

Rapid Assessment of Newborn Stabilization Units (NBSUs) and Newborn Care Corners (NBCCs)

Instruction Sheet

The instruction sheet should be read by all involved in this exercise. The basic information and set of guidelines for filling up the questionnaire is detailed below. The exercise is learning and sharing exercise with the purpose of a rapid cross-sectional assessment and objective to support the district/state authorities in planning, implementing and standardizing the quality.

Purpose of the exercise

Facility based newborn care in a given district is provided by a network of Newborn Stabilization Units (NBSUs) at sub-district health facility (CHC, FRU or SDH) and a Special Newborn Care Unit (SNCU) at the District Hospital. In addition, essential newborn care is provided at Newborn Care Corners (NBCCs) situated within the labour rooms and operation theatres of all health facilities.

NBSUs expand the outreach of special newborn care within a district, beyond the district hospital. When well networked and supported by SNCU at the district hospital, these units can manage large numbers of new-borns requiring special care at the sub-district level, and thereby:

- Reduce delay in initiation of appropriate care (delay in reaching SNCU from a distant area) for sick newborns and improve outcomes
- Help in stabilizing sick newborns before referral to higher centre
- Prevent overloading of SNCUs at the district hospital
- Reduce the cost of care

However currently there is a concern that the network of SNCUs, NBSUs and NBCCs is not functioning optimally. Though the operational status and service utilization of SNCUs is being monitored regularly, there is no such mechanism for the NBSUs & NBCCs. This assessment aims to generate understanding and insights on the current functioning of NBSUs & NBCCs in the country, and identify future directions to ensure optimal utilization and effective functioning of these units in a district.

The assessment has been designed to review the operational status of NBSUs and NBCCs by comparing the following parameters with the recommended norms (as given in the FBNC guideline):

1. Infrastructure: area, bed strength, availability of water and electricity
2. Human resource: availability and adequacy of doctors, staff nurses & paramedical staff, their training status
3. Service utilization: Criteria for admissions, their demographic and morbidity profile, management and outcome
4. Logistics: Availability and adequacy/functionality of drugs, equipments and consumables
5. Reporting and record keeping
6. Supervisory and referral mechanism
7. Aseptic practices by directly observing these
8. Clinical case management practices through retrospective review of case sheets of admitted babies

The specific outputs are to

1. Provide a facility based strength and gap analysis with supportive supervision recommendations
2. Share the findings of the field visit, district interactions and suggested recommendations with the MD (NRHM) / concerned state officials
3. Review the current guidelines as against the field findings for guiding the operationalization.

Methodology

The designated teams are identified by CH division (MOHFW) and are experts visiting the districts under the guidance of GOI.

The team has been allotted selected district in the state to conduct the rapid assessment. This is a supportive exercise to understand the strengths and gaps in the implementation of facility based newborn care at the district/ sub-district level. The teams have been oriented at the national level and will be carrying relevant background information and formats to be filled up during the visit.

The overall plan is to simultaneously conduct this in 6 states with at least 2 districts each. The process involves the state and district officials in the assessments.

The concerned teams are instructed to follow the following steps during the visit to the district.

1. The team will first meet the concerned RCHO/child health nodal officer/concerned district officials.
2. The form 1 detailing the district profile should be completed and made available to the visiting team. It will help to have a quick overview of the district profile.
3. The team will work with the district officer to select the facilities for review. District should nominate district officers to accompany the team during their field visits.
4. Information of the visit to the selected facility should be provided to MOIC of facility by the RCHO prior the team's assessment.
5. Districts teams will be visiting 2 NBSUs in each district (districts are encouraged to select and route chart the plan). However, if the experts wish to visit another facility, support should be extended to the team.
6. Along with assessment of the NBSU, the NBCCs (OT and LR) and postnatal ward in the selected facility will also be assessed. 2 other NBCCs besides facility will also be assessed.
7. The team should ensure compliance as per the instructions. Teams are requested to follow the following guiding principles;

<i>While interviewing and observations</i>
1. Read <u>ALL</u> the instructions in the given format before starting the assessment.
2. Demonstrate professionalism.

3. Listen effectively.
4. Capture data and responses and record them according to the standards outlined in the tool
5. Provide factual information as needed.
6. Recognize verbal and non-verbal problems and address problems as they are identified.
7. No prompting unless really needed
8. Report observations in an objective manner.
<i>During data collection</i>
9. Determine the appropriate source(s) for the information required; do not overlook important sources.
10. Recognize internal inconsistencies and resolve them when possible.
11. Accurately record information in the format.
12. All formats should be legible and filled completely for further review.

8. The de-briefing meeting at the district level and state should be conducted by the team. Findings of the field visit and district interactions with suggested recommendations to be shared with MD (NRHM) /concerned state officials.
9. The filled up formats along with a detailed report should be submitted / mailed to Dr. P.K Prabhakar DC(CH) at pkprabhakar2009@gamil.com and copied to Dr. Renu Srivastava at renusrivastavagoel@gmail.com within 1 week of completing the assessment.
10. Overall compilation of the data and the report will be completed at NCHRC, NIHFW and will be submitted to GOI. A copy of same will be shared with the state HQ.
11. Recommendations to be reviewed and follow up actions by GOI to be taken after the assessments

SECTION A: District Profile

(This section is to be completed by the District officials – RCHO, District Child Health Coordinator, District program Manager, along with the local map depicting the public and private health facilities)

Name of the district.....

State.....

1. Demographic profile (Census 2011)

Population (in lakhs)	
% of Rural	
% of Urban	
% of SC	
% of ST	
% of others	
% of BPL population	
Literacy rate	
Population density (per Sq km)	
Sex Ratio at birth	
Sex Ratio (0-6)	

2. Administrative profile (RHS 2010)

No. of Blocks	
No. of villages	
No. of Gram Panchayat	

3 Health profile (Census 2011)

CBR (AHS 2011)	
Infant Mortality Rate (AHS 2011)	
Neonatal Mortality Rate (AHS 2011)	
Still births per 1000 live births	

4. Facility status (2010-11 HMIS / as per district record)

SN	Public Sector	Total No	Designated as FRUs (in no.)
1	District Hospitals		
2	Sub Divisional Hospitals		
3	Other Hospitals (please specify category/ type of facility e.g. Referral Hospital, Women and Child Hospital etc. make separate row for each category)		
4	CHC		
5	Block PHCs		
6	PHC (break up to be included if Mini PHCs APHC,UGPHC)		
7	Total Sub centers		
8	No. of licensed blood banks		
9	No. of licensed blood storage units/centers		

5. Accreditation of Private Health Facilities:

S N	Private Sector	Accredited for Deliveries (Normal & LSCS)	Accredited for sick new born care services
1	No of Private Hospitals Accredited under JSY		
2	No of Private Hospitals Accredited under any other scheme (specify)		

6. How much budget has been allocated for the FBNC program (establishment and recurring costs) in the district PIPs? How much was utilized?

Year	Allocation	Expenditure
2010-2011		
2011-2012		

7. Was there a district orientation on FBNC operational guidelines? YES NO

When ___/___/___

8. How many trainers have been trained in the district for

a) NSSK: _____

b) F-IMNCI: _____

c) FBNC: _____

9. Child Health:

Indicators	2010-11 (HMIS)	2011-12 (HMIS)			
		1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
New born breastfed within one hr of birth					
Number of new born weighed less than 2.5 kgs					
No of functional SNCU					
No of functional NBSU					
No of functional NBCC					

10. Brief information regarding functionality of SCNU in the district

Number of beds available	
Number of Medical officer/Specialist posted	
Number of Nurses posted	
Cumulative number of admission in the last quarter (Apr-Jun)	
Cumulative number of deaths in the last quarter (Apr-Jun)	

SECTION B: NBSU Assessment Form

I. GENERAL INFORMATION

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

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

Address of facility			
Type of designated facility	DH <input type="checkbox"/> SDH <input type="checkbox"/> FRU <input type="checkbox"/> CHC <input type="checkbox"/> 24X7 PHC <input type="checkbox"/>		
Number of beds in the facility			
Is there 24-hour coverage for delivery and newborn? <i>(If yes, ask to see a duty roster for night staffing)</i>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
<i>24-hour duty roster present</i>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
<i>If yes, is staff present onsite</i>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Type of services provided (Designated by the state)	Cemoc <input type="checkbox"/>	Bemoc <input type="checkbox"/>	
High Risk pregnancies are detected	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
If above is yes then are they referred to higher centre for delivery	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Normal deliveries	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Assisted (Forceps delivery/Vacuum)	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Manual removal of placenta	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Administration of parenteral oxytocin / antibiotics / inj. Mg SO4	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Management of PPH /other complications	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Caesarean section	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Availability of laboratory services	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
If yes	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
• 24X7			
• Blood sugar		In house <input type="checkbox"/>	Outsourced <input type="checkbox"/> Private <input type="checkbox"/>
• Serum bilirubin		In house <input type="checkbox"/>	Outsourced <input type="checkbox"/> Private <input type="checkbox"/>

Is Infant Death Review conducted? If yes, then provide details	YES <input type="checkbox"/> NO <input type="checkbox"/>
Mention/Enquire about nearby public or private facility having neonatal services, and provide details if applicable	

***Essential Criteria to designate as FRU:** 24* & 7 MCH care, Facility of LSCS, Care of Sick Newborn and Availability of Blood bank,

Remarks:

II. INFRASTRUCTURE

- A. NBS unit functional/operational since:/...../..... (DD/MM/YY)
- B. Total floor area of NBSU (in sq. feet)
- C. Number beds in NBSU
- D. Availability of Newborn Care Corner
- Within labour Room: YES NO
 - Within operation theatre: YES NO
- E. Is the labour room in close proximity to NBSU: YES NO
- If no, give remarks _____
- F. Where does the mother stay while the newborn is admitted to NBSU _____
- G. Is a room thermometer available in NBSU? YES NO
- H. Is the temperature maintained in NBSU? YES NO
- I. Is the unit walled with washable tiles up to 7 feet YES NO
- J. Is continuous water supply available to the NBSU? YES NO
- If YES check
- K. If NO, no. of hours of water supply to NBSU hrs.
- Is there a dedicated overhead tank for water? YES NO
 - Is a dedicated hand washing area available? YES NO
 - Is a wash-basin with elbow operated tap available YES NO

L. Is there 24*7 electrical Supply:
 YES NO

If yes check

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

N. Is the NBSU well lit?
 YES NO

O. Is there a power supply
 YES NO

P. Provision of stabilized power back-up

Provision of Power back-up	Equipment	Available	If available		Functional	If not functional	
			Number	Capacity		Since when	
Provision of Power back-up	Generator	Y <input type="checkbox"/> N <input type="checkbox"/>			Y <input type="checkbox"/> N <input type="checkbox"/>		
	Inverter	Y <input type="checkbox"/> N <input type="checkbox"/>			Y <input type="checkbox"/> N <input type="checkbox"/>		
Provision of safety of electrical devices and equipments	Centralized servo stabilizer	Y <input type="checkbox"/> N <input type="checkbox"/>			Y <input type="checkbox"/> N <input type="checkbox"/>		
	Voltage stabilizer	Y <input type="checkbox"/> N <input type="checkbox"/>			Y <input type="checkbox"/> N <input type="checkbox"/>		
Remark on safety of power supply							

Overall rating:

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

Remarks:

III. HUMAN RESOURCE

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

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

- Regular staff nurses
- Contractual staff nurses

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

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

Time	Name	Qualification Degree /Dip.	Full time/part time for NBSU	At facility since when	Training		Training dates/ Duration	Observership	
					FIMNCI	FBNC		Done	Place Duration
8 am - 2 pm									
2 pm - 8 pm									
8 pm - 8 am									

E. Paediatricians / Medical Officers engaged with NBSU

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

F. Other supporting staff

S. N.	Category of staff	Regular/Contract	At health facility since	Full time/Part time for NBSU
1	Laboratory			
2	Ward aide*			
3	Cleaning			
4	Security			
5	Other (Specify)			

Overall rating:

Criteria	Score		
	0	1	2

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

Remarks:

IV. SERVICE UTILIZATION AND REPORT KEEPING

(Based on the delivery / newborn register or case sheets)

- A. Case record register/Case sheets available: YES NO
- B. Report being sent YES NO
- C. If yes, how frequently Monthly Quarterly

Remark _____

Data	Last 3 months						Total
	1 st Month		2 nd Month		3 rd Month		
	Inborn	Outborn	Inborn	Outborn	Inborn	Outborn	
Total number of deliveries in facility							
Total number of Caesarean sections							
Total number of live births							
• < 1000 gm							
• 1000 – 1499 gm							
• 1500 – 2499 gm							
• ≥ 2500 gm							
Total number of LBW newborns							
Number of still births							
Total no. of admissions in NBSU							
Male							
Female							
Total No. of cases admitted to NBSU							
• Birth weight ≥ 2500 gm							
• 1500 – 2499 gm							
• 1000 – 1499 gm							
• < 1000 gm							
Morbidity Profile (Primary diagnosis)							
• Neonatal sepsis							
• Birth asphyxia							
• Pre-maturity/LBW							

• Hypothermia							
• Jaundice							
• Any other - specify							
Management (no. of babies who received)							
• Oxygen							
• Antibiotics							
• Gavage feeding							
• IV fluid							
• Phototherapy							
• Enteral feed							
Outcome							
• Discharge							
• Referral							
• Left against medical advice (LAMA)							
• Died							
Duration of stay							
• < 6 hrs.							
• 6-12 hrs.							
• 12-24 hrs.							
• 24-72hrs.							
• > 72hrs.							
Cause of death							
• Neonatal sepsis							
• Birth asphyxia							
• Pre-maturity/LBW							
• Hypothermia							
• Jaundice							
• Any other - specify							

Overall rating

Criteria	Score		
	0	1	2
Average no. of monthly admissions	< 5	5-10	> 10
% of LBW (<2.5 kgs) admitted in NBSU during the last quarter	Nil	< 80%	80% or more
% of LBW (<2.5 kgs) babies with hospital stay > 24 hrs out of total LBW admissions (avg. of 3 months)	Nil	< 80%	80% or more

% of Newborn babies discharged out of total admissions	<50	50-90	>90
% of admissions managed under phototherapy	nil	<25%	>25%

Remarks:

V. DRUGS & EQUIPMENT

A. Drugs

Name of Drug	Availability at time of visit (Yes / No)	Adequacy of stock (Yes / No)	Any stock out in last 6 months (Yes / No)	Remarks
Drugs				
Inj. Adrenaline				
Inj. Ampicillin				
Inj. Gentamycin				
Other antibiotics				
Inj. Calcium gluconate				
Normal saline				
10% dextrose				
Isolyte-P				
Inj. Phenobarbitone				
Inj. Vitamin K				
Disinfectants				
Soap				
Handrub (Alcohol-based)				
Spirit				
10% Betadine				
Gluteraldehyde				
Surface disinfectant				
Floordisinfctant (Lysol 5%)				
Slippers				
Consumables / Disposables				
Gloves				
Different colour polythene				
I/V cannulas (24)				
Needles				
Syringes				
Feeding tubes				
Endotracheal tube				

For radiant warmers report on voltage fluctuation and availability of stabilizer	
For Phototherapy units report on condition of tubes (no. of tubes fused/with black ends/Flickering) and frequency of change	

Overall rating:

Criteria	Score		
	0	1	2
Inventory of drugs and equipments	Not available	Available but not updated	Available and update
Antibiotics (Ampicillin and Gentamycin)	Not available	Any one available	Both available
Disinfectants (Soap and surface disinfectant)	Not available	Any one available	Both available
Consumables (I/V cannula no. 24 and feeding tubes)	Not available	Any one available	Both available
Radiant warmer	Not available	Available but not functional	Available & functional
Phototherapy unit	Not available	Available but not functional	Available & functional

Remarks:

VI. SUPERVISION AND REFERRAL

- A. Is there a mechanism of a regular supervision to the unit? YES NO
- B. No. of supervisory visits conducted to the NBSU over past one year? Mention who conducted the visits (Attach any reports of the visits, if available)
- _____
- C. Is there a system available to seek support from a collaborative centres/ medical college hospital/SNCU? YES NO
- D. If yes how?
- _____

- E. Details of support in last 6 months? _____
- F. Is there a functional system of referral for baby's to higher centre YES NO
- G. Is there a functional system of referral from Community/Lower facilities/Frontline worker to the NBSU? YES NO
- H. If yes, please describe in brief the referral system (Advance communication , 2 way referral feedback and feedback to the units, Type of transport use)

Overall rating

Criteria	Score		
	0	1	2
Supportive supervision	No mechanism	Mechanism available but not operational at facility level	Mechanism available and operational at facility level
Support taken from higher centres (SNCU /Medical college/others)	Never	Infrequent	Frequent
Referral system <ul style="list-style-type: none"> • Two way • Advance information to higher centre 	No system	System available but no mechanism for two way referral and advance information	System available with mechanism of two way referral and advance information
Transport for referral <ul style="list-style-type: none"> • Functional motor vehicle • Operated by private or Govt. 	Not available	Available and functional but operated by private agency (Paid services)	Available, functional and operated through Govt scheme (Free services)

Remarks:

VII. ASSESSMENT OF PRACTICES

ASK & OBSERVE

Hand washing before handling baby	Always <input type="checkbox"/> Before entering SNCU <input type="checkbox"/>	Sometime <input type="checkbox"/> Not done <input type="checkbox"/>
Cleanliness of general equipment	Once a day <input type="checkbox"/> Once a week <input type="checkbox"/> Not done <input type="checkbox"/>	Alternate days <input type="checkbox"/> During Fumigation <input type="checkbox"/>
Disinfection of baby care equipment	After each use <input type="checkbox"/> When visibly soiled <input type="checkbox"/>	Daily <input type="checkbox"/> Not done <input type="checkbox"/>

Cleaning and disinfection of floor & walls	Once per shift <input type="checkbox"/>	Once a day <input type="checkbox"/>
	Once a week <input type="checkbox"/>	Not done regularly <input type="checkbox"/>
Cleaning of linen	Autoclaved <input type="checkbox"/>	Washed & ironed <input type="checkbox"/>
	Only Washed <input type="checkbox"/>	
Waste segregation and disposal	Appropriate <input type="checkbox"/>	Not appropriate <input type="checkbox"/>

Clinical Case Management: Investigator should review 1st six case sheets of the last 4 months. The investigator should if possible have on the spot case observation and remark on overall judgement regarding appropriateness and adequacy of treatment protocol. **Only note “✓” if info available, ✗” if not available, if not applicable the cell may be left blank**(Get photocopies of the observed case sheets)

No.	Questions	Coding Categories											
		1 MONTH AGO						2 MONTHS AGO					
	Individual case record (Check for presence of the following)	1	2	3	4	5	6	1	2	3	4	5	6
1	Criteria for admission according to norms												
2	Daily notes												
3	Initial treatment order*(usage of antibiotics and IV fluids)												
4	Provisional diagnosis												
5	Enteral feeds												
6	Discharge advice												
	Individual case record (Check for presence of the following)	3 MONTH AGO						4 MONTH AGO					
		1	2	3	4	5	6	1	2	3	4	5	6
1	Criteria for admission according to norms												
2	Daily notes												
3	Initial treatment order*(usage of antibiotics and IV fluids)												
4	Provisional diagnosis												
5	Enteral feeds												
6	Discharge advice												

Overall rating: Kindly note that a minimum of 12 case sheets need to be observed before going for scoring

Criteria Out of 24 cases	Score		
	0	1	2
Admissions according to recommended criteria	Not done	Sometime	Regular
Daily notes	Not done	Sometime	Regular
Hand washing	Not done	Sometime	Regular
Waste segregation	Not practicing	Sometime	Practicing
Admission & Discharge policy	Not available	Sometime	Available

Remarks:

VIII. FEEDBACK

Investigators should interact with the medical officer- in-charge and staff nurses and any other available staff. Best practices and challenges should be discussed.

A. Mention the best practices in your unit?

a. _____

b. _____

c. _____

B. Mention three major bottlenecks/ challenges in functioning of the NBSU

a. _____

b. _____

c. _____

C. Give three suggestions for improving the services provided through NBSU

a. _____

b. _____

c. _____

Place _____

Date ____ / ____ / _____

Signature _____

Name _____

Designation _____

The team members should acknowledge and document their appreciation of the unit's functioning.

Thank the visited unit's staff and provide your contact details. Also ensure the entered observations are shared with the concerned medical officer in-charge / staff nurses before leaving the facility.