ASSESSMENT OF SPECIAL NEWBORN CARE UNITS USING NNFI ACCREDITATION TOOL

INTRODUCTION

Child Health

In India, 26 Million babies are born every year and 940,000 babies die before one month of life, India carries the single largest share around 25-30 % of Neonatal deaths in the world. The neonatal period is only 28 days; yet, Neonatal Mortality Rate (NMR) contributes to about two- thirds of Infant Mortality Rate (IMR) and about half of under-5 Mortality Rate (U5MR).

The Government of India is committed to improve the availability of quality newborn care services .

Preventable morbidities such as hypothermia, asphyxia, infections, prematurity and respiratory distress continue to be the main causes of mortality in the neonatal period. There is an increasing need to focus on new-born care and survival for significant reduction in IMR and U5MR and strengthen the care of sick, premature, low birth weight newborns at the various levels of facilities right from the moment to birth through the neonatal period.

Special Newborn Care Unit

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

National Neonatology forum

The **National Neonatology Forum** (NNF) came into existence in 1980 through the initiative of a handful of leading pediatricians working in the field of neonatology. They set forth the following objectives for NNF:

- To encourage and advance the knowledge, study and practice of the science of neonatology in the country;
- To draw out recommendations for neonatal care at different levels;
- To establish liaison with other professionals concerned with neonatal care;
- To assess the current status of electronic equipment being used in the country for Perinatal care.
- To promote indigenous manufacturing of the equipment; To develop neonatal component of the curriculum for medical as well as nursing teaching

To organize conferences, training's, workshops etc. To promote neonatal care in the country.

OBJECTIVE

To assess the status of Special Newborn Care Units (SNCU) in Rajasthan state according to NNFI accreditation tool

METHODOLOGY

Study area- Special Newborn Care Unit of Rajasthan

- 14 District hospital
- 1 Sub District hospital
- 3 Medical colleges

Study Design - Cross-sectional study.

Study period – April 3rd to June 2nd 2017

Study population- Special newborn care units

Sampling Frame – All Special newborn care units in Rajasthan (37)

Sample Size – 50% Sampling as per convenience : 18 SNCUs

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

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 guidance of Project Director Child Health. Primary data collected from 18 SNCUs that are functional from past one year. NNF Self-Assessment Tool was used for primary data and secondary data was obtained from online software of SNCU. Then data was analyzed using Ms excel.

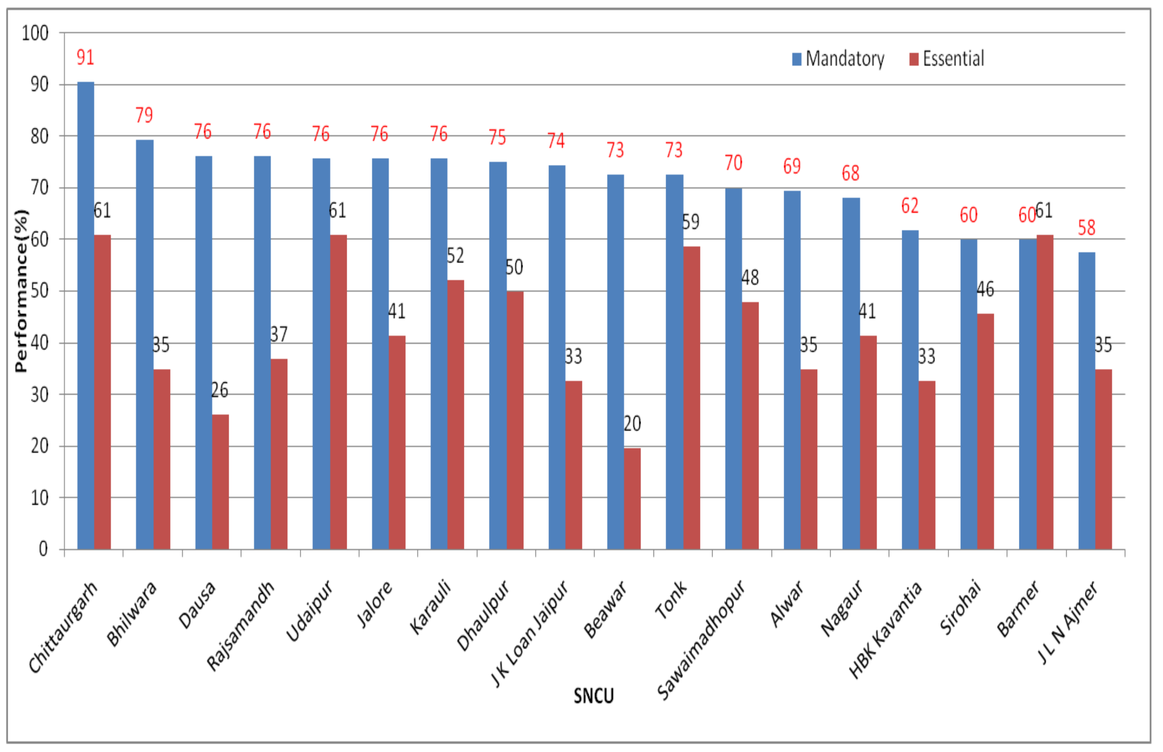
FINDINGS

S.NO	Mandatory Fields	Mandatory fields of Lacking (%)
1	ABG analysis	100
2	Availability of umbilical vein cannulation sets to be used during resuscitation	100
3	Committed breastfeeding policy being followed & displayed 10 steps of Baby Friendly Hospital initiative	100
4	Centrifuge, hematocrit, bench-top , up to 1200 rpm including rotor	100
5	Surgical instruments (suture/ SET)	100
6	Every bed should have the space of 100 sq.ft	67
7	One Resident doctor / junior consultant with MD/DNB/DCH (MIN . 1.5 YR. Experience post –DCH)[non-rotational basis	67
8	One MBBS doctor available in each shift	57
9	ROP Screening (in house)	68
10	A log book for KMC to be maintained in unit	73
11	Presence of at least one wash basin for every baby care area	78
12	Availability of alcohol – based hand rubs – one between two beds?	67
13	Disinfection & cleaning practices being followed	86
14	unit follow the bio medical waste management norms	67
15	Coagulogram	78
16	Availability of the neonatal nursing staff or trained doctors in all transport	88
17	FACILITY for provision of warmth , oxygenation , suction and resuscitation kit in the ambulance	68
18	Points for pulse oximeter and the Infusion pumps in the ambulance	88
19	TORCHES Screen	78
20	written guidelines for method of equipment cleaning and disinfection	68

ESSENTIAL FIELDS

According to NNF tools Essential fields should be 75% in SNCU. From the assessment it was clear that 10 fields were fulfilling the criteria of 75% and 36 fields were not fulfilling the 75% criteria in SNCU. So, 36 fields need to be focused.

OVERALL STATUS OF SNCUs



SUGGESTIONS

Manpower:

1.Number of sanctioned positions (4) of class IV staff must be fulfilled for the proper cleaning and dusting of SNCU.

2.Sanctioned positions of Medical Officers (4) for SNCU must be fulfilled for the better and smooth functioning of SNCU.

Training:

All medical staff must be FBNC trained as early as possible after joining in SNCU and at least one FBNC trained MO must be available round the clock at the SNCU.

Infrastructure:

There must be separate area in SNCUs for mothers of out born babies and also a separate area for keeping asymptotic high risk babies along with their mothers with good nursing cover, beds and separate toilets/washrooms for mothers.

Cleaning and disinfection:

1.There must be at least one wash basin with soap having mechanism which doesn't require use of washer's hands (e.g. elbow or foot operated taps) for every 5 beds. Poster on hand washing should be displayed at all hand washing stations

2.Adequate quantity of disinfectants, soaps, diapers, eye patches for phototherapy, disposable hand wipes/sterile paper, color coded BMW bins must be available in the unit.

Improvement in referral rate:

There is a need to reduce number of referrals from SNCU to higher centers by providing all required facilities (e.g. lab tests) at that unit.

ON SITE CORRECTIONS

- FBNC Protocols Displayed (J k loan Jaipur, Sirohi, Tonk, Alwar, Barmer, Rajsamand, Dausa, Karauli, Jalore, Dholpur)
- Triaging area established in Dholpur, Sawai Madhopur, Tonk, Sirohi, Rajsamand, Barmer., Bhilwara, Alwar
- Availability of sanitizer, Beta dine and Spirit Gauge at every Radiant warmer (Sirohi, Sawai Madhopur, Nagaur, Bhilwara, Tonk).
- Facilitated establishment of Step down unit in Sawai Madhopur SNCU.
- Bio Medical Waste policy 2016 displayed in J.K. Loan Jaipur, J.L.N Ajmer, Alwar, Dausa, Dholpur, Beawar.

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 may be an effective tool to reduce NMR of the country. Mandatory Requirements and Facilities for Thermoregulation were not met by any of the SNCU. Protocols and processes, Human Resources, Drugs, IV Fluids Management and Nutrition, Neonatal Resuscitation in Labor Rooms, Infection Control Practices and Case Record Maintenance criteria were met by Chittaurgarh districts whereas SNCU Barmer, Sirohi, Rajsamand, HBK Jaipur lacks in all.

Karauli, Dholpur districts need improvement in Facilities for Neo-natal Transport. The criteria in Physical Infrastructure Facilities need to be improved in district Barmer, Karauli and Beawar.

Depending upon the NMR, SNCU's are much required in each district to prevent the deaths of newborn.

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