1	1	1	1	1	1	1	1
M32	Infantometer , plexi 3 1/2ft/105 cm	1	1	1	1	1	1	1	1	1	1	0	1	1
M33	Washing machine with dryer with AMC for maintenance	1	0	0	1	0	1	1	1	1	1	1	1	1
M34	Gowns for staff and mothers	1	1	0	0	1	0	1	0	1	1	1	N.F.	1
M35	Washable slippers	1	1	1	1	1	1	1	1	1	1	1	1	1
M36	Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor	1	1	1	1	0	1	1	0	1	0	0	0	1
M37	Gulcometer with dextrostix	1	1	1	1	1	1	1	1	1	1	1	1	1
M38	Generator of appropriate load bearing capacity with MOU for maintenance & logbook for operation	1	1	1	1	1	1	1	1	1	1	1	1	1
M39	Refrigerator	1	1	0	1	1	1	1	1	1	1	1	1	1
M40	Voltage servo – stabilizer (three phase) 25-50 KVA	1	1	1	1	1	1	1	1	1	1	1	1	1
M41	Spot lamps	1	1	1	1	1	1	1	1	1	1	1	1	1
M42	Wall clock with second hand	1	1	1	0	1	1	0	0	1	1	1	1	1
E	ESSENTIAL													
E1	STERILE fluid preparation area with laminar flow station	0	0	1	1	1	1	1	1	1	0	0	1	0
E2	T-piece resuscitator in unit	o	1	0	0	0	0	0	0	1	0	1	1	1
E3	Cold light source for detection of pneumothorax	o	0	0	1	0	0	1	0	1	0	0	0	0
E4	2D ECHO facility on call	0	1	0	0	0	0	0	0	1	0	0	0	0
E5	Invasive BP monitoring for ventilated babies	0	1	0	0	0	0	0	0	0	0	1	0	1
E6	Flux meter	0	1	1	1	1	1	1	0	1	0	0	0	1
	TOTAL SCORE	36	44	40	41	40	40	42	39	47	40	41	37	45
	HUMAN RESOURCES													
M	MANDATORY													
M1	ONE FULL time in charge of unit should be MD/DNB/DCH 3/3/5 years experience in neonatology after post-graduation (on call)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)(non-rotational basis	1	1	1	0	0	1	0	1	1	0	1	0	1
M3	One resident doctor (post MBBS) for the unit in each shift	0	1	1	1	0	0	0	0	1	0	1	0	1
M4	One nursing In charge – who should have at least 1 year experience of working in a neonatal unit on a non rotational basis	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	There should be at least one nurse /shift /level 2B bed , who is privileged for level 2B care	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M7	At least one cleaner /helper should be present per shift	1	1	1	1	0	1	1	1	1	0	1	0	1
M8	ROP Screening (in house)	0	0	1	1	0	0	0	0	1	0	1	1	1
E	ESSENTIAL													
E1	An attached ophthalmologist for ROP screening	0	0	1	1	0	0	0	0	0	0	1	1	0
E2	ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)	0	0	0	0	0	0	0	0	0	0	0	0	0
E3	Lactation counselor (in 9 am – 4 pm shift) for difficult case (who can be shared with maternal unit, if present with in the hospital)	0	1	0	1	1	1	1	1	1	1	1	1	1
E4	Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)	0	1	0	0	1	0	0	0	1	0	0	0	1
E5	Nursing staff trained in the developmental supportive care (certification & demonstration for same can be asked by assessor during assessment	1	1	1	1	1	1	1	1	1	1	1	0	1
E6	Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)	0	1	0	0	0	0	0	1	1	0	1	0	1
	Total score	7	11	10	10	7	8	7	9	12	6	12	6	12
	PROTOCOL & PROCESS													

M	MANDATORY													
M1	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative	1	0	0	0	1	1	1	1	1	1	1	0	1
M2	Hospital must have a policy for providing separate stay facility for all mothers of 2000 gms with in units /hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M3	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M4	A defined process for communication of newborns condition regularly to the parents/ relatives , at least once a day	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	A defined protocol / process for conducting grievance counseling of the parents and family by the doctor in case of newborn death	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed	1	0	0	0	1	1	1	0	1	1	0	1	1
M7	Admission and discharge policy defined and displayed	1	0	0	0	0	0	1	0	1	1	1	1	0
M8	Is there a protocol for identifying babies (along with details of their mother) admitted in the unit ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Protocol for level 2 care (CPG Guideline) /FBNC or Equivalent should be retained & followed	1	1	1	0	1	1	1	1	1	1	1	1	1
M10	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated	0	1	0	0	0	1	1	1	1	1	1	1	1
M11	Protocol of orientation of new staff and refresher course (like CME) for existing staff	1	1	1	0	1	0	0	0	1	1	1	1	1
M12	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused	1	1	0	1	0	0	0	1	1	0	1	0	0
M13	A separate follow –up clinic for the high risk NICU graduates	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Protocol to screen all high risk babies for ROP	0	0	1	0	0	0	0	0	1	0	1	0	0
M15	Protocol for universal hearing screen of all babies prior to discharge	0	0	1	0	0	0	0	0	1	0	1	1	1
M16	Availability of written protocols manual for FBNC in the unit	1	0	0	1	1	0	0	0	1	1	1	1	0
M17	Written instruction for trouble shooting of individual equipment	1	0	0	0	0	1	1	1	1	1	1	1	1
M18	Proper formats for communication & counseling of parents, consent forms , for vital signs	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Transport protocol , both to and from higher and lower level	1	1	1	1	1	1	1	1	1	1	1	1	1
M20	Proper documentation on incident reporting and closure of loop	1	1	1	0	1	1	1	1	1	1	1	1	1
E	ESSENTIAL										1			
E1	Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES	0	1	0	0	0	0	0	0	0	0	0	0	0
	TOTAL SCORE ...	16	14	13	10	14	14	15	14	20	18	19	16	16
	FACILITIES FOR THERMOREGULATION													
M	MANDATORY													
M1	Adequate number of functional room thermometers (at least one for each baby care room)	0	1	1	1	1	1	1	1	1	1	1	1	1
M2	Servo system of all warmers is working (assessor can ask one of staff to demonstrate it)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Adequate number of digital thermometers / alternate device to monitor for severe hypothermia	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	A log book for KMC to be maintained in unit (with documentation of mothers &baby details)	1	0	1	1	1	1	1	0	1	1	1	0	0
M5	A log book with daily shift –wise recording of temperature of NICU is maintained	o	0	0	0	1	0	0	0	0	0	0	0	0
E	ESSENTIAL													
E1	SKIN to skin contact immediately after birth practiced (in routine care)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Transcutaneous billirubinometer	0	1	0	0	0	1	1	1	1	1	1	1	0
TOTAL SCORE		**4**	**5**	**5**	**5**	**6**	**6**	**6**	**5**	**6**	**6**	**6**	**5**	4
	DRUGS, FLUIDS,AND NUTRITION													
M	MANDATORY													
M1	GROWTH chart used for day to day monitoring	1	1	0	1	0	0	1	0	1	1	1	0	1
M2	Separate containers with lids for storage of the EBM being used	0	1	0	1	1	1	1	0	1	1	1	1	1
M3	A separate emergency tray for every 4 babies	0	1	0	0	1	1	1	1	1	0	0	0	0
M4	All fluid administration by infusion pumps	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Availability of a refrigerator exclusively for storing feeds/vaccines and drugs in baby care area	1	1	1	1	1	1	1	1	1	1	1	0	1
E	ESSENTIAL													
E1	PROTOCOL for partial parenteral nutrition defined and followed	0	1	0	0	0	0	1	1	1	0	1	0	1
E2	Use of scientifically designed breast pumps (electronic /manual)	0	1	0	1	0	1	0	0	1	1	1	0	1
	TOTAL SCORE	**3**	**7**	**2**	**5**	**4**	**5**	**6**	**4**	**7**	**5**	**6**	**1**	6
	FACILITIES FOR THERMOREGULATION LR													
M	MANDATORY													
M1	AVAILABILITY of a wall clock with seconds hand in at all birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M2	Availability of functional radiant warmer (newborn care corner) at all Birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M3	Availability of a functioning pressure controlled suction machine	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M4	A separate set of working infant laryngoscopes with all blade seizes (00,0 & 1) with all sizes ETT (2.5,3,3.5,4)	0	1	NA	0	1	1	1	NA	1	1	1	1	1
M5	Availability of separate self – inflating resuscitation bag and well- fitting neonatal face mask (all sizes)	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M6	Display of the NRP Algorithm at all the birthing places	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M7	Staff aware of and helps mother initiate successful breastfeeding within the first hour	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M8	Availability of essential and emergency resuscitation drugs (e.g adrenaline, normal saline, etc)that is replenished on daily basis	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M9	Availability of oxygen (central or from cylinder) with a flow meter	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M10	Availability of umbilical vein cannulation sets to be used during resuscitation	0	1	NA	0	0	0	0	NA	1	0	1	0	1
M11	The record sheets of resuscitation as per the NRP guideline /CPG guideline	1	1	NA	1	1	1	1	NA	1	1	1	0	1
E	ESSENTIAL													
E1	AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender	0	1	NA	0	0	0	1	NA	1	1	1	0	1
E2	Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)	1	1	NA	0	1	0	1	NA	1	0	1	0	1
E3	Availability of the T- piece resuscitator for the preterm babies	0	1	NA	0	0	0	0	NA	1	0	1	0	0
E4	Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries	0	0	NA	0	0	0	1	NA	0	1	1	0	0
E5	The facility for administration of surfactant (drug and logistics) in birthing place	0	1	NA	1	0	1	0	NA	0	0	1	0	0
E6	A stand by CPAP machine for initiating DR-CPAP when indicated	0	1	NA	0	0	0	0	NA	0	0	1	0	1
	TOTAL SCORE	**10**	**16**		**10**	**11**	**11**	**13**		**14**	**12**	**17**	**7**	34
	INFECTION CONTROL PRACTICES													
M	MANDATORY													
M1	Availability of a dedicated wash area with gown changing area , prior to entry into the NICU	1	1	1	1	0	0	0	0	1	1	1	0	1
M2	Presence of at least one wash basin for every baby care area (room) shower tap (elbow or foot operated)	1	1	1	1	1	1	1	1	1	1	1	0	1
M3	Provisions for hand washing instructions displayed in the wash area	1	1	1	1	0	1	1	1	1	1	0	0	1
M4	Staff aware of technique of hand washing	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Is there availability of alcohol – based hand rub – one between two beds ?	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Is there a written down unit antibiotic policy ?	1	0	1	1	1	1	1	1	1	0	0	0	1
M7	Availability of adequate quantity of disinfectants , e. g • Floor (e. g . Lysol, phenol) • Surface (Bacillocid) etc • Tubes/circuits (e. g. glutaraldehyde) • Hands/baby (hand rubs, betadine, chlorhexidine) • Autoclave	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Are there written instruction / guidelines for method of equipment cleaning and disinfection	0	1	0	0	1	1	1	0	1	0	0	1	0
M9	Are there written instruction / guideline for units cleaning , disinfection routines ?	0	1	0	0	0	1	1	0	1	0	0	1	0
M10	Disinfection & cleaning practices being followed and documented properly (verify logbook)	0	1	0	1	0	0	0	0	0	1	0	0	1
M11	Does the unit follow the bio medical waste management norms as prescribed by government of India ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Is there a defined protocol for handling and disposal of soiled linen ?	1	1	1	1	1	0	0	1	1	1	1	1	1
E	ESSENTIAL													
E1	Bundles for VAP prevention	0	0	0	0	0	0	0	0	0	0	1	0	0
E2	Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)	0	1	0	0	0	0	0	0	0	0	0	0	0
E3	Infection surveillance and audit of the unit is done on regular basis	0	1	1	1	0	0	1	0	1	0	1	0	1
E4	Periodic bacteriological surveillance done of the unit by infection control committee	0	1	1	1	0	0	1	0	1	0	1	0	1
	TOTAL SCORE...	9	14	11	12	8	9	11	8	13	9	10	6	12

	LABORATORY FACILITIES (WITH unit/ hospital /out sourced [MOU for the same should be present with the unit]													
M	MANDATORY													
M1	CBC	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Serum Bilirubin(both direct and indirect)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Plasma Glucose	0	1	1	1	1	1	1	1	1	1	1	1	1
M4	Serum Urea and Creatinine	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Serum Electrolytes and Calcium	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)	1	1	1	1	1	1	0	1	1	0	1	0	1
M7	ABG analysis	0	0	1	0	0	1	0	1	1	0	0	0	1
M8	TORCHES Screen	0	1	1	0	0	0	1	0	1	0	1	0	1
M9	Coagulogram	0	0	1	0	0	0	0	0	1	0	1	0	1
E	ESSENTIAL													
E1	FACILITY FOR IEM screen including thyroid profile	0	0	1	0	0	0	1	0	0	0	0	0	0
E2	Karyotyping / RFLP Studies	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total score	5	7	10	6	6	7	7	7	9	5	8	3	9
	FACILITIES FOR THERMOREGULATION Ambulance													
M	MANDATORY													
M1	FACILITY for provision of warmth , oxygenation , suction and resuscitation kit in the ambulance	0	1	0	0	0	1	1	0	1	1	1	1	1
M2	Adequate number of ambulance drivers and / or paramedics (in – house / outsourced)	1	1	1	1	1	1	0	1	1	1	1	1	1
M3	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)	1	1	0	0	0	0	0	0	1	1	1	1	1
M4	Points for pulse oximeter and the Infusion pumps in the ambulance	1	1	1	0	0	0	1	0	1	1	1	1	1
M5	Transport incubator available with the unit for use during transport of babies	0	0	0	1	1	1	1	1	1	0	0	0	0
M6	Record of all transport (referral in & out) with	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Display of contact details of higher and lower referral linkage of the unit	0	0	0	0	0	0	0	0	0	0	0	0	1
M8	Outcome records of these referred patients/ follow-up of such patients	0	0	1	1	0	0	1	1	1	0	0	1	1
E	ESSENTIAL													
E1	Percentage of babies transported –in from lower centers (level 1 & level 2A)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Record of outcomes of such transported – in babies from lower centers	1	1	1	1	1	1	1	1	1	0	0	1	1
E3	A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU	0	0	0	0	0	0	0	0	0	0	0	0	0
E4	NEONATAL transport ventilator in the ambulance	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total score ...	6	7	6	6	5	6	7	6	9	6	6	8	9
	CASE RECORD MAINTENANCE													
M	MANDATORY													
M1	Case sheets have daily record of examination and daily orders with signature of the treating doctor	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Record of daily charting of temperature , pulse and fluid input/output in case sheets with signature (identity) of on duty nurse	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Are the verbal orders by doctors verified by them within 24 hours of giving such orders ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	Documentation of all procedures done in the unit in appropriate format	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Use of growth charts regularly in the unit especially for small babies	1	1	1	0	0	1	1	1	1	1	1	1	0
M6	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc	0	1	0	0	0	0	0	1	1	0	1	0	1
M7	Electronic/manual medical records and data sharing with NNF (these should be inclusive of m8 m11 mentioned below)	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Monthly and annual sepsis data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Monthly and annual morbidity data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M10	Monthly and annual mortality data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Monthly and annual equipment status report	1	1	1	1	1	1	1	1	1	1	1	1	1
E	ESSENTIAL													
E1	MONTHLY perinatal – neonatal meeting with documented record of such discussions	1	0	0	1	0	1	0	1	1	1	0	1	1
E2	Enrolment into a data network (multi centric)	1	1	1	1	1	1	1	1	1	1	1	1	1
E3	Structured sequential developmental follow up of discharged babies till 2 years with all records	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total score..	13	13	12	12	11	13	12	14	14	13	13	13	13
	FACILITY FOR THERMOREGULATION FCC													
M	MANDATORY													
M1	AT least one computer with printer and internet access in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Unit should have an adequately stocked library with audio –visual aids	0	0	1	1	1	1	1	1	1	1	0	0	1
E	ESSENTIAL													
E1	THE unit should be undertaking short research in community –based neonatology /neonatology	0	1	1	0	0	0	0	0	1	0	1	0	0
E2	Unit should have a community outreach programme	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL SCORES...	1	2	3	2	2	2	2	2	3	2	2	2	2
		130	172	143	145	139	146	153	135	186	167	187	146	170

	NNF ACCREDITATION PROGRAM Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B													
SECTION	ELEMENTS IN SECTION													
	SERVICES													
M	MANDATORY													
M1	Resuscitation at birth to all babies by NRP trained doctor preferably pediatrician	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	CARE of sick neonate including babies	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	CPAP ventilation (non –invasive)	0	1	1	1	1	1	1	1	1	1	1	0	1
M4	Short term basic mechanical ventilation (less then 24 hours)	0	1	1	0	0	1	0	0	1	1	1	1	1
M5	Stabilization of patients prior to referral	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Transport facility for higher level of care	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Follow-up of the high risk SNCU /NICU graduates	1	1	1	1	1	1	1	1	1	1	0	1	1
M8	The unit should be working / operational for at least 24 months before applying for accreditation	NA	NA	1	1	1	1	1	1	1	1	0	0	1
M9	Patient care load of at least 300 patients deserving admission in a level 2 unit / year	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total Mandatory Services	6	8	9	8	8	9	8	8	9	9	7	7	9
E	ESSENTIAL													
E1	SURFACTANT therapy	0	1	1	0	0	0	0	0	1	0	1	0	1
E2	Partial parenteral nutrition	0	1	1	1	1	1	1	1	1	1	1	0	1
E3	Facility for carrying out exchange transfusion	0	1	1	0	0	0	0	1	1	0	1	0	1
E4	Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)	0	1	1	0	0	0	0	0	1	1	1	0	1
	Total Essential Services	0	4	4	1	1	1	1	2	4	2	4	0	4
	INFRASTRUCTURE													
M	MANDATORY													
M1	Should have minimum 12 beds inclusive of 4 level 2-B beds .the unit may be bigger in the same proportion (for every 1 ventilated bed , there should be 4 non ventilated bed)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One basic mechanical ventilation devices	0	1	1	0	0	0	0	0	1	0	1	1	1
M3	Two devices for non – invassive ventilation (can be with above devices in M2 or separate)	0	1	1	0	0	0	0	0	1				1
M4	Every bed should have the space of 100 sq.ft.(this is inclusive of 50 sq. ft of the ancillary areas	1	1	1	1	1	0	1	1	0	1	1	1	1
M5	A separate marked area/room for expression of milk and breastfeeding	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Hospital must have a room for providing separate stay facility for all mothers babies within units / hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M7	Are there designated areas for clean utility and dirty utility	1	1	0	1	0	1	0	1	0	1	1	1	1
M8	Adequate measure for maintaining the ambient temperature of the baby care area , like use of area conditioning (hot climate) and of room warmers (cold climate)to maintain the temperature between the 26-28 degree Celsius range	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Availability of compressed air facility	1	1	1	1	1	1	1	1	1	0	1	1	1
M10	Availability of oxygen facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Availability of suction facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Well illuminated but adjustable day and night lighting .cool white	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	Reinforced light of 1000-1500 lux shadow free illumination for examination	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Availability of continuous water supply round the clock	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	There should be at least 4-6 sockets /beds of appropriate amperage as required by level 2A & 2B beds in the unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Blood bank /storage unit with component theraphy 24*7 services in the hospital /conveniently outsourced	1	1	1	1	1	0	1	1	1	1	1	1	1
M17	Uninterrupted availability of power supply through a generator / ups etc	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total Mandatory Infra	14	17	16	15	14	13	14	15	15	14	16	16	17
E	ESSENTIAL													
E1	FACILITY of dimming of general lighting in the NICU for development care	0	1	1	1	1	1	1	1	1	1	0	0	1
E2	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	0	1	0	0	0	0	1	0	0	1	1	1	1
E3	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	0	1	1	0	0	0	0	0	1	0	0	0	0
E4	There should be provision for contingency space/ room for shifting the unit in case of temporary closure of the unit due to epidemics	0	0	0	1	1	1	0	1	1	1	1	1	1
	TOTAL SCORE Essential Infra	0	3	2	2	2	2	2	2	3	3	2	2	3
	EQUIPMENTS													
M	MANDATORY													
M1	ONE STETHOSCOPE with each neonatal bed	1	1	1	1	0	0	1	1	1	1	0	0	1
M2	All warmer (equivalent to the neonatal bed) should have temperature sensing with servo control	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	At least two electronic weighing machine with minimum 5 g sensitivity	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	One pulse – oximeter for every two level 2-A beds one pulse – oximeter for every level 2B bed	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	One multi- para monitor for every two level 2B bed	0	1	1	1	1	1	1	1	1	1	1	0	1
M6	A portable x- ray machine (in unit /in house) available round the clock	0	1	1	1	1	1	1	1	1	1	1	0	1
M7	Acid blood gas analysis machine within unit or hospital premises	0	0	1	0	1	1	1	1	1	1	1	0	1
M8	At least 2 gulcometer in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced	1	1	1	1	1	1	1	1	1	1	1	0	1
M10	Phototheraphy machine one for each 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Two infusion pumps for each level 2B beds and one for every level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Resuscitation equipment with all sizes of blades and mask , at least 4 such sets for each 12 level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	The following equipments should also be present in the unit: Open care system : radiant warmer , fixed height , with trolley ,drawers , oxygen humidifier	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Phototherapy unit , single head ,high intensity	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	Resuscitator , hand- operated, neonate, 250 ml	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Resuscitator , hand- operated, neonate, 500 ml	0	1	1	1	1	1	1	1	1	1	1	1	1
M17	Laryngoscope set, neonate	1	1	1	1	1	1	1	1	1	1	1	1	1
M18	Pump, suction , portable , 220 v and /or pump , suction , foot operated	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Surgical instruments (suture/ SET)	0	1	0	0	0	0	0	0	1	0	1	1	1
M20	Syringe pump ,10, 20, 50 ml , single phase	1	1	1	1	1	1	1	1	1	1	1	1	1
M21	Oxygen hood ,S and M , set of 3 each , including connecting tubes	1	1	1	1	1	1	1	1	1	1	1	1	1
M22	Thermometer, clinical ,digital, 32-43 C	1	1	1	1	1	1	1	1	1	1	1	1	1
M23	Scale, baby, electronic 10kg, 5 kg	1	1	1	1	1	1	1	1	1	1	1	1	1
M24	Pulse oximeter, bedside, neonatal	1	1	1	1	1	1	1	1	1	1	1	1	1
M25	Sphygmomanometer, neonate electronic	1	1	1	1	1	1	1	1	1	1	1	1	1
M26	Light for examination , (mobile) 220w-12 v	1	1	1	1	1	1	1	1	1	1	1	1	1
M27	Hub cutter, syringe	1	1	1	1	1	1	1	1	1	1	1	1	1
M28	Tape, measure, vinyl-coated, 1.5 m.	1	1	1	1	1	1	1	1	1	1	1	1	1
M29	Basin, kidney, stainless steel , 825 ml	1	1	1	1	1	0	0	1	1	1	1	1	1

M30	Tray, dressing, 300*200*30mm	1	1	1	1	1	1	1	1	1	1	1	1	1
M31	Stand, infusion, double hook ,on castors	0	1	1	1	1	1	1	1	1	1	1	1	1
M32	Infantometer , plexi 3 1/2ft/105 cm	1	1	1	1	1	1	1	1	1	1	0	1	1
M33	Washing machine with dryer with AMC for maintenance	1	0	0	1	0	1	1	1	1	1	1	1	1
M34	Gowns for staff and mothers	1	1	0	0	1	0	1	0	1	1	1	N.F.	1
M35	Washable slippers	1	1	1	1	1	1	1	1	1	1	1	1	1
M36	Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor	1	1	1	1	0	1	1	0	1	0	0	0	1
M37	Gulcometer with dextrostix	1	1	1	1	1	1	1	1	1	1	1	1	1
M38	Generator of appropriate load bearing capacity with MOU for maintenance & logbook for operation	1	1	1	1	1	1	1	1	1	1	1	1	1
M39	Refrigerator	1	1	0	1	1	1	1	1	1	1	1	1	1
M40	Voltage servo – stabilizer (three phase) 25-50 KVA	1	1	1	1	1	1	1	1	1	1	1	1	1
M41	Spot lamps	1	1	1	1	1	1	1	1	1	1	1	1	1
M42	Wall clock with second hand	1	1	1	0	1	1	0	0	1	1	1	1	1
	Equipments Mandatory total	36	40	38	38	38	38	39	38	42	40	39	35	42
E	ESSENTIAL													
E1	STERILE fluid preparation area with laminar flow station	0	0	1	1	1	1	1	1	1	0	0	1	0
E2	T-piece resuscitator in unit	o	1	0	0	0	0	0	0	1	0	1	1	1
E3	Cold light source for detection of pneumothorax	o	0	0	1	0	0	1	0	1	0	0	0	0
E4	2D ECHO facility on call	0	1	0	0	0	0	0	0	1	0	0	0	0
E5	Invasive BP monitoring for ventilated babies	0	1	0	0	0	0	0	0	0	0	1	0	1
E6	Flux meter	0	1	1	1	1	1	1	0	1	0	0	0	1
	TOTAL SCORE Essential Equipments	0	4	2	3	2	2	3	1	5	0	2	2	3
	HUMAN RESOURCES													
M	MANDATORY													
M1	ONE FULL time in charge of unit should be MD/DNB/DCH 3/3/5 years experience in neonatology after post-graduation (on call)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis	1	1	1	0	0	1	0	1	1	0	1	0	1
M3	One resident doctor (post MBBS) for the unit in each shift	0	1	1	1	0	0	0	0	1	0	1	0	1
M4	One nursing In charge – who should have at least 1 year experience of working in a neonatal unit on a non rotational basis	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	There should be at least one nurse /shift /level 2B bed , who is privileged for level 2B care	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M7	At least one cleaner /helper should be present per shift	1	1	1	1	0	1	1	1	1	0	1	0	1
M8	ROP Screening (in house)	0	0	1	1	0	0	0	0	1	0	1	1	1
	Total Mandatory HR	6	7	8	7	4	6	5	6	8	4	8	4	8
E	ESSENTIAL													
E1	An attached ophthalmologist for ROP screening	0	0	1	1	0	0	0	0	0	0	1	1	0
E2	ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)	0	0	0	0	0	0	0	0	0	0	0	0	0
E3	Lactation counselor (in 9 am – 4 pm shift) for difficult case (who can be shared with maternal unit, if present with in the hospital)	0	1	0	1	1	1	1	1	1	1	1	1	1
E4	Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)	0	1	0	0	1	0	0	0	1	0	0	0	1
E5	Nursing staff trained in the developmental supportive care (certification & demonstration for same can be asked by assessor during assessment	1	1	1	1	1	1	1	1	1	1	1	0	1
E6	Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)	0	1	0	0	0	0	0	1	1	0	1	0	1
	Total score Essential HR	1	4	2	3	3	2	2	3	4	2	4	2	4
	PROTOCOL & PROCESS													
M	MANDATORY													
M1	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative	1	0	0	0	1	1	1	1	1	1	1	0	1
M2	Hospital must have a policy for providing separate stay facility for all mothers of 2000 gms with in units /hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M3	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M4	A defined process for communication of newborns condition regularly to the parents/ relatives , at least once a day	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	A defined protocol / process for conducting grievance counseling of the parents and family by the doctor in case of newborn death	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed	1	0	0	0	1	1	1	0	1	1	0	1	1
M7	Admission and discharge policy defined and displayed	1	0	0	0	0	0	1	0	1	1	1	1	0
M8	Is there a protocol for identifying babies (along with details of their mother) admitted in the unit ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Protocol for level 2 care (CPG Guideline) /FBNC or Equivalent should be retained & followed	1	1	1	0	1	1	1	1	1	1	1	1	1
M10	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated	0	1	0	0	0	1	1	1	1	1	1	1	1
M11	Protocol of orientation of new staff and refresher course (like CME) for existing staff	1	1	1	0	1	0	0	0	1	1	1	1	1
M12	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused	1	1	0	1	0	0	0	1	1	0	1	0	0
M13	A separate follow –up clinic for the high risk NICU graduates	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Protocol to screen all high risk babies for ROP	0	0	1	0	0	0	0	0	1	0	1	0	0
M15	Protocol for universal hearing screen of all babies prior to discharge	0	0	1	0	0	0	0	0	1	0	1	1	1
M16	Availability of written protocols manual for FBNC in the unit	1	0	0	1	1	0	0	0	1	1	1	1	0
M17	Written instruction for trouble shooting of individual equipment	1	0	0	0	0	1	1	1	1	1	1	1	1
M18	Proper formats for communication & counseling of parents, consent forms , for vital signs	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Transport protocol , both to and from higher and lower level	1	1	1	1	1	1	1	1	1	1	1	1	1
M20	Proper documentation on incident reporting and closure of loop	1	1	1	0	1	1	1	1	1	1	1	1	1
	Total Mandatory Protocols	16	13	13	10	14	14	15	14	20	17	19	16	16
E	ESSENTIAL										1			
E1	Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES	0	1	0	0	0	0	0	0	0	0	0	0	0
	TOTAL SCORE Essential Protocols	0	1	0	0	0	0	0	0	0	0	0	0	0
	FACILITIES FOR THERMOREGULATION													
M	MANDATORY													
M1	Adequate number of functional room thermometers (at least one for each baby care room)	0	1	1	1	1	1	1	1	1	1	1	1	1
M2	Servo system of all warmers is working (assessor can ask one of staff to demonstrate it)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Adequate number of digital thermometers / alternate device to monitor for severe hypothermia	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	A log book for KMC to be maintained in unit (with documentation of mothers &baby details)	1	0	1	1	1	1	1	0	1	1	1	0	0

M5	A log book with daily shift –wise recording of temperature of NICU is maintained	o	0	0	0	1	0	0	0	0	0	0	0	0
	Total Score Mandatory Thermo regulation SNCU	3	3	4	4	5	4	4	3	4	4	4	3	3
E1	SKIN to skin contact immediately after birth practiced (in routine care)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Transcutaneous billirubinometer	0	1	0	0	0	1	1	1	1	1	1	1	0
	Essential total Thermoregulation	**1**	**2**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**
	DRUGS, FLUIDS,AND NUTRITION													
M	MANDATORY													
M1	GROWTH chart used for day to day monitoring	1	1	0	1	0	0	1	0	1	1	1	0	1
M2	Separate containers with lids for storage of the EBM being used	0	1	0	1	1	1	1	0	1	1	1	1	1
M3	A separate emergency tray for every 4 babies	0	1	0	0	1	1	1	1	1	0	0	0	0
M4	All fluid administration by infusion pumps	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Availability of a refrigerator exclusively for storing feeds/vaccines and drugs in baby care area	1	1	1	1	1	1	1	1	1	1	1	0	1
	Total Score DRUGS, FLUIDS,AND NUTRITION	3	5	2	4	4	4	5	3	5	4	4	1	4
E1	PROTOCOL for partial parenteral nutrition defined and followed	0	1	0	0	0	0	1	1	1	0	1	0	1
E2	Use of scientifically designed breast pumps (electronic /manual)	0	1	0	1	0	1	0	0	1	1	1	0	1
	TOTAL SCORE Essential Fluids and Nutrition	**0**	**2**	**0**	**1**	**0**	**1**	**1**	**1**	**2**	**1**	**2**	**0**	**2**
	FACILITIES FOR THERMOREGULATION LR													
M	MANDATORY													
M1	AVAILABILITY of a wall clock with seconds hand in at all birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M2	Availability of functional radiant warmer (newborn care corner) at all Birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M3	Availability of a functioning pressure controlled suction machine	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M4	A separate set of working infant laryngoscopes with all blade seizes (00,0 & 1) with all sizes ETT (2.5,3,3.5,4)	0	1	NA	0	1	1	1	NA	1	1	1	1	1
M5	Availability of separate self – inflating resuscitation bag and well- fitting neonatal face mask (all sizes)	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M6	Display of the NRP Algorithm at all the birthing places	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M7	Staff aware of and helps mother initiate successful breastfeeding within the first hour	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M8	Availability of essential and emergency resuscitation drugs (e.g adrenaline, normal saline, etc)that is replenished on daily basis	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M9	Availability of oxygen (central or from cylinder) with a flow meter	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M10	Availability of umbilical vein cannulation sets to be used during resuscitation	0	1	NA	0	0	0	0	NA	1	0	1	0	1
M11	The record sheets of resuscitation as per the NRP guideline /CPG guideline	1	1	NA	1	1	1	1	NA	1	1	1	0	1
	Total Mandatory Thermoregulation in LR	9	11	0	9	10	10	10	0	11	10	11	7	11
E	ESSENTIAL													
E1	AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender	0	1	NA	0	0	0	1	NA	1	1	1	0	1
E2	Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)	1	1	NA	0	1	0	1	NA	1	0	1	0	1
E3	Availability of the T- piece resuscitator for the preterm babies	0	1	NA	0	0	0	0	NA	1	0	1	0	0
E4	Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries	0	0	NA	0	0	0	1	NA	0	1	1	0	0
E5	The facility for administration of surfactant (drug and logistics) in birthing place	0	1	NA	1	0	1	0	NA	0	0	1	0	0
E6	A stand by CPAP machine for initiating DR-CPAP when indicated	0	1	NA	0	0	0	0	NA	0	0	1	0	1
	TOTAL SCORE Thermoregulation in LR	**1**	**5**	**0**	**1**	**1**	**1**	**3**	**0**	**3**	**2**	**6**	**0**	**3**
	INFECTION CONTROL PRACTICES													
M	MANDATORY													
M1	Availability of a dedicated wash area with gown changing area , prior to entry into the NICU	1	1	1	1	0	0	0	0	1	1	1	0	1
M2	Presence of at least one wash basin for every baby care area (room) shower tap (elbow or foot operated)	1	1	1	1	1	1	1	1	1	1	1	0	1
M3	Provisions for hand washing instructions displayed in the wash area	1	1	1	1	0	1	1	1	1	1	0	0	1
M4	Staff aware of technique of hand washing	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Is there availability of alcohol – based hand rub – one between two beds ?	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Is there a written down unit antibiotic policy ?	1	0	1	1	1	1	1	1	1	0	0	0	1
M7	Availability of adequate quantity of disinfectants , e. g • Floor (e. g . Lysol, phenol) • Surface (Bacillocid) etc • Tubes/circuits (e. g. glutaraldehyde) • Hands/baby (hand rubs, betadine, chlorhexidine) • Autoclave	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Are there written instruction / guidelines for method of equipment cleaning and	0	1	0	0	1	1	1	0	1	0	0	1	0
M9	Are there written instruction / guideline for units cleaning , disinfection routines ?	0	1	0	0	0	1	1	0	1	0	0	1	0
M10	Disinfection & cleaning practices being followed and documented properly (verify logbook)	0	1	0	1	0	0	0	0	0	1	0	0	1
M11	Does the unit follow the bio medical waste management norms as prescribed by government of India ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Is there a defined protocol for handling and disposal of soiled linen ?	1	1	1	1	1	0	0	1	1	1	1	1	1
	Total Infaction control Mandatory	9	11	9	10	8	9	9	8	11	9	7	6	10
E	ESSENTIAL													
E1	Bundles for VAP prevention	0	0	0	0	0	0	0	0	0	0	1	0	0
E2	Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)	0	1	0	0	0	0	0	0	0	0	0	0	0
E3	Infection surveillance and audit of the unit is done on regular basis	0	1	1	1	0	0	1	0	1	0	1	0	1
E4	Periodic bacteriological surveillance done of the unit by infection control committee	0	1	1	1	0	0	1	0	1	0	1	0	1
	Total Infaction control Essential	0	3	2	2	0	0	2	0	2	0	3	0	2
	LABORATORY FACILITIES (WITH unit/ hospital /out sourced [MOU for the same should be present with the unit]													
M	MANDATORY													
M1	CBC	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Serum Bilirubin(both direct and indirect)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Plasma Glucose	0	1	1	1	1	1	1	1	1	1	1	1	1
M4	Serum Urea and Creatinine	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Serum Electrolytes and Calcium	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)	1	1	1	1	1	1	0	1	1	0	1	0	1
M7	ABG analysis	0	0	1	0	0	1	0	1	1	0	0	0	1
M8	TORCHES Screen	0	1	1	0	0	0	1	0	1	0	1	0	1
M9	Coagulogram	0	0	1	0	0	0	0	0	1	0	1	0	1
	Total Mandatory Laboratory facilities	5	7	9	6	6	7	6	7	9	5	8	3	9
E	ESSENTIAL													
E1	FACILITY FOR IEM screen including thyroid profile	0	0	1	0	0	0	1	0	0	0	0	0	0
E2	Karyotyping / RFLP Studies	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Laboratory facilities Essential	0	0	1	0	0	0	1	0	0	0	0	0	0

	FACILITIES FOR THERMOREGULATION Ambulance													
M	MANDATORY													
M1	FACILITY for provision of warmth , oxygenation , suction and resuscitation kit in the ambulance	0	1	0	0	0	1	1	0	1	1	1	1	1
M2	Adequate number of ambulance drivers and / or paramedics (in – house / outsourced)	1	1	1	1	1	1	0	1	1	1	1	1	1
M3	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)	1	1	0	0	0	0	0	0	1	1	1	1	1
M4	Points for pulse oximeter and the Infusion pumps in the ambulance	1	1	1	0	0	0	1	0	1	1	1	1	1
M5	Transport incubator available with the unit for use during transport of babies	0	0	0	1	1	1	1	1	1	0	0	0	0
M6	Record of all transport (referral in & out) with	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Display of contact details of higher and lower referral linkage of the unit	0	0	0	0	0	0	0	0	0	0	0	0	1
M8	Outcome records of these referred patients/ follow-up of such patients	0	0	1	1	0	0	1	1	1	0	0	1	1
	Total Mandatory Facilities of Thermoregulation Ambulance	4	5	4	4	3	4	5	4	7	5	5	6	7
E	ESSENTIAL													
E1	Percentage of babies transported –in from lower centers (level 1 & level 2A)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Record of outcomes of such transported – in babies from lower centers	1	1	1	1	1	1	1	1	1	0	0	1	1
E3	A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU	0	0	0	0	0	0	0	0	0	0	0	0	0
E4	NEONATAL transport ventilator in the ambulance	0	0	0	0	0	0	0	0	0	0	0	0	0
	Essential Facilities of Thermoregulation Ambulance	2	2	2	2	2	2	2	2	2	1	1	2	2
	CASE RECORD MAINTENANCE													
M	MANDATORY													
M1	Case sheets have daily record of examination and daily orders with signature of the treating doctor	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Record of daily charting of temperature , pulse and fluid input/output in case sheets with signature (identity) of on duty nurse	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Are the verbal orders by doctors verified by them within 24 hours of giving such orders ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	Documentation of all procedures done in the unit in appropriate format	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Use of growth charts regularly in the unit especially for small babies	1	1	1	0	0	1	1	1	1	1	1	1	0
M6	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc	0	1	0	0	0	0	0	1	1	0	1	0	1
M7	Electronic/manual medical records and data sharing with NNF (these should be inclusive of m8 m11 mentioned below)	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Monthly and annual sepsis data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Monthly and annual morbidity data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M10	Monthly and annual mortality data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Monthly and annual equipment status report	1	1	1	1	1	1	1	1	1	1	1	1	1
	Mandatory CASE RECORD MAINTENANCE	10	11	10	9	9	10	10	11	11	10	11	10	10
E	ESSENTIAL													
E1	MONTHLY perinatal – neonatal meeting with documented record of such discussions	1	0	0	1	0	1	0	1	1	1	0	1	1
E2	Enrolment into a data network (multi centric)	1	1	1	1	1	1	1	1	1	1	1	1	1
E3	Structured sequential developmental follow up of discharged babies till 2 years with all records	1	1	1	1	1	1	1	1	1	1	1	1	1
	Essential CASE RECORD MAINTENANCE	3	2	2	3	2	3	2	3	3	3	2	3	3
	FACILITY FOR THERMOREGULATION FCC													
M	MANDATORY													
M1	AT least one computer with printer and internet access in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Unit should have an adequately stocked library with audio –visual aids	0	0	1	1	1	1	1	1	1	1	0	0	1
	Mandatory total FACILITY FOR THERMOREGULATION FCC	1	1	2	2	2	2	2	2	2	2	1	1	2
E	ESSENTIAL													
E1	THE unit should be undertaking short research in community –based neonatology /neonatology	0	1	1	0	0	0	0	0	1	0	1	0	0
E2	Unit should have a community outreach programme	0	0	0	0	0	0	0	0	0	0	0	0	0
	Essential total FACILITY FOR THERMOREGULATION FCC	0	1	1	0	0	0	0	0	1	0	1	0	0

	NNF ACCREDITATION PROGRAM Application Form cum Assessment Toolkit & Assessor Reporting Format for LEVEL 2-B													
SECTION	ELEMENTS IN SECTION													
	SERVICES													
M	MANDATORY													
M1	Resuscitation at birth to all babies by NRP trained doctor preferably pediatrician	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	CARE of sick neonate including babies	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	CPAP ventilation (non –invasive)	0	1	1	1	1	1	1	1	1	1	1	0	1
M4	Short term basic mechanical ventilation (less then 24 hours)	0	1	1	0	0	1	0	0	1	1	1	1	1
M5	Stabilization of patients prior to referral	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Transport facility for higher level of care	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Follow-up of the high risk SNCU /NICU graduates	1	1	1	1	1	1	1	1	1	1	0	1	1
M8	The unit should be working / operational for at least 24 months before applying for accreditation	NA	NA	1	1	1	1	1	1	1	1	0	0	1
M9	Patient care load of at least 300 patients deserving admission in a level 2 unit / year	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total Mandatory Services	6	8	9	8	8	9	8	8	9	9	7	7	9
E	ESSENTIAL													
E1	SURFACTANT therapy	0	1	1	0	0	0	0	0	1	0	1	0	1
E2	Partial parenteral nutrition	0	1	1	1	1	1	1	1	1	1	1	0	1
E3	Facility for carrying out exchange transfusion	0	1	1	0	0	0	0	1	1	0	1	0	1
E4	Facility for oto-acoustic emission(OAE) /BERA screening (in house/outsourced)	0	1	1	0	0	0	0	0	1	1	1	0	1
	Total Essential Services	0	4	4	1	1	1	1	2	4	2	4	0	4
	INFRASTRUCTURE													
M	MANDATORY													
M1	Should have minimum 12 beds inclusive of 4 level 2-B beds .the unit may be bigger in the same proportion (for every 1 ventilated bed , there should be 4 non ventilated bed)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One basic mechanical ventilation devices	0	1	1	0	0	0	0	0	1	0	1	1	1
M3	Two devices for non – invassive ventilation (can be with above devices in M2 or separate)	0	1	1	0	0	0	0	0	1				1
M4	Every bed should have the space of 100 sq.ft.(this is inclusive of 50 sq. ft of the ancillary areas	1	1	1	1	1	0	1	1	0	1	1	1	1
M5	A separate marked area/room for expression of milk and breastfeeding	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Hospital must have a room for providing separate stay facility for all mothers babies within units / hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M7	Are there designated areas for clean utility and dirty utility	1	1	0	1	0	1	0	1	0	1	1	1	1
M8	Adequate measure for maintaining the ambient temperature of the baby care area , like use of area conditioning (hot climate) and of room warmers (cold climate)to maintain the temperature between the 26-28 degree Celsius range	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Availability of compressed air facility	1	1	1	1	1	1	1	1	1	0	1	1	1
M10	Availability of oxygen facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Availability of suction facility	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Well illuminated but adjustable day and night lighting .cool white	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	Reinforced light of 1000-1500 lux shadow free illumination for examination	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Availability of continuous water supply round the clock	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	There should be at least 4-6 sockets /beds of appropriate amperage as required by level 2A & 2B beds in the unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Blood bank /storage unit with component theraphy 24*7 services in the hospital /conveniently outsourced	1	1	1	1	1	0	1	1	1	1	1	1	1
M17	Uninterrupted availability of power supply through a generator / ups etc	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total Mandatory Infra	14	17	16	15	14	13	14	15	15	14	16	16	17
E	ESSENTIAL													
E1	FACILITY of dimming of general lighting in the NICU for development care	0	1	1	1	1	1	1	1	1	1	0	0	1
E2	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	0	1	0	0	0	0	1	0	0	1	1	1	1
E3	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	0	1	1	0	0	0	0	0	1	0	0	0	0
E4	There should be provision for contingency space/ room for shifting the unit in case of temporary closure of the unit due to epidemics	0	0	0	1	1	1	0	1	1	1	1	1	1
	TOTAL SCORE Essential Infra	0	3	2	2	2	2	2	2	3	3	2	2	3
	EQUIPMENTS													
M	MANDATORY													
M1	ONE STETHOSCOPE with each neonatal bed	1	1	1	1	0	0	1	1	1	1	0	0	1
M2	All warmer (equivalent to the neonatal bed) should have temperature sensing with servo control	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	At least two electronic weighing machine with minimum 5 g sensitivity	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	One pulse – oximeter for every two level 2-A beds one pulse – oximeter for every level 2B bed	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	One multi- para monitor for every two level 2B bed	0	1	1	1	1	1	1	1	1	1	1	0	1
M6	A portable x- ray machine (in unit /in house) available round the clock	0	1	1	1	1	1	1	1	1	1	1	0	1
M7	Acid blood gas analysis machine within unit or hospital premises	0	0	1	0	1	1	1	1	1	1	1	0	1
M8	At least 2 gulcometer in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	USG/CT/MRI facility that is present either with in the hospital /conveniently outsourced	1	1	1	1	1	1	1	1	1	1	1	0	1
M10	Phototheraphy machine one for each 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Two infusion pumps for each level 2B beds and one for every level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Resuscitation equipment with all sizes of blades and mask , at least 4 such sets for each 12 level 2 beds	1	1	1	1	1	1	1	1	1	1	1	1	1
M13	The following equipments should also be present in the unit: Open care system : radiant warmer , fixed height , with trolley ,drawers , oxygen humidifier	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Phototherapy unit , single head ,high intensity	1	1	1	1	1	1	1	1	1	1	1	1	1
M15	Resuscitator , hand- operated, neonate, 250 ml	1	1	1	1	1	1	1	1	1	1	1	1	1
M16	Resuscitator , hand- operated, neonate, 500 ml	0	1	1	1	1	1	1	1	1	1	1	1	1
M17	Laryngoscope set, neonate	1	1	1	1	1	1	1	1	1	1	1	1	1
M18	Pump, suction , portable , 220 v and /or pump , suction , foot operated	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Surgical instruments (suture/ SET)	0	1	0	0	0	0	0	0	1	0	1	1	1
M20	Syringe pump ,10, 20, 50 ml , single phase	1	1	1	1	1	1	1	1	1	1	1	1	1
M21	Oxygen hood ,S and M , set of 3 each , including connecting tubes	1	1	1	1	1	1	1	1	1	1	1	1	1
M22	Thermometer, clinical ,digital, 32-43 C	1	1	1	1	1	1	1	1	1	1	1	1	1
M23	Scale, baby, electronic 10kg, 5 kg	1	1	1	1	1	1	1	1	1	1	1	1	1
M24	Pulse oximeter, bedside, neonatal	1	1	1	1	1	1	1	1	1	1	1	1	1
M25	Sphygmomanometer, neonate electronic	1	1	1	1	1	1	1	1	1	1	1	1	1
M26	Light for examination , (mobile) 220w-12 v	1	1	1	1	1	1	1	1	1	1	1	1	1
M27	Hub cutter, syringe	1	1	1	1	1	1	1	1	1	1	1	1	1
M28	Tape, measure, vinyl-coated, 1.5 m.	1	1	1	1	1	1	1	1	1	1	1	1	1
M29	Basin, kidney, stainless steel , 825 ml	1	1	1	1	1	0	0	1	1	1	1	1	1

M30	Tray, dressing, 300*200*30mm	1	1	1	1	1	1	1	1	1	1	1	1	1
M31	Stand, infusion, double hook ,on castors	0	1	1	1	1	1	1	1	1	1	1	1	1
M32	Infantometer , plexi 3 1/2ft/105 cm	1	1	1	1	1	1	1	1	1	1	0	1	1
M33	Washing machine with dryer with AMC for maintenance	1	0	0	1	0	1	1	1	1	1	1	1	1
M34	Gowns for staff and mothers	1	1	0	0	1	0	1	0	1	1	1	N.F.	1
M35	Washable slippers	1	1	1	1	1	1	1	1	1	1	1	1	1
M36	Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor	1	1	1	1	0	1	1	0	1	0	0	0	1
M37	Gulcometer with dextrostix	1	1	1	1	1	1	1	1	1	1	1	1	1
M38	Generator of appropriate load bearing capacity with MOU for maintenance & logbook for operation	1	1	1	1	1	1	1	1	1	1	1	1	1
M39	Refrigerator	1	1	0	1	1	1	1	1	1	1	1	1	1
M40	Voltage servo – stabilizer (three phase) 25-50 KVA	1	1	1	1	1	1	1	1	1	1	1	1	1
M41	Spot lamps	1	1	1	1	1	1	1	1	1	1	1	1	1
M42	Wall clock with second hand	1	1	1	0	1	1	0	0	1	1	1	1	1
	Equipments Mandatory total	36	40	38	38	38	38	39	38	42	40	39	35	42
E	ESSENTIAL													
E1	STERILE fluid preparation area with laminar flow station	0	0	1	1	1	1	1	1	1	0	0	1	0
E2	T-piece resuscitator in unit	o	1	0	0	0	0	0	0	1	0	1	1	1
E3	Cold light source for detection of pneumothorax	o	0	0	1	0	0	1	0	1	0	0	0	0
E4	2D ECHO facility on call	0	1	0	0	0	0	0	0	1	0	0	0	0
E5	Invasive BP monitoring for ventilated babies	0	1	0	0	0	0	0	0	0	0	1	0	1
E6	Flux meter	0	1	1	1	1	1	1	0	1	0	0	0	1
	TOTAL SCORE Essential Equipments	0	4	2	3	2	2	3	1	5	0	2	2	3
	HUMAN RESOURCES													
M	MANDATORY													
M1	ONE FULL time in charge of unit should be MD/DNB/DCH 3/3/5 years experience in neonatology after post-graduation (on call)	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis	1	1	1	0	0	1	0	1	1	0	1	0	1
M3	One resident doctor (post MBBS) for the unit in each shift	0	1	1	1	0	0	0	0	1	0	1	0	1
M4	One nursing In charge – who should have at least 1 year experience of working in a neonatal unit on a non rotational basis	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	There should be at least one nurse /shift /level 2B bed , who is privileged for level 2B care	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M7	At least one cleaner /helper should be present per shift	1	1	1	1	0	1	1	1	1	0	1	0	1
M8	ROP Screening (in house)	0	0	1	1	0	0	0	0	1	0	1	1	1
	Total Mandatory HR	6	7	8	7	4	6	5	6	8	4	8	4	8
E	ESSENTIAL													
E1	An attached ophthalmologist for ROP screening	0	0	1	1	0	0	0	0	0	0	1	1	0
E2	ICU Technician for the unit 1 per shift with 20 % reserve (minimum 4)	0	0	0	0	0	0	0	0	0	0	0	0	0
E3	Lactation counselor (in 9 am – 4 pm shift) for difficult case (who can be shared with maternal unit, if present with in the hospital)	0	1	0	1	1	1	1	1	1	1	1	1	1
E4	Respiratory therapist : 1 per shift with 20% reserve (i.e a 12 bed unit should be minimum 4)	0	1	0	0	1	0	0	0	1	0	0	0	1
E5	Nursing staff trained in the developmental supportive care (certification & demonstration for same can be asked by assessor during assessment	1	1	1	1	1	1	1	1	1	1	1	0	1
E6	Security personnel 1 per shift with 20 % reserve (i. e a 12-bed unit should have minimum 4)	0	1	0	0	0	0	0	1	1	0	1	0	1
	Total score Essential HR	1	4	2	3	3	2	2	3	4	2	4	2	4
	PROTOCOL & PROCESS													
M	MANDATORY													
M1	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative	1	0	0	0	1	1	1	1	1	1	1	0	1
M2	Hospital must have a policy for providing separate stay facility for all mothers of 2000 gms with in units /hospitals premises	0	1	1	1	1	1	1	1	1	1	1	1	1
M3	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	1	1	1	1	1	1	1	1	1	1	1	0	1
M4	A defined process for communication of newborns condition regularly to the parents/ relatives , at least once a day	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	A defined protocol / process for conducting grievance counseling of the parents and family by the doctor in case of newborn death	1	1	1	1	1	1	1	1	1	1	1	1	1
M6	Protocol for adequate and effective warming for high risk babies during special care/ procedure displayed in the unit and followed	1	0	0	0	1	1	1	0	1	1	0	1	1
M7	Admission and discharge policy defined and displayed	1	0	0	0	0	0	1	0	1	1	1	1	0
M8	Is there a protocol for identifying babies (along with details of their mother) admitted in the unit ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Protocol for level 2 care (CPG Guideline) /FBNC or Equivalent should be retained & followed	1	1	1	0	1	1	1	1	1	1	1	1	1
M10	A defined policy on equipment maintenance (including the AMC /CMC) where ever indicated	0	1	0	0	0	1	1	1	1	1	1	1	1
M11	Protocol of orientation of new staff and refresher course (like CME) for existing staff	1	1	1	0	1	0	0	0	1	1	1	1	1
M12	Sepsis screen & blood culture be done on babies prior to starting antibiotics / are labs equipped & focused	1	1	0	1	0	0	0	1	1	0	1	0	0
M13	A separate follow –up clinic for the high risk NICU graduates	1	1	1	1	1	1	1	1	1	1	1	1	1
M14	Protocol to screen all high risk babies for ROP	0	0	1	0	0	0	0	0	1	0	1	0	0
M15	Protocol for universal hearing screen of all babies prior to discharge	0	0	1	0	0	0	0	0	1	0	1	1	1
M16	Availability of written protocols manual for FBNC in the unit	1	0	0	1	1	0	0	0	1	1	1	1	0
M17	Written instruction for trouble shooting of individual equipment	1	0	0	0	0	1	1	1	1	1	1	1	1
M18	Proper formats for communication & counseling of parents, consent forms , for vital signs	1	1	1	1	1	1	1	1	1	1	1	1	1
M19	Transport protocol , both to and from higher and lower level	1	1	1	1	1	1	1	1	1	1	1	1	1
M20	Proper documentation on incident reporting and closure of loop	1	1	1	0	1	1	1	1	1	1	1	1	1
	Total Mandatory Protocols	16	13	13	10	14	14	15	14	20	17	19	16	16
E	ESSENTIAL										1			
E1	Protocol for metabolic screen (e. g TSH,PKU,GALACTOSEMIA ETC) ON ALL BABIES	0	1	0	0	0	0	0	0	0	0	0	0	0
	TOTAL SCORE Essential Protocols	0	1	0	0	0	0	0	0	0	0	0	0	0
	FACILITIES FOR THERMOREGULATION													
M	MANDATORY													
M1	Adequate number of functional room thermometers (at least one for each baby care room)	0	1	1	1	1	1	1	1	1	1	1	1	1
M2	Servo system of all warmers is working (assessor can ask one of staff to demonstrate it)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Adequate number of digital thermometers / alternate device to monitor for severe hypothermia	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	A log book for KMC to be maintained in unit (with documentation of mothers &baby details)	1	0	1	1	1	1	1	0	1	1	1	0	0

M5	A log book with daily shift –wise recording of temperature of NICU is maintained	o	0	0	0	1	0	0	0	0	0	0	0	0
	Total Score Mandatory Thermo regulation SNCU	3	3	4	4	5	4	4	3	4	4	4	3	3
E1	SKIN to skin contact immediately after birth practiced (in routine care)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Transcutaneous billirubinometer	0	1	0	0	0	1	1	1	1	1	1	1	0
	Essential total Thermoregulation	**1**	**2**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**
	DRUGS, FLUIDS,AND NUTRITION													
M	MANDATORY													
M1	GROWTH chart used for day to day monitoring	1	1	0	1	0	0	1	0	1	1	1	0	1
M2	Separate containers with lids for storage of the EBM being used	0	1	0	1	1	1	1	0	1	1	1	1	1
M3	A separate emergency tray for every 4 babies	0	1	0	0	1	1	1	1	1	0	0	0	0
M4	All fluid administration by infusion pumps	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Availability of a refrigerator exclusively for storing feeds/vaccines and drugs in baby care area	1	1	1	1	1	1	1	1	1	1	1	0	1
	Total Score DRUGS, FLUIDS,AND NUTRITION	3	5	2	4	4	4	5	3	5	4	4	1	4
E1	PROTOCOL for partial parenteral nutrition defined and followed	0	1	0	0	0	0	1	1	1	0	1	0	1
E2	Use of scientifically designed breast pumps (electronic /manual)	0	1	0	1	0	1	0	0	1	1	1	0	1
	TOTAL SCORE Essential Fluids and Nutrition	**0**	**2**	**0**	**1**	**0**	**1**	**1**	**1**	**2**	**1**	**2**	**0**	**2**
	FACILITIES FOR THERMOREGULATION LR													
M	MANDATORY													
M1	AVAILABILITY of a wall clock with seconds hand in at all birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M2	Availability of functional radiant warmer (newborn care corner) at all Birthing areas	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M3	Availability of a functioning pressure controlled suction machine	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M4	A separate set of working infant laryngoscopes with all blade seizes (00,0 & 1) with all sizes ETT (2.5,3,3.5,4)	0	1	NA	0	1	1	1	NA	1	1	1	1	1
M5	Availability of separate self – inflating resuscitation bag and well- fitting neonatal face mask (all sizes)	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M6	Display of the NRP Algorithm at all the birthing places	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M7	Staff aware of and helps mother initiate successful breastfeeding within the first hour	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M8	Availability of essential and emergency resuscitation drugs (e.g adrenaline, normal saline, etc)that is replenished on daily basis	1	1	NA	1	1	1	1	NA	1	1	1	0	1
M9	Availability of oxygen (central or from cylinder) with a flow meter	1	1	NA	1	1	1	1	NA	1	1	1	1	1
M10	Availability of umbilical vein cannulation sets to be used during resuscitation	0	1	NA	0	0	0	0	NA	1	0	1	0	1
M11	The record sheets of resuscitation as per the NRP guideline /CPG guideline	1	1	NA	1	1	1	1	NA	1	1	1	0	1
	Total Mandatory Thermoregulation in LR	9	11	0	9	10	10	10	0	11	10	11	7	11
E														
E1	AVAILABILITY of facility for blending for graded oxygen delivery (at least differential flow blending)/blender	0	1	NA	0	0	0	1	NA	1	1	1	0	1
E2	Availability of the pulse oximeter for monitoring of the baby (preferably SET technology)	1	1	NA	0	1	0	1	NA	1	0	1	0	1
E3	Availability of the T- piece resuscitator for the preterm babies	0	1	NA	0	0	0	0	NA	1	0	1	0	0
E4	Availability of the heater pads/ re-sealable plastic (zip pouch) to be used for preterm deliveries	0	0	NA	0	0	0	1	NA	0	1	1	0	0
E5	The facility for administration of surfactant (drug and logistics) in birthing place	0	1	NA	1	0	1	0	NA	0	0	1	0	0
E6	A stand by CPAP machine for initiating DR-CPAP when indicated	0	1	NA	0	0	0	0	NA	0	0	1	0	1
	total essential thermoregulation LR score	**1**	**5**	**0**	**1**	**1**	**1**	**3**	**0**	**3**	**2**	**6**	**0**	**3**
	INFECTION CONTROL PRACTICES													
M	MANDATORY													
M1	Availability of a dedicated wash area with gown changing area , prior to entry into the NICU	1	1	1	1	0	0	0	0	1	1	1	0	1
M2	Presence of at least one wash basin for every baby care area (room) shower tap (elbow or foot operated)	1	1	1	1	1	1	1	1	1	1	1	0	1
M3	Provisions for hand washing instructions displayed in the wash area	1	1	1	1	0	1	1	1	1	1	0	0	1
M4	Staff aware of technique of hand washing	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Is there availability of alcohol – based hand rub – one between two beds ?	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Is there a written down unit antibiotic policy ?	1	0	1	1	1	1	1	1	1	0	0	0	1
M7	Availability of adequate quantity of disinfectants , e. g • Floor (e. g . Lysol, phenol) • Surface (Bacillocid) etc • Tubes/circuits (e. g. glutaraldehyde) • Hands/baby (hand rubs, betadine, chlorhexidine) • Autoclave	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Are there written instruction / guidelines for method of equipment cleaning and	0	1	0	0	1	1	1	0	1	0	0	1	0
M9	Are there written instruction / guideline for units cleaning , disinfection routines ?	0	1	0	0	0	1	1	0	1	0	0	1	0
M10	Disinfection & cleaning practices being followed and documented properly (verify logbook)	0	1	0	1	0	0	0	0	0	1	0	0	1
M11	Does the unit follow the bio medical waste management norms as prescribed by government of India ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M12	Is there a defined protocol for handling and disposal of soiled linen ?	1	1	1	1	1	0	0	1	1	1	1	1	1
	Total Infaction control Mandatory	9	11	9	10	8	9	9	8	11	9	7	6	10
E	ESSENTIAL													
E1	Bundles for VAP prevention	0	0	0	0	0	0	0	0	0	0	1	0	0
E2	Provision for insertion of PICC lines (only staff trained for such procedures should put these lines)	0	1	0	0	0	0	0	0	0	0	0	0	0
E3	Infection surveillance and audit of the unit is done on regular basis	0	1	1	1	0	0	1	0	1	0	1	0	1
E4	Periodic bacteriological surveillance done of the unit by infection control committee	0	1	1	1	0	0	1	0	1	0	1	0	1
	Total Infaction control Essential	0	3	2	2	0	0	2	0	2	0	3	0	2
	LABORATORY FACILITIES (WITH unit/ hospital /out sourced [MOU for the same should be present with the unit]													
M	MANDATORY													
M1	CBC	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Serum Bilirubin(both direct and indirect)	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Plasma Glucose	0	1	1	1	1	1	1	1	1	1	1	1	1
M4	Serum Urea and Creatinine	1	1	1	1	1	1	1	1	1	1	1	0	1
M5	Serum Electrolytes and Calcium	1	1	1	1	1	1	1	1	1	1	1	0	1
M6	Microbiological lab facilities (inclusive of Blood Culture , fungal ,culture, lab CRP, etc)	1	1	1	1	1	1	0	1	1	0	1	0	1
M7	ABG analysis	0	0	1	0	0	1	0	1	1	0	0	0	1
M8	TORCHES Screen	0	1	1	0	0	0	1	0	1	0	1	0	1
M9	Coagulogram	0	0	1	0	0	0	0	0	1	0	1	0	1
	Total Mandatory Laboratory facilities	5	7	9	6	6	7	6	7	9	5	8	3	9
E	ESSENTIAL													
E1	FACILITY FOR IEM screen including thyroid profile	0	0	1	0	0	0	1	0	0	0	0	0	0
E2	Karyotyping / RFLP Studies	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Laboratory facilities Essential	0	0	1	0	0	0	1	0	0	0	0	0	0

	FACILITIES FOR THERMOREGULATION Ambulance													
M	MANDATORY													
M1	FACILITY for provision of warmth , oxygenation , suction and resuscitation kit in the ambulance	0	1	0	0	0	1	1	0	1	1	1	1	1
M2	Adequate number of ambulance drivers and / or paramedics (in – house / outsourced)	1	1	1	1	1	1	0	1	1	1	1	1	1
M3	Availability of the neonatal nursing staff or trained doctors in all transports (documentary proof)	1	1	0	0	0	0	0	0	1	1	1	1	1
M4	Points for pulse oximeter and the Infusion pumps in the ambulance	1	1	1	0	0	0	1	0	1	1	1	1	1
M5	Transport incubator available with the unit for use during transport of babies	0	0	0	1	1	1	1	1	1	0	0	0	0
M6	Record of all transport (referral in & out) with	1	1	1	1	1	1	1	1	1	1	1	1	1
M7	Display of contact details of higher and lower referral linkage of the unit	0	0	0	0	0	0	0	0	0	0	0	0	1
M8	Outcome records of these referred patients/ follow-up of such patients	0	0	1	1	0	0	1	1	1	0	0	1	1
	Total Mandatory Facilities of Thermoregulation Ambulance	4	5	4	4	3	4	5	4	7	5	5	6	7
E	ESSENTIAL													
E1	Percentage of babies transported –in from lower centers (level 1 & level 2A)	1	1	1	1	1	1	1	1	1	1	1	1	1
E2	Record of outcomes of such transported – in babies from lower centers	1	1	1	1	1	1	1	1	1	0	0	1	1
E3	A neonatal transport ambulance (minimum of the sizes of TEMPO TRAVELLER with an intensive bed akin to one in the NICU	0	0	0	0	0	0	0	0	0	0	0	0	0
E4	NEONATAL transport ventilator in the ambulance	0	0	0	0	0	0	0	0	0	0	0	0	0
	Essential Facilities of Thermoregulation Ambulance	2	2	2	2	2	2	2	2	2	1	1	2	2
	CASE RECORD MAINTENANCE													
M	MANDATORY													
M1	Case sheets have daily record of examination and daily orders with signature of the treating doctor	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Record of daily charting of temperature , pulse and fluid input/output in case sheets with signature (identity) of on duty nurse	1	1	1	1	1	1	1	1	1	1	1	1	1
M3	Are the verbal orders by doctors verified by them within 24 hours of giving such orders ?	1	1	1	1	1	1	1	1	1	1	1	1	1
M4	Documentation of all procedures done in the unit in appropriate format	1	1	1	1	1	1	1	1	1	1	1	1	1
M5	Use of growth charts regularly in the unit especially for small babies	1	1	1	0	0	1	1	1	1	1	1	1	0
M6	Use of the special charts for exchange transfusion / partial exchange transfusion /ABG ventilation etc	0	1	0	0	0	0	0	1	1	0	1	0	1
M7	Electronic/manual medical records and data sharing with NNF (these should be inclusive of m8 m11 mentioned below)	1	1	1	1	1	1	1	1	1	1	1	1	1
M8	Monthly and annual sepsis data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M9	Monthly and annual morbidity data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M10	Monthly and annual mortality data maintained	1	1	1	1	1	1	1	1	1	1	1	1	1
M11	Monthly and annual equipment status report	1	1	1	1	1	1	1	1	1	1	1	1	1
	Mandatory CASE RECORD MAINTENANCE	10	11	10	9	9	10	10	11	11	10	11	10	10
E	ESSENTIAL													
E1	MONTHLY perinatal – neonatal meeting with documented record of such discussions	1	0	0	1	0	1	0	1	1	1	0	1	1
E2	Enrolment into a data network (multi centric)	1	1	1	1	1	1	1	1	1	1	1	1	1
E3	Structured sequential developmental follow up of discharged babies till 2 years with all records	1	1	1	1	1	1	1	1	1	1	1	1	1
	Essential CASE RECORD MAINTENANCE	3	2	2	3	2	3	2	3	3	3	2	3	3
	FACILITY FOR THERMOREGULATION FCC													
M	MANDATORY													
M1	AT least one computer with printer and internet access in unit	1	1	1	1	1	1	1	1	1	1	1	1	1
M2	Unit should have an adequately stocked library with audio –visual aids	0	0	1	1	1	1	1	1	1	1	0	0	1
	Mandatory total FACILITY FOR THERMOREGULATION FCC	1	1	2	2	2	2	2	2	2	2	1	1	2
E	ESSENTIAL													
E1	THE unit should be undertaking short research in community –based neonatology /neonatology	0	1	1	0	0	0	0	0	1	0	1	0	0
E2	Unit should have a community outreach programme	0	0	0	0	0	0	0	0	0	0	0	0	0
	Essential total FACILITY FOR THERMOREGULATION FCC	0	1	1	0	0	0	0	0	1	0	1	0	0

	KISHANGAR	%	JAIPURIYA		AJMER(JLN)		TONK		S.MADHOPUR		BHARATPUR		DAUSA		ALWAR		UDAIPUR MC		BEAWAR		ZANANA AIMER		HIDAUN CITY		MAHILA JAIPUR	
SERVICES																										
Total Mandatory Services	6	67	8	89	9	100	8	89	8	89	9	100	8	89	8	89	9	100	9	100	7	78	7	78	9	100
Total Essential Services	0	0	4	100	4	100	1	25	1	25	1	25	1	25	2	50	4	100	2	50	4	100	0	0	4	100
INFRASTRUCTURE																										
Total mandatory infrastructure	14	82	17	100	16	94	15	88	14	82	13	76	14	82	15	88	15	88	14	82	16	94	16	94	17	100
Total essential infrastructure	0	0	3	75	2	50	2	50	2	50	2	50	2	50	2	50	3	75	3	75	2	50	2	50	3	75
EQUIPMENTS																										
Total mandatory equipment	36	86	40	95	38	90	38	90	38	90	38	90	39	93	38	90	42	100	40	95	39	93	35	83	42	100
Total essential equipment	0	0	4	67	2	33	3	50	2	33	2	33	3	50	1	17	5	83	0	0	2	33	2	33	3	50
HUMAN RESOURCES																										
Total Mandatory HR	6	75	7	85	8	100	7	85	4	50	6	75	5	63	6	75	8	100	4	50	8	100	4	50	8	100
Total score Essential HR	1	17	4	67	2	34	3	50	3	50	2	34	2	34	3	50	4	67	2	34	4	67	2	34	4	67
PROTOCOL AND PROCESS																										
Total mandatory protocol & process	16	80	13	65	13	65	10	50	14	70	14	70	15	75	14	70	20	100	17	85	19	95	16	80	16	80
Total essential protocol & process	0	0	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DRUGS, FLUIDS, AND NUTRITION																										
Total mandatory drugs,fluids and nutrition	3	60	5	100	2	40	4	80	4	80	4	80	5	100	3	60	5	100	4	80	4	80	1	20	4	80
Total essential drugs,fluid and nutrition	0	0	2	100	0	0	1	50	0	0	1	50	1	50	1	50	2	100	1	50	2	100	0	0	2	100
INFECTION CONTROL PRACTICES																										
Total mandatory infection control	9	75	11	92	9	75	10	83	8	67	9	75	9	75	8	67	11	92	9	75	7	58	6	50	10	83
Total essential infection control	0	0	3	75	2	50	2	50	0	0	0	0	2	50	0	0	2	50	0	0	3	75	0	0	2	50
LABORATORY FACILITIES																										
Total mandatory lab facilities	5	55	7	78	9	100	6	67	6	67	7	78	6	67	7	78	9	100	5	55	8	89	3	33	9	100
Total essential lab facilities	0	0	0	0	1	50	0	0	0	0	0	0	1	50	0	0	0	0	0	0	0	0	0	0	0	0
CASE RECORD MAINTENANCE																										
Total mandatory case record	10	91	11	100	10	91	9	82	9	82	10	91	10	91	11	100	11	100	10	91	11	100	10	91	10	91
Total essential case record	3	100	2	67	2	67	3	100	2	67	3	100	2	67	3	100	3	100	3	100	2	67	3	100	3	100
FACILITITES FOR THERMOREGULATION LR																										
Total Mandatory Thermoregulation in LR	9	82	11	100	0	0	9	82	10	91	10	91	10	91	0	0	11	100	10	91	11	100	7	64	11	100
TOTAL SCORE Thermoregulation in LR	1	17	5	83	0	0	1	17	1	17	1	17	3	50	0	0	3	50	2	33	6	100	0	0	3	50
FACILITITES FOR THERMOREGULATION AMBULANCE																										
Total mandatory thermoregulation in ambulance	4	50	5	62	4	50	4	50	3	37	4	50	5	62	4	50	7	87	5	62	5	62	6	75	7	87
Total essential thermoregulation in ambulance	2	50	2	50	2	50	2	50	2	50	2	50	2	50	2	50	2	50	1	25	1	25	2	50	2	50
FACILITIES FOR THERMOREGULATION IN SNCU																										
Total mandatory thermoregulation in SNCU	3	60	3	60	4	80	4	80	5	100	4	80	4	80	3	60	4	80	4	80	4	80	3	60	3	60
Total essential thermoregulation in SNCU	1	50	2	100	1	50	1	50	1	50	2	100	2	100	2	100	2	100	2	100	2	100	2	100	1	50
MISCELLANEOUS																										
total mandatory misc	1	50	1	50	2	100	2	100	2	100	2	100	2	100	2	100	2	100	2	100	1	50	1	50	2	100
total essential misc	0	0	1	50	1	50	0	0	0	0	0	0	0	0	0	0	1	50	0	0	1	50	0	0	0	0
TOTAL SCORE																										
Total mandatory score	122	77	139	87	124	78	126	79	125	79	130	82	132	83	119	75	154	97	133	84	140	80	115	72	148	93
Total essential score	8	17	31	67	19	41	19	41	14	30	16	35	21	46	16	35	31	67	16	35	29	63	13	28	27	59

	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
SERVICES														
Total Mandatory Services	67	89	100	89	89	100	89	89	100	100	78	78		100
Total Essential Services	0	100	100	25	25	25	25	50	100	50	100	0		100
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
INFRASTRUCTURE														
Total mandatory infrastructure	82	100	94	88	82	76	82	88	88	82	94	94		100
Total essential infrastructure	0	75	50	50	50	50	50	50	75	75	50	50		75
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
EQUIPMENTS														
Total mandatory equipment	86	95	90	90	90	90	93	90	100	95	93	83		100
Total essential equipment	0	67	33	50	33	33	50	17	83	0	33	33		50
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
HUMAN RESOURCES														
Total Mandatory HR	75	85	100	85	50	75	63	75	100	50	100	50		100
Total score Essential HR	17	67	34	50	50	34	34	50	67	34	67	34		67
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
PROTOCOL AND PROCESS														
Total mandatory protocol & process	80	65	65	50	70	70	75	70	100	85	95	80		80
Total essential protocol & process	0	100	0	0	0	0	0	0	0	0	0	0		0
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
DRUGS, FLUIDS, AND NUTRITION														
Total mandatory drugs,fluids and nutrition	60	100	40	80	80	80	100	60	100	80	80	20		80
Total essential drugs,fluid and nutrition	0	100	0	50	0	50	50	50	100	50	100	0		100
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
INFECTION CONTROL PRACTICES														
Total mandatory infection control	75	92	75	83	67	75	75	67	92	75	58	50		83
Total essential infection control	0	75	50	50	0	0	50	0	50	0	75	0		50
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
LABORATORY FACILITIES														
Total mandatory lab facilities	55	78	100	67	67	78	67	78	100	55	89	33		100
Total essential lab facilities	0	0	50	0	0	0	50	0	0	0	0	0		0
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
CASE RECORD MAINTENANCE														
Total mandatory case record	91	100	91	82	82	91	91	100	100	91	100	91		91
Total essential case record	100	67	67	100	67	100	67	100	100	100	67	100		100
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
FACILITITES FOR THERMOREGULATION LR														
Total Mandatory Thermoregulation in LR	82	100	0	82	91	91	91	0	100	91	100	64		100
TOTAL SCORE Thermoregulation in LR	17	83	0	17	17	17	50	0	50	33	100	0		50
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
FACILITITES FOR THERMOREGULATION AMBULANCE														
Total mandatory thermoregulation in ambulance	50	62	50	50	37	50	62	50	87	62	62	75		87
Total essential thermoregulation in ambulance	50	50	50	50	50	50	50	50	50	25	25	50		50
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
FACILITIES FOR THERMOREGULATION IN SNCU														
Total mandatory thermoregulation in SNCU	60	60	80	80	100	80	80	60	80	80	80	60		60
Total essential thermoregulation in SNCU	50	100	50	50	50	100	100	100	100	100	100	100		50
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
MISCELLANEOUS														
total mandatory misc	50	50	100	100	100	100	100	100	100	100	50	50		100
total essential misc	0	50	50	0	0	0	0	0	50	0	50	0		0
	Kishangarh	Jaipuriya	JLN	Tonk	S.Madhopur	Bharatpur	Dausa	Alwar	Udaipur MC	Beawar	Zanana Ajmer	Hidaun city	Mahila jaipur	
OVERALL PERFORMANCE														
Total mandatory score	77	87	78	79	79	82	83	75	97	84	80	72		93
Total essential score	17	67	41	41	30	35	46	35	67	35	63	28		59