**SNCU News Letter**

By State SNCU Manager, Madhya Pradesh

### STATUS AT A GLANCE

Neonatal mortality rate of Madhya Pradesh is 35 per thousand live births, while early neonatal mortality is 26 per thousand live births.

Madhya Pradesh is having 51 district. District Agar is a newly formed district.

Madhya Pradesh has 54 SNCUs operational in 50 districts. Each high priority district is having a functional special newborn care unit.

In four districts more than one SNCU is functional namely, Bhopal, Jabalpur Gwalior and Rewa.

District Agar does not have a functional SNCU as it has recently gained status of a district. New SNCU is proposed for Agar district in Program implementation plan 2016-17.

### BED STRENGTH

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMR (SRS 2014)</td>
<td>35</td>
</tr>
<tr>
<td>ENMR (SRS 2014)</td>
<td>26</td>
</tr>
<tr>
<td>Districts</td>
<td>51</td>
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<tr>
<td>Total SNCUs</td>
<td>54</td>
</tr>
<tr>
<td>Districts with SNCU</td>
<td>50</td>
</tr>
<tr>
<td>Districts without SNCU</td>
<td>1</td>
</tr>
<tr>
<td>HPDs with SNCU</td>
<td>17 (100%)</td>
</tr>
</tbody>
</table>

**Bed strength**

Three SNCUs has bed strength less than 20 beds (SNCU Singrauli, Dewas and SNCU Elgin Hospital, Jabalpur), while 43 SNCUs have 20-30 beds. 8 SNCUs reported to have more than 30 beds.
Adequacy of human resource in SNCU

35 SNCUs have adequate\(^1\) no. of doctors while 30 units have adequate no. of nurses.

08 HPD have adequate\(^2\) no. of doctors while Mandla, Jhabua, Panna, Raisen, Alirajpur and Sidhi have inadequate number of doctors.

Out of 17 HPDs, only 9 HPDs (Damoh, Panna, Chhaterpur, Sidhi, Shahdol, Dindori, Barwani, Annupur, and Umaira) have adequate number of nurses in SNCU while remaining 8 HPDs have inadequate number of nurses in SNCU.

Similarly, bed nurse ratio is alarming. Only three SNCUs namely, Singrouli, Sehore, and Hoshangabaad have bed nurse ratio below 3 beds per nurse. While All other SNCUs are having bed nurse ratio 3 or more.

In HPD, only Singrouli has bed nurse ratio below 3 beds per nurse, rest of the HPDs have bed nurse ratio 3 or more.

Support Staff\(^3\): 11 SNCUs do not have adequate number of ward boys (At least 3 ward boys are required in each SNCU). In SNCU Rewa, none of the SNCU support staff is hired.

22 SNCUs do not have adequate number of Aayas (At least 3).

14 SNCUs do not have required number of security guards.

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\(^1\) Adequate no. of doctors is 4 or more doctors in SNCU

\(^2\) Adequate no. of nurses are 16 more working in SNCU

\(^3\) 3 wardboy, 3 aayas and 3 security guards are required for each SNCU
Admission analysis
January - December 2016

More than half of the admissions are outborn admissions calls for strengthening of sub-district newborn care facilities in terms of HR, newborn care trainings as well as infrastructure.

In case of outborns, female admission dips to 37% which indicates health seeking behavior is positive when sick newborn is a male but not in case of female newborn.

This highlights gender inequity in state.

Lower female newborn admissions can indicate-
1. Lesser no. of female babies being born
2. Biological stability in female leading to lower sickness
60% admissions are LBW
13% newborns weigh below 1500 gms while 47% newborns weigh between 1500-2499 gms. Around 43% newborns weigh above 2500 gms.

62% outborn newborns were LBW while 57% inborn newborns were LBW. Around 38% newborns were above 2500gms among outborns and 43% among inborns.

36% admissions are pre-term
Of total admission, 19% babies are below 34 weeks of gestation while 17% newborns are between 34-37 weeks of gestation.

60% LBW admission in sick newborn care units of Madhya Pradesh.

36% Admissions are preterm i.e. born too soon.

FAST FACTS
- out of total 52928 outborn cases, most of the case (74%) were referred from facility while only quarter was referred by ASHA/community/parents
- Role of ASHAs need to be strengthened in case of referrals. ASHAs can be given exposure visit to SNCUs.

Transportation utilized
56% beneficiaries’ utilized government provided vehicle while 44% sick newborns were brought to SNCUs by self-arranged means of transport.
Need to focus on strengthening referral transport for the sick newborns. Information about free entitlements for sick infants should be known to community.

Janani Express is being used for referral for mothers but utilization for sick newborns is still very poor in the state. There is also a dire need to assign a transport dedicated to newborns. As per conversation with family members, ASHA & data entry operators of SNCU, mostly vehicle is not available for newborns because it is busy in pickup and drop-back of delivery cases.

**Referral to SNCU by place of delivery (N=94060)**

Highest number of newborns took birth on some government health facility (78%). While remaining 12% either took birth in private facilities, at home or in other district.

**Referral from SNCU to higher Centre (n=5655)**

Mostly cases are being referred to Government medical college, around 6% cases are being referred to other district level SNCUs, 11% cases were referred to institution outside state or trust hospitals.

44% cases were referred due to need of ventilation while 23% cases were referred due to surgical intervention. 26% cases were also referred due to diagnostic workup. Referring the newborns for diagnostic workup can is leading to increase in workload of higher centers. Based on the diagnostic needs of units, lab services can be upgraded to ensure availability of all tests.
Maternal History

Maternal age on admission
In 27% cases maternal age was below 21 years while nearly in half of the cases, maternal age was between 22-25 years. In 1% cases were mother was either below 18 years or above 35 years.

Focus on increasing average age at marriage. Advocacy for Initiative related to women empowerment are need to be focused.

Birth Spacing
In about two-third of admissions, birth spacing is 2 years or less, this includes 16% of those who has birth spacing of <1 year.

Use of family planning methods need to be promoted.

Mother’s weight is taken as proxy for nutrition status of mother which affects the growth of fetus.

In our state, burden of LBW and preterm birth is high which indicates nutritional deficiencies in maternal age group women. Around 60% mother weigh below 50 kg.
Use of ANCS is only 11.8% and only 1.3% cases received full dose treatment of antenatal steroid. Eligible cases for ANCS was 17095, all cases who are delivered before 34 week of gestation.

Around 44% of admissions stayed for 3 days or less in SNCU. There is not much variation in inborn and out born duration of stay.

Districts can focus on understanding the indication of admission of cases which stayed less than 3 days may help us reduce crowding in SNCUs.

Duration of stay

Around 44% of total admissions stayed for 3 days or less in SNCU. There is variation of 2% in inborn and outborn newborn duration of stay.

Districts should focus on understanding the indication of admission in cases which stayed less than 3 days. Identification of such cases will also help in reducing overcrowding in SNCUs.
Outcome analysis

Total outcome analysis

77% cases were successfully discharged out of total admission. 14% deaths, 3% LAMA, and 6% cases were referred to higher institution.

Inborn outcome analysis

Among inborns 78% cases were successfully discharged with 13% deaths, 3% LAMA and 6% referral.

Outborn outcome analysis

Among outborns 75% cases were discharged successfully with 15% deaths, 4% LAMA, and 6% referral.
Indication of admission

In overall causes of admission, respiratory distress is the top most cause of admission followed by perinatal asphyxia.

Among outborns RD is same as overall causes but perinatal asphyxia is 15% while in inborn cases it is 25%.

% neonatal jaundice, prematurity <34 weeks remains same in both the groups.

Refusal to feed is higher among outborns which shows higher sepsis cases among outborns.
Mortality analysis

Mortality analysis based on gender (n=13059)

- **Outborn**
  - Female: 14.6
  - Male: 14.4
  - Total: 13.8

- **Inborn**
  - Female: 12.9
  - Male: 13.3
  - Total: 14.1

Mortality is higher in female newborns in whether of inborn group and outborn group.

Proportional Mortality is highest among out born facility referred newborns while outborn community referred reflects only 11% of mortality.

Among all SNCU deaths, 62% deaths were in preterm as group.

Category wise mortality (n=13059)

- ST: 19%
- General: 26%
- SC: 18%
- OBC: 37%

Mortality: Inborn Vs Outborn

- Outborn (Comm. Ref.) 11%
- Outborn (Facility Ref.) 48%
- Inborn: 41%
Proportional mortality is highest in 1500-2499 gms age group. As per duration of stay, mortality is highest within 1-3 days.

Mortality among newborns staying in SNCU for > 7 days should be enquired separately for causes of deaths, as these cases are given enough time and energy of health care providers.