Special Newborn Care Units to help reduce newborn deaths in India

2007-2017

Evaluation of UNICEF’s Support to the Facility Based Newborn Care (FBNC) Programme in India

Submitted to UNICEF India

31 July 2019
# Table of Contents

LIST OF FIGURES .......................................................................................................................... III

LIST OF TABLES ............................................................................................................................ IV

ACKNOWLEDGMENTS ...................................................................................................................... V

ACRONYMS ....................................................................................................................................... VII

KEY INFORMATION ABOUT THE EVALUATION ......................................................................... IX

EXECUTIVE SUMMARY .................................................................................................................. 1

1. INTRODUCTION .......................................................................................................................... 9

1.1. BACKGROUND TO THE EVALUATION .................................................................................. 9

1.1.1. Newborn Mortality Reduction: A national priority in India .................................................. 9

1.1.2. Facility Based Newborn Care Strategy in India ..................................................................... 11

1.2. THEORY OF CHANGE FOR THE EVALUATION ................................................................. 17

2. PURPOSE, OBJECTIVES AND SCOPE OF THE EVALUATION .............................................. 19

2.1. EVALUATION PURPOSE, RATIONALE AND EXPECTED USE OF THE FINDINGS ............. 19

2.1.1. Purpose of the evaluation ................................................................................................... 19

2.1.2. Rationale ............................................................................................................................ 19

2.1.3. Expected use of findings .................................................................................................. 19

2.2. EVALUATION OBJECTIVES ................................................................................................. 19

2.3. TIME PERIOD ....................................................................................................................... 20

2.4. SCOPE OF THE EVALUATION .............................................................................................. 20

2.5. GEOGRAPHIC FOCUS OF THE EVALUATION ....................................................................... 20

2.6. TARGET GROUPS ................................................................................................................. 21

3. EVALUATION METHODOLOGY ............................................................................................... 22

3.1. EVALUATION DESIGN ........................................................................................................... 22

3.2. SAMPLING FRAMEWORK .................................................................................................... 22

3.3. SAMPLING AND DATA COLLECTION: STRATEGY, METHODS AND TOOLS ..................... 23

3.4. SAMPLING FRAMEWORK .................................................................................................... 23

3.5. ANALYTICAL APPROACHES .............................................................................................. 26

3.6. RISKS AND LIMITATIONS .................................................................................................. 30

3.7. PRINCIPLES AND ETHICAL STANDARDS .......................................................................... 31

4. FINDINGS ..................................................................................................................................... 32

4.1. RELEVANCE: WHAT WAS THE RELEVANCE OF UNICEF’S CONTRIBUTION TO INDIA’S SNCUs? ................................................................................................................................. 34

Evaluation Q1. Was the intervention aligned to the country’s commitments, priorities and the strategic plan for improving newborn health? ................................................................. 34

Evaluation Q2. Was UNICEF’s support adjusted during implementation to align with emerging needs and to ensure support for best practice? ................................................................. 35

4.2. EFFECTIVENESS: WERE UNICEF’S CONTRIBUTIONS EFFECTIVE AND WERE THE OBJECTIVES FOR SNCUs ACHIEVED? ............................................................................................... 36

Evaluation Q3. What is the intervention implemented according to plan? ..................................... 36

Evaluation Q4. Was the intervention implemented according to plan? ........................................ 36

Evaluation Q5. What is the intended results achieved? .................................................................... 40

Evaluation Q6. What unintended results, positive as well as negative, have resulted from UNICEF’s contribution to India’s FBNC programme particularly focusing on the SNCUs? ............. 47

Evaluation Q7. Were results achieved in adherence to equity, gender equality, non-discrimination, and other human rights? ........................................................................................................ 51
Evaluation Q8. What were the factors that influenced the achievement or non-achievement of programme results?

4.3 Efficiency: To what extent did UNICEF’s contributions to the SNCUs represent the best possible use of available resources to achieve results of the greatest possible value to recipients and the community?

Evaluation Q9 and Q10. Did the intervention have sufficient funding support for the FBNC/SNCU programme and for the total maintenance cost incurred by NHM for sustaining SNCUs; and did the intervention use the available resources in an economical manner to achieve its objectives?

Evaluation Q11. Did the intervention have sufficient and appropriate staffing resources?

Evaluation Q12. To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?

Evaluation Q13 and Q14. What are the positive results from UNICEF’s contribution and which are likely to be sustained? Why? Was the intervention scaled-up sufficiently to achieve the intended results?

Evaluation Q15. Were results achieved in a sustainable manner? To what extent can the activities and the benefits of the intervention continue after external funding has ceased?

Evaluation Q16. To what extent has the intervention been mainstreamed in the National Health Mission, particularly regarding allocation of financial and human resources as UNICEF’s involvement has declined over time?

Evaluation Q17. Are any areas of the intervention unsustainable? What lessons can be learnt from such areas?

Evaluation Q18. What were the major factors that influenced the achievement or non-achievement of sustainability of the intervention?

Evaluation Q19. Is there any evidence of other organizations/partners sharing a common platform with UNICEF in the implementation of the SNCU programme and has any of the UNICEF supported initiatives being adopted by these organizations/partners and institutionalised?

5. Conclusions and Lessons Learnt

6. Recommendations

7. References

Annexes

Annex 0. State by State Case Summaries

Annex 1. Supplementary Tables and Figures

Annex 2. Inception Report

Annex 3. Terms of Reference for the UNICEF Call for the Evaluation

Annex 4. Linkages between the Conceptual Framework and the Theory of Change

Annex 5. Data Collection Tools- Original

Annex 6. Revised Tools Following Data Collection in MP

Annex 7. List of Meetings Attended

Annex 8. Key Data Sources
List of Figures

Figure 1. Milestones in the development of the FBNC programme ................................................................. 12

Figure 2 Proposed Theory of Change (together with the assumptions and risks) that explains how UNICEF’s support might result in expected outcomes ................................................................. 18

Figure 3 Phases of the evaluation .................................................................................................................................................... 25

Figure 4 The current distribution of districts with at least one SNCU across the six evaluation states; red districts do not have SNCUs yet ........................................................................................................ 38

Figure 5 Distribution of SNCUs in the state of Andhra Pradesh showing representation in tribal areas (data provided by UNICEF, Andhra Pradesh) ............................................................................................................. 52

Figure 6 Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Andhra Pradesh and Haryana, by birthweight of the baby ........................................................................................................ 99

Figure 7 Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Maharashtra and Madhya Pradesh, by birthweight of the baby ...................................................................................... 100

Figure 8. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Odisha and Uttar Pradesh, by birthweight of the baby ........................................................................................................ 101

Figure 9 Mortality rates in SNCUs at the state level (AP, Haryana & Maharashtra) and scaleup (s) and pilot(p) districts by diagnosis at admission (small baby, asphyxia & sick babies) ................. 102

Figure 10 Mortality rates in SNCUs at the state level (MP, Odisha & UP) and scaleup (s) and pilot(p) districts by diagnosis at admission (small baby, asphyxia & sick babies) ........................................... 103

Figure 11. Mortality rates in SNCUs at the state level, scaleup (s) and pilot(p) district levels by sex of baby ......................................................................................................................................................... 104

Figure 12. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in AP and Haryana, by caste ................................................................................................................................................. 105

Figure 13. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Maharashtra and MP, by caste ............................................................................................................................................. 106

Figure 14. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Odisha and Uttar Pradesh, by caste ............................................................................................................................................. 107

Figure 15. Mortality rates in SNCUs at the state level (AP, Haryana & Maharashtra) and scaleup (s) and pilot(p) districts by (Scheduled tribe, scheduled caste, OBCs, general) ......................................................... 108

Figure 16. Mortality rates in SNCUs at the state level (MP, Odisha & UP) and scaleup (s) and pilot(p) districts by (Scheduled tribe, scheduled caste, OBCs, general) ........................................................................................................ 109
# List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.</td>
<td>Summary of some socio-demographic, health services and health outcome indicators across the six states</td>
</tr>
<tr>
<td>Table 2.</td>
<td>Newborn care services at different levels of healthcare facilities under FBNC</td>
</tr>
<tr>
<td>Table 3.</td>
<td>Districts selected for data collection</td>
</tr>
<tr>
<td>Table 4.</td>
<td>OECD/DAC criteria and the evaluation questions addressing UNICEF’s involvement in FBNC/SNCUs</td>
</tr>
<tr>
<td>Table 5.</td>
<td>Respondent types and numbers of Key informant interviews and Focus group discussions</td>
</tr>
<tr>
<td>Table 6.</td>
<td>Statistics on admissions and outcome of admissions for babies brought to the 18 SNCUs (in blue font) in the evaluation between February and August 2018, by state</td>
</tr>
<tr>
<td>Table 7.</td>
<td>Summary of pre-discharge mortality rates for all SNCUs in each of the states 2012-2017 (from aggregated data provided by UNICEF from SNCU online database)</td>
</tr>
<tr>
<td>Table 8.</td>
<td>Statistics on human resource availability and training at the 18 evaluation SNCUs and 11 NBSUs, by state</td>
</tr>
<tr>
<td>Table 9.</td>
<td>Labour room quality of care in facilities with SNCUs</td>
</tr>
<tr>
<td>Table 10.</td>
<td>Distribution of scheduled tribes in the latest national population census (2011)</td>
</tr>
<tr>
<td>Table 11.</td>
<td>Sex ratio (female : male) among children (0-6 years) in the 2011 national population census compared to SNCU admissions</td>
</tr>
<tr>
<td>Table 12.</td>
<td>Summary of NHM approved budget (in INR lakhs) for the FBNC programme between 2013-2017 by the budget heads across the six states</td>
</tr>
<tr>
<td>Table 13.</td>
<td>Configuration of SNCU units showing availability of designated areas for specific care provision to newborn, by state</td>
</tr>
<tr>
<td>Table 14.</td>
<td>Comparison of the current availability of major equipment for newborn care with the standards set in the FBNC guidelines</td>
</tr>
<tr>
<td>Table 15.</td>
<td>Comparison of the current availability of essential equipment for critical newborn care with the standards set in the FBNC guidelines</td>
</tr>
<tr>
<td>Table 16.</td>
<td>Comparison of the current availability of essential drugs for newborn care with the standards set in the FBNC guidelines</td>
</tr>
<tr>
<td>Table 17.</td>
<td>Comparison of the essential equipment for newborn care with the standards set in the FBNC guidelines</td>
</tr>
<tr>
<td>Table 18.</td>
<td>Comparison of the current availability of protocols and guidelines for care of small and sick babies at SNCUs, by state</td>
</tr>
<tr>
<td>Table 19.</td>
<td>Comparison of the current availability of protocols and guidelines for care of small and sick babies at NBSUs, by state</td>
</tr>
</tbody>
</table>
Acknowledgments

Between September 2017 and December 2018, the Centre for Maternal and Newborn Health at the Liverpool School of Tropical Medicine (LSTM) conducted this Evaluation of UNICEF’s contribution to the Facility Based Newborn Care (FBNC) Programme in India, focusing on Special Newborn Care Units (SNCUs).

The design and implementation of this evaluation followed the terms of reference. And the approach proposed in the inception report was approved by the Evaluation Reference Group (ERG) at the inception meeting in Delhi in November 2017.

Following reviews and approvals from relevant authorities, including the LSTM Research Ethics Committee, data collection took place in six selected states from May to October 2018.

This Evaluation Report presents the evaluation’s key findings and aims to offer evidence-based independent recommendations to improve newborn survival in India based on the lessons learnt from the six states.

The evaluation team would like to extend sincere thanks to the Government of India’s Ministry of Health and Family Welfare, the governments of Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh, and UNICEF India for the leadership and support to the overall process of this evaluation.

This evaluation would have been impossible without the participation of national, state and district government policymakers, programme managers and staff working in SNCUs at district level, UNICEF staff members, consultants and others involved in implementing the programme who participated in the collection of primary data. We thank them for their knowledge and time given to the data collection process.

We are grateful for the contribution of the stakeholders from the Evaluation Reference Group which included:

Dr. Ajay Khera, Deputy Commissioner and In-charge Child Health, Ministry of Health
Dr. P.K. Prabhakar, Deputy Commissioner, Child Health, Ministry of Health
Dr. Renu Goel Srivastava, Norway-India Partnership Initiative
Dr. Praveen Kumar, Head of Division of Neonatology, PGIMER Chandigarh
Dr. Paul Francis, Health Specialist, World Health Organization
Dr. B.D. Bhatia, President, National Neonatology Forum
Dr. Alok Bhandari, Secretary, National Neonatology Forum
Dr. Ajay Gambhir, Ex-President, National Neonatology Forum

These stakeholders gave their time, expertise and perspectives throughout the evaluation.

We are also grateful to national experts Dr. Harish Chellani and Dr. Ravish Behal for their expertise and support.
Finally, we extend our thanks to Solutio Global, India who delivered and managed the process of primary data collection across the states and districts. We also wish to thanks those behind the scenes in this exercise: data collectors, translators and transcribers.

The evaluation team
Liverpool, 31 July 2019
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC</td>
<td>Annual maintenance contracts</td>
</tr>
<tr>
<td>ANM</td>
<td>Auxiliary Nurse Midwives</td>
</tr>
<tr>
<td>ASHA</td>
<td>Accredited Social Health Activist</td>
</tr>
<tr>
<td>CHC</td>
<td>Community health centre</td>
</tr>
<tr>
<td>C-IMNCI</td>
<td>Community Integrated Management of Childhood Illness</td>
</tr>
<tr>
<td>CMNH</td>
<td>Centre for Maternal and Newborn Health</td>
</tr>
<tr>
<td>CSSM</td>
<td>Child Survival and Safe Motherhood</td>
</tr>
<tr>
<td>DAC</td>
<td>Development Assistance Committee</td>
</tr>
<tr>
<td>EmONC</td>
<td>Emergency Obstetric and Newborn Care</td>
</tr>
<tr>
<td>ER</td>
<td>Expected Ratio</td>
</tr>
<tr>
<td>ERG</td>
<td>Evaluation Reference Group</td>
</tr>
<tr>
<td>FBNC</td>
<td>Facility Based Newborn Care</td>
</tr>
<tr>
<td>FHR</td>
<td>Fetal Heart Rate</td>
</tr>
<tr>
<td>FGDs</td>
<td>Focus Group Discussions</td>
</tr>
<tr>
<td>FMR</td>
<td>Financial management reports</td>
</tr>
<tr>
<td>FY</td>
<td>Financial year</td>
</tr>
<tr>
<td>GoI</td>
<td>Government of India</td>
</tr>
<tr>
<td>HBNC</td>
<td>Home Based Newborn Care Programme</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Management Information System</td>
</tr>
<tr>
<td>HR</td>
<td>Human resources</td>
</tr>
<tr>
<td>IAP</td>
<td>Indian Academy of Pediatrics</td>
</tr>
<tr>
<td>INAP</td>
<td>India Newborn Action Plan</td>
</tr>
<tr>
<td>IMNCI</td>
<td>Integrated Management of Neonatal and Childhood Illness</td>
</tr>
<tr>
<td>JSSK</td>
<td>Janani Shishu Suraksha Karyakram</td>
</tr>
<tr>
<td>JSY</td>
<td>Janani Suraksha Yojana</td>
</tr>
<tr>
<td>KII</td>
<td>Key Informant Interviews</td>
</tr>
<tr>
<td>KMC</td>
<td>Kangaroo mother care</td>
</tr>
<tr>
<td>LSTM</td>
<td>Liverpool School of Tropical Medicine</td>
</tr>
<tr>
<td>MC</td>
<td>Medical college</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MNH</td>
<td>Maternal and newborn health</td>
</tr>
<tr>
<td>MoHFW</td>
<td>Ministry of Health and Family Welfare</td>
</tr>
<tr>
<td>MP</td>
<td>Madhya Pradesh</td>
</tr>
<tr>
<td>MPDSR</td>
<td>Maternal and perinatal death surveillance and response</td>
</tr>
<tr>
<td>NBCC</td>
<td>Newborn Care Corner</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>NBSU</td>
<td>Newborn Stabilisation Units</td>
</tr>
<tr>
<td>NFHS</td>
<td>National Family Health Survey</td>
</tr>
<tr>
<td>NHM</td>
<td>National Health Mission</td>
</tr>
<tr>
<td>NICU</td>
<td>Neonatal Intensive Care Unit</td>
</tr>
<tr>
<td>NIPI</td>
<td>Norway-India Partnership Initiative</td>
</tr>
<tr>
<td>NNF</td>
<td>National Neonatology Forum</td>
</tr>
<tr>
<td>NMR</td>
<td>Neonatal Mortality Rate</td>
</tr>
<tr>
<td>NPCC</td>
<td>National Programme Coordination Committee</td>
</tr>
<tr>
<td>NRC</td>
<td>Nutritional Rehabilitation Centres</td>
</tr>
<tr>
<td>NRHM</td>
<td>National Rural Health Mission</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary health centre</td>
</tr>
<tr>
<td>PIPs</td>
<td>Programme Implementation Plans</td>
</tr>
<tr>
<td>PDSA</td>
<td>Plan-Do-Study-Act</td>
</tr>
<tr>
<td>RMNCH+A</td>
<td>Reproductive, Maternal, Newborn, Child and Adolescent Health</td>
</tr>
<tr>
<td>ROP</td>
<td>Record of proceedings</td>
</tr>
<tr>
<td>ROSA</td>
<td>Regional Office for South Asia</td>
</tr>
<tr>
<td>SG</td>
<td>Solutio Global</td>
</tr>
<tr>
<td>SNCU</td>
<td>Special Newborn Care Unit</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard operating procedures</td>
</tr>
<tr>
<td>SRS</td>
<td>Sample Registration System</td>
</tr>
<tr>
<td>ST</td>
<td>Scheduled tribes</td>
</tr>
<tr>
<td>ToC</td>
<td>Theory of Change</td>
</tr>
<tr>
<td>U5MR</td>
<td>Under 5 mortality rate</td>
</tr>
<tr>
<td>UHC</td>
<td>Universal Health Coverage</td>
</tr>
<tr>
<td>UNEG</td>
<td>United Nations Ethical Guidelines</td>
</tr>
<tr>
<td>vLBW</td>
<td>Very low birth weight</td>
</tr>
<tr>
<td>vPTB</td>
<td>Very preterm birth</td>
</tr>
</tbody>
</table>
# KEY INFORMATION ABOUT THE EVALUATION

<table>
<thead>
<tr>
<th><strong>Object of the Evaluation</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme under evaluation</td>
<td>Facility Based Newborn Care (FBNC) Programme with special focus on Special Newborn Care Units (SNCUs)</td>
</tr>
<tr>
<td>Country</td>
<td>India</td>
</tr>
<tr>
<td>Duration of the Programme</td>
<td>2007-2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Evaluation</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization commissioning the evaluation</td>
<td>UNICEF India</td>
</tr>
<tr>
<td>Organization performing the evaluation</td>
<td>Liverpool School of Tropical Medicine</td>
</tr>
<tr>
<td>Contract</td>
<td>Service Contract No. 43242341</td>
</tr>
<tr>
<td>Timeframe</td>
<td>September 2017 – July 2018</td>
</tr>
<tr>
<td>Type of evaluation</td>
<td>Cross sectional using a case-study approach with states as cases</td>
</tr>
<tr>
<td>Scope of the evaluation</td>
<td><strong>Six states</strong>: Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Odisha, Uttar Pradesh</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Contract Deliverables</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Draft inception report</td>
</tr>
<tr>
<td></td>
<td>Revised/approved inception report</td>
</tr>
<tr>
<td></td>
<td>Draft report</td>
</tr>
<tr>
<td></td>
<td>Revised draft report</td>
</tr>
<tr>
<td></td>
<td>Final report</td>
</tr>
</tbody>
</table>

| **Date of Evaluation Report** | 31 July 2019 |

<table>
<thead>
<tr>
<th><strong>Key Contact persons</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Matthews Mathai</td>
<td>Chair in Maternal and Newborn Health</td>
</tr>
<tr>
<td><a href="mailto:matthews.mathai@lstmed.ac.uk">matthews.mathai@lstmed.ac.uk</a></td>
<td>Liverpool School of Tropical Medicine</td>
</tr>
<tr>
<td>Luigi D’Aquino</td>
<td>Chief of Health</td>
</tr>
<tr>
<td><a href="mailto:ldaquino@unicef.org">ldaquino@unicef.org</a></td>
<td>UNICEF India</td>
</tr>
</tbody>
</table>
Executive Summary

Background:
Reducing newborn deaths is a national priority that the Government of India has been addressing by adopting a two-pronged approach at facility and community levels.

National policies over the years, such as the Janani Suraksha Yojana (JSY) and the Janani Shishu Suraksha Karyakram (JSSK), have attempted to increase access to facility-based care. In 2005, the launch of the National Rural Health Mission (NRHM) and subsequently the National Health Mission (NHM) led to an even greater focus on facility-based newborn care (FBNC). This led to the launch of a pilot and then the scale-up of the Facility Based Newborn Care (FBNC) programme across India, with district-level Special Newborn Care Units (SNCUs) at the centre of the programme.

UNICEF partnered with the Government of India (GoI) to support the implementation of the FBNC programme. UNICEF support concentrated on five programme areas: (i) piloting the FBNC programme in several states to help the NHM create a model for sustainable care, focussing on SNCUs; (ii) developing and implementing standards, protocols and quality improvement in SNCUs; (iii) contributing to the scale-up of the FBNC programme, particularly the SNCUs; (iv) monitoring in real-time to ensure credible data are available to track performance, ensure accountability and initiate timely actions; and (v) promoting links between the FBNC programme and community-based follow-up care.

This cross-sectional evaluation assesses UNICEF decade-long support in six states: Andhra Pradesh, Haryana, Maharashtra, Madhya Pradesh, Odisha and Uttar Pradesh.

Specifically, the evaluation firstly informs UNICEF and GoI partners (for example, state governments, the National Neonatology Forum, the Indian Academy of Pediatrics and WHO and the Norway-India Partnership Initiative) on the relevance, effectiveness, efficiency and sustainability of UNICEF’s contribution to the FBNC programme, with a focus the SNCUs. And secondly, the results have been analysed to recommend changes to improve newborn survival in India, based on lessons learnt from the six selected states.

This is an external, independent, formative evaluation of UNICEF’s contribution to the GoI’s FBNC and SNCU programmes and how it evolved over time.

Evaluation objectives:
1. to determine to what extent and how UNICEF has contributed to India’s FBNC programme, particularly the SNCUs.
2. to document the findings including gaps and challenges, lessons learnt, conclusions, and to make recommendations to inform the strategic direction in UNICEF’s future partnership with the GoI, specifically programme strategies to achieve India Newborn Action Plan (INAP) goals and targets.

Intended audience and use of the report:
The findings and recommendations from this evaluation will be presented to UNICEF and the central and state governments in India and development partners to inform the GoI’s newborn strategy, especially the FBNC programme. The findings will contribute to policy decisions by central and state governments, and ensure accountability on expected results set out in the Ministry of Health and Family Welfare (MoHFW)-UNICEF Programme of Cooperation and Rolling Workplan 2016-17 on
quality maternal and newborn care services. In addition, the findings will inform strategies for the new 2018-2022 UNICEF programme in India.

**Methodology:**

The evaluation covered the period from 2007 to March 2017 and used the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) criteria of relevance, effectiveness, efficiency and sustainability. (Impact was not a primary criterion for this evaluation.) The evaluation used a case-study approach where the states were treated as cases and the analysis took the form of within and between case comparisons. The proposed approach and the Theory of Change was reviewed by key stakeholders in the inception phase and revised based on the feedback. Both primary and secondary sources of data were used for the evaluation.

Key informant interviews (KIIIs) were conducted with present and past stakeholders of the FBNC programme from facilities, districts, states and central government levels. This included NHM staff, professional bodies, collaborating centres and development partners (including UNICEF and WHO). This wide selection of stakeholders helped to understand both internal and external perspectives on UNICEF’s contribution to the programme and to account for inter-state differences in implementation and progress.

Focus group discussions were held with Accredited Social Health Activists (ASHAs) who are key community level staff linking families to health facilities. The ASHAs were able to comment on the links between facility and community-based newborn care, their own roles and perspectives on the follow-up of newborn babies who had been discharged from SNCUs.

Facility assessments were conducted at SNCUs and Newborn Stabilisation Units (NBSUs) together with their accompanying maternity labour wards to assess availability of resources for quality maternal and newborn care.

The main limitations of the evaluation were: (i) the cross-sectional design made it difficult to attribute the FBNC programme outcomes to UNICEF’s support (only an assessment of UNICEF’s contribution was possible); (ii) the lack of access to primary data from the SNCU online data system precluded an analysis on the effectiveness of SNCUs; and (iii) the generalisability of the findings were limited to the six states in which the evaluation was conducted.

**Key findings:**

**Relevance:**

UNICEF’s support was relevant. It was aligned with the priorities of the GoI’s FBNC strategy, and the specific focus on the SNCU programme. UNICEF also built in flexibility to enable adjustments in its support to emerging needs. For example, facilities were supported to provide new services such as kangaroo mother care (KMC). Frequently, the needs were identified directly through high-level analyses of data collected from the SNCUs.

**Effectiveness:**

Overall, UNICEF’s approach – working with the GoI and the states rather than leading the programme – resulted in achievement of many of the main intended outcomes, particularly improving access to the SNCUs. Nevertheless, challenges persist within the areas that UNICEF provided support, as well as beyond, notably improving newborn care through FBNC and SNCUs.
UNICEF support brought renewed focus on newborn health at district level across the country. SNCUs were scaled up to 214 of the 228 districts in the six selected states. UNICEF also supported the states to establish SNCUs in tribal areas. Some districts had no SNCUs (three districts in Odisha, four in Maharashtra and seven in Uttar Pradesh); however, this did not seem to have a discernible geographical pattern and therefore does not seem to be linked to systematic administrative issues.

The main equipment, installations and essential drugs for newborn care were mostly available in all facilities with SNCUs. Also, most SNCUs had integrated the recommended screening for visual and hearing impairments into SNCU care. Yet equipment maintenance in the SNCU was a challenge. Many states had no regular maintenance contracts in place, and even when they did, delays in repairing equipment were reported. In addition, both pilot and scale-up facilities did not have the expected ratio of functional equipment to the number of beds as specified in the operational guidelines.

UNICEF was cited as the lead organization supporting the development of SNCUs protocols, and the protocols were available at almost all the SNCU units. In contrast, UNICEF had limited involvement in the protocol development in NBSUs, and protocols were lacking in these units.

UNICEF partnered with the NHM to strengthen human resource (HR) capacity at SNCUs. This involved strengthening institutions as regional centres to train and supervise SNCU staff. Despite these efforts, the evaluation noted a shortage of specialists such as neonatologists and paediatricians in the SNCUs. Respondents at state and district levels reported staff tend to refuse postings to rural settings. Moreover, placement policies were poor with staff trained in newborn care being shifted into areas of care where their skills are not utilised. A substantial proportion of nurses were contractual rather than permanent – hired on time-bound contracts - which was seen to be unsustainable; there was frequent staff turnover, leading to loss of institutional memory of key interventions.

UNICEF supported the piloting and rolling out of an online computerised data capture and monitoring system for SNCUs that allowed real-time reporting of data from each SNCU. The online system served as the basis for providing regular feedback from the National Ministry of Health to states on care practices at SNCUs. UNICEF also supported capacity building for deploying the online data system in states and districts to analyse data and report to state and national governments. Currently, about 85 per cent of all SNCUs report regularly through this online system, and data are analysed at national level and reports shared periodically with states. Yet, many respondents at state and national levels said that the available data were not being used adequately to improve SNCU service quality, and especially use of data generated at facility-level by staff in facilities was reported to be almost nonexistent. This could be due to bureaucratic delays in sharing data, making any timely corrective action impossible. Overall, the view was despite capacity building initiatives supported by UNICEF, the use of data for quality improvement in the facilities was poor.

The proportion of scheduled tribe (ST) members among admissions to SNCUs was higher than was represented in the 0-6 years category in the 2011 national census, suggesting possible improvement in access to STs (although without data on the relative burden of illnesses and preterm birth rates among this population group, this finding is inconclusive). However, some state level policies have had the unintended impact of limiting access to certain groups. For example, policies introduced in Uttar Pradesh to reduce overcrowding in SNCUs has disproportionately disadvantaged babies referred from distant or tribal populations, which could result in increasing equity gaps in newborn survival.

Under-representation of baby girls in SNCU admissions compared to the sex ratio in children in the general population suggests baby girls remain at a disadvantage. Respondents to KIIs confirmed these findings suggesting that although gender bias had reduced due to educational activities by accredited
social health activist (ASHAs), gender bias still existed among some communities. UNICEF presented sex-disaggregated data from the SNCU online system to policymakers; however, addressing gender equity was seen by policymakers and development partner organizations to be beyond the scope of the FBNC programme. Other components of the newborn health programme, in particular community mobilisation by ASHAs, are key to addressing social determinants of health, including gender.

UNICEF’s support to the programme was said to be too focussed on promoting the use of SNCUs, and less on other aspects of FBNC, such as the NBSUs. Many stakeholders, including policymakers, development partners and collaborative centre respondents, felt that if NBSUs had received more support, overcrowding could have been reduced in SNCU units. As a result newborn care was perceived to be available only at district headquarters level and not elsewhere in the district. In the six months preceding the evaluation, the SNCU online aggregate data revealed that over 14,300 newborns had been admitted to SNCUs. Yet these units had only 326 beds available and staff numbers were lower than recommended.

Moreover, in spite of the mechanisms put in place with UNICEF support, follow-up of discharged newborns in the community in some states was very poor. In the states where data were available, only 39.4 per cent of discharged newborns received follow up visits in the communities. Maharashtra had the highest follow-up rate (74.0 per cent) which was three-and-half times higher than the 20.7 per cent in the state of Andhra Pradesh. While protocols existed for ASHAs to follow up newborns discharged from SNCUs, their training and capacity to provide such follow-up care was poor and the quality of such follow-up care was not monitored in the programme.

Overall, links between maternal health and newborn health were poor, programmatically and operationally, according to almost all respondents including policymakers at national and state levels, development partners, collaborative centre respondents and professional association members. SNCUs were seen to be ‘islands of excellence’ in the facilities with no links to other important components of care in the same facilities, notably labour wards and NBSUs. UNICEF’s workplans and reports show efforts had been made to improve quality in antenatal and postnatal care in other areas, such as developing model labour rooms and developing and disseminating the Maternal Newborn Health toolkit. In addition, UNICEF supported the government to strengthen antenatal, intranatal and postnatal care through capacity building; the finalization and dissemination of the Emergency Obstetric and Newborn Care (EmONC guidelines); and the strengthening of the maternal death review. However, these initiatives have had minimal impact. The evaluation team observed during facility assessments that quality of care in labour rooms was suboptimal as evidenced, for example, by lack of adherence to protocols related to partographs and significantly low caesarean section rates in many states, especially at night.

These key challenges were seen by stakeholders as affecting the quality of care provided in SNCUs. Data showed consistent trends of minimal improvement in case fatality rates in SNCUS. The average mortality across the six states from assessment and secondary SNCU online monitoring data is around 13 per cent, with the highest rate in Andhra Pradesh and Uttar Pradesh, and the lowest in Haryana.

Efficiency:

1 Emergency caesareans typically happen at night; when there are low numbers of caesareans, this could indicate services are not working well.
The evaluation can only provide limited conclusions on efficiency, mainly due to unavailability of cost data linked to outcomes. Regarding nominal expenditure, out of approximately INR 31,620 lakhs (approx. US$50,016,0002) approved by GoI in the Programme Implementation Plans (PIPs) for the FBNC programme, the Record of Proceedings (ROPs) show that only about 63 per cent were spent on operational costs as most states had already functional SNCUs. Other areas such as infrastructure development, capacity building and procurement of equipment, took a tiny proportion of the state FBNC budgets. While the low expenditure could be due to errors in planning for operationalising these units, it was difficult to draw conclusions; SNCUs PIP budgetary allocations were available in the public domain data but not fund utilisation.

In addition, although UNICEF’s support was described as a very efficient use of resources by both programme and facility level staff, figures on the actual costs of the UNICEF investment in the programme were unavailable. This made it impossible to draw strong conclusions on the efficiency of UNICEF spending on the FBNC programme. The findings under Effectiveness can point to the efficiency of UNICEF support to some extent: the effort and resources invested in supporting the FBNC programme, and specifically the SNCUs, have resulted in the scale-up of SNCUs, but have not always translated into the intended results on the ground, especially regarding quality of care.

In addition, assessment was made of the coordination and collaboration with existing programmes and partners working in the same area. It was reported that UNICEF forged partnerships with other groups and played a convening role in the normative function while involving other development partners, professionals and professional associations in supportive roles. UNICEF supported the state governments by training, strengthening community monitoring and referrals by introducing an application to track ASHA’s visits and supervision of babies discharged from the SNCU facilities. However, this implementation, as noted earlier, has been varied across states.

**Sustainability:**

Overall, UNICEF’s support to the programme was deemed sustainable particularly because of the close partnership with the GoI during the national health missions and the implementation, as well as the government’s commitment and leadership. The fact that no financial support had been provided to the programme for the last few years by UNICEF and all funding was coming through the government-funded NHM was seen as proof of sustainability. Credit was given by evaluation respondents to UNICEF for fostering government ownership.

Challenges to sustainability include the previously mentioned lack of human resources, poor equipment maintenance, weak community linkages for effective referrals, and poor decentralisation of the mentorship programme. Also, the quality of and the capacity to use the data was poor. Most respondents at state and national levels felt that addressing these challenges would require continued mentoring and support from UNICEF, without which, the successes achieved in the programme could become unsustainable.

**Conclusions:**

UNICEF’s support to the FBNC programme, particularly the SNCUs, has been mostly successful in the areas which UNICEF was expected to provide support. UNICEF support increased visibility and improved national commitment to the FBNC programme. It helped scale up SNCUs and improved

---

2 All calculations of US$ equivalent are based on average annual exchange rate of US$ to INR between 2013 and 2017.
Source: [https://data.oecd.org/conversion/exchange-rates.htm](https://data.oecd.org/conversion/exchange-rates.htm)
access to small and sick newborns. It improved staff capacity for the care of small and sick newborns in SNCUs in a standardised way, guided by protocols and care guidelines. UNICEF support ensured the main equipment and installations were in place in SNCUs. Moreover, the data collection system has the potential to provide information to improve the quality of programme. Interventions have also been developed for the follow-up of babies discharged from SNCUs. UNICEF used a model of close collaboration with the GoI through the NHM to support the programme which enhanced the sustainability of many core components of the FBNC programme.

However, there are still areas for improvement. These include ensuring the SNCU develops strong links with other components of the FBNC, notably community care and maternal health. In addition, UNICEF should ensure better implementation of existing policies and guidelines related to quality of perinatal care in facilities, more effective and efficient human resourcing and capacity-building and ensuring more effective follow-up of SNCU-discharged babies. The potential of the SNCU online data system could be better used.

**Recommendations:**

Based on the evaluation, there should be an increased role for national and state governments in transitioning UNICEF’s focal areas to the NHM.

The recommendations listed below evolved through a consultative process between the evaluation team, national experts and the Evaluation Reference Group (ERG) and include proposed timelines, based on the urgency to address issues identified in the evaluation, and responsibilities for addressing them.

1. **Suggested recommendations for UNICEF India:**

   **Highest priority:**
   
   i. **Holistic support to newborn health:** UNICEF should be holistic in its support to the FBNC programme and focus beyond SNCUs. It should continue its initiatives in recent years to support improvement of care in maternity units, NBSUs and other lower levels of newborn care, while strengthening collaborative partnerships with other developmental partners and organizations to ensure quality newborn care is available at all levels.
   
   ii. **Protocols for NBSUs:** Having developed capacity in SNCUs, UNICEF should invest in the development of protocols and training for care in NBSUs and newborn care corners (NBCCs).
   
   iii. **Introduction of a Quality Improvement approach in SNCUs, NBSUs and labour rooms:** UNICEF should support the Government by improving quality of SNCUs, NBSUs and labour rooms. This could be achieved by the development and implementation of standards and norms, capacity building, and use of data for monitoring and supportive supervision.
   
   iv. **Promotion of facility level use of data:** UNICEF should ensure that data from the SNCUs are used by facilities to improve quality of care in the units. The data must be fed into quality improvement (Plan-Do-Study-Act, PDSA) cycles that will be led by the facilities.
   
   v. **Capacity building for data use:** UNICEF should support efforts to build capacities of programme managers at district, state and facility levels to conduct focussed examinations of SNCU online data on performance to inform the implementation.

   **Medium term priority:**
v. **Equipment maintenance:** UNICEF should support the state governments with technical inputs to build capacities of local staff in the installation and follow-on maintenance of the equipment.

vi. **Mentorship (and the use of virtual platforms):** As the mentorship programme is limited by the number of places, staff who can be accessed and the cost, UNICEF should support decentralisation of mentoring to state and district levels, for example through telemedicine facilities with collaborative centres.

vii. **Interventions to address gender inequity:** Interventions to address gender disparity in health care seeking behaviour related to newborn care may be beyond the scope of the FBNC programme. However, UNICEF, as part of its advocacy work, should facilitate and support work with ASHAs in health programmes to develop gender equitable attitudes at community level.

---

ii. **Suggested Recommendations for Government of India and State Governments:**

**Highest priority:**

i. **Strengthening of NBSUs:** In the short to medium-term, the aim should be to strengthen the capacity of NBSUs to play a critical role in the care of stable newborns and to bring care closer to families, and provide post-discharge follow up of SNCU-discharged babies.

ii. **Referral systems:** Referral systems for babies from the communities to SNCUs should be strengthened.

iii. **Strengthening quality of care for mother-baby dyad:** Maternity units and intrapartum care should be improved to ensure adequate provisions for the best quality care for mother and baby.

iv. **The screening and tertiary level care for SNCU-discharged babies:** A policy for mandatory screening for hearing and retinopathy of prematurity in the medium to long term should be developed for SNCU-discharged babies.

v. **Follow up of SNCU-discharged babies:** Protocols and policies should be developed and implemented effectively for care of babies discharged from SNCUs at community level. Follow-up care of babies discharged from SNCUs should be seen by the Government as a pathway to strengthening community care for newborns.

vi. **Capacity building for use of data:** Investments should be made to train staff at facility level to capture, analyse and interpret data; and measures should be put in place to retain these staff.

vii. **Equipment maintenance:** State PIPs should outline responsibilities and procedures for equipment/consumable maintenance in facilities; allocate sufficient funding for this purpose; and ensure effective implementation.

viii. **The filling of human resource gaps:** A complete re-evaluation of the human resource policies related to SNCUs and the entire FBNC programme is recommended. Innovative mechanisms to recruit and retain staff – professional and auxiliary – to provide care at these facilities are essential. The numbers and capacities of staff in SNCUs need to be increased to improve the quality of care.

**Medium-term priority:**

ix. **Annual maintenance contracts:** States should be supported to include comprehensive annual maintenance contracts (AMCs) for equipment in all procurement contracts as stated in the operational guidelines and enforce the regular conducting of post-installation routine maintenance.

x. **Information technology for capacity building:** Partnerships between the Government and development partners should be formed to explore the use of information technology
(such as the use of telemedicine) in capacity building of the staff working in the FBNC programme.

xi. **Data monitoring and use:** Use of data from facility and community levels should be linked and integrated into other systems such as the District Health information Systems – 2 (DHIS-2). The quality of the data should be audited regularly to ensure accuracy.

xii. **Inter-sectoral collaboration:** There is a key opportunity for NHM to take a leadership role both at central and state levels to harness inter-departmental, inter-ministerial, inter-sectoral and inter-agency co-operation to achieve better newborn health outcomes. Improving newborn health, including reducing inequities, requires inputs in diverse areas such as maternal health, nutrition, education, human resource development and agriculture.
1. INTRODUCTION

1.1. Background to the evaluation

1.1.1. Newborn Mortality Reduction: A national priority in India

In India, between 2008 and 2016\(^1\) the death rate for children under the age of 5 declined by about 43 per cent, from 69 to 39 per 1,000 live births\(^2\). Yet this success was not reflected in the death rate for newborns; the death rate for newborns, in the first month of life, was reduced by only 31 per cent, from 35 to 24 per 1,000 live births over the same period\(^1,2\).

Not all newborns face the same risk. Inequities and inequalities persist among different population sub-groups. For example, data suggests that newborns are twice as likely to die in rural areas. In 2016, the neonatal mortality rate (NMR) stood at 14 per 1,000 live births in urban areas compared to 27 per 1,000 live births in rural areas\(^2\).

Many of these deaths are preventable with existing, proven interventions that do not require sophisticated care\(^3\). The leading causes of neonatal deaths in India are complications of preterm birth, intrapartum-related complications, infections and congenital anomalies\(^4,5\). Mortality rates also differ by the size or weight of the baby at birth. The report of the fourth National Family Health Survey (NFHS-4) shows that NMR among average or larger sized babies was 23.5 per 1,000 live births compared to the rate of 39.7 per 1,000 live births for small babies, about 1.7 times the risk of death among average sized babies\(^3\).

UNICEF India has designated preventing newborn deaths as a priority and is working closely with the Government of India (GoI) to reduce the high number of neonatal deaths in the country. Since 2007, UNICEF support to the GoI has been to establish special newborn care units (SNCUs) to provide quality facility-based newborn care services at the district level\(^6\).

Maternal and Newborn-related Indicators in the six Evaluation States

The six states of Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh chosen for the evaluation represent geographically diverse regions in the country. They also represent different levels of socio-economic and health system development across the country. Table 1 shows a summary of some socio-demographic, health services and health outcome indicators across the six states and also compares them against the national average.

The central state of Madhya Pradesh (MP) is the second largest state in India and, based on its relatively poor human development and health indicators, has been defined by the Government as one of the High Focus states in the country for priority interventions. Table 1 shows that apart from its institutional birth rate, all indicators are considerably worse than the national average\(^1,2\). For example, in Madhya Pradesh state almost a third of all women marry before the legal age of 18 years and a third of married women report experiencing spousal violence\(^3\).
Madhya Pradesh also has a relatively high proportion of marginalised communities among its population with 15.2 per cent belonging to scheduled castes and 20.3 per cent to scheduled tribes. Mortality rates in the state are higher for scheduled tribes, scheduled castes and other marginalised classes than for others.

The western state of Maharashtra is one of the most economically well-developed states in the country and is also highly industrialised. The state has a well-functioning public health system, reflected in the health indicators which are better than the national average (Table 1). However, Undernutrition in tribal communities in the state has received wide media attention in the last three decades and has resulted in specific interventions by the state to address this. Scheduled castes constitute 10.2 per cent of the state’s population and scheduled tribes 8.9 per cent.

In the northern state of Uttar Pradesh (UP), the most populous state in the country, is also one of the High Focus states due to its relatively poor human development and health indicators. The state’s maternal mortality ratio (MMR) and NMR are much higher than the national average. Quality of and access to health services are poor, for example, only 5.9 per cent of pregnant women in the state receive full antenatal care. Over one-fifth of the state population are scheduled castes (21.1 per cent) and 19.3 per cent belong to the Muslim community. Women’s literacy levels are lower than the national average.

The eastern state of Odisha is also a High Focus state. The state’s health outcome indicators, notably the MMR, infant mortality rate (IMR) and under five mortality rate (U5MR), are worse than the national average. It has a high scheduled caste (16.5 per cent) and scheduled tribe (22.1 per cent) populations. The state has however pioneered strategies to reduce health inequities in these marginalised communities for over a decade with a Health Equity Strategy (2009) and a Nutrition Operation Plan (2010).

Andhra Pradesh (AP) is one of the five states in southern India. The larger state of Andhra Pradesh was divided into the current Andhra Pradesh and Telangana in 2014. Like the other southern states, Andhra Pradesh has a relatively well functioning public health system. Health outcome indicators like MMR and NMR are lower than the national average. Approximately 16.2 per cent of the state’s

### Table 1. Summary of some socio-demographic, health services and health outcome indicators across the six states

<table>
<thead>
<tr>
<th>Indicator</th>
<th>India</th>
<th>Madhya Pradesh</th>
<th>Uttar Pradesh</th>
<th>Maharashtra</th>
<th>Odisha</th>
<th>Andhra Pradesh</th>
<th>Haryana</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR(^1)</td>
<td>130</td>
<td>173</td>
<td>201</td>
<td>61</td>
<td>180</td>
<td>74</td>
<td>101</td>
</tr>
<tr>
<td>NMR(^2)</td>
<td>24</td>
<td>32</td>
<td>30</td>
<td>13</td>
<td>32</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>Early NMR(^2)</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>11</td>
<td>24</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Stillbirth rate(^2)</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>13</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Perinatal mortality rate(^2)</td>
<td>23</td>
<td>32</td>
<td>26</td>
<td>14</td>
<td>37</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Institutional births (%)</td>
<td>78.9</td>
<td>80.8</td>
<td>67.8</td>
<td>90.3</td>
<td>85.3</td>
<td>91.5</td>
<td>80.4</td>
</tr>
<tr>
<td>Women who are literate (%)(^3)</td>
<td>68.4</td>
<td>59.4</td>
<td>61.0</td>
<td>80.3</td>
<td>67.4</td>
<td>62.9</td>
<td>75.4</td>
</tr>
</tbody>
</table>

\(^1\) Special Bulletin on Maternal Mortality in India, 2014-16
\(^2\) SRS Statistical report 2016
\(^3\) National Family Health Survey 4
population belong to scheduled castes and 6.6 per cent to scheduled tribes; however, caste/tribal status does not seem to influence access to health services. About a third of all women in the state are married before the legal age of 18 years and 43 per cent of married women report experiencing spousal violence.

Haryana, in north west India, is one of the wealthiest states in the country. However, the state’s health indicators are not commensurate with its economic development. The state’s MMR, NMR and U5MR, although lower than the national averages, are much higher than those of states with comparable economic development. Just under a fifth (19.3 per cent) of the population belong to Scheduled Castes and there are no scheduled tribes in the state. The communities in Haryana State have been known for their negative gender attitudes; the state has the lowest female-to-male child sex ratio in the country of 0.83.

1.1.2. Facility Based Newborn Care Strategy in India

The evolution of the facility based newborn care (FBNC) strategy in India has been described in the inception report (Annex 2). Figure 1 summarises the key milestones in the development of the FBNC strategy within the relevant policy environment of the country starting from the launch of the Child Survival and Safe Motherhood (CSSM) programme in 1994 through to the key Indian Call to Action (CTA) for Child Survival in 2013 and the launch of the India Newborn Action Plan (INAP) for reducing preventable newborn deaths in 2014. During this time, various national policies have been implemented such as the Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakram (JSSK) programmes aimed at improving access to facility deliveries and subsequent access to facility care for mothers and newborns. There was also the launch of the National Rural Health Mission (NRHM) with the goal to improve equitable access to facility care.

The FBNC programme is currently the overarching strategy for tackling newborn deaths in health facilities and aligns with other national strategies and priorities for maternal and newborn health as well as the 2013 Call to Action for Child Survival and Development and the India Newborn Action Plan. It defines a standard of care for newborns at different levels of healthcare facilities with specific services tailored to meet their resource capacities (Table 2). The cornerstone of the programme is the SNCU which is the first level to provide specialised care for at risk or sick newborns and which would take a substantial part of the total investment into the FBNC programme.

Special Newborn Care Units: These are district-level specialised units which have been specifically resourced to provide services to sick newborns, 24 hours a day, 7 days a week. SNCUs serve as the referral centre for the entire district for the provision of advanced care for sick newborns. The design of SNCUs considers the projected demand for the service in resourcing the facilities. On average, SNCUs should have a 12-20 bed capacity, with a consultant paediatrician responsible for clinical standards of the care of newborns and 3-4 trained doctors, 10-12 nurses with at least 2 per shift, round-the-clock, and support staff.

Each SNCU is equipped to provide specialised care at birth (including resuscitation of asphyxiated newborns), sick newborn care and routine postnatal care (immunisation services). SNCUs can provide care for low birthweight newborns (less than 1,800g), all sick newborns except those requiring mechanical ventilation or major surgery; refer where necessary for appropriate care; and crucially, provide follow-up care for high risk babies discharged from the unit.

More information on policies and programmes that influenced implementation of FBNC programme are given below:
National pilot of the SNCU programme and UNICEF’s subsequent involvement

India’s FBNC programme was first piloted by UNICEF in Purulia where a district hospital was upgraded as a SNCU in 2003. The pilot was found to be successful by state governments, MoHFW partners and stakeholders based on its demonstration of a model that increased availability of newborn care at district level. In 2005, the GoI piloted SNCUs in 17 facilities across the country. This pilot was also successful and the FBNC programme was well received with plans for the programme to be scaled up to cover all district hospitals in all states (Figure 1). The national pilot followed the launch of the National Rural Health Mission (NRHM) programme which facilitated the pilot’s implementation. The scale-up of the programme took place under the auspices of the NRHM.

Figure 1. Milestones in the development of the FBNC programme

The Janani Suraksha Yojana Programme (JSY)

In 2005, the GoI implemented the Janani Suraksha Yojana (JSY) programme, a conditional cash transfer scheme, to increase access to institutional services. An evaluation of the JSY scheme found inequities in the access to the scheme and, therefore, to health facilities. In certain areas, facilities were unavailable and so the scheme had no real value to women because they could not afford the transport costs to distant facilities to utilise these services under the JSY scheme. Therefore, although the JSY scheme and the Integrated Management of Newborn and Childhood Illnesses (IMNCI) improved care for children, challenges with access to care in facilities were not fully addressed.

National Rural Health Mission and transition to the National Health Mission

To provide equitable, affordable and quality health care to people living in rural areas of the country, the NRHM was launched by the GoI in April 2005. The target group for the NRHM was vulnerable populations living in rural areas. Interventions focussed on the Empowered Action Group (EAG) states and the north-eastern states. The NRHM policy thrust was to establish a ‘fully functional community-
owned decentralised health delivery system with inter-sectoral convergence at all levels, to ensure simultaneous action on a wide range of determinants of health such as water, sanitation, education, nutrition, social and gender equality. Based on the success of the NRHM, the Union Cabinet took a decision in May 2013 to establish the National Health Mission (NHM) with the NRHM and a National Urban Health Mission (NUHM) as subsidiaries. Four of the 11 goals of the NHM were relevant to maternal and child health and include ‘to reduce maternal mortality ratio to 1 per 1,000 live births’, ‘to reduce infant mortality rate to 25 per 1000 live births’, ‘to prevent and reduce anaemia in women aged 15-49 years’ and ‘to reduce household out-of-pocket expenditure on total health care expenditure’. States set specific goals based on capacity and context and developed process and outcome indicators to reflect equity, quality, efficiency and responsiveness. Innovations were encouraged.

The Janani Shishu Suraksha Karyakram Programme

Services to women and their newborns in health facilities were made free under a MoHFW scheme called the Janani Shishu Suraksha Karyakram (JSSK) that was launched by the GoI on 1 June, 2011. JSSK has provided a range of services for pregnant women to encourage institutional deliveries and free diagnostics, drugs and treatment to all newborns requiring facility-based newborn care up to one year after birth. Transport for emergency referrals and to and from health facilities and for inter-facility referrals has also been provided. In areas poorly served by public health services or where the facilities are ill-equipped to provide basic and/or advanced obstetric and neonatal care, accredited private institutions were certified to provide these services until public health facilities were strengthened. JSSK improved facility access, resulting in even higher caseloads at first referral units. With no changes in the capacity of health care providers, quality of care declined.

Table 2. Newborn care services at different levels of healthcare facilities under FBNC

<table>
<thead>
<tr>
<th>Healthcare Facility</th>
<th>All Newborns</th>
<th>Sick Newborns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Health Centre (PHC; MCH level I)</td>
<td>Newborn care corner (NBCC) in labour rooms</td>
<td>Identification and prompt referral</td>
</tr>
<tr>
<td>Community Health Centre (CHC; MCH level II)</td>
<td>NBCC in labour rooms and operation theatre</td>
<td>Newborn Stabilisation Unit (NBSU)</td>
</tr>
<tr>
<td>District Hospital (MCH level III)</td>
<td>NBCC in labour room and operation theatre</td>
<td>Special Newborn Care Unit (SNCU)</td>
</tr>
</tbody>
</table>

National Plan for Facility Based Newborn Care and Special Newborn Care Units

Key highlights in the national plan for the FBNC (and SNCU) programme include the following:

- The national goal was to have an SNCU in each district hospital and in any sub-district hospital where annual births exceed 3,000. A three-step prioritisation was adopted for:
  - high focus districts performing poorly on maternal and newborn health (MNH) indicators within each state (i.e. with infant mortality rates higher than the state average and that have high institutional delivery rates)
  - facilities with high institutional deliveries within the district and
  - existing newborn care units in a medical college hospital must meet the requirements of an SNCU.
- A National Collaborative Centre for FBNC was established to:
provide technical expertise and overall support to the GoI to implement the FBNC programme effectively and monitor progress
work with regional collaborative centres to build capacity of the service providers and mentor SNCU teams and state/district programme managers.
A multi-disciplinary team was constituted in each state to assess the work and refurbishment of SNCU facilities.
In the procurement of equipment, priority was given to the quality of the equipment and selection of suppliers was biased in favour of indigenously-manufactured products. If available, used equipment from peripheral facilities were collected and sent to the SNCU as a first step.
Equipment procurement contracts should include annual maintenance contracts (AMCs) for all states and SNCUs. Districts and states should ensure the provision of stable power and other conditions to secure optimal operation of all the procured equipment. Funds should be set aside for the training of biomedical engineers and technicians to service the equipment and for outsourcing maintenance activities including regular equipment functionality audits.
Identification of human resource requirements to run the SNCUs: recruit these staff, assess their training needs and develop a plan for their training. This should include training on the use of the equipment in the SNCUs.
Standard operating procedures (SOPs) for housekeeping and clinical management of newborns should be developed to ensure quality of care.
Records should be maintained for each admitted newborn on standardised forms with standard definitions for newborn conditions and, where possible, the data system should be computerised.
At all levels from facility to national, reports from the SNCUs should be analysed and performance reviewed based on standard indicators.
State, district and collaborating centre experts should supervise and mentor staff at the SNCUs. These experts will encourage operations research within SNCUs and review the data to inform planning and quality improvement around services provided at SNCUs.
Costs of mentoring visits should be covered in Programme Implementation Plans (PIPs).

FBNC-linked Community level follow-up care for newborns
The FBNC programme was developed with a strong community component which links SNCU services to community-based care. When the baby is discharged from the SNCU, the baby is referred to an accredited social health activist (ASHA) in the community to provide follow-up care of the baby for one year. The ASHAs should conduct six structured home visits to newborns discharged from health facilities in the first 42 days of life. ASHAs were trained to identify and refer newborns with complications back to health facilities for care. The community package also involved six community visits by health workers in the first month and five hospital visits in the first year of life.

Collaborative Centres
A vital requirement for the successful functioning of the FBNC programme is adequately trained personnel. Collaborating centres selected to support the FBNC programme should be tertiary level hospitals with NNF-certified Level II or Level III nurseries with adequate faculty numbers, which have
expressed interest in supporting rural health facilities and are involved in operations research around evidence-based care.

With the support of UNICEF-India and other GoI partners, four regional collaborating centres were established in King Edward Memorial Hospital, Mumbai; PGIMER, Chandigarh; Institute of Child Health, Chennai and Assam Medical College, Dibrugarh and a national collaborating centre in Kalawati Saran Children’s Hospital, New Delhi. These centres are tasked to:

1. **Build capacity of the staff and administrators in SNCUs**
2. **Support the establishment of standard recording and reporting systems**
3. **Provide on-going support to the FBNC programme especially the SNCUs**
4. **Assure quality care in SNCUs**
5. **Conduct focussed operations research to identify gaps in knowledge**
6. **Organize bi-annual review meetings for in-charges of newborn units in the states and districts.**

**National scale-up of SNCUs**

SNCUs were scaled-up across states and districts after the successful implementation of the national pilot. This rapid increase in the number of SNCUs came at a cost and it was unclear whether the expected benefits of the FBNC programme were being achieved. No systematic data were being collected to inform implementation quality and the outcomes of management of newborns in the facilities. Several studies have demonstrated the impact of SNCUs on neonatal mortality, but authors warned that the rapid uptake of SNCUs may pose challenges. For example, assessment of SNCUs in Andhra Pradesh by the state government and UNICEF found inconsistencies in the design of the physical infrastructure, huge caseloads, limited resources, inadequate water, sanitation and hygiene (WASH) facilities, erratic power supplies and lack of safe newborn transfer facilities. The numbers of trained staff were grossly insufficient and faced challenges with competencies. Basic service protocols and guidelines were lacking.

A report by the Centre for Innovations in Health Systems observed that whilst the establishment of SNCUs had contributed to reducing the otherwise stagnant NMR in the country, it ‘exposed the inadequacies of data systems to monitor quality of care in SNCUs’ and also the ‘limited the efforts for corrective actions to improve performance of these units’. The authors said the lack of credible data made it difficult to justify the continued investments in establishing SNCUs amongst other competing priorities and interests in the health sector. In 2012, following the recommendations of an expert panel convened in 2010, UNICEF and the government of Madhya Pradesh developed and launched a real-time online data management and follow-up tracking system. Data staff sent Short Messaging Service (SMS) reminders through the online system to ASHA workers to strengthen follow-up care and reduce post-discharge mortality of ‘at risk’ newborns.
UNICEF’s plan for India’s FBNC (SNCU) programme

With the experience of the initial pilot of the SNCU programme in Purulia, in West Bengal, UNICEF India committed to support the GoI with the national plan of the FBNC programme. UNICEF’s focus of support for the programme was planned to be at SNCUs, the first level for referral care of newborns. UNICEF committed to focus on the five areas as shown in Box 1. LSTM’s proposed Theory of Change (ToC) for the evaluation of UNICEF’s contribution to the FBNC programme and the evaluation report are presented according to these questions and how they relate to the assumptions on the ToC.

Box 1. UNICEF’s focal areas of involvement in India’s FBNC (SNCU) programme

1. Piloting of FBNC with the focus on SNCUs in several states to create a model for sustainable care by the NHM,

2. Developing and implementing standards, protocols and quality improvement within SNCUs,

3. Contributing to scale-up of the FBNC programme, particularly the SNCUs,

4. Monitoring in real-time to ensure credible data are available to track performance, ensure accountability and initiate timely actions, and

5. Promoting linkages between the FBNC programme and community-based follow-up care.
1.2. Theory of change for the evaluation

The proposed ToC developed by the Centre for Maternal and Newborn Health, Liverpool School of Tropical Medicine (CMNH-LSTM) to explain how UNICEF’s involvement in the FBNC/SNCU programme is shown in Figure 2. It builds on the UNICEF Regional Office for South Asia’s (ROSA) ToC for saving newborns, incorporating specific outputs and outcomes that are relevant to UNICEF India’s contribution to the FBNC programme. It identifies the challenge of newborn deaths from preventable causes and poor care quality. UNICEF provided technical and financial support to the GoI as inputs (A1-A4) and the ToC identifies activities (B1-B4) related to these inputs, the immediate outputs (C1-C4) which in the short term produced immediate (D1-D4) and intermediate outcomes (E1-E3) such as improved coverage, quality and equity around access to SNCU care for newborns; all of which lead to improved care for newborns at SNCUs. These pathways have several interlinkages but are all based on specific assumptions (indicated with white labelled stars) enumerated under the chart. The overarching cross-cutting assumptions were key considerations for the evaluation.

Intended results of UNICEF’s support to India’s FBNC (SNCU) programme

The key expected outputs and immediate outcomes are: C1 and D1: SNCUs are scaled-up from the initial pilot to other districts in the states. The pilot was assessed to understand what components needed to be scaled-up. This then leads to SNCUs scaled-up across other states; C2 and D2: Trained Accredited Social Health Activists (ASHA) are available to follow-up babies discharged from SNCUs into the community. This assume ASHAs are trained and understand their relationship with SNCUs and the content, job aids and schedule of visits to babies who have been discharged from SNCU. Newborns discharged from SNCUs, therefore, receive continued care in the community; C3 and D3: Standards, protocols and guidelines are available for newborn care in SNCUs and staff in SNCUs trained to use them. Newborns in SNCUs receive quality care according to these standards, protocols and guidelines; C4 and D4: Data is collected from SNCUs to track their performance. This hinges not only on the development of the data management system but also systematic review and interpretation of this data to for tracking. This will also include the development of indicators to track performance. SNCU staff initiate timely actions on challenges identified from the data.

These outputs and immediate outcomes, according to the ToC, will produce three outcomes that lead ultimately to improved care for newborns at health facilities as part of the SNCU programme. These outcomes in E1-E3 are: E1: Improved coverage of sick newborn care; E2: Increased access and utilisation of SNCU services, equitably by all small and sick newborns; and E3: Quality care to small and sick babies in all SNCUs.
**Proposed Theory of Change (together with the assumptions and risks) that explains how UNICEF’s support might result in expected outcomes**

**ASSUMPTIONS**
1. Advocacy will lead to increased political will
2. Advocacy will result in increased investment into improving newborn health
3. Advocacy will increase awareness about newborn health (HCW & Community)
4. Piloting of SNCUs took place within each state
5. Scale-up with in states informed extension of SNCU services to other states
6. Scale-up within states informed extension of SNCU services to other states
7. Scale-up leads to improved access (coverage and utilisation)
8. ASHAs trained to understand their support to SNCUs
9. Number of ASHAs trained and supported can cover all SNCU discharged newborns
10. ASHAs can provide quality care for every newborn
11. Standards, protocols and guidelines developed for use in SNCUs
12. SNCU staff understand and adhere to standards, protocols and guidelines
13. Adhering to the standards, protocols and guidelines will improve quality
14. Data monitoring system established
15. Data from SNCUs used to track performance & link with community care
16. SNCUs can act on the findings from the performance tracking data
17. Referral systems to link SNCUs to ASHAs are effective

**OVERARCHING CROSS-CUTTING ASSUMPTIONS**
- a. UNICEF’s interventions are in line with national priorities
- b. UNICEF’s areas of focus represent what was needed for the programme
- c. The format of UNICEF’s support meets what programme managers expected

*Figure 2 Proposed Theory of Change (together with the assumptions and risks) that explains how UNICEF’s support might result in expected outcomes*
2. PURPOSE, OBJECTIVES AND SCOPE OF THE EVALUATION

2.1. Evaluation purpose, rationale and expected use of the findings

2.1.1. Purpose of the evaluation
The purpose of the evaluation is to inform UNICEF and its GoI partners, for example state governments, NNF, IAP, NIPI and WHO, on the relevance, effectiveness, efficiency and sustainability of UNICEF’s contribution to India’s FBNC programme with emphasis on SNCUs and to recommend changes to improve newborn survival in India, using lessons learnt from six large states: Andhra Pradesh, Haryana, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh. It is an external, independent, formative evaluation of UNICEF’s contribution to GoI’s FBNC and SNCU programmes and how it evolved over time.

2.1.2. Rationale
UNICEF India has contributed in several areas over the past decade to the FBNC programme. These contributions include staff time, technical assistance, equipment and infrastructure development. The nature and scope of support have evolved over time. However, there has been no systematic evaluation of UNICEF’s role to assess its relevance, effectiveness, efficiency and sustainability in the long term.

2.1.3. Expected use of findings
For the Government of India (GoI), the evaluation will be used to develop a set of recommendations to inform newborn strategy, especially the FBNC. The findings should help future programme and policy decisions. In addition, the findings should guide accountability on expected results set out in the Ministry of Health and Family Welfare (MoHFW)-UNICEF Programme of Cooperation and Rolling Workplan 2016-17 on delivery of quality maternal and newborn care services, with a focus on reducing neonatal deaths and prioritising the most vulnerable communities and groups.

For UNICEF, the evaluation will inform strategies for the new 2018-2022 country programme in India. And with support from LSTM, UNICEF will disseminate the findings of the evaluation to other stakeholders in the country, the regional office and other organizations.

2.2. Evaluation objectives
Evaluation objectives are two-fold:

1. To determine to what extent and how UNICEF has contributed to India’s FBNC programme with emphasis on the SNCUs, particularly aspects of SNCUs on which UNICEF has focussed, namely the development and implementation of standards, protocols and quality improvement in SNCUs, as well as linking facilities with communities and real time monitoring.

2. To document the findings including gaps and challenges, lessons learnt, conclusions and to develop recommendations to inform the strategic direction in UNICEF’s future partnership with the GoI and programme strategies in order to achieve India Newborn Action Plan (INAP) goals and targets.
The evaluation objectives are slightly different from the original terms of reference; these were revised based on the advice of the Evaluation Reference Group (ERG): The evaluation objectives were reviewed at the inception meeting on 29 November 2018 and the ERG recommended that the scope of the evaluation should be modified to cover FBNC, with a focus on SNCUs. The ERG noted that since Newborn Stabilisation Units (NBSUs) feed into the SNCUs, it is vital to understand care provision and human resource capacities at NBSUs and their role in newborn care at sub-district levels. The group also agreed that as UNICEF set up the Collaborating Centres at the start of the FBNC programme, the scope of data collection should include interviews at those centres. And it was agreed that in districts where there are medical colleges, the human resource and care delivery capacity should be assessed in the neonatal intensive care units (NICUs).

2.3. Time Period

The evaluation focuses on UNICEF’s role in the FBNC programme (and especially the SNCUs) starting from 2007 up to March 2017.

2.4. Scope of the Evaluation

This formative evaluation focuses only on UNICEF’s contribution to India’s FBNC programme with special focus on SNCUs, rather than an evaluation of the outcomes and impact of SNCUs. The evaluation assesses five aspects of UNICEF’s ongoing work relating to FBNC as illustrated in Box 1. In these five aspects, the evaluation paid attention to how UNICEF contributed to promoting equity in access to FBNC in the states and assessed the utilisation of SNCUs by the most disadvantaged and excluded children and their families. Factors such as geographic location, gender inequality, economic status and social and cultural norms/behaviours were considered. Furthermore, the evaluation considered how UNICEF has supported the GoI through activities such as capacity building, technical assistance, joint planning, advocacy, field visits, coordination and leveraging resources. The evaluation explored whether other organizations, public or private that are an important part of the service, are sharing a platform with UNICEF in the implementation of the SNCU programme and how these strong cooperative networks can contribute to improving the quality of services in the public sector. Trends in GoI contributions to the FBNC programme were explored but not UNICEF’s financial contribution due to unavailability of data.

2.5. Geographic focus of the evaluation

The evaluation was conducted in six states: Andhra Pradesh, Haryana Madhya Pradesh, Maharashtra, Odisha, and Uttar Pradesh. These states were proposed because they are geographically dispersed across India and represent a mix of states that are at various stages in scaling-up the FBNC programme. In addition, all the states, with the exception of Haryana, have had a UNICEF field offices. In Haryana, although there is no UNICEF office, the GoI and the state government requested UNICEF’s support for the FBNC implementation. In each state, data was collected from two districts as detailed in Table 3: one state that was involved in UNICEF’s initial pilot of the SNCU component of the FBNC programme and a second state that was involved in scale-up of SNCUs. Regarding selection of SNCUs for the evaluation, priority was given to SNCUs that are in districts with medical colleges. In those districts, additional assessments were conducted in the medical colleges to assess the human and other resources available to newborns who are referred to these facilities from SNCUs.
<table>
<thead>
<tr>
<th>STATE</th>
<th>DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>East Godavari (pilot)</td>
</tr>
<tr>
<td></td>
<td>Chittoor (scale-up)</td>
</tr>
<tr>
<td>Haryana</td>
<td>Rewari (pilot)</td>
</tr>
<tr>
<td></td>
<td>Sonipat (scale-up)</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>Guna (pilot)</td>
</tr>
<tr>
<td></td>
<td>Jabalpur (scale-up)</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Gadchiroli (pilot)</td>
</tr>
<tr>
<td></td>
<td>Parbhani (scale-up)</td>
</tr>
<tr>
<td>Odisha</td>
<td>Mayurbhanj (pilot)</td>
</tr>
<tr>
<td></td>
<td>Sundargarh (scale-up)</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>Allahabad (pilot)</td>
</tr>
<tr>
<td></td>
<td>Rae Bareli (scale-up)</td>
</tr>
</tbody>
</table>

Table 3. Districts selected for data collection

2.6. Target groups

The main target groups who were involved in the evaluation included the main stakeholders, namely: national, state and district government policymakers and managers, programme managers and staff working in SNCUs at district level, UNICEF staff members, consultants and others involved in implementing the programme, and other relevant partners including representatives of professional bodies like the National Neonatology Forum (NNF).
3. EVALUATION METHODOLOGY

3.1. Evaluation design

This evaluation used a cross-sectional design and adopted a case study approach where the states selected for the evaluation acted as cases with identifiable boundaries, unique socio-demographic characteristics, governments, health priorities and other distinct characteristics. For each case, the evaluation involved an in-depth exploration of how UNICEF contributed to the FBNC programme, beginning with the SNCUs and extending to involve Neonatal Intensive Care Units (NICUs) in districts with medical colleges and Newborn Stabilisation Units (NBSUs) at sub-district level which can refer babies to the SNCUs.

This approach allowed for a better understanding of the programme implementation in individual states while enabling possible comparisons on how the states have been providing a holistic approach. It also gave an insight into the progress made in the implementation of the SNCU component of the FBNC programme, and more specifically on UNICEF’s contributions to these. This approach had the additional merit of producing evidence in districts and states, and nationally, on what works and what does not. This is critical to inform strategic improvements in programme planning and implementation.

The LSTM drew on its previous extensive experience using mixed research methodology for operational research and programme evaluations in low- and middle-income countries to carry out this assignment at optimal quality standards.

The basic assumptions on which the proposed evaluation was based are as shown below (Box 2).

<table>
<thead>
<tr>
<th>Box 2. Basic assumptions for the evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. UNICEF’s support for the FBNC, particularly the SNCU programme, is based on a plausible theory of change; reproduced by the evaluation team (presented in Figure 2).</td>
</tr>
<tr>
<td>ii. Activities in the theory of change were implemented accordingly.</td>
</tr>
<tr>
<td>iii. The theory of change can be validated by existing evidence.</td>
</tr>
<tr>
<td>iv. The implementation addressed the core criteria of relevance, effectiveness, efficiency and sustainability.</td>
</tr>
</tbody>
</table>

3.2. Evaluation framework

The evaluation framework was based on the Organization for Economic Co-operation and Development (OECD)/Development Assistance Committee (DAC) criteria for evaluation which examines relevance, effectiveness, efficiency and sustainability. Although impact is a criterion in the OECD/DAC framework, it was not within the scope of this evaluation. The evaluation framework was developed by LSTM based on the UNICEF’s inputs in the FBNC programme and illustrates how UNICEF’s contribution to India’s FBNC, specifically the SNCU programme, could lead to improved outcomes for newborns who accessed facilities. This evaluation framework has strong links with the theory of change (Annex 4) described in previous sections.

The evaluation framework starts by acknowledging the many newborn deaths from preventable causes in India.
To address the high neonatal mortality, FBNC has been proposed as the best approach but access to care had been a challenge. The GoI introduced the JSSK programme to improve access to care but this was not matched by a commensurate increase in the quality of care to guarantee survival of babies attending healthcare facilities. At the same time, GoI established SNCUs as part of the strengthening of the FBNC programme to provide specialised care for sick and small newborn babies. With increased access, facilities became overcrowded and healthcare workers were over-burdened leading to compromises in the quality of care particularly to the detriment of newborns. SNCUs were also confronted by many other challenges. Coverage of the intervention was poor, the implementation was inconsistent between districts and states, there was no systematic monitoring of implementation and data collected were inadequate to inform the needed improvements and guide remedial actions.

To remedy the situation, UNICEF partnered with GoI to provide particular technical and financial assistance to the SNCUs in the five areas illustrated in the boxes with the green outlines (Figure 2). The blue coloured arrows and the boxes with blue outline show proposed pathways to outcomes starting with preventable deaths of newborns in communities which led to the establishment of the SNCUs. These SNCUs, when fully operational, will improve care for sick and small newborns and lead to improved newborn survival. However, the red section (Figure 2) shows that there were implementation challenges including poor coverage and expansion of the programme, ineffective data collection and use for monitoring and informing quality improvement in the implementation, poor accountability and facility-community linkages, the latter being an important component of the programme.

UNICEF identified these four implementation challenges through commissioned assessments on the functioning of SNCUs in the country and worked with the GoI to address them. For UNICEF’s contribution (in green) to result in restoring the programme track to improving outcomes, it must be relevant, effective, efficient and sustainable. This evaluation, therefore, assesses these key attributes of UNICEF’s contribution to the SNCU programme following the OECD definitions.

### 3.3. Evaluation criteria and questions

The purpose of the evaluation is to address the following questions:

**a)** Which theory could explain how UNICEF contributions could affect changes experienced during the implementation of the SNCUs?

**b)** What is the relevance, effectiveness, efficiency, and sustainability of the SNCU programme as evaluated under the following questions in Table 4?

Question (b) draws from the DAC of the OECD criteria for evaluation which comprises an assessment of the relevance, effectiveness, efficiency and sustainability of the programme. The definitions of each of the criteria are detailed in Table 4.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Key Evaluation Questions</th>
<th>Data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>What was the relevance of UNICEF’s contribution to India’s FBNC programme particularly focusing on the SNCUs?</td>
<td>DRev, KII</td>
</tr>
<tr>
<td>I.</td>
<td>Was the intervention aligned to the country’s commitments, priorities and strategic plan for improving newborn health?</td>
<td>DRev, KII</td>
</tr>
<tr>
<td>II.</td>
<td>Was the intervention adjusted throughout its implementation period to align it with emerging priorities/needs and to ensure support for best practice?</td>
<td>DRev, KII</td>
</tr>
<tr>
<td></td>
<td>Was UNICEF’s contributions effective and were the objectives achieved?</td>
<td>DRev, FA, KII</td>
</tr>
<tr>
<td>III.</td>
<td>Was the intervention implemented according to plan?</td>
<td>KII</td>
</tr>
<tr>
<td>IV.</td>
<td>Was timely corrective action taken where necessary?</td>
<td>FAs, KII, FGD</td>
</tr>
<tr>
<td>V.</td>
<td>Were the intended results (relating to the five aspects listed above of UNICEF’s ongoing work) achieved?</td>
<td>FAs, KII, FGD</td>
</tr>
<tr>
<td>VI.</td>
<td>What unintended results, positive as well as negative, have resulted from UNICEF’s contribution to India’s FBNC programme particularly focusing on the SNCUs?</td>
<td>FAs, KII, FGD</td>
</tr>
<tr>
<td>VII.</td>
<td>Were results achieved in adherence to equity, gender equality, non-discrimination, and other human rights?</td>
<td>DRev, KII, FGD, Sec</td>
</tr>
<tr>
<td>VIII.</td>
<td>What were the factors that influenced the achievement or non-achievement of programme results?</td>
<td>FAs, KII</td>
</tr>
<tr>
<td></td>
<td>To what extent did UNICEF’s contributions to the FBNC programme (and the focus on SNCUs) represent the best possible use of available resources to achieve results of the greatest possible value to recipients and the community?</td>
<td>DRev, FA, KII</td>
</tr>
<tr>
<td>IX.</td>
<td>Did the intervention use the available resources in an economical manner to achieve its objectives?</td>
<td>DRev, KII, Sec</td>
</tr>
<tr>
<td>X.</td>
<td>Did the intervention have sufficient funding support for FBNC programme and SNCUs, in particular, and for the total maintenance cost incurred by NHM for sustaining SNCUs?</td>
<td>FAs, KII</td>
</tr>
<tr>
<td>XI.</td>
<td>Did the intervention have sufficient and appropriate staffing resources?</td>
<td>FAs, KII</td>
</tr>
<tr>
<td>XII.</td>
<td>To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?</td>
<td>KII, FGD</td>
</tr>
<tr>
<td></td>
<td>Are any positive results from UNICEF’s contribution likely to be sustained?</td>
<td>FAs, KII, FGD</td>
</tr>
<tr>
<td>XIII.</td>
<td>What are the positive results and which positive results from UNICEF’s contribution are likely to be sustained? Why and why not?</td>
<td>FAs, KII, FGD</td>
</tr>
<tr>
<td>XIV.</td>
<td>Was the intervention scaled-up sufficiently to achieve the intended results?</td>
<td>DRev, FA, KII</td>
</tr>
<tr>
<td>XV.</td>
<td>Were results achieved in a sustainable manner? To what extent can the activities and the benefits of the intervention continue after external funding has ceased?</td>
<td>KII</td>
</tr>
<tr>
<td>XVI.</td>
<td>To what extent has the intervention been mainstreamed in the National Health Mission, particularly in terms of allocation of financial and human resources as UNICEF’s involvement has declined over time?</td>
<td>KII, FGD</td>
</tr>
<tr>
<td>XVII.</td>
<td>Are any areas of the intervention clearly unsustainable? What lessons can be learned from such areas?</td>
<td>KII</td>
</tr>
<tr>
<td>XVIII.</td>
<td>What were the major factors that influenced the achievement or non-achievement of sustainability of the intervention?</td>
<td>KII, FGD</td>
</tr>
<tr>
<td>XIX.</td>
<td>Is there any evidence of other organizations/partners sharing a common platform with UNICEF in the implementation of the SNCU programme and has any of the UNICEF supported initiatives being adopted by these organizations/partners and institutionalised?</td>
<td>DRev, KII</td>
</tr>
</tbody>
</table>

DRev=Desk/Literature Review; Sec=Secondary Data; FA=Facility Assessment; KII= Key Informant Interview; FGD=Focus Group Discussion
- Relevance represents the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.
- Effectiveness represents a measure of the extent to which an aid activity attains its objectives.
- Efficiency represents a measure of how economically resources/inputs (funds, expertise, time, equipment, etc.) are converted into results.
- Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally as well as financially sustainable’.

Context-specific adaptations were made to these definitions of the criteria (Table 4), to make them fit for the evaluation. Specific questions under each of the criteria were then formulated to be answered during the evaluation. A matrix of the methodologies to be applied to address these criteria and their accompanying questions as well as how these link with the proposed theory of change is presented in Annex 4. These evaluation questions and the matrix were presented to the team of experts at the scoping meeting in Delhi in November 2017 and approved.

The evaluation was conducted in three phases with six interlinked steps as illustrated in Figure 3.

![Figure 3 Phases of the evaluation](image)

Phase 1 (inception and evaluation developments) involved steps 1 and 2; phase 2 (implementation of the evaluation and data collection) comprised steps 2 and 3 and phase 3 (data analysis, interpretation, reporting and dissemination) consisted of steps 4-6.

i. **Step 1: Literature review**: An initial review of relevant literature involving both published and unpublished reports, and documents around the planning, process and function of the FBNC programme with emphasis on SNCUs as well as UNICEF contribution to these was conducted by the team in LSTM. The review report was submitted as part of the inception report (Annex 2) and provided the context for the evaluation (for example, the FBNC programme, JSSK programme, the NHM and the State of India’s Newborns within the global context of newborn survival).

ii. **Step 2: District mapping and respondent selection through**: A mapping exercise was conducted to obtain an inventory of all districts within the states implementing the SNCU programme and key stakeholders to be involved in the qualitative key informant interviews (Table 5). The SNCUs were classified by whether they were implemented in the pilot or scale-up phase. In each of the six evaluation states, one pilot and one scale-up phase facility was selected. The selection of the districts was purposive to include those with medical colleges and two sub-district NBSUs were also assessed per district for care provided and referral mechanisms.
iii. **Step 3: Data collection (qualitative and quantitative)**

*Quantitative data*

Data were obtained from the online routine SNCU monitoring system and analysed as part of the evaluation. From a list of all variables collected from each district and state level facility, relevant variables that addressed coverage of SNCU services, human resource availability, gender and equity in access were selected. Different states are at different stages of implementation and data on selected variables were shared by UNICEF. Formic*-enabled facility assessment forms were used to assess infrastructure, drugs, equipment, supplies, human resources, protocol availability and maternal and newborn health outcomes from facilities and labour rooms in the six months to the assessment. Data were presented, comparing findings to standards specified in the FBNC toolkit.

*Qualitative key informant interviews and focus group discussions with key informants*

Key informant interviews (KIIs) were held with central, state, district and facility level stakeholders to elicit their perceptions of the overall implementation of the FBNC programme. FGDs were also held with ASHAs to obtain their perspectives on their role in the continuity of care for newborns, and on the accessibility of SNCUs to communities.

iv. **Steps 4&5 - Data analyses**: This involved the use of quantitative methods to analyse data from the routine data from the online real-time data monitoring system. Initial analyses were done at district level and then aggregated at the state level as ‘evaluation cases’. The analyses also involved comparing the evaluation findings across the six states to identify similarities and differences in UNICEF’s contribution, their contextual interpretations and possible policy implications.

v. **Step 6: Interpretation to draw lessons learned and recommendations**: The findings from the analyses across the different states were synthesised in the last stage of the evaluation. Interpretation of the findings involved triangulation of results from the different data sources: review of the literature, qualitative and quantitative data.

### 3.4. Sampling and data collection: Strategy, methods and tools

*Pretesting of tools, training of data collectors and pilot of the evaluation strategy*

Step 3 commenced with pretesting of the data collection instruments, to assess their validity, remove redundant questions and ensure interviews could be completed within the time allocated. This pretesting was done in Gwalior on 9 – 10 April 2018 with support from LSTM local partner, Solutio Global (SG).
### Table 5. Respondent types and numbers of Key informant interviews and Focus group discussions

<table>
<thead>
<tr>
<th>Level</th>
<th>Organizations</th>
<th>Madhya Pradesh</th>
<th>UP</th>
<th>Odisha</th>
<th>Maharashtra</th>
<th>Andhra Pradesh</th>
<th>Haryana</th>
<th>Total</th>
<th>KII or FGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Govt officials</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>22</td>
<td>KII</td>
</tr>
<tr>
<td></td>
<td>Professional bodies</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>KII</td>
</tr>
<tr>
<td></td>
<td>UNICEF / Other NGOs</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>Pilot</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>KII</td>
</tr>
<tr>
<td></td>
<td>Scale-up</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>KII</td>
</tr>
<tr>
<td>Facility</td>
<td>Pilot</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>11</td>
<td>KII</td>
</tr>
<tr>
<td></td>
<td>Scale-up</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>14</td>
<td>KII</td>
</tr>
<tr>
<td>Community</td>
<td>Pilot</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>FGD</td>
</tr>
<tr>
<td></td>
<td>Scale-up</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>FGD</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>20</strong></td>
<td><strong>21</strong></td>
<td><strong>17</strong></td>
<td><strong>19</strong></td>
<td><strong>15</strong></td>
<td><strong>112</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Training of the data collection team was undertaken in two phases. An initial three-day training for data collectors from all six states was held in Delhi on 14 - 16 May 2018, facilitated by LSTM and SG. Training covered the validated instruments and the principles for rapport-building, comportment during data collection, the consenting process, team-building and team dynamics, roles of each team member and lines of reporting were reiterated.

State data collection was deployed in two stages: the first stage, immediately following the training, LSTM and SG implemented the data collection strategy in the state of Madhya Pradesh. This was completed between 17- 20 May 2018. The data were analysed, and key lessons learnt documented. Based on the findings, the qualitative interview guides were revised for better flow and additional forms were added to assess care of mothers and babies in maternity units.

A refresher training was held with all data collectors in Delhi on 24 and 25 July 2018 to apprise them on the revised tools and strategy. Data collection commenced in the five other states on 1 August 2018 and was completed by the 31st of October 2018. Simultaneously, evaluators from LSTM started data collection at central level from 23-27 September 2018. Information regarding the selection of respondents and strategy for conducting interviews with the various respondents is in the following sections. The final tools for the data collection are as shown in Annex 5. These tools were translated into the local languages for the FGDs. For all the KIIs and FGDs, the interviewers took field notes to describe the context of the interview such as the exact location, any forms of interruptions, any non-verbal language used by the respondent and other nuances that occurred during the interview.

**Key informant interviews**

To fully account for inter-state differences in existing health systems structures, progress of implementation and change processes, KIIs were conducted with policy and programme level staff to obtain their perceptions of UNICEF’s contribution to the FBNC programme. Respondents for the KII (Table 5) were purposively selected using ‘maximum variation sampling’ from a wide sampling frame, selected to reflect the duration of engagement on the project, level of involvement in implementation
and hierarchy in decision-making. All KII respondents were asked to provide written informed consent for all interviews, which were digitally recorded.

The guides used for these KIIIs covered programmatic content to assess UNICEF’s contribution to the FBNC programme using the OECD criteria. Since interviews were conducted at central, state, district and facility levels with both programme managers and technical or clinical staff, the guides were adapted to cover domains that fitted the expected knowledge and expertise of specific respondents.

Key informants at central, state, district and facility levels, who are programme managers, were asked general questions about contributions of various stakeholders and UNICEF to the FBNC programme. These questions covered the development, planning, resourcing and funding for the day-to-day running of the programme as well as progress of implementation, including challenges and lessons learnt. Clinicians and healthcare providers at healthcare facilities were asked questions to elicit their technical appraisal of the clinical care delivered at these facilities, how this care delivery met programmatic objectives and UNICEF’s role in resourcing them for these services, either through training or provision of infrastructure, equipment, drugs and supplies. Their perceptions as to how the implementation of the FBNC programme is providing life-saving interventions for sick and ‘at risk’ newborns were explored. All interviews were conducted by the team from SG in a language chosen by the respondent. They lasted approximately 60-75 minutes.

**At Central level:** The KIIIs were conducted with previous and current policymakers and programme managers at the MoHFW dealing with newborn care at healthcare facilities, professional bodies such as the National Neonatology Forum (NNF), UNICEF staff, other implementing partners and civil society organizations amongst others. A total of 10 KIIIs were held at the national level covering the range of these respondents. These interviews were conducted in English by LSTM staff and lasted approximately 45-120 minutes each. They covered topics relevant to the FBNC programme, the SNCUs, UNICEF’s contribution to these, partnership with other organizations and the efficiency and sustainability of the programme.

**At State and District levels:** Similar criteria were used to select respondents for the KIIIs, but other important distinctions within each state were considered in the selection of the KII respondents. For instance, the state of Haryana has no UNICEF office and, therefore, more detailed information was collected around the key players involved and how the programme was performing. District level respondents were also selected using similar criteria and considerations. These interviews were conducted by SG in the respondents’ chosen language. They lasted approximately 45-120 minutes.

**At Facility level:** For all selected districts with pilot and scale-up SNCUs, KIIIs were conducted with selected implementers. These KIIIs focussed primarily on assessing the content of care provided and human resource issues. The KIIIs were augmented with observations such as duty rotas and availability of protocols for care. The interviews also solicited the opinions and perceptions of technical or clinical staff on the challenges and gaps in care provided at the facility. These KIIIs specifically focussed on UNICEF’s contribution to the FBNC programme and how this evolved over time.

**Focus group discussions**

Twenty-four FGDs were conducted with 234 ASHAs at community level in their own local languages. In selected contiguous communities within districts where SNCUs were evaluated, two groups of 6-12
ASHAs were selected for the FGDs and invited to a location accessible to all of the respondents. The selection of the ASHAs was based on the distance of the communities they serve from the SNCUs. One FGD was held with ASHAs who worked in blocks less than 5kms away and the other with those who worked in blocks more than 20kms away from the district SNCU.

Individual informed consent for participation was obtained from all ASHAs participating in the FGDs. The FGDs were moderated by experts from the SG together with a trained note-taker and they were digitally recorded on encrypted, password-protected recorders to aid the transcription. The interviews with ASHAs included their perceptions on the accessibility of SNCUs to community members; their involvement in the continuity of care for newborns after they are discharged from SNCUs; and how they have been prepared for these functions. For example, any training they were provided specific for newborn health and also for follow-up of sick and small babies discharged from healthcare facilities; job aids they have been given; the procedures and protocols they follow to attend to such newborns; any referrals back to facilities and what the criteria are for referrals; what the duration of follow-up is and how they decide to stop following-up any child. In addition the interviews elicited their motivation to do the work; any incentives they are provided to do the work and its source; perceptions of community members of their work; their ideas on how to make them more effective as well as their challenges with SNCU referrals. The FGDs lasted between 60-90 minutes.

**Methodology for financial analysis of budgets and expenditures in the states**

- Analysis of the budget approved for FBNC interventions was conducted, including those related to SNCUs, NBSUs, and NBCCs, in the state under the NHM, and corresponding expenditure incurred. The period for which the data were analysed covered the financial year (FY) 2013-14, 2014-15, 2015-16 and 2016-17. For the budgets, references were made to the administrative approvals of the State PIPs which are released as the record of proceedings (ROPs) of the National Programme Coordination Committee (NPCC) of the NHM, chaired by the Additional Secretary and Mission Director, NHM, of the MoHFW. These were accessed from the website of the NHM and expenditure data was sourced from the financial management reports (FMR) which the states submit to the MoHFW every quarter. Cumulative expenditure data was used from the fourth quarter FMR for each of the reference years.

The following steps were undertaken to extract the approved budgets for FBNC activities from the ROPs for the respective years:

1. **Budget for activities related to SNCUs** are typically combined with those for NBSUs and NBCCs due to the way the PIP formats were designed by the MoHFW. Hence, a separate budget for SNCUs only was unavailable. The extraction therefore covered all FBNC activities.

2. **Budget approvals for FBNC** are spread over different sections of the PIPs and, correspondingly, the ROPs. These were extracted under the following budget heads:
   
   i. Operational costs for SNCU, NBSU and NBCC, and other activities (for example, SNCU accreditation through the National Neonatology Forum, mentoring visits)
   
   ii. Human resources (contractual) including paediatricians, nurses and support staff.
   
   iii. Training for Facility-based IMNCI (F-IMNCI), FBNC, and SNCU (including observerships)
iv. Programme management (including state level SNCU consultant, data entry 
operators, review meetings)

v. Infrastructure (setting up of new SNCU, NBSU and NBCC)

vi. Procurement of equipment (for SNCU, NBSU, and NBCC)

3. Additional budget approvals are allocated through the submission of Supplementary PIP(s) 
and corresponding Supplementary ROP(s). The supplementary ROPs were also accessed and 
included in the analyses to ensure that the complete approved budgets were used.

4. Expenditure data from the FMRs were mapped against the corresponding budget heads.

5. Utilisation levels were calculated where one-to-one correlation could be conducted between 
the budget head and corresponding expenditure head.

3.5. Analytical approaches

All data were managed in accordance with the LSTM policy for data management. The following three 
approaches of data analysis was employed:

i. ‘within-case analysis’; ii. ‘cross-case’ analysis; and iii. interpretation

Within-case analysis was conducted to understand the complexity of the programme within each state 
by providing a rich context. Cross-case analysis was conducted to compare similarities and differences 
among the six states using thematic analysis.

Qualitative analyses were done using NVivo 11 software whilst all quantitative analysis was done in 
Stata 15 and SPSS 24 statistical software. From the routine data being collected in the SNCU 
programme, LSTM experts conducted analyses on the coverage of SNCU services as well as equity in 
access by social caste, sex of the newborn and other social characteristics.

Where available, analysis was done of the budget approved for FBNC (aggregated for SNCUs, NBSUs, 
and NBCCs) in the state under the NHM, and corresponding expenditure incurred. The period for 
which the data were analysed covered the financial years (FY) 2013-14, 2014-15, 2015-16 and 2016-
17. For the budgets, LSTM referred to the administrative approvals of the State PIPs which are released 
as the record of proceedings (ROPs) of the National Programme Coordination Committee (NPCC) of 
NHM. These were accessed from the website of the NHM. Expenditure data was sourced from the 
Financial Management Reports (FMR) which the states submit to MoHFW every quarter. Cumulative 
expenditure data was used from the fourth quarter FMR for each of the reference years.

Qualitative data were transcribed verbatim along with contextual interpretation as soon as possible 
following collection, ensuring all identifying information was removed and transcripts anonymised. 
Transcripts were translated into English when required. Recordings of FGDs and KIIs were stored on 
password protected data devices and destroyed once the data had been transcribed and analysed.

The analyses used a hybrid of thematic and grounded learning approaches in which the data from the 
transcripts were coded into pre-defined themes by LSTM team using NVivo 11 and new themes were 
added and coded for when they emerged during the coding. Data collection continued alongside the 
analysis process which allowed for filling gaps in data, borrowing concepts from the grounded learning 
approach. Analysis explored context-specific interpretation of the coded data and assessed 
relationships between themes, states, districts and respondent characteristics.
3.6. Risks and limitations

The evaluation assesses UNICEF’s contribution to the programme and the relevance, effectiveness, efficiency and sustainability of this support. An evaluation of attribution to UNICEF of any results of the FBNC programme is not possible due to a lack of an appropriate comparison group (without UNICEF support) or a counterfactual; it is cross-sectional rather than an experimental design. Additionally, reductions in neonatal mortality can be caused by multiple interventions and therefore it would be difficult to evaluate FBNC’s attributable contribution to neonatal mortality reduction in this case. However, the evaluation explored whether it would be possible to demonstrate the intervention led to an improvement in coverage, availability and utilisation of services of the population in the programme area.

The non-availability of data for analysis also posed a limitation. The evaluation relied on data from the online monitoring system. Access to the primary data in the online system was not granted and therefore only aggregated reports on certain indicators were provided by UNICEF. Moreover, there was variability in the quality of data from the different states. This severely restricted analysis on the effectiveness of the SNCUs. For instance, data for only two quarters in 2017 were available for Uttar Pradesh; Odisha had for 2015 to 2017 whilst Madhya Pradesh had for all quarters from 2012 to 2017. Also, it would have been insightful to analyse population level data to assess the overall impact of the improved care for newborns (from the ToC) on overall neonatal mortality. This is an indicator of the effectiveness of UNICEF’s contribution. However, such impact cannot be solely attributed to the SNCUs and because some districts have both facilities in the pilot and scale-up phases, this level of disaggregation was not possible, hence the reliance on trends in SNCU online data for reporting effectiveness.

LIMITATIONS AND CHALLENGES IN DATA AVAILABILITY FOR FINANCIAL ANALYSIS OF BUDGETS AND EXPENDITURES:

The following challenges were encountered in the analyses, predominantly due to the designed formats of the PIP budget and FMR:

i. Budget details for HR and Programme Management Costs attributable to FBNC were not always available. For example, there were sub-budget heads for nurses at different facility levels, but it was combined for SNCU/NBSU/NRC (Nutritional Rehabilitation Centres). PIPs might have provided details, but sometimes administrative approval in ROPs did not provide these details, especially if number of HR approved was less than proposed, or a lower remuneration was approved.

ii. The PIP and ROP approval formats are detailed, but expenditure reporting in FMR is combined with larger budget sub-heads, making it difficult to match the expenditure with the specific FBNC budgets. This was especially a challenge for HR and Programme Management.

a. Expenditure for HR costs for all specialists (Paediatricians, Obstetrician-Gynaecologists, Surgeons, Anaesthetists, etc.) were reported together.

b. Expenditure for HR costs for all nurses, irrespective of level of facility and function, were reported together, and grouped with the HR costs of ANMs.

c. Expenditure for all state level programme management costs were aggregated (for consultants, office expenditure, mobility, etc.).

d. Expenditure on SNCU training is not separately reported, and gets clubbed with “other training”

iii. Budget and expenditure of UNICEF support was not available
The evaluation used qualitative methods to answer several of the evaluation questions. While these methods carry the risk of respondents giving desirable answers, the qualitative interviews and FGDs were conducted by experienced researchers. These issues were discussed during training for data collection. Interview guides were designed in a way that the questions were non-leading and non-judgemental. In addition, LSTM staff undertook regular field visits during data collection to ensure data quality. Data obtained through qualitative methods was triangulated wherever possible with other data sources like facility assessments, available secondary data from the SNCU online system, UNICEF reports and workplans.

The evaluation took place in six large states and the results may not be generalisable to other states whose contexts are different. Additionally, the six states are at different stages of FBNC implementation and UNICEF’s role varied between different states. However, since these states were purposively selected to be representative of the geography, health system functionality, different phases of implementation of the programme, they are sufficient to address the research questions.

3.7. Principles and Ethical standards

Obligations of evaluators:

To ensure maximum credibility of this evaluation, the design was informed by an initial literature review. Where possible, priority was given to a mixed-methods approach to validate findings via triangulation of sources. At the implementation stage, protocols for the collection of quantitative and qualitative data were designed following a thorough process of adoption of best practices, adaptation and validation of tools in country, peer review, and pilot testing. Our teams were in charge of designing and delivering training to data collectors, and of providing quality assurance during data collection. At the analysis stage, a rigorous process of internal and external peer review of data analysis plans and reports was in place.

To ensure that evaluative judgements were impartial, team members did not have any conflicts of interest in evaluating the specific programme; the criteria and standards used to draw evaluate were defined in advance of evidence gathering, and these were agreed upon and validated with key stakeholders. A process of peer review and quality assurance was established for all stages of the evaluation.

Ethical safeguards of participants:

The evaluation protocol was approved by the Institutional Ethics Review Committee of LSTM. The protocol complied with ethical principles outlined in the United Nations Evaluation Group (UNEG) Ethical Guidelines for Evaluation31, and UNICEF Procedure for Ethical Standards in Research, Evaluation, Data Collection and Analysis (CF/PD/DRP/2015-001) 32. UNICEF confirmed that separate ethics approval from in-country (India) were not required and so was waived. The details of the content of the ethics submission and principles are outlined in the inception report (Annex 2).

To summarise, the evaluation team ensured confidentiality at all stages of the evaluation and took all possible measures to protect the participants from harm or danger and to preserve their rights. All data collectors were trained in good interviewing skills and principles of data confidentiality.

Participants were informed about the study in advance (written communication and telephone calls for key informants) and just prior to data collection. Participation was on a voluntary basis and participants were assured of their freedom to withdraw at any stage without the need to offer an explanation.
Written informed consent was obtained from all interview respondents in this evaluation. LSTM’s stringent procedures for obtaining consent was adhered to in accordance with the Helsinki declaration on the rights of subjects. These rights include autonomy (ability to participate or withdraw from the study at their own free will), beneficence (that the benefits of participation to the respondent will outweigh the possible harms) and justice.

An information sheet explaining the purpose of the study and all the possible benefits and harms was read to or given to the respondent in advance of the interviews. Respondents were granted the opportunity to ask questions and responses were given. Trained social scientists who conducted the interviews explained to all participants that they had the right to withdraw their participation from the interview before, during and even at the end of the interviews without any explanation or prejudice to their position or access to health services in the district, state or country. Participants were encouraged not to disclose any information they were uncomfortable with sharing and to decline responding to any statement they considered sensitive.

An information sheet explaining the purpose of the study and all the possible benefits and harms was read to or given to the respondent in advance of the interviews. Respondents were granted the opportunity to ask questions before their responses were given. Trained social scientists who conducted the interviews explained to all participants that they had the right to withdraw their participation from the interview before, during and even at the end of the interviews without any explanation or prejudice to their position or access to health services in the district, state or country. Participants were encouraged not to disclose any information they were uncomfortable with sharing and to decline responding to any statement they considered sensitive.

Participants were then invited to participate in the interview and their consent to participate was indicated with a signature on the adapted LSTM research ethics committee consent form. Consent also included seeking the respondents’ approval to digitally record the interviews to aid in the transcription.

Transcripts from the interviews and all quantitative data were password-protected and saved to dedicated study servers. All identifying variables such as name of the respondent were removed from the data before analysis. Only pseudonyms were used to describe respondents.
4. FINDINGS

4.1. Relevance: What was the relevance of UNICEF’s contribution to India’s SNCUs?

UNICEF’s support to the SNCU programme was assessed using two key indicators: Firstly, how was UNICEF’s support aligned to national priorities, commitments and strategies for newborn health in India; and secondly, how did UNICEF adjust its support to the FBNC/SNCU programme in response to needs and emerging priorities during implementation.

Evaluation Q1. Was the intervention aligned to the country’s commitments, priorities and the strategic plan for improving newborn health?

**Key findings:**

- **Reduction of newborn mortality was a key priority for the GoI. Improved newborn care at both facility and community levels was a key strategy to achieve this. UNICEF partnered with the GoI and state governments in conceptualising and operationalising the Facility Based Newborn Care programme, especially the scale up of SNCUs, aligning its support with government key priorities.**

The intervention was seen as aligned to the country’s policy for improving newborn health and reducing neonatal mortality. Like the government policy, the intervention focussed on strengthening the provision of newborn care at two levels:

i. Preventive and promotive care services at community level. (This involved identifying and referring sick and vulnerable newborns to health facilities; and when referral was impossible, treating the newborns in the community. This is aligned with the community integrated management of neonatal and childhood illnesses (IMNCI) and home-based newborn care (HBNC) programmes).

ii. Curative services at facility level through the Facility Based Newborn Care (FBNC) programme.

Development partners and other agencies in each of the states considered this dual approach to newborn care strategic. For example, a respondent in the KII’s called it ‘important’.

> “Most important intervention is care of newborn at and around birth, care of sick newborn and care of the newborn at home and community... Now the focus is on facility-based newborn care ...”.

[State level development partner staff]

The FBNC programme has filled a gap: community integrated management of childhood diseases (C-IMNCI) and the home-based newborn care (HBNC) programmes had focussed on community level care and medical colleges provided tertiary level intensive care for newborns, but secondary level newborn care at district level was under-developed.

UNICEF supported the GoI and state governments in conceptualising and operationalising the FBNC programme, aligning itself with the government’s key priorities. Also, interviews with state and national level participants appreciated UNICEF’s key role in advocating for FBNC, especially district level care in SNCUs.

> “I would say absolutely aligned (to national priorities). And if somebody like UNICEF was not there, this whole business of facility based newborn care would not have come at the time that it came... You
need facilities closer to the babies. You need facilities, if not even closer, at least at the district level...so it was at an opportune time, that UNICEF was there.” [National KII 6, Collaborative centre respondent]

The interviews suggested UNICEF supported the government at each stage of the programme, with a focus on establishing and implementing the SNCUs. Respondents at central and state government levels, described UNICEF’s role at the start of the SNCU programme saying, for example, UNICEF ‘modelled’ and ‘initiated’ the programme in the state.

Several examples were given by respondents to UNICEF’s commitment to align to GoI priorities and strategies. For example, when government leaders in Haryana approached UNICEF about support for SNCUs, UNICEF only agreed to support the state after clearance from the GoI. (Haryana is a state with relatively low infant mortality rates and in line with GoI guidelines, not a UNICEF focus state.)

In accordance with the national criteria, UNICEF supported the establishment of SNCUs based primarily on delivery caseloads in a facility. However, as UNICEF was not the organization implementing at facility level, some respondents at facility level in some of the states were unaware of the extent of UNICEF’s involvement in the SNCU programme.

Evaluation Q2. Was UNICEF’s support adjusted during implementation to align with emerging needs and to ensure support for best practice?

**Key findings:**

- UNICEF’s support to the GoI for the SNCU programme evolved from total financial and technical support in the pilot phase to be more normative and supportive in the scale-up phase.
- In the scale-up phase, facilities were supported to provide new services such as kangaroo mother care (KMC) and rooming-in, based on the needs of the facility, district or state. Some of these services were in response to direct requests from states.
- Innovations, such as the android-based checklist for supervision and online data capture systems, were introduced in response to needs identified during implementation of the SNCU programme.

During implementation, UNICEF’s support evolved in response to lessons learnt and programme needs. In the initial phase of the programme, UNICEF supported the pilot SNCU model in different states to demonstrate the role health facilities could play in advancing newborn care. In most of the states, UNICEF’s involvement at this stage included financial as well as technical support to establish the first SNCU units. Then, when UNICEF had demonstrated the feasibility and benefits of the SNCU model to the states, UNICEF’s role shifted to supporting the scale-up of SNCUs in and across districts. During the scale-up phase, UNICEF provided technical support for establishing guidelines and protocols, ensuring operationalisation through capacity building, and setting up mentoring support, quality assurance and data management. In both the pilot and scale up phases, UNICEF played an important advocacy role for SNCUs - organizing visits for health staff, programme managers and key policymakers so they could witness the SNCUs’ operations and potential benefits. Once scale up had begun (and is continuing to happen), based on the needs of the districts or facilities, UNICEF’s role transformed into supporting the GoI to further develop SNCUs by adding important components such as Kangaroo Mother Care (KMC) for small babies and rooming-in care, where mothers and babies are cared for together in the same unit.

Many stakeholders cited several instances where UNICEF had to adjust its support to the SNCUs to meet programme needs. State and district level stakeholders identified the needs and participated in
finding solutions. Often needs were identified by analysing data collected from the SNCUs; for example the data showed the high proportion of inborn babies’ admissions to SNCUs related to sub-optimal care in labour rooms. These findings led to plans for establishing model labour rooms in selected facilities.

UNICEF was also perceived as a listening partner who worked closely with state governments, adapting its support when necessary.

“Basically, what happens that they work with a plan...like KMC was not in our initial plan. We approached them with KMC plan and they supported well. So, UNICEF has supported us on as-and-when-required bases also.” [State level, Maharashtra]

During the implementation phase, UNICEF modified the supervisory structure in some of the states by providing a checklist for use by the monitors who visit SNCUs. This checklist was later translated into Hindi and adapted onto an android platform. In many other states, data monitoring systems through an online platform was established based on lessons from Madhya Pradesh (MP) state.

4.2. Effectiveness: Were UNICEF’s contributions effective and were the objectives for SNCUs achieved?

The evaluation assessed if the SNCU intervention was implemented according to UNICEF’s plan; whether results (intended and unintended) were achieved; if UNICEF took timely corrective action and if equity was considered.

**Evaluation Q3.** Was the intervention implemented according to plan?

**Key findings:**

✓ UNICEF’s support was implemented according to plan for both the pilot and scale-up.
✓ The SNCUs were mostly organized according to the set standards. The absence of a step-down area in some scale-up facilities may have affected triaging critically ill and stable newborns for targeted care.
✓ Although many major pieces of equipment, power supply with back-up generators were available, critical equipment in many facilities failed to meet the set standards in the FBNC guideline, especially in the pilot facilities.
✓ UNICEF’s support to the GoI scale-up coverage of SNCUs was acknowledged; yet several respondents reported that the quality of care in SNCUs still needed to be addressed.

The evaluation shows that UNICEF’s support to the SNCU programme aligned with national commitments and were delivered according to the national and UNICEF’s plans (see sub-section 1.1.2).

The SNCU programme was initially piloted in specific districts before being scaled-up in the states. In some states, like Madhya Pradesh, piloting in districts was carried out years before the scale-up phase. In other districts, like those in Uttar Pradesh, SNCU roll out was done in three phases: phase 1 (2008-2014), phase 2 (2014-early 2016) and phase 3 (late 2016-2017). Many respondents to the KIIIs said it had been important to invest in the pilot to test whether the concept was flawed. Respondents commented that in the past, pilots were seldom scaled-up. They appreciated UNICEF’s facilitation of the scale-up of this programme; one respondent called the scale up an ‘oasis in the desert’.
“It was not a matter of initiating a pilot because many development partners and agencies come up with very good pilots but converting those to scale was always a big question mark; so this was some kind of oasis among the desert.” [State level respondent, Madhya Pradesh]

Figure 4 shows that most districts have SNCUs; notably all districts in the states of Andhra Pradesh, Madhya Pradesh and Haryana have at least one SNCU. There are three districts in Odisha, four in Maharashtra and seven in Uttar Pradesh that do not yet have any SNCU; however, the distribution of these districts without SNCUs appeared to be random, which suggests there were no systematic geographical/administrative issues. Haryana State was a special case because, although it was not a priority state and had no UNICEF office, the successful scale up of the programme showed what state leadership can achieve for newborns – from their initial request for a pilot unit with UNICEF’s support to total coverage in all districts. For the pilot, the state leadership committed funds for 10 SNCUs.

“...Team members visited Bhopal and visited the SNCU in Bhopal to study what they are doing, what is the structure, what are the processes they are following, whether they have been able to make a dent into the newborn care in Madhya Pradesh, and he came back full of enthusiasm, saying ‘I am really impressed and I really want to do these things in Haryana...I said let’s go ahead.’” [State level respondent, Haryana]

All districts in the state have at least one SNCU, and many respondents attributed this success to UNICEF’s support and facilitation.

The evaluation team visited 29 facilities to assess the key services for newborns:

i. Care at birth including resuscitating asphyxiated babies,
ii. Management of sick newborns
iii. Postnatal care for babies
iv. Follow-up care for high-risk newborns discharged from SNCUs
v. Referral services to higher-level facilities and
vi. Immunization services for newborns and infants

The six core newborn and infant services were available in all 18 SNCUs (pilot and scale-up). Table 13 (Annex 1) shows a comparison of the configuration of SNCUs assessed to the standards set in the Guidelines for implementing facility-based newborn care. The standards of these services outlined in the FBNC guidelines, however, were not fully met. For example, although rectified in the scale-up phase, not all pilot facilities had a designated area for mothers to breastfeed or express breastmilk. And some scale-up facilities lacked the step-down (or rooming-in) area for triaging stable and critically-ill newborns for targeted care. Tables 14-16 (Annex 1) show key equipment and installations and essential drugs for newborn care were mostly available. Also available were back-up generators to ensure reliable power supply to SNCUs, voltage stabilisers to prevent power fluctuations that destroy essential equipment and autoclaving units for sterilisation of equipment (Table 14, Annex 1). However, one facility in Odisha had inadequate phototherapy units and the facility lacked functional voltage stabilisers, exposing the few functional units to the risk of damage from power fluctuations. All SNCUs had functional autoclaving units and glucometers with dextrostixs for newborn care. But only half of all SNCUs, both in the pilot and scale-up, had wall clocks and one-third lacked functional wall thermometers to monitor ambient temperatures in the SNCUs.
Figure 4 The current distribution of districts with at least one SNCU across the six evaluation states; red districts do not have SNCUs yet*.  

*Note that all maps used in this report are for representation purposes only.
As shown in Table 15 (Annex 1), although all the SNCUs had oxygen cylinders, not all had adequate numbers of neonatal-sized oxygen masks or nasal catheters. Moreover, although most SNCUs had bilirubinometers, blood transfusion units were unavailable in pilot facilities and were inadequate in scale-up facilities (transfusions are one of the key interventions of the SNCUs). The only option would be to refer babies with high serum bilirubin levels to higher-level centres. There were similar shortages of venous catheters in pilot and scale-up SNCUs.

In most SNCUs, screening for visual and hearing impairments, possible complications of preterm birth and neonatal sepsis, have been integrated into SNCU care. (This is in line with the sustainable development goals (SDGs), children must not only survive but thrive.)

Table 16 (Annex 1) shows most essential drugs required for critical care of small and sick babies at SNCUs were available in all the facilities, apart from nevirapine (an anti-retroviral drug) and gentamicin (an antibiotic for gram negative infections). Both these drugs are important; although India has a low HIV prevalence, nevirapine is critical to help prevent vertical transmission of HIV and gentamicin is a cheap antibiotic, so would reduce costs. Alternative arrangements between facilities to prevent no such stock-out days may be essential for comprehensive care for newborns in SNCUs.

Regarding (see Table 17 in Annex 1), the FBNC guidelines specify the essential equipment needed for a 12-bed facility. This is stated as Expected Ratio (ER). For instance, the guidelines specified a 12-bed SNCU should have 12 radiant warmers, so the ratio for radiant warmers should be 1:1 (1 radiant warmer: 1 bed).

Most pilot facilities did not have the expected ratio of functional equipment to the number of beds. There were two pieces of equipment - the oxygen concentrator and baby weighing scales - for which no pilot facility met the standard. The biggest challenge was the lack of critical equipment, like phototherapy units and pulse oximeters. Small and preterm babies often need phototherapy and sick babies require monitoring of oxygen saturation levels.

In the 12 scale-up facilities, although the availability of essential equipment was also poor, at least one SNCU met the standard for each item of equipment considered. During interviews, lack of equipment maintenance was identified as a key factor limiting the effectiveness of SNCUs, although guidelines specify the need for annual maintenance contracts (AMCs). Some respondents said efforts had been made to have maintenance contracts with designated firms, however, not all worked well.

“Major obstacle is the maintenance of equipment. As I told you we give responsibility to a doctor and we talk about it, but still our down time is a little big. To decrease this down time, [the] government has launched a programme which was from centre only but that was not utilised so much, that was not able to give outcome, equipment downtime is decreased but not decreased complete 100 per cent.” [Facility level respondent, Madhya Pradesh]

Overall, although acknowledging UNICEF’s contributions, respondents including policymakers, collaborating centre respondents and other development partners at national level, thought UNICEF
could have made the programme more effective. They reported that UNICEF helped the GoI to scale-up coverage but quality of care in SNCUs needed to be addressed.

“We don’t want that quality as a bottleneck... and you know that it can backfire if you don’t manage the overcrowding. And... you know, we have some suboptimal capacity of the people to deliver the services and also the... you know lackless, just chalta hai (anything goes) attitude, those things will be crucial. We have to overcome that and provide complete quality. Now we are addressing quality, and for which, we will again require same type of zealous support from everybody.” [National KII 1, Policymaker]

“Some shortcomings are there which need to be taken care. So, when we go for mentoring visits, antibiotic use is still high. Feeding is not being done. It is all babies on IV, antibiotics, asepsis is really not up to the mark. Too much IV fluids going on. All that. And that has been rectified slowly and steadily and which we didn’t expect to happen overnight. We did expect it to take time.” [National KII 6, Collaborating centre respondent]

“So, for last 10 years there has been a rat race that open more and more SNCUs....While it has done a very good job in terms of establishing FBNC, it hasn’t done that good a job in terms of quality strengthening.” [National KII 8, Development partner]

Evaluation Q4. Was timely corrective action taken where necessary?

Key finding:
✓ There was divergence of opinion on whether corrective actions to SNCU challenges were timely.

The evaluation assessed the promptness of responses to SNCU challenges. Primarily, key informant interviews at different levels were used to answer this question, and where possible, this was triangulated with available reports and workplans. Also, interviews with respondents who were involved in the SNCU programme in different capacities in the past were used to capture how the programme had evolved. There were mixed results. The facilities reported prompt UNICEF support in establishing the SNCU’s core functions, for example setting up the online data monitoring system to replace the inefficient manual system, and introducing Kangaroo Mother Care (KMC) to improve quality of care for small babies. UNICEF workplans and annual reports revealed that based on pilots in Shivpuri and Guna, over the last five years UNICEF made efforts towards improving the quality of labour rooms by establishing model labour rooms in districts where UNICEF works. Other respondents said there were delays, citing dysfunctional equipment in some SNCUs. Similarly, as reported later, the evaluation team found quality of care in labour rooms sub-optimal during facility visits, questioning the effectiveness of corrective actions such as the model labour rooms.

Evaluation Q5. Were the intended results achieved?

Key findings:
✓ UNICEF’s SNCU involvement brought renewed focus on newborn health at district level. (On average, 18 per cent of all admissions were babies born at gestational ages<34 weeks).
✓ Newborn care facilities have become available to all at district level.
✓ UNICEF’s focal areas for support was piloting and scaling-up SNCUs under the FBNC programme.
✓ UNICEF’s support strengthened staff capacity.
✓ UNICEF has been instrumental in support for developing protocols for care of sick babies in SNCUs. UNICEF recently developed KMC guidelines and NBSU protocols.
Overall respondents reported that the most important outcome of UNICEF’s involvement in the SNCU programme was the renewed focus on newborn health at district levels across the country. In particular it resulted in the scale-up of the SNCU intervention, increasing geographical coverage of SNCUs services and access in many districts across the country. A respondent from a GoI development partner organization suggested that this has eased caregiver anxiety.

“At least one angle we have covered. I have seen people running from pillar to post to get their newborn admitted. Now there are so many sites in India.” [National KII 7, Development partner]

While other development partners, such as the Norway-India Partnership Initiative (NIPI), were involved in the early phases of the SNCU piloting, UNICEF was credited by most respondents for the scale-up of the SNCUs across districts and states. The National Neonatology Forum was also credited for its contribution of technical inputs and trainings in preparation for the scale-up. Since the evaluation was focussed on UNICEF’s support, the contribution of other agencies and partners was not explored further.

In the 18 SNCUs evaluated, overcrowding was a challenge (see section on unintended results, evaluation, Q6). Table 6 shows an average of 7.4 babies were admitted per bed in the SNCUs every month. This varied from 4.2 admissions per bed per month in Uttar Pradesh to as high as 10.8 admissions per bed per month in Odisha. If a state has four admissions for each bed per month, babies could only stay up to one week. While data were unavailable to the evaluation team on individual babies’ duration of stay, on average babies admitted to SNCUs based on protocols would spend four to seven days in the SNCUs. Some small and sick babies may have to stay even longer for treatment. This implies there was more than one baby per bed, which could lead to nosocomial infections, overburdening of the staff, poor quality of care and ultimately poor outcomes for the newborn. Analyses of secondary data from the districts where the evaluation was conducted are shown in Figures 6 - 8 (Annex 1) and confirm the trends in admission.

Of the admissions made to the SNCUs, an average of 18.0 per cent were very preterm babies (vPTB), born at gestational age of less than 34 weeks; the range was from 15.4 per cent (Odisha) to 21 per cent (Andhra Pradesh). Despite this high vPTB admission rate, the proportion who were of very low birthweight (vLBW; birthweight<1.5kg) was smaller. On average, 11.6 per cent of all admissions were vLBW and the proportion ranged between 7.6 per cent (Haryana) and 15.2 per cent (Madhya Pradesh).

Utilisation of NBSUs: The NBSUs are often able to provide care closer to home than the SNCUs which would make it easier for the caregiver and could, therefore, reduce the number of babies taken home against medical advice. However, the evaluation found evidence of lower utilisation of NBSUs than for the SNCUs. NBSUs are expected to stabilise sick babies and then, if necessary, refer them to higher levels of care, for example, babies with respiratory distress. Those who could be managed at NBSU include small babies who have no respiratory distress, requiring only assisted feeding; pre-term babies requiring phototherapy; and babies requiring antibiotic therapy initiated in SNCUs. Table 6 shows that only 1,186 babies were admitted to the 11 NBSUs in six months of the assessment, indicating an average of 5.2 admissions per bed per month. While it is difficult to draw conclusions without population level data as denominators, the fact that NBSUs would be expected to handle less serious cases, newborns made up only half the utilisation rates as SNCUs, suggesting lower utilisation of these NBSUs.
Mortality Outcomes of Admissions: Reduction in neonatal mortality should be the primary outcome of the SNCU programme. Many respondents to the KII thought neonatal mortality had declined at a faster rate over the last few years due to the SNCUs, even in states with high newborn mortality. However, some KIIs respondents were cautious in ascribing all the gains made in NMR reduction to the SNCUs. Some state and national level respondents from the government, UNICEF and other development partners, argued the reduction was not as much as would be expected considering the investments that had been put into the SNCUs. Others said SNCUs could possibly be keeping newborns alive only while they are in the facility since many deaths occurred after the babies were discharged. Two of the respondents referred to unpublished small studies suggesting that up to 10 per cent of babies died post-discharge from facilities (No data was available).

“Mortality trends, I mean, they are very expensive, and they are visible we are seeing, but it is difficult to attribute that mortality came down due to specialised newborn care. It’s difficult to attribute. I think this is something which has to be studied further, whether the current reduction in neonatal mortality or infant mortality is due to the quality of Facility Based Newborn Care happening all across the country.” [UNICEF respondent, Andhra Pradesh]

“We do see that the neonatal mortality rate in the state is definitely reducing. It is not that the trend is reducing in a big way every year. Also, it cannot be said that this has happened because of SNCU. There are other factors like antenatal care, etc. These factors have also strongly contributed. But yes, over a period of a few years, you will definitely see the decline in the neonatal mortality rate, due to this facility-based component.” [State level policymaker, Maharashtra]

“If you have more than 600 districts having an SNCU and you have an SNCU coverage which is being claimed to be close to almost 60 per cent, mortality should be in single digit[s], while it gets reduced one point, two points, three points, at the most. That is not the kind of mortality (reduction)... Every quarter I am told 400,000 newborns are admitted across SNCUs but has the mortality reduction really happened? Of that kind? That hasn’t happened.” [National KII 8, Development partner]

The mortality figures collated from the assessment of the facilities were higher than reported by respondents to the KII. Table 6 also shows overall 13.6 per cent of all newborns admitted to the SNCUs died. This pre-discharge mortality varied from 6.7 per cent in Maharashtra to 20.0 per cent in Andhra Pradesh. The state of Andhra Pradesh also had the highest rate of vPTB newborns but it was the only state where this correlation was found. In other states, there was no correlation between mortality and vPTB rates.
### Table 6. Statistics on admissions and outcome of admissions for babies brought to the 18 SNCUs (in blue font) in the evaluation between February and August 2018, by state

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Andhra Pradesh</th>
<th>Haryana*</th>
<th>Maharashtra</th>
<th>Madhya Pradesh</th>
<th>Odisha</th>
<th>Uttar Pradesh</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SNCUs (n=4)</td>
<td>NBSUs (n=2)</td>
<td>SNCUs (n=3)</td>
<td>NBSUs (n=2)</td>
<td>SNCUs (n=3)</td>
<td>NBSUs (n=2)</td>
<td>SNCUs (n=3)</td>
</tr>
<tr>
<td>Number of beds</td>
<td>70 11</td>
<td>45 6</td>
<td>50 6</td>
<td>74 7</td>
<td>48 4</td>
<td>39 4</td>
<td>326 38</td>
</tr>
<tr>
<td>Admissions (total)</td>
<td>3625 490</td>
<td>1175 39</td>
<td>2261 147</td>
<td>3236 159</td>
<td>3096 319</td>
<td>994 32</td>
<td>14,387 1186</td>
</tr>
<tr>
<td>Monthly admissions/bed</td>
<td>8.6 7.4</td>
<td>4.4 1.1</td>
<td>7.5 4.1</td>
<td>7.3 3.8</td>
<td>10.8 13.3</td>
<td>4.2 1.3</td>
<td>7.4 5.2</td>
</tr>
<tr>
<td>Very preterm babies (less than 34 weeks’ gestation)</td>
<td>762 7</td>
<td>198 2</td>
<td>390 1</td>
<td>569 11</td>
<td>476 16</td>
<td>190 0</td>
<td>2585 37</td>
</tr>
<tr>
<td>% very preterm admissions</td>
<td>21.0% 1.4%</td>
<td>16.9% 5.1%</td>
<td>17.2% 0.7%</td>
<td>17.6% 6.9%</td>
<td>15.4% 5.0%</td>
<td>19.1% 0%</td>
<td>18.0% 3.1%</td>
</tr>
<tr>
<td>Babies with birthweight less than 1.5kg (vLBW)</td>
<td>405 3</td>
<td>89 2</td>
<td>232 6</td>
<td>493 7</td>
<td>328 8</td>
<td>128 2</td>
<td>1675 28</td>
</tr>
<tr>
<td>% vLBW admissions</td>
<td>11.2% 0.6%</td>
<td>7.6% 5.1%</td>
<td>10.3% 4.1%</td>
<td>15.2% 4.4%</td>
<td>10.6% 2.5%</td>
<td>12.9% 6.3%</td>
<td>11.6% 2.4%</td>
</tr>
<tr>
<td>Deaths</td>
<td>726 5</td>
<td>86 0</td>
<td>151 0</td>
<td>611 0</td>
<td>285 2</td>
<td>101 4</td>
<td>1960 11</td>
</tr>
<tr>
<td>Deaths per admission</td>
<td>20.0% 1.0%</td>
<td>7.3% 0.0%</td>
<td>6.7% 0.0%</td>
<td>18.9% 0.0%</td>
<td>9.2% 0.6%</td>
<td>10.2% 12.5%</td>
<td>13.6% 0.9%</td>
</tr>
<tr>
<td>Referrals to higher centres</td>
<td>142 61</td>
<td>128 8</td>
<td>147 96</td>
<td>131 61</td>
<td>263 49</td>
<td>126 13</td>
<td>937 288</td>
</tr>
<tr>
<td>% admissions referred</td>
<td>3.9% 12.4%</td>
<td>10.9% 20.5%</td>
<td>6.5% 65.3%</td>
<td>4.0% 38.4%</td>
<td>8.5% 15.4%</td>
<td>12.7% 40.6%</td>
<td>6.5% 24.3%</td>
</tr>
<tr>
<td>Community post-discharge follow-up</td>
<td>601 Not available</td>
<td>318 Not available</td>
<td>1561 80</td>
<td>Not collected</td>
<td>Not collected</td>
<td>890 0</td>
<td>493 Not available</td>
</tr>
<tr>
<td>% survivors followed-up**</td>
<td>20.7% -</td>
<td>29.2% -</td>
<td>74.0% 54.4%</td>
<td>- -</td>
<td>31.7% 0.0%</td>
<td>55.2% -</td>
<td>39.4% 17.2%</td>
</tr>
</tbody>
</table>

*SNCUs included the NICU. **Only for facilities where data was collected/available
The mortality rates were consistent with the SNCU data in the online data monitoring system. Data were available for different periods for different states. The overall average mortality rates was around 13 per cent. Table 7 shows that mortality was highest for vLBW infants in all the states and decreased with increasing birthweight category so that it was several times higher in vLBW compared to normal birthweight infants. Similarly, mortality increased with decreasing gestational age at birth. Notably, there were no sex differences in mortality at admission. The lowest mortality rates were in Haryana and the highest were in Andhra Pradesh and Uttar Pradesh. The graph of mortality trends are presented in Annex 1 Figures 9 - 11 and 15 - 16 showing mortality rates in SNCUs at state level (aggregated from all SNCUs in the state) in comparison to the pilot and scale-up districts, disaggregated by the gestational age at birth, caste and sex of the baby.

Table 7. Summary of pre-discharge mortality rates for all SNCUs in each of the states 2012-2017 (from aggregated data provided by UNICEF from SNCU online database)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Andhra Pradesh</th>
<th>Haryana</th>
<th>Maharashtra</th>
<th>Madhya Pradesh</th>
<th>Odisha</th>
<th>Uttar Pradesh</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Male</td>
<td>12.1%</td>
<td>3.5%</td>
<td>9.7%</td>
<td>12.6%</td>
<td>10.0%</td>
<td>13.2%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>11.5%</td>
<td>4.8%</td>
<td>9.3%</td>
<td>13.0%</td>
<td>10.3%</td>
<td>13.1%</td>
</tr>
<tr>
<td><strong>Maturity</strong></td>
<td>Term (≥37wks)</td>
<td>7.3%</td>
<td>2.1%</td>
<td>5.4%</td>
<td>7.7%</td>
<td>7.0%</td>
<td>9.6%</td>
</tr>
<tr>
<td></td>
<td>Preterm (34-37wks)</td>
<td>11.6%</td>
<td>4.7%</td>
<td>8.3%</td>
<td>13.9%</td>
<td>9.6%</td>
<td>13.2%</td>
</tr>
<tr>
<td></td>
<td>vPTB (&lt;34wks)</td>
<td>32.4%</td>
<td>13.4%</td>
<td>25.0%</td>
<td>31.2%</td>
<td>23.0%</td>
<td>27.0%</td>
</tr>
<tr>
<td><strong>Birthweight</strong></td>
<td>≥ 2.5kg</td>
<td>6.6%</td>
<td>1.8%</td>
<td>4.1%</td>
<td>6.6%</td>
<td>6.3%</td>
<td>8.8%</td>
</tr>
<tr>
<td></td>
<td>1.5kg-2.4kg</td>
<td>11.8%</td>
<td>3.8%</td>
<td>7.6%</td>
<td>10.9%</td>
<td>8.3%</td>
<td>13.0%</td>
</tr>
<tr>
<td></td>
<td>&lt;1.5kg</td>
<td>45.4%</td>
<td>18.2%</td>
<td>36.2%</td>
<td>38.5%</td>
<td>27.3%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

Mortality rates in NBSUs were relatively lower – at 0.9 per cent. The NBSUs referred close to a quarter (24.3 per cent) of all admissions to higher level centres compared to the referral rate from SNCUs to higher level facilities of 6.5 per cent.

Community follow-up of discharged newborns in the states where data were available, was only 39.4 per cent. Maharashtra had the highest follow-up rate (74.0 per cent) which was three-and-half times higher than the 20.7 per cent in the state of Andhra Pradesh. For all these indices, there was no difference between the state of Haryana which did not have a UNICEF office and the other five states that had UNICEF offices.

**Human Resource availability at SNCUs**: UNICEF partnered with the NHM to strengthen human resource capacity at SNCUs. Key informant interviews and analysis of UNICEF reports and workplans highlighted that to meet demands for specialised care at SNCUs, UNICEF supported capacity development of institutions. These institutions acted as regional centres to train and supervise staff who work in the SNCUs. Norms were laid out for SNCU staffing and SNCU staff had hands-on training modules. However, as the evaluation team did not assess the knowledge and skills of SNCU staff, the effectiveness of the capacity building activities could not be verified.

There were significant differences between facilities regarding reported sanctioned staff posts and those that had been filled. Across the 29 facilities assessed, reports varied; overall there were too few specialists such as neonatologists and paediatricians in the SNCUs. Table 8 shows that in each state the reported number of sanctioned positions did not depend on the number of beds or the estimated
workload. For example, there were only three paediatricians for three SNCUs in Haryana compared to 10 paediatricians for three SNCUs in Madhya Pradesh.

In Andhra Pradesh and Haryana, the reported number of sanctioned specialist positions was less than the number of SNCUs (1 specialist position is required per SNCU) and many of the sanctioned specialist positions were unfilled at the time of the assessment. Aside from the lack of specialists, there were also few medical officer positions filled across all facilities. Table 8 indicates that up to three SNCUs had none of their medical officer positions filled. In two SNCUs (row six), all the medical officer positions were filled by contractual staff, rather than permanent staff, and many of the medical officers were not trained on FBNC protocols. Notably, there were fewer medical officer positions in SNCUs than in NBSUs. The situation was no different for staff nurses; many of the staff nurses were contractual.

At national level, respondents were equally concerned about the HR challenges facing SNCUs. In addition, some of the staff who had been trained in the care of newborns were moved from SNCUs to other hospital units, often in areas where their skills were not used. There were recent efforts to develop HR policies, with varying success across states, to ensure that trained personnel were retained in SNCUs.

Availability of protocols and guidelines for newborn care: The development of the SNCU toolkit, operational guidelines and clinical protocols were adhered to from design to day-to-day operations. The evaluation covered the availability of protocols on care for small and sick babies: resuscitation to prevent asphyxia, KMC and feeding for small and premature babies; and treatment of infections (sepsis and pneumonia). Low birth weight, sepsis and pneumonia account for over 80 per cent of all neonatal deaths in India.

Annex 1 Tables 18-19 show that protocols were available in all SNCUs (pilot or scale-up) and NBSUs. UNICEF has been involved in the development of many of these protocols, especially in the SNCUs. Annex 1 Table 18 shows that apart from SNCUs in Andhra Pradesh, almost all the SNCUs assessed had all the protocols for critical care for newborns. However, UNICEF was only recently involved in the development in the KMC protocol which could have been a missed opportunity. KMC is a key intervention in the care for the 18 per cent of vPTB babies admitted to SNCUs, and is critical when equipment functioning cannot be guaranteed and incubators are unavailable. An expert from the national collaborating centre said the availability of the protocol in the facility was important for adherence.

Real-time online data management system: UNICEF strengthened the development of an information management system for SNCUs. This online system allows real-time reporting of data from each SNCU and was seen as improving transparency and providing evidence necessary for policy development. In addition, the online system provided regular feedback from the Ministry of Health to states on care practices at SNCUs. About 85 per cent of all SNCUs were reporting regularly through this online system.
Table 8. Statistics on human resource availability and training at the 18 evaluation SNCUs and 11 NBSUs, by state

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Andhra Pradesh</th>
<th>Haryana</th>
<th>Maharashtra</th>
<th>Madhya Pradesh</th>
<th>Odisha</th>
<th>UP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SNCUs (n=4)</td>
<td>NBSUs (n=2)</td>
<td>SNCUs (n=3)</td>
<td>NBSUs (n=2)</td>
<td>SNCUs (n=3)</td>
<td>NBSUs (n=2)</td>
</tr>
<tr>
<td>Sanctioned Specialists (Paediatricians/Neonatologists)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Specialist posts filled (% of sanctioned)</td>
<td>2 (66.7%)</td>
<td>0 (0%)</td>
<td>2 (100%)</td>
<td>1 (100%)</td>
<td>2 (100%)</td>
<td>1 (100%)</td>
</tr>
<tr>
<td>Sanctioned Medical officers</td>
<td>16</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>10*</td>
<td>9</td>
</tr>
<tr>
<td>Medical Officers post filled (% of sanctioned)</td>
<td>9 (56%)</td>
<td>1 (50%)</td>
<td>3 (60%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>3 (33%)</td>
</tr>
<tr>
<td>FBNC-trained MOs</td>
<td>7 (78.0%)</td>
<td>0 (0.0%)</td>
<td>3 (60%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Contractual MOs (% of posts filled)</td>
<td>4 (44.4%)</td>
<td>0 (0.0%)</td>
<td>3 (100%)</td>
<td>0 (0%)</td>
<td>7 (70%)</td>
<td>5 (56%)</td>
</tr>
<tr>
<td>Sanctioned Staff nurses (SN)</td>
<td>48</td>
<td>6</td>
<td>20</td>
<td>4</td>
<td>54</td>
<td>2</td>
</tr>
<tr>
<td>SN posts filled (% sanctioned)</td>
<td>41 (85%)</td>
<td>6 (100%)</td>
<td>23 (115%)</td>
<td>4 (100%)</td>
<td>34 (63%)</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Contractual SNs (% of posts filled)</td>
<td>21 (51%)</td>
<td>6 (100%)</td>
<td>18 (90%)</td>
<td>2 (50%)</td>
<td>34 (100%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>FBNC-trained SNs posts filled</td>
<td>36 (88%)</td>
<td>3 (50%)</td>
<td>7 (30%)</td>
<td>2 (50%)</td>
<td>30 (88%)</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>

*The second District hospital in Maharashtra could not give the number of medical officer and nurses sanctioned posts; **Number of sanctioned medical officer positions for the NBSUs in Odisha was not known
**Follow-up of SNCU-discharged newborns:** UNICEF support aimed to strengthen links between communities and facilities. A key mechanism UNICEF developed for this was an online monitoring system for the follow up by facility and community level staff of SNCU-discharged babies. The online monitoring system was used to generate and transmit automated reminders to caregivers of discharged babies.

In the communities, ASHAs and auxiliary nurse midwives (ANMs) were trained to follow-up babies who were discharged from SNCUs and were also provided with job aids to identify sick and small babies in the community for referral to SNCUs. In addition, referral slips/cards or discharge certificates were issued to mothers or other caregivers to be given to the ASHAs in their communities.

“When a newborn is discharged we used to provide information and read the discharge slip. It is very good, and everything is explained in it...Home visit is also done for LBW...Parents are not trained but ASHAs are trained.” [District level respondent, UP]

Results show that although facility staff were aware they should provide details on the baby’s referral card so that ASHAs had sufficient information to provide appropriate care along with the caregivers, some caregivers were excluded from the care.

In some states, UNICEF also supported the development of software applications on android-based mobile platforms that tracked the frequency of ASHAs’ visits to the caregivers. In the future, the software will be developed to track the quality of both the ASHAs’ visits and the supervisory visits to ASHAs, and also the promptness of referrals and the newborns’ outcomes after discharge from the SNCUs.

Challenges were noted in community-based follow-up with an average follow-up rate of less than 40 per cent. No programme data was available on the quality of follow-up.

**Evaluation Q6. What unintended results, positive as well as negative, have resulted from UNICEF’s contribution to India’s FBNC programme particularly focusing on the SNCUs?**

**Key findings:**

- **UNICEF’s contribution to the FBNC programme generated unintended positive results.** For example, people have become more aware that quality newborn care is available, contributing to increased facility deliveries.
  - UNICEF support also strengthened health management information systems (HMIS) and provided a model for GoI-partner engagement being adopted by other partners.

- **UNICEF’s contribution to the FBNC programme also generated unintended negative results.** For example, SNCU facilities have become overcrowded, and there has been inadequate attention to NBSUs and community level care, as well as weak links between newborn care and maternal health.

According to some respondents, UNICEF’s support to the SNCUs had unintended positive results. Notably, the support was seen to have increased awareness among the public that quality newborn care and services for newborns is available. Also the establishment of the online data management systems not only strengthened the feedback system to the SNCUs but was linked to the national HMIS to improve overall system effectiveness and efficiency. In addition, UNICEF’s engagement with the government in the SNCU services has been a model for development partners working with the NHM. Currently, other bilateral agencies, like the Norway-India Partnership Initiative (NIPI), have been engaged in supporting the development of SNCUs, not only using the UNICEF model of engagement but also using the outputs, such as protocols and guidelines, developed through the UNICEF-GoI/NHM partnership.
However, UNICEF’s support to the SNCU programme also resulted in some unintended results that were seen as detrimental to newborn health.

Firstly, the demand for services at SNCUs was higher than the capacity. For example in the state of Uttar Pradesh, babies were being turned away from SNCUs.

“Majority population is not able to take the services of SNCU. We have nearly 200 deliveries every day and there are lots of babies born with complications but due to a shortage of beds we are not able provide services to every newborn.” [District programme manager, Uttar Pradesh]

Refusing access to SNCUs put babies at risk and undermined community confidence in ASHAs who had referred the newborn. This was expressed in a focus group discussions (FGDs).

“Madam (moderator) we were asked to refer small and sick babies to the children’s hospital, but most of the time because of the scarcity of beds, parents are refused admission of their child and sent back to the village, and because of that, other people in the village get influenced, and when we tell them to take their child to the hospital they refuse.” [ASHA 2, FGD2 Uttar Pradesh]

According to the ASHAs, the state policy has made staff reluctant to take the responsibility of admitting babies when all the beds are full for fear of repercussions. In some cases, ASHAs have had to refer babies to private facilities.

“So, in critical cases, where the baby is below kgs. we advise them to go to private hospitals but if the baby is not very low weight means we advise them to follow KMC method and breastfeeding.” [ASHA-4, FGD4 Uttar Pradesh]

A district level manager from Uttar Pradesh suggested facilities could reserve two additional beds for babies who are referred from other facilities in distant villages to the SNCUs, a view shared by the ASHAs during their FGDs.

“I also would suggest that one or two beds should be kept for the referrals from periphery. Referral from villages should be attended.” [District level respondent, Uttar Pradesh]

“The referred cases must be given some priority. When we show the referred letter, they should handle those cases more seriously.” [ASHAs FGD3, Uttar Pradesh]

Secondly, attempting to address overcrowding at SNCUs resulted in another unintended negative outcome. The number of beds were increased with no increase in other resources, making it impossible to provide good quality special care.

Thirdly, respondents at all levels thought UNICEF’s focus on SNCUs resulted in a lack of adequate attention to lower tiers of the FBNC programme, particularly newborn stabilisation units (NBSUs) and newborn care corners (NBCCs). This focus on the SNCU programme was also evident in UNICEF’s annual reports and workplans; although support to strengthen delivery points is stated in UNICEF’s workplans from 2016-17, no mention is made of support to NBSUs. Whether the decision to focus on SNCUs to the exclusion of other levels of FBNC was made by UNICEF, or by the GoI is unclear. Some senior policymakers and development partners from other agencies saw UNICEF as a key driver in directing the programme, attributing the focus on SNCUs to UNICEF.

National level stakeholders, including policymakers, collaborative centre representatives and other development partners, said the lack of attention to the NBSUs resulted in newborn care being available only in the district headquarters. Some technical experts argued that as many as 70-80 per cent of newborn complications could have been handled at NBSUs, and therefore well-functioning NBSUs could have reduced overcrowding at SNCUs. Yet, it should be noted that the NBSUs can only
be used when babies are in a stable condition; 20 per cent of admissions are vPTB babies who could not be managed at NBSUs. Nevertheless, stakeholders argued that transferring stable babies to NBSUs would have a triple benefit of decongesting the SNCUs, strengthening the capacity of NBSUs and benefiting families by bringing care closer to home.

Fourthly, some respondents felt that community confidence in NBSUs was undermined due to underinvestment in staff training and care. The training of NBSU nurses had been inadequate (see in Table 8). Although facility-based IMN CI training was proposed for NBSU nurses, some respondents felt this would still be inadequate. Even mentoring by collaborative centres had been focussed on SNCUs and not NBSUs. The perception was that caregivers lost confidence in the NBSUs, and that they preferred to travel to a distant SNCU rather than first stabilising their newborns at the nearby NBSU. This resulted in further health complications of the newborn and consequently increased mortality.

“So this concept (tiered levels of newborn care) somehow got lost somewhere. So that has caused...resulted in two things. One is that we are getting non-functioning NBSUs and second thing is overcrowding at SNCUs. And also we are losing a lot of time in travel and stabilisation which is again leading to mortality.” [National KII 1, Policymaker]

“Restricting themselves to SNCUs is not right. Now if I am given a chance, I will tell them (UNICEF), take the whole district as a unit and try to cover up. At least in those districts where especially SNCUs are not established... like states which are done well...they could have done more for NBSUs because that could have sort of pre-empted the kind of troubles and problems we are facing at SNCU like overcrowding and all. That system of transport and training that could have been done at that level itself rather than only restricting to SNCU.” [National KII 1, Policymaker]

“So SNCU was chalked out relatively fairly well. Newborn stabilisation units and newborn care corners were not chalked out all that well and that lacuna remains till date that they haven’t been looked at all that well.” [National KII 6, Collaborative centre respondent]

Policymakers and other development partners said NBSUs faced major systemic challenges in terms of availability of human resources and space at block level and other operational constraints.

“But community health centres, creating a separate space with additional staff, etc (for NBSU), didn’t take off very well. Similarly, newborn care at birth suffered in general because I mean though there have been lots of attempts to strengthen that and... But the point is that while there were a lot of trainings and other inputs, if there are no staff in primary health centres to conduct deliveries or the staff doesn’t live there, it was extremely difficult to improve substantially the care at birth in facilities.” [National KII 10, Development partner]

In contrast, some policymakers from the government, while acknowledging the gaps in NBSUs, also argued that the focus on SNCUs was ‘the right thing to do’ because programmatically it was impossible to spread limited HR too thin, and a phased approach was better than trying to do everything.

Fifthly, the focus on facility-based care in UNICEF’s approach was perceived by a wide range of stakeholders, including government policymakers and development partners, to have led to the neglect of community level care in general. Respondents to the KIIs said FBNC must be seen as only one of the strategies to reduce newborn mortality and improve newborn health. Programming should provide a balance between community and facility level care. While UNICEF had earlier supported the IMN CI programme, one development partner felt UNICEF had not sustained its support causing the programme to subsequently weaken. And, although a HBNC programme was implemented by the
National Health Systems Resource Centre and UNICEF set out to provide links with community care through the use of the ASHAs, the systems almost run in parallel and the attention to training, monitoring and advocacy for the HBNC programme was inadequate.

“Because we have been concentrating on ...too much on this facility-based newborn care, so that the community-based care, in some states has taken back seat. Like Madhya Pradesh I can mention, because you know there, community... this thing... home-based newborn care is at not same par level of care as this thing (FBNC).” [National KII 1, Policymaker]

Also, facility-based newborn care (FBNC) tended to be preferred by policy-makers and programme managers because FBNC involves providing infrastructure that is visible to everyone compared to community interventions that are less visible. A national level development partner argued that:

“Anything that is facility-based always is more glamorous and it is more visible both to the governments and implementing organizations, etc. It always becomes more glamorous because you can see what you are doing, there is more direct kind of impact...and it looks glossy...community-based interventions suffer.” [National KII 10, Development partner]

Sixthly, respondents also felt links in the SNCU programme between maternal health and newborn care were absent or, at best, weak. (Programmes in the past like the Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) and the Rashtriya Kishor Swasthya Karyakram had focussed on this link). Care of the newborn in the labour room was not given as much attention as the care of the newborn in the SNCU. The respondents said that the SNCUs are like ‘islands of excellence’ in the facilities with no links to other important components of newborn care. In particular, labour wards were not providing optimal care during and immediately after birth. Respondents argued that the evidence suggests that only care along the continuum can reduce neonatal deaths; half of all these deaths occur in the first 24 hours, most of which start in the labour rooms and arise from intrapartum causes.

“Why SNCUs? Islands of excellence, sparkling (you know) place. But look at the mother in a labour room, you know dirty conditions.” [National KII 7, Policymaker]

During facility assessments, the evaluation team observed that quality of care in labour rooms was suboptimal. As shown in Table 9, partograph use was poor across all the five states where labour rooms were included in the assessment (labour rooms were not assessed in Madhya Pradesh), and care during night time seemed to be sub-optimal as indicated by the disproportionately few caesarean sections taking place at night in four of the five states where assessments were done. The night time caesarean section rate in Andhra Pradesh was exceptionally high.

### Table 9. Labour room quality of care in facilities with SNCUs

<table>
<thead>
<tr>
<th>State</th>
<th>Andhra Pradesh (n=4)</th>
<th>Haryana (n=2)</th>
<th>Maharashtra (n=2)</th>
<th>Odisha (n=3)</th>
<th>Uttar Pradesh (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of partographs assessed</td>
<td>40</td>
<td>20</td>
<td>20</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Partographs with FHR recorded (as % of total)</td>
<td>30 (75%)</td>
<td>20 (100%)</td>
<td>16 (80%)</td>
<td>3 (10%)</td>
<td>3 (10%)</td>
</tr>
<tr>
<td>Partographs with FHR recorded every 30 minutes (as % of those with FHR recorded)</td>
<td>29 (96.7%)</td>
<td>7 (35%)</td>
<td>0 (0%)</td>
<td>3 (100%)</td>
<td>1 (33.3%)</td>
</tr>
</tbody>
</table>
Partographs with colour of liquor recorded (as % of total) | 22 (55%) | 15 (75%) | 7 (35%) | 3 (10%) | 3 (10%) |
--- | --- | --- | --- | --- | --- |
Total Caesarean sections in previous month | 621 | 95 | 471 | 609 | 374 |
Night time caesarean sections in previous month (% of total) | 373 (60.1%) | 4 (4.2%) | 10 (2.1%) | 145 (23.8%) | 2 (0.5%) |
FHR = fetal heart rate

Some respondents from development partner organizations argued that UNICEF, as a development partner, should have advised the GoI to have a better balance between community and facility, primary and secondary care levels, and should have also advocated for stronger links with maternity care services.

*But there definitely is need for a much better balance between community-based care. And secondly as I said, within facility-based, focussing much more on primary health care systems where babies are... and the third is much better integration with maternal care. [National KII 10, Development partner]*

Lastly, another unintended result that was reported by development partners, was the shift from managing sick and small babies to very sick or extremely small newborns. One respondents argued that the FBNC initially aimed to give good quality secondary level care at SNCUs and refer babies who needed further treatment to tertiary level care at medical college hospitals. Another development partner respondent believed that the programme has evolved in a direction where the public health perspective has been lost in favour of more ‘sophisticated’ clinical services. Respondents said that given the SNCUs were already challenged for resources and overburdened, this sophistication took away the larger public health goals of the FBNC programme. A respondent said that the babies admitted in the district level SNCUs were different from those admitted in tertiary level NICUs. Interventions need to be tailored to their needs including promoting KMC or allowing mothers to be part of care of their babies. However, another respondent said that although quality clinical care is essential for the intervention to meet public health goals, a ceiling should be set on the clinical services that SNCUs should cover.

**Evaluation Q7. Were results achieved in adherence to equity, gender equality, non-discrimination, and other human rights?**

**Key findings:**
- UNICEF’s support to SNCUs aimed for universal coverage by the scaling-up the SNCU programme to cover all districts in the states, including ‘tribal’ populations.
- SNCU data revealed that admissions of newborns from the ‘scheduled tribal communities’ was proportional to their representation in the population. But conclusions on whether this means increased access for these newborns to SNCU care cannot be drawn without population level data on disease burden.
- SNCU data also suggested lower access for female newborns compared to males.

UNICEF’s approach has been to support the GoI to scale-up SNCUs to achieve universal coverage and also build in targeted interventions for sub-populations who might not have equal access to SNCUs.
For instance, in Andhra Pradesh, Figure 5 shows that 5 of the 26 SNCUs (19 per cent) established in the state were specifically targeted at tribal areas to improve access of tribal communities to SNCU care. Distribution across different castes (general, other castes (OBC), scheduled castes, scheduled tribes (ST)) and sex of babies were used as proxies for assessing equity in admissions to SNCU services. Figures 12-16 (Annex 1) show trends in admissions and mortality by caste at state level (comprising aggregated data from all districts in the state) and the two districts (one pilot (p) and one scale-up (s)) assessed as part of the evaluation. The figures show that all castes were represented in SNCUs admissions.

**Figure 5 Distribution of SNCUs in the state of Andhra Pradesh showing representation in tribal areas (data provided by UNICEF, Andhra Pradesh).**

<table>
<thead>
<tr>
<th>Table 10. Distribution of scheduled tribes in the latest national population census (2011).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State</strong></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
</tr>
<tr>
<td>Haryana</td>
</tr>
<tr>
<td>Maharashtra</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
</tr>
<tr>
<td>Odisha</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
</tr>
</tbody>
</table>

In Haryana, consistent with the 2011 census report (Table 10), almost no STs were among the admissions; with few admissions in the pilot and scale-up districts. In Andhra Pradesh, about 8-18 per cent of SNCU admissions were STs, slightly higher than the proportion of STs in the state. The pilot district had higher ST admissions than the scale-up district because one of the two SNCUs in this district was in a tribal hospital set up in a predominantly tribal area. In Maharashtra where about 12-20 per cent of admissions were from STs, there was almost no representation of STs in the admissions at scale-up facilities. This finding was consistent with the low ST population in the scale-up district of Parbhani. In the state in general, Table 10 shows that STs represent 9 per cent of the population. Odisha also presented a unique scenario. Some 22-28 per cent of admissions to SNCUs were from STs, consistent with the representation from the census data. However, in the scale-up district, admissions from tribal populations were as high as 70 per cent. Although, without access to population-level data...
on disease burden related to newborn health in tribal populations, conclusions cannot be made about access to SNCUs to newborns from tribal communities.

Also, as reported in earlier sections, policies introduced in Uttar Pradesh to limit congestion in SNCUs has disproportionately disadvantaged babies referred from distant or tribal populations, with the potential to increase equity gaps in newborn survival.

Table 11. Sex ratio (female : male) among children (0-6 years) in the 2011 national population census compared to SNCU admissions.

<table>
<thead>
<tr>
<th>State</th>
<th>Sex ratio (Female: Male)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Children 0-6 yrs</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>0.94</td>
</tr>
<tr>
<td>Haryana</td>
<td>0.88</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>0.89</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>0.93</td>
</tr>
<tr>
<td>Odisha</td>
<td>0.98</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Table 11 shows the relative distribution of the sex ratio of children under the age of 6 years to the sex ratio at SNCU admissions. Under-representation of female newborns in admissions was evident. Although comparing the sex ratio at birth would have been more accurate, the data suggests a bias against female newborns.

Respondents to KIs in all states confirmed these findings suggesting that gender bias existed among some communities and that some families were reluctant to spend time and resources to care for female newborns in hospitals. Various respondents said this gender bias used to be an even more common occurrence in the past but now with ASHAs working in the communities, this bias is becoming rarer. However, a state level participant told of how a mother refused to let her baby girl be admitted to the SNCU.

“Once I have witnessed the female vs male issue in XXXX district where a girl child was brought to the facility, and the family was not ready to stay for treatment of the girl child. The doctor counselled the family regarding the health issue, but they were reluctant on the discharge of the baby from the facility.” [K1-5, UP]

It was also noted that there has been traditionally less gender bias reported among tribal communities in Maharashtra and Odisha.

Some respondents pointed out that although UNICEF had highlighted the gender bias to policymakers by presenting sex-disaggregated data from the SNCU online data, addressing gender equity was beyond UNICEF’s or the Ministry of Health’s purview under the FBNC programme.

“And it is not purely [the] health department’s work, it is the overall I will say the social determinants which needs to get strengthened.” [National level, Development partner]

Given female and male newborns seem to have unequal access to care, addressing gender equity in FBNC, as well as in other areas of newborn health programme, should be a key focus moving forward.

**Evaluation Q8. What were the factors that influenced the achievement or non-achievement of programme results?**

Several factors in UNICEF’s support were identified as critical in the attainment of the programme
UNICEF’s approach as support to government rather than as lead implementer on a project. In the pilot stage, when UNICEF provided financial and technical support that covered every aspect of the running of the SNCUs, UNICEF always referred to itself as a ‘supporter’ to the GoI on the FBNC programme rather than the lead organization. This enhanced the visibility of the GoI in the implementation of the programme, promoting ownership of the programme in all districts and states.

UNICEF’s responsiveness to the needs and emerging priorities. Although UNICEF had a plan for the SNCUs, UNICEF worked with the NHM to identify and address emerging programme priorities, allowing for the strategy to evolve through the life of the programme. With presence in several states, UNICEF was seen as a credible partner that provided hands-on support to states. The leadership within UNICEF was credited for reliable support over the several years of the programme.

UNICEF’s strategic partnerships to facilitate support to the FBNC programme. UNICEF also forged partnerships with other groups; this was seen as a key factor in the achievement of the intended results. UNICEF played a convening role in the normative function while involving other development partners, professionals and professional associations in supportive roles.

UNICEF’s support and capacity-building around the systematic use of data to inform priorities. After the successful implementation of SNCUs, performance monitoring was important to assess coverage and equity. UNICEF promoted the use of SNCU data to identify emerging needs, prioritise interventions and guide appropriate corrective actions. UNICEF accelerated the migration of manual data capture to computer-based, using the experience of a pilot in one of the states. UNICEF supported capacity building for deploying the system in states and districts to analyse data and report to state and national governments. However, many respondents, at state and national levels, thought that the available data were not being used to inform improvement in SNCU service quality. Several respondents at national level and across multiple states from a range of stakeholders including policymakers, collaborative centre respondents, state level UNICEF representatives, professional associations and other development partners, reported that the quality of data was poor attributing this to lack of data entry operators. Even when data operators were employed, as they had no clinical background, they were unable to assess data quality. There was no system of oversight by clinical staff in the facility and the data operators were not trained to undertake this role. In addition, some respondents interviewed shared that indicator definitions in data entry were not standardised and were reportedly changed intermittently precluding comparisons over time or between facilities. Some respondents reported finding dissonant data, for example, greater numbers of vLBW newborns than LBW newborns, although vLBW should be counted as part of the LBW group. One respondent reported finding incorrect contact details of the family in 30 per cent of admissions, which questions the feasibility of effective follow-up. The evaluation team could not independently verify this due to the lack of access to the SNCU online database.

“The database has been formulated. But nobody has been paying (attention) to put things appropriate to that. If I say this baby has pneumonia, this baby is RDS, this baby is meconium
aspiration syndrome, who is ensuring that I am defining it the way it should be defined? I call anything and everything sepsis. And why I say this, because then I get to see that data, that is not often, that is seldom. But whenever I get to see that data, others is 60 per cent. So if others is 60 per cent and the designated diagnosis don’t contain much in those cells, what do I make out of this data? That is where my issue is.” [National level respondent, Collaborative centre]

“One challenge is that the data entry operators, is about their appointment and continuation. Very often since the data entry operators are not paid decent honorary amount or salary, the turnover is quite high. And because of the high turnover, actually the data entry suffers. That is one thing, the second thing is that very often is engaged by the hospital authorities in different other activities. That results in the delay in the data entry in the SNCU software. Then, there are issues related to the training of the data entry operators, and there are some other logistical issues, regarding the availability of the telephone and other facilities for that person to do the monitoring for the communication and follow-up.” [State level UNICEF representative]

“Quality remains the issue and it and this issue has been for years. In spite of trainings, orientations, there are mistakes in filling the stationery mistakes and filling the data. Because [the] data entry operator is not a technical person.” [State level policymaker, Madhya Pradesh]

“By 2015, we had the software developed and all the SNCUs had DEOs to enter the data. What is disappointing is that this work is hampered as we do not have the DEO position filled. We have to get the staff nurses to do it. So, it is not uploaded properly and we only have the deaths that are uploaded. We do not get data on occupancy as this is not uploaded. As of now, only 50 per cent of the data is getting uploaded. The DEO was in place only for six months.” [State level policymaker, Andhra Pradesh]

Moreover, a few respondents suggested at state level that the online data monitoring system should not only monitor performance of the SNCUs with facility data but should be expanded to track mothers and newborns in the system. The system should be improved to link peripartum care with postnatal care practices both for the facility and for individual women who use the SNCUs for follow-on care within the community.

Another key challenge reported was with utilisation of the data. National level policymakers reported that the SNCU online data was analysed periodically at their level and feedback shared with the states. However, feedback provided based on the data analysed centrally faced bureaucratic challenges, with feedback sent first to the state, then to the district, and then to the facility, making implementation of any timely corrective action difficult. The national level policymakers also reported that more recently, some states had started utilising the data for conducting periodic state level reviews of SNCU performance.

Aggregate reports published periodically by the centre and state appeared to be missing key indicators, and often had denominators absent, and were therefore not seen as useful for programmatic improvement. For example, the SNCU factsheets developed by the GoI and UNICEF included state-wise aggregate numbers of admissions. These were disaggregated by:

- inborn and outborn;
- sex and gestational age at birth;
- indications for admissions;
- treatment outcomes disaggregated by inborn and outborn;
- cause-specific mortality;
- process indicators like bed occupancy rates and human resource availability; and
- comparative statistics of different SNCUs within a state on indicators like bed occupancy, antibiotic and oxygen usage and type of transport used to reach SNCU.

However, other key information, which would have been useful for clinical quality improvement, was omitted. For example:

- indications for and duration of antibiotic;
- indications for and duration of oxygen use;
- indications for referral;
- duration of stay by diagnosis; and
- gestational age.

And while facilities and district authorities have access to data for further analysis to feed into quality improvement, capacity for such data use was limited. Facility level utilisation of data generated by the facilities was reported to be almost non-existent. Recently, a few states were reported to be using the data at state level during review meetings.

“This data is, as I said, is gold mine you know. And unless we analyse this data, we will be failing.”

[National KII 7, Policymaker]
v. **Capacity building of human resources to work in the SNCUs.** In both pilot and scale-up facilities, UNICEF supported the development of HR, both professional health workers and auxiliary staff, to serve in SNCUs. Yet, a few respondents interviewed felt the SNCU staff handling of newborn complications was below standard. Staff turnover was high, particularly retention of trained staff in the SNCUs. Also, refresher trainings were held infrequently leading to knowledge and skill gaps. Some facilities used graduate medical or nursing students to support SNCU but when most of the caregiving was passed on to them, quality was compromised. Also, FGDs with ASHAs in several states commented on the staffs’ negative attitudes towards caregivers.

“They also say that they are very harsh at words because when the mother goes to feed the baby they will say, “We know to take care about the baby and we know when to feed you don’t have to be bother”. After hearing this the mothers they will come to us and ask us about feeding the kid.”

[ASHA FGD, Andhra Pradesh]

“Nurse behaviour is very bad with the mother.” [ASHA FGD, Madhya Pradesh]

vi. Some collaborative centre respondents and development partners reported that doctors’ and nurses’ pre-service knowledge and skills on special newborn care was poor and they were slow in adopting evidence-based practices. Some respondents reported that during visits to SNCUs, they found clinical protocols were not being followed. For example, antibiotics were used indiscriminately; there were delays in transition to feeds from IV fluids; and there was poor maintenance of the equipment. Also, admission and discharge protocols were not followed – one respondent reported that 30 per cent of all babies admitted to SNCUs were discharged within 24-48 hours, indicating that the admission might not have been necessary, and could have been handled in a NBSU.

vii. **Inadequacy of staff to provide care at SNCUs.** There were widespread complaints about lack of skilled staff working in the SNCUs. This shortage was said to be across different cadres including specialists, medical officers and nurses; but also for programme level staff at state levels. KII respondents referred to the situation as ‘critical’ and ‘not good’.

“We need trained and qualified staff for SNCU. The current situation is not good; therefore, we need to have qualified and trained staff. In our SNCU, we have to hire nurses of this calibre.”

[State level respondent]

As mentioned, to address the staff shortage, sometimes with the support of UNICEF, contractual staff were hired for care delivery. The situation is reportedly worse in remote areas where most staff are unwilling to be posted. The stop-gap contractual staff also were reported in some states to have both low morale and motivation to provide quality services in SNCUs due to delay or non-payment of salaries. The consensus among respondents was a preference for regular or permanent staff to be responsible for critical areas in SNCUs, including provision of clinical care and data management. The respondents said that developing capacity of non-permanent staff for the programme was ineffective and inefficient. Having permanent staff would also make the processing and use of data easier.

viii. **Poor access to facilities due to geographic proximity, poverty, social and cultural barriers.** There were still challenges with access to facilities by various sub-populations across states. People who live far from SNCUs are sometimes unable to come to the facility when they are referred or when their babies are sick, and many children die on the way before getting to the SNCUs.
“Because, to reach the children hospital many children die on the way, in my area four children died because of that. Two of them died on the way and other two died during the admission process was going on. It takes time to get admission there.” [ASHA FGD, UP]

In many communities there is either no transport or it is too expensive for poor families struggling to provide for their families. Also, some caregivers have nobody to take care of their other children at home while they take the newborn to the facility. Moreover, in some cases, caregivers can be charged at the SNCUs which puts off potential clients.

“in children’s hospital, they charge some amount of money; it is not totally free.” [ASHA-2, FDG1, UP]

ix. UNICEF’s focus on SNCUs with lack of attention to other critical components of FBNC. This point has been elaborated in earlier discussions.

x. Inadequacy and lack of key support services. There were perceptions that laboratory services, particularly microbiology laboratory support for sepsis management for newborns in SNCUs were lacking, having a negative impact on quality of care. However, on the positive side, although the SNCUs were not initially meant to render some other services such as diagnosis and management of retinopathy of prematurity and auditory deficiencies, these services have been started in some SNCUs.

xi. Challenges with the maintenance of equipment in the SNCUs. While considerable investment in equipment for SNCUs has been made, one key challenge was equipment maintenance. No regular maintenance contracts were in place in many states, and even when present, there were delays in attending to non-functional equipment. This was seen as a key deterrent to provision of quality care.

4.3 Efficiency: To what extent did UNICEF’s contributions to the SNCUs represent the best possible use of available resources to achieve results of the greatest possible value to recipients and the community?

The following four questions (evaluation questions 9 to 12 in Table 4) were addressed in the evaluation of the efficiency of UNICEF’s support to the FBNC/SNCU programme in India.

Evaluation Q9 and Q10. Did the intervention have sufficient funding support for the FBNC/SNCU programme and for the total maintenance cost incurred by NHM for sustaining SNCUs; and did the intervention use the available resources in an economical manner to achieve its objectives?

Key findings:

✓ The availability and sufficiency of funding for the SNCUs was assessed based on NHM PIPs and ROPS, aggregated for SNCUs, NBSUs and NBCCs and covering infrastructure, operational costs, training and capacity building and equipment procurement. Data on UNICEF’s investment in the programme at both state and central levels were unavailable.

✓ A total of INR 31,620 lakhs ( ) was approved by the NHM for the FBNC budget between 2013 and 2017.

✓ The expenditure was lower than the budgets. Only 62.6 per cent of the approved budgets were expended and the largest component of budget and expenditure was on operational costs.
It was difficult to relate the budgets and expenditures with the intended outcomes due to challenges in obtaining financial data, and the way the financial planning and utilisation reporting formats were designed.

These evaluation questions were examined at two levels:

i. The use of resources by UNICEF as an organization supporting the NHM to implement the FBNC programme

ii. The NHM as the implementer of the FBNC programme.

No data were available to address UNICEF’s use of resources at the time of this report. Therefore, it was impossible to evaluate the efficiency of UNICEF’s use of resources in supporting NHM in the FBNC programme implementation. This report discusses only information on the availability and use of NHM resources for the FBNC programme.

After the initial SNCUs were set up with financial support from UNICEF, financial resources for the SNCU programme have been channelled by the GoI through the National Health Mission. The budgetary planning for this, as for all of NHM, is done through the PIP process. Generic budgetary heads have been provided under the PIP process for states to use and a two-way iterative consultation takes place between the GoI and the state governments to finalise the PIP and budget. Standard norms for establishment and maintenance costs for SNCUs have been provided and states are expected to use these while budgeting.

An analyses of the NHM resources was conducted, excluding human resources and programme management, (see Limitations and Challenges) by each state to assess investment into the FBNC programme.
<table>
<thead>
<tr>
<th>State</th>
<th>Budget head</th>
<th>Infrastructure</th>
<th>Operational costs</th>
<th>F-IMNCl trainings</th>
<th>Equipment procurement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approved (%)</td>
<td>Approved (%)</td>
<td>Approved (%)</td>
<td>Approved (%)</td>
<td>Approved (%)</td>
<td>Approved (%)</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>590</td>
<td>1608 (272.5%)</td>
<td>2797</td>
<td>2895 (103.5%)</td>
<td>304</td>
<td>59 (19.4%)</td>
</tr>
<tr>
<td>Haryana</td>
<td>318</td>
<td>99 (31.1%)</td>
<td>824</td>
<td>505 (61.3%)</td>
<td>230</td>
<td>83 (36.1%)</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>572</td>
<td>180 (31.5%)</td>
<td>4443</td>
<td>3941 (88.7%)</td>
<td>96</td>
<td>51 (53.1%)</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>767</td>
<td>73 (9.5%)</td>
<td>2477</td>
<td>2164 (87.4%)</td>
<td>195</td>
<td>128 (65.6%)</td>
</tr>
<tr>
<td>Odisha</td>
<td>1160</td>
<td>281 (24.2%)</td>
<td>1414</td>
<td>810 (57.3%)</td>
<td>461</td>
<td>76 (16.5%)</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>289</td>
<td>263 (91.0%)</td>
<td>2630</td>
<td>1321 (50.2%)</td>
<td>207</td>
<td>60 (29.0%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3696</td>
<td>2504 (67.7%)</td>
<td>14585</td>
<td>11636 (79.8%)</td>
<td>1493</td>
<td>457 (30.6%)</td>
</tr>
</tbody>
</table>

Table 12 shows that a total of INR 31,620 lakhs was approved by the NHM for the FBNC budget between 2013 and 2017. The largest proportion (46 per cent) of this approved budget was for the operational costs of the FBNC programme in the respective states. Approximately 12 per cent was approved for infrastructure development and 38 per cent for equipment procurement.

The focus of approved budgets differed among the six states. In Andhra Pradesh and Maharashtra, for instance, the largest proportion of the approved budget (73 per cent and 69 per cent respectively) was allocated to service delivery during the period 2013-17. In Andhra Pradesh, another 15 per cent for infrastructure and 12 per cent for trainings. The annual trend over the period 2013-17 has been to allocate most of the FBNC budget to service delivery, up to a high of 93 per cent in the financial year (FY) 2016-17. Trainings account for the lowest share of overall budget approved for FBNC under NHM over the period 2013-17 amounting to INR 473 lakhs (approx. US$748,188).

However, expenditure patterns were different from the approved budgets in all the six states (Table 12). In total, only INR 19,796 lakhs (approx. US$31,313,000) were spent on the FBNC programme over the same period, representing 62.6 per cent of the approved budget. All the states, except Andhra Pradesh, spent less than was approved in the budget for the FBNC programme. The expenditure varied from 29 per cent of the approved budget in Odisha to 73 per cent in Madhya Pradesh. FBNC operational costs and procurement accounted for 92 per cent of the budget in Madhya Pradesh and the expenditure utilisation on these heads was 76 per cent, possibly since most of the SNCUs had a good case load, and procurement systems have been strengthened in the state. In Odisha, infrastructure and equipment procurement accounted for nearly 62 per cent of the budget but expenditure utilisation was only 17 per cent. This could possibly be due to incorrect planning for operationalising these units. The largest expenditure was on operational costs in all the states, since they had been budgeted by the states for SNCUs/NBSUs that were already functional.

In Andhra Pradesh, the expenditure on the FBNC programme was 23 per cent higher than the approved budget. There was wide variation in financial utilisation of various FBNC components in the state. Over-expenditure has been reported for SNCU/NBSU/NBCC operational costs (104 per cent) and infrastructure (273 per cent), which could be on account of carry over budgets from earlier years. F-IMNCI training showed very poor budget utilisation (19 per cent). During the KIIs, respondents confirmed that sufficient funding support was available to them in the implementation of the FBNC programme.

“The positive thing is that we had a very strong political will, bureaucratic commitment, UNICEF’s technical support, which helped into the newborn health...We always purchased standard and best possible equipment for our units. We never had any shortage of funds. We were very well supported by the higher officials and bureaucrats... The Ministry was generous enough to provide funds to state PIP to buy these things locally.” (KI-7)

The PIP process was seen by almost all respondents as bringing efficiency and transparency to the system, while simultaneously allowing for adequate flexibility for the states. It was seen as a means of ensuring

---

3 As mentioned in “Limitations and Challenges”, this amount does not include Human Resources and Programme Management costs, which are significant. For example, the HR budget approved for SNCU/NBSU/NRC in Madhya Pradesh was nearly INR 11,500 lakhs during 2013-2017 and a major portion of this is expected to be allocated to FBNC, while the approved budget for the other elements as shown in Table 12 is INR 8,852 lakhs. However, expenditure on HR cannot be ascertained. Similar figures for Haryana were INR 3,820 lakhs and INR 1,926 lakhs, respectively, while those for Uttar Pradesh were INR 10,769 lakhs and INR 8,741 lakhs, respectively.

4 Service delivery includes SNCU/NBSU/NBCC operational cost and wherever budgeted other activities such as SNCU data management, rapid assessment of SNCUs and SNCU quality improvement.

5 All calculations of US$ equivalent are based on average annual exchange rate of US$ to INR between 2013 and 2017. Source: https://data.oecd.org/conversion/exchange-rates.htm

6 In 2013-14 and 2014-15, expenditure utilisation on infrastructure was 169 per cent and 475 per cent, respectively; whereas, no budget was approved nor expenditure reported in the next two years.
accountability because it allowed the central government to track allocation and use of funds. In addition, financial accountability was ensured by already established mechanisms like the Comptroller and Auditor General’s audits, concurrent NHM audit and state-level audits. UNICEF also ensured accountability by monitoring financial utilisation at different levels, identifying bottlenecks and giving feedback to the government.

However, some respondents critiqued the PIP process. They thought that the PIP budgets were not thought through but prepared by merely adding a percentage to the previous year’s budget. One contested the validity of the process felt that yearly funding for SNCUs had to be thought through on a more long-term basis.

“The problem is old wine, new bottle. They look at whatever the previous things, add 10 per cent and come and present as budget. No one really cares to look at.” [National Development partner]

There was also criticism that there were no available data on the utilisation of these funds which prevented analysis on how efficiently the funding mechanism worked, although SNCUs PIP budgetary allocations were available in the public domain. Also, while the PIP process monitored financial accountability, some respondents felt that it did not review managerial accountability at state, district or facility levels. This was seen as a major gap that compromised both efficient use of resources and had a negative effect on outcomes. However, the culture of accountability on the use of the resources in the facilities seemed to have been inculcated. The NHM also increased the scrutiny and due diligence on all investments into the SNCUs including regular audits.

**Evaluation Q11. Did the intervention have sufficient and appropriate staffing resources?**

Funding for staff is provided through the NHM and not through UNICEF. The inadequacy of the staffing resources for the FBNC/SNCU programme has already been described under the effectiveness of the programme. Briefly, most of specialist, medical officer and staff nurse positions were unfilled, confirming the lack of human resources to deliver interventions of optimal quality. For example, Andhra Pradesh had only 56 per cent of medical officers in place in SNCUs, Uttar Pradesh had none, Haryana had 60 per cent and Odisha 57 per cent. A substantial proportion of the positions that have been filled in the facilities were contractual, undermining sustainability and efficiency, as attrition and turnover amongst contractual staff was reported to be higher. This was reported to also affect staff morale, at least in one state.

“Even after receiving trainings, nurses are leaving their jobs and joining private hospitals. Mostly, the nurses are appointed on contractual basis for seven to eight years by the NHM. After completion of that period, if they are not considered for normal regular pay roll, then their working spirit gets hampered. [The] government. has to think about it, in order to have a qualitative work set up.” [Professional association representative, Odisha]

**Evaluation Q12. To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?**

*Key findings:*

- UNICEF forged collaboration with states and other development partners for the advancement of newborn health particularly on the SNCUs.
- It was suggested that support for the coordination of care at district level was lacking, especially the continuity of care from community through NBSUs to SNCUs.
- There was also limited focus on labour wards leaving most babies coming from these units compromised; the SNCUs helped the babies to merely survive.
Although information on UNICEF’s financial inputs into the programme were unavailable, efficiency was also inferred indirectly through other ways including the findings on effectiveness. For example, UNICEF’s coordination with other organizations and agencies working in the same areas reduced the duplication of functions and increased value for money on all investments in the SNCU programme. UNICEF played a convening role in the normative function while involving other development partners in supportive roles such as WHO, the Norway-India Partnership Initiative (NIPI), UNFPA, as well as professionals and professional associations including the National Neonatology Forum (NNF) and the Indian Academy of Paediatrics (IAP). However, some respondents differed suggesting UNICEF’s support could have been improved with better coordination with other development partners in newborn health.

“I think there is need to for more collaboration between Access and UNICEF, and at the National Level, we have Save the Children, NIPI supporting newborn care; also Bill Melinda Gates Foundation also is working intensively in two states UP and Bihar, where their focus is on newborn but its more around the community-based care... for whatever reason they really felt there would probably be stamping on UNICEF’s toes if they enter into the SNCUs, and also probably they really did not believe much in this FBNC strategy as a whole.” [KI-15, Andhra Pradesh]

It was noted UNICEF supported the SNCUs by improving links with other health facilities such as PHCs, and medical colleges for mentoring SNCU staff. UNICEF also linked up with other organizations such as NIPI as well as professional bodies to provide supervision and capacity-building of the staff who worked in the SNCUs.

In addition, UNICEF supported the state governments in training staff, strengthening community monitoring and referral mechanisms. UNICEF introduced an application to help track and supervise ASHA visits as well as babies discharged from the SNCU facilities into the communities. However, as reported earlier, implementation on the ground has been varied across states. ASHAs were trained to follow up babies discharged from the SNCU facilities for up to six months or one year, using the HBNC protocol. The community members could also contact SNCU facilities through their ASHAs or Auxiliary Nurse Midwives (ANMs) if they had any problems with the discharged baby.

As mentioned earlier, in all states, the lack of links between SNCUs and other units in health facilities, such as the labour ward and NBSUs, undermined efficiency and quality care. Also, the lack of coordination with community-level care providers compromised the continued care from birth until discharge from the SNCUs. For example, the overcrowding reported in some SNCUs could have been eased if the care of stable babies had been delegated to NBSUs. (UNICEF was involved in the development of protocols in SNCUs but in NBSUs, protocols were mostly unavailable).

In some of the states, depending on whether the facility was involved in the pilot or scale-up of the SNCU programme, a difference was observed in the links between facilities and communities. In Uttar Pradesh, for instance, whilst ASHAs in pilot facilities seem to be informed about discharges from facilities, this was not so in scale-up facilities.
4.4. Sustainability: Are any positive results from UNICEF’s contribution likely to be sustained?

Sustainability of the SNCU programme was evaluated by assessing UNICEF’s approach. Most of the findings are listed under Q17 and Q18.

Evaluation Q13 and Q14. What are the positive results from UNICEF’s contribution and which are likely to be sustained? Why? Was the intervention scaled-up sufficiently to achieve the intended results?

**Key findings:**

- SNCUs have been scaled-up in the states; a data management system has been set up to enhance efficiency and improve quality; a supervisory system has been established and is being continually improved; training and job aids have been provided to ASHAs to improve community follow-up of SNCU-discharged babies; and protocols and operational guidelines have been developed for the SNCUs. These are all sustainable with government support, even if UNICEF withdrew its technical support for the programme.

The SNCU programme was scaled-up in almost all districts in the evaluation states and many of the intended results were achieved.

Evaluation Q15. Were results achieved in a sustainable manner? To what extent can the activities and the benefits of the intervention continue after external funding has ceased?

**Key findings:**

- Most respondents were optimistic that the activities and gains made on the SNCU programme were sustainable.

Most respondents thought the SNCU programme was sustainable. For the last few years, no financial support has been provided to the programme by UNICEF with all funding coming through the government-funded NHM, which was seen as proof of sustainability. This has also been covered in detail under Efficiency.

“[The] Programme is quite sustainable. Because in terms of resources there is no problem. Because once the government of India and state government own it, the funds are you know…” [National KII 7, Policymaker]
Evaluation Q16. To what extent has the intervention been mainstreamed in the National Health Mission, particularly regarding allocation of financial and human resources as UNICEF’s involvement has declined over time?

Key findings:

✓ The challenges to sustainability were the possibility of government not committing to continue in the key areas of engagement in the programme.
✓ UNICEF needs to be continually engaged so that institutional memory will be passed on to the NHM in a structured transition.

A major factor contributing to sustainability was the government’s ownership early in the programme. This was evident from the resources put into the programme by the government and the visibility given to it as a government initiative.

“Because of the government buy in, once the government starts, in India it is like a big elephant or once it starts moving ...it is hard to stop... nobody can reverse it. Once the services are being provided, they would not stop.” [National KII 2, Development partner]

“Now everybody has accepted.... Like our previous minister, honourable minister Mr. XXX in Parliament, he could easily say that in SNCU, we have radiant warmer, oxygen...he could tell extempore without any written... “there is a machine in the newborn corner that keeps the baby warm, oxygen is given, suction is done, SNCU is so big that even babies who are seriously ill can be treated.” [National KII 1, Policymaker]

Stakeholders in the different states reported that the programme had been owned by their state governments, and, due to the strong integration and partnership between UNICEF and the NHM in the implementation of the support for the SNCUs, sustainability of the achievements is attainable. In Haryana, the state government was unique amongst the evaluation states that it did not receive formal support from UNICEF; participants in this state believed that achievements gained, notably the improved monitoring system and improved quality of care due to increased care provision and improvement in infrastructures, were likely to be sustained.

Credit was given to UNICEF for fostering the government’s ownership of the programme. It was also appreciated that UNICEF put money into the programme only when government committed to support human resources and maintenance costs. Respondents added that UNICEF shared lessons from the pilot phase with the government, helping the programme to move forward.

It was acknowledged that, as a development partner, UNICEF had limitations in the extent of support it could provide; scale-up could happen only when the government took ownership of the programme. This was also exemplified by how different states had taken the basic model that UNICEF had piloted and added several new components to it, for example, Telangana invested in quality assurance initiatives and Tamil Nadu introduced special newborn ambulances.

“Initially, [the] UNICEF role is commendable, but now it has no role at District level. Its previous roles were value-added type especially in the field of training, mentorship, capacity building, follow-up mechanism, data entry operators’ capacity buildings, in designing software, case sheet, all are well supported by UNICEF...Till 2011-12 UNICEF roles were well noticed and full-fledged. After that their role was not there.” [Scale-up district level respondent]
Evaluation Q17. Are any areas of the intervention unsustainable? What lessons can be learnt from such areas?

Key findings:

✓ The current system of data management being hosted by UNICEF on a separate server is unsustainable because the data are not feeding into the data management and quality cycles in the facilities.

✓ There are components of UNICEF’s support to the system, such as the community component and data management system and use at facility level for quality improvement, that need further inputs and it may be premature for UNICEF to discontinue continuing technical support for these components.

✓ The use of contractual staff to fill positions in the SNCUs is unsustainable. It serves a purpose at the moment but the lack of continuity with such contractual staff and rapid changes of staff working at the SNCUs is a skill drain and affects institutional memory on best practices in the facility.

✓ Using third parties for equipment maintenance may not be sustainable. There was the need for the NHM to institute measures to develop capacity to maintain equipment and for this system to be owned and directed by the NHM.

✓ The centralised system of mentoring is unsustainable. Mentoring will need to be decentralised to be closer to facilities.

While acknowledging the importance of government ownership of the programme and the provision of government financial resources, almost all respondents, including policymakers and development partners, pointed out several risks to sustainability, in particular scaling up SNCUs without quality care.

Policymakers interviewed at national level said government and UNICEF need to provide continued commitment and leadership to ensure the focus on the programme remained constant. The policymakers also thought that the programme needs to evolve and innovate for it to remain sustainable. While the transition of funding from UNICEF to the government was universally appreciated, several challenges were also highlighted by a few respondents. For example, the transition of support for the collaborative centres from UNICEF to the government had been especially difficult with inordinate delays in funding resulting in staff working for several months without salaries.

Another potential challenge highlighted by national level policymakers and development partners was the sustainability of the data system. Currently, this was being managed by UNICEF, and data were being hosted on private servers. Reservations were expressed by respondents about transitioning this system to government servers. In addition, it was perceived that integrating the data with other data systems, such as the existing HMIS, is needed to ensure sustainability of the system.

Several concerns were also expressed regarding access to data. While a respondent suggested that standard guidelines were needed to safeguard access to data, another said researchers should have easy access to this data to allow for this data to be fed back into the programme. Overall, respondents said available SNCU data should be better analysed to help identify gaps and strengthen the programme, and bringing in academics and researchers would add to the capacity for such analysis. To address issues related to data privacy and confidentiality of personal data, access could be granted for academic and research purposes after appropriate anonymisation. Models are available in the country for providing such access, for example data from the National Family Health Surveys.

“See data analysis is one of the major problems in our country. And the government people don’t really understand the value of data analysis. Because in government it is not us, maybe it has value for the researchers and then they can really provide... but we are not really expecting government or the people who are running these SNCUs to analyse you know... but if we empower them to do so that will help us further.” [National level respondent, Policymaker]
“So if more and more people have access to that data, they will utilise it for better purposes. Even existing data. Forget even about.. at least you can see trends as to what is happening.” [National level respondent, Development partner]

While mechanisms had been put in place to ensure sustainability of human resources, this has still been a challenge. One respondent at national level said a large number of SNCUs were being opened without adequate human resources. Other respondents focussed on the constant attrition of human resources from SNCUs. This has been reported in detail in the section on Effectiveness.

The governance mechanisms of NHM, which allow recruitment of contractual staff, were also seen by several respondents across a range of stakeholders as creating a dual pattern in staffing. While these were seen as beneficial in the short term and bypassing the red tape involved in recruiting regular staff, in the long term, concern was expressed about sustainability; it has led to staff frustration and high staff turnover.

“The most important is the HR. Because the staff leaves in between if they get a permanent job. All staff is from NHM, but they are not permanent staff if they don’t get work at some place they are being adjusted here. They resign in between which creates a problem for us.” [District level respondent, Haryana]

Respondents highlighted the importance of providing incentives to retain staff in the SNCUs, and upgrading their skills as key for sustainability.

Similarly, equipment maintenance needed to be addressed. This had been identified in some states as a key factor influencing quality of care. Corrective measures have been reported in detail in the section on effectiveness.

“Maintenance of all equipment in running condition is a big problem here…Like, take the example of pulse meter. We have one continuous pulse meter fixed for one baby so that we can get the basic parameter of that baby. When one gets out of order, that means we are managing two babies with one pulse meter in a phased manner. We have warmers as per the bed. If one warmer is out of order, that means we are adjusting that baby with some other baby. If the number of non-functioning of warmer increases then that means we are adjusting that many patients with another patient, which should not be followed in SNCU”. [Facility level respondent, Odisha]

Sustaining quality care was a challenge identified by several of the respondents. SNCUs were rapidly expanding both in number and in the kind of services they provide, but several respondents cautioned that this could come at the cost of quality, especially given the inadequacy of human resources. It was felt that UNICEF now needed to focus its advocacy on quality issues in SNCUs.

The need to strengthen community-level care was also identified. The practice of taking existing staff from the district, as reported by some respondents, was seen as compromising the quality of care in the community and sustainability.

Respondents from the collaborative centres and development partners felt that the current collaborative centres were overburdened and were inadequate to meet demands for HR capacity building and mentoring across the country. Respondents felt mentoring should be decentralised; for example medical colleges could be mentored by existing collaborative centres and could in turn be responsible for monitoring and mentoring SNCUs around them. Extra human resources could be integrated within the existing medical college structure to ensure retention of clinical skills. State level resource centres were mentioned by several respondents as a way to strengthen mentoring mechanisms.
“We would love to have resource centres even at the regional level, at divisional level you can say, within that state, to give them six or seven you can say, SNCUs, not more than I will say six. To give them... and there they should look at the data carefully. Then provide supportive supervision based on where that weakness is happening.” [National level development partner]

In addition to clinical mentoring, some development partners at national level felt techno-managerial and programme management capacities needed to be strengthened at state and district levels so that evidence-based programming could be undertaken. Finally, accountability was key to sustaining the achievements gained at the SNCU facilities, notably having accountable staff members.

**Evaluation Q18. What were the major factors that influenced the achievement or non-achievement of sustainability of the intervention?**

**Key finding:**
- Many of the factors aiding sustainability were cited in various sections of this report. These included the approach of the GoI to the programme, partnering with UNICEF to ensure the benefits derived from the system are documented and shared.

Apart from funding, other factors that were seen as aiding sustainability were the norms put in by UNICEF, (including for HR, equipment and supplies), the data information system, and the mentoring mechanism through the collaborative centres. The other organizations, besides UNICEF, now involved in the programme was also seen as a positive factor towards sustainability. Again, UNICEF was given credit for having put in these support systems to ensure sustainability of the programme.

Respondents to the KII's were unanimous that the strong integration and partnership between UNICEF and the NHM has made the achievements sustainable. However, some respondents thought there could be challenges maintaining the level of financial support to the facilities, notably for trained and qualified health workers, functioning equipment, adequate numbers of hospital beds, referral and transport. However, as mentioned earlier, all of these have been funded through NHM for the past several years.

It was evident that an important factor that influenced the achievement of sustainability of UNICEF’s support to the SNCUs was the approach adopted by the GoI itself. The GoI through the NHM has shown commitment and policy support to create the enabling environment for the SNCUs.

Yet, the evaluation elicited concerns from some of the states that may affect the sustainability of UNICEF’s support.

- There were concerns that when UNICEF’s technical support is withdrawn, the GoI may not be ready to sustain the maintenance of the infrastructure and equipment. In Madhya Pradesh, there was the fear that, apart from the human resource challenges, there could also be the challenge of how the GoI will maintain the infrastructure and equipment when UNICEF’s technical support ceases. Andhra Pradesh State has addressed this with a government directive for a new procurement policy of install-and-maintain as part of the procurement processes for SNCU equipment.

- There was consensus that the low staff numbers and the use of contractual staff will make the SNCUs unsustainable in the long term.

- Respondents were concerned that sustainability of SNCUs will hinge on availability of data to inform improvements. They also contended that developing capacity for use of data will be crucial to sustainability. There was, therefore, the belief that in the short to medium term, UNICEF will have to
continue to provide technical support, especially capacity building for improving the use of the data management system.

Therefore, it seemed that while the SNCU programme was seen to be sustainable, there were challenges in ensuring quality of care in these facilities. It was felt continued advice and technical support was required from UNICEF if the successes achieved in the programme are to be sustained.

**Evaluation Q19. Is there any evidence of other organizations/partners sharing a common platform with UNICEF in the implementation of the SNCU programme and has any of the UNICEF supported initiatives being adopted by these organizations/ partners and institutionalised?**

This has also been discussed under the efficiency section.
5. CONCLUSIONS AND LESSONS LEARNT

CONCLUSIONS:

✓ A key strategy to reducing neonatal mortality has been improving newborn care in facilities and at home. In support, UNICEF has supported the GoI and various state governments in conceptualising and operationalising the Facility Based Newborn Care programme, with a focus on Special Newborn Care Units (SNCUs). This is in line with a key government priority to achieve national goals and the Sustainable Development Goals (SDGs).

✓ The FBNC programme was implemented according to plan to the extent that a model of secondary level care for newborns at district level was demonstrated through pilots of SNCUs in a few facilities and then scaled up.

✓ UNICEF forged strategic partnerships with key partners including the Government of India, state governments, development partners, and professional associations to achieve the SNCU objectives.

✓ Key results achieved from UNICEF’s support to the SNCU programme included making newborn care available at district level; strengthening health system components for newborn care including health human resource capacity; ensuring major equipment and commodities were in place in SNCUs; supporting the development of guidelines and protocols for SNCUs; and establishing information management systems. (The evaluation team did not assess the knowledge and skill level of staff working in SNCUs, therefore the team could not independently verify the effectiveness of capacity building).

✓ The support provided by UNICEF to the programme was a key factor influencing programme outcomes: notably UNICEF’s credibility, internal leadership, presence in several states, partnership with other organizations, and flexibility to adapt to needs.

✓ UNICEF’s support included capacity development for staff in the SNCUs through facilitated mentorship and observership opportunities through collaborative centres.

✓ Key challenges to the SNCU implementation included uneven coverage across states and districts, shortage of human resources, poor capacity in existing human resource, poor quality of care, challenges with equipment maintenance, limited use of data at facility level and poor quality of data to inform quality improvement, and low follow-up rates.

✓ UNICEF adjusted the nature of its support to meet programme needs. However, initially, greater focus was placed on increasing the numbers of SNCUs to cover all districts. Although efforts at improving the quality of care were made, they were insufficient to keep up with the scale-up of coverage. According to some stakeholders, this could risk community trust in the care provided at SNCUs. Some steps have been taken in recent years by introducing interventions to improve quality in SNCUs and labour rooms, and strengthening community linkages.

✓ Although newborn services are situated in public health facilities, equity issues that undermined other programmes, for example caste, poverty, distance and gender, also affected access to SNCUs. UNICEF highlighted these issues to policymakers by presenting disaggregated data showing these inequities. Efforts to address equity were felt by several stakeholders to be beyond the scope of the SNCU programme.
Some states targeted the establishment of the SNCUs in tribal areas. Yet in other states, like Uttar Pradesh, efforts to prevent overcrowding in SNCUs and improve quality has disproportionately disadvantaged babies referred from distant or tribal populations; this could increase equity gaps in access and survival of babies.

The SNCU focus of the programme, until recent years, resulted in insufficient attention to Newborn Stabilisation Units (NBSUs), community-level care, and links between maternal and newborn health.

UNICEF’s support and the FBNC programme evolved with the introduction of newer service components and mechanisms for systematic follow up of babies after discharge from facilities. Based on facility level experience, components such as the data management system and community-based follow-up of SNCU-discharged babies were added. However, this follow up should not have stopped at assessing contacts with facilities but should include content and quality monitoring for these visits.

GoI has provided substantial funding for the FBNC programme in the country through the NHM, and has invested significant resources in scaling up of SNCUs. However, wide variations were seen in utilisation of approved budgets across states, affecting the progress of the interventions.

The factors supporting sustainability of the programme include government ownership and government funding of the programme, establishment of norms set out in operational guidelines, institutionalisation of mentoring mechanisms through collaborative centres, and involvement of other organizations beyond UNICEF. These suggest that SNCUs will continue to function when UNICEF withdraws the technical support it provides.

Factors that may undermine sustainability include the major focus on SNCUs and the limited focus on other tiers of newborn care, and delay in transition of data management systems from UNICEF to the government. Specific areas that faced challenges in sustainability include retention of trained human resources, equipment maintenance, quality of care, data quality, and non-devolution of mentoring mechanisms to states. These suggest that although SNCUs will continue to function even when UNICEF withdraws technical support, they may not be in a position to provide high quality services to enable achievement of newborn health outcomes.

LESSONS LEARNT:

i. National ownership of India's FBNC programme and the leadership provided by the National Health Mission (NHM) contributed to the successful implementation and expansion of the programme and should allow for sustainability of many components of the programme.

ii. Implementing the SNCU programme according to national priorities and guidelines, and also UNICEF clearly supporting rather implementing for the government has improved uptake of the programme and has help programme feasibility and acceptability.

iii. Holistic systems need to be developed for improving newborn care, including the FBNC programme, taking into account continuity at all levels of care, from the community to facility care. UNICEF’s support to the FBNC programme failed to achieve maximum impact because the SNCU-centric focus led to inadequate attention to lower levels of care: community-level care and effective referral linkages between the two. More recently, efforts have been made to improve quality of care in labour rooms and community linkages.
iv. By deciding to expand access to SNCU services before tackling quality issues risked losing community trust in these facilities if the outcomes of care were poor. To secure community trust, planning must ensure that quality improvement goes in tandem with expansion.

v. Some respondents felt that the FBNC programme moved away from a comprehensive public health approach to a more sophisticated clinical model. They felt that tertiary care had been transposed to district level facilities that were originally designed to provide secondary level care.

vi. The FBNC programme will only achieve quality objectives if equipment maintenance is done locally. A sustainable system of ensuring optimal functioning of equipment needs to be in place, involving local engineers who should be trained to maintain the equipment.

vii. Building effective data capture systems in the implementation of the SNCU programme is key to quality monitoring and is commendable. However, unless these data are utilised in real time at facility level to address quality issues as illustrated in the Theory of Change (ToC), impact on efficiency and effectiveness of the services provided will be minimal.

In summary, national ownership of the FBNC programme and the leadership and commitment under the NHM will contribute to programme sustainability and scale up. However, the government should take urgent steps to address the shortage of adequately trained staff and lack of functioning equipment. Furthermore, to ensure healthy development of newborn babies, the FBNC programme should include a more holistic approach that goes beyond SNCUs and immediate survival. Such an approach should aim to improve quality of care provided for mothers and babies in maternity units around the time of birth, in NBSUs and in the community after they have been discharged from facilities. Additionally, healthcare providers and managers should be empowered to use data locally to monitor progress and to take corrective actions whenever required.

Future research areas that could inform the FBNC programme would include studying the long-term survival and well-being of newborns treated in SNCUs, and the efficiency of the programme by investigating resource allocation by various stakeholders, and use and cost-effectiveness.
6. RECOMMENDATIONS

Development of the Recommendations

The recommendations from the evaluation were developed through a consultative process involving the Liverpool School of Tropical Medicine (LSTM), UNICEF, national experts and the Evaluation Reference Group (ERG). The LSTM developed the draft recommendations based on the findings and the conclusions. The LSTM also provided evidence in support of each of the recommendations. The recommendations were presented to the ERG and UNICEF and were discussed extensively. The final recommendations were agreed and reviewed by two national consultants for the evaluation – a specialist in neonatology and a health systems specialist. The recommendations from this consultative process include proposed timelines (based on the urgency to address issues identified in the evaluation) and responsibilities for addressing them.

Suggested Recommendations for UNICEF-India

Highest priority

Holistic support to newborn health: UNICEF’s support to the FBNC programme should be holistic and focus beyond the SNCUs. Although the SNCUs may be providing vital level two care for small and sick newborns, maternity units and NBSUs need to be strengthened. Specifically, improving the monitoring of unborn babies and care of stable newborns would reduce complications and mortalities. Therefore, UNICEF should extend similar support provided to the SNCUs to lower levels of care such as the NBSUs. This would decongest the SNCUs, bring newborns care closer to families and increase acceptability and utilisation. Furthermore, UNICEF should strengthen collaborative partnerships with other developmental partners and organizations, and support the government to ensure quality newborn care is available not only at SNCUs but also in maternity units, NBSUs and at community level.

i. Protocols for NBSUs: UNICEF should aim to strategically invest in development of protocols and training for care at lower level facilities. In addition, UNICEF should incorporate data collection from these facilities to provide a comprehensive picture of the status of newborn health in the districts. It will be relatively less expensive and will ensure continuity in the messaging on newborn care.

ii. Introduction of a Quality Improvement approach in SNCUs, NBSUs and labour rooms: UNICEF should support the government in integrating quality improvement mechanisms in the SNCUs as well as other areas that provide newborn care including NBSUs and labour rooms. This can be done by supporting development and implementation of standards and norms, capacity building, and use of data for monitoring and supportive supervision.

iii. Promotion of facility level use of data: As an immediate step, UNICEF should ensure that data from the SNCUs are used to improve quality of care in the units. The data must be fed into quality improvement Plan-Do-Study-Act (PDSA) cycles that will be led by the facilities. The data should also inform the maternal and perinatal death surveillance and response (MPDSR) that, together with the PDSA cycles, can be used to identify systemic challenges in providing quality care. The data will also help prioritise, set objectives, and implement activities to address emerging facility challenges. The regular use of data will also help improve the quality of the data. Also, to capture, collate and analyse data effectively in all facilities, UNICEF should not hire consultants, and ask central and state governments to identify staff who could be trained to carry this out.
iv. **Capacity building for data use:** UNICEF should support efforts to build the capacities of programme managers at district and state levels, as well as facility level staff for focussed examination of data on SNCU performance at all levels including at the facility level to inform the implementation. Running the SNCU data in a parallel system will not guarantee quality and sustainability.

**Medium term priority**

v. **Equipment maintenance:** UNICEF must support state governments with technical inputs to build capacities of local staff with the requisite training to be involved in the equipment installation and maintenance.

vi. **Mentorship (and the use of virtual platforms):** In the medium to long term, UNICEF’s support for the mentorship programme should aim to systematically decentralise the function to state and district levels. Although the mentors’ physical presence is crucial to help tailor support to the needs of the facility, the number of places for mentors and staff are limited and the costs too high. Therefore, UNICEF should invest in a telemedicine facility development with the collaborating centres so that continuous support can be provided to all facilities in a timely and efficient manner. This potential high-impact capacity building process may involve a higher set-up cost but will eventually prove cost-effective.

vii. **Addressing of gender inequity:** Interventions to address gender disparity in health care seeking behaviour related to newborn care could be beyond the scope of the FBNC programme. However, UNICEF as part of its advocacy work should facilitate and support work with ASHAs in various health programmes on developing gender equitable attitudes in the communities.

**Suggested Recommendations for the Government of India and State Governments**

**Highest priority**

i. **Strengthen NBSUs:** In the short- to medium-term, the aim should be to strengthen the capacity of the NBSUs to play a critical role in care for stable newborns and bring care closer to families. The NBSUs could provide follow up of babies discharged from SNCUs. This should improve acceptability of the NBSUs and reduce family expenditure on healthcare for newborns. Strengthening NBSUs should be in tandem with strengthening community-level care through linkages with the homebased-newborn care (HBNC).

ii. **Referral systems:** As follow-on to the support provided by UNICEF, strategic investments should be made to strengthen existing mechanisms for effective referral systems that will ensure seamless transfer of babies from communities to SNCUs and from SNCUs to lower levels of care.

iii. **Strengthening quality of care for mother-baby dyad:** There should be further efforts to strengthen maternity units and intrapartum care and to ensure adequate provisions for the best quality of care for both mother and baby together. Inadequate attention to this will result in babies being severely compromised before being sent to SNCUs for care. These babies may survive but may not thrive to reach their maximum potentials. SNCUs should be mandated to send staff to support newborn care in the newborn care corners (NBCCs) in labour rooms.

iv. **Screening and tertiary level care for SNCU-discharged babies:** While screening for visual and hearing impairments, which are not uncommon complications of preterm birth and neonatal sepsis, have been integrated into SNCU care in most SNCUs, a policy should be developed for mandatory screening for hearing and retinopathy of prematurity in the medium to long-term.
v. **The follow-up of discharged babies:** In the short-term, a protocol for community care of babies discharged from SNCUs should be developed and measures put in place to ensure implementation. Currently, the programmes depend on ASHAs to follow up but they seem to lack training to provide the care that meets the programme objectives; going beyond survival to thriving and reaching optimum potentials. ASHAs’ roles need to be defined and their capacities assessed with the aim of developing their skills to support mothers and their babies once they have been discharged from SNCUs. There is also the need for data collection tracking of SNCU-discharged babies, and for supervision support of ASHAs to ensure they are building self-efficacy of mothers to care for their babies. To guide future steps, it would be important to conduct further research on care of babies in the communities following their discharge from health facilities.

vi. **Capacity building for use of data:** Investment needs to be made in staff training at facility level to capture, analyse and interpret data. The data should be put to use not just at facility level but must be made publicly accessible with checks and balances for protecting patient privacy and confidentiality so that academic explorations will help identify challenges and develop interventions to address them. In addition, measures need to be put into place to retain staff who are trained in data analysis.

vii. **Equipment maintenance:** State programme implementation plans (PIPs) should outline responsibility and procedure for equipment maintenance in facilities, allocate sufficient state funding for this purpose and ensure effective implementation.

viii. **Human resources:** In the short- to medium-term, there should be an evaluation of the human resource policies for the FBNC programme, including the SNCUs. Meanwhile staff numbers need to be increased and their skills upgraded to prevent the quality of care being compromised in the SNCUs. Innovative mechanisms to recruit and retain staff – professional and auxiliary – to provide care at these facilities will be pivotal. Placement policies should also be examined to prevent staff who are trained to serve in specialised units from being moved to other areas of care where their skills are not utilised. A possible policy could be to ensure that staff who work in SNCUs and have undergone capacity development for this specialised care should not be transferred from newborn care for a specified period of time, for example three years, by which time new people would have been trained to take up such roles.

**Medium Term priority**

ix. **Equipment maintenance:** States should be empowered to incorporate and implement comprehensive annual maintenance contracts (AMCs) for each piece of equipment into all procurement contracts as stated in the operational guidelines and to enforce the conduct of post-installation routine maintenance. This should be combined with a certification system that will allow members of the supervisory team who visit the facility to inspect the certificates during visits. It should also include a rapid breakdown response which must be logged and reviewed annually in the contract renewal with the service provider. The goal should be to systematically develop capacity of local engineers through structured scholarships to take over these functions.

x. **Information technology for capacity building:** Partnerships between the government and other development partners should be formed to explore the use of information technology (such as the use of telemedicine) in capacity building for staff working in the FBNC programme. In the short-term, the mentoring component in the FBNC programme will need to be decentralised and brought closer to facilities — to the state level and eventually district level. Existing collaborating centres should develop district or regional capacities for the mentoring, and the system should be structured so that it benefits the recipient. In the medium- to long-term, mentoring site visits should evolve to include innovative use of technology such as the deployment of telemedicine facilities for high impact and high coverage.
x. Data monitoring and use: Use of data from the facility and community levels should be linked and integrated into other systems such as the District Health information Systems – 2 (DHIMS-2). The quality of the data should be audited regularly to ensure accuracy. Data systems should be amended to track the individual babies who have made contacts with the health systems, especially the FBNC programme. The information management systems should aim to build in indicators on well-being and not focus only on morbidity and mortality. Critical maternal factors or characteristics that directly impact on newborn outcomes should also be captured.

xi. Streamlining inter-sectoral collaboration: There is a key opportunity for NHM to take a leadership role both at central and state levels to harness inter-departmental, inter-ministerial, inter-sectoral and inter-agency co-operation. There are challenges in maintaining oversight on responsibilities which are delineated between different ministries; for example, the current mentoring structure is led by medical colleges under the Ministry of Education while the FBNC programme is under the Ministry of Health and Family Welfare (MoHFW). Mechanisms should be devised to streamline mentoring activities, including the use of specialised commissions with dedicated budget to facilitate this bi-sectoral intervention. Ultimately, improving newborn health, and reducing inequities, requires inputs in diverse areas such as maternal health, nutrition, education, human resource development and agriculture.
7. REFERENCES


30. OECD. Glossary of Evaluation and Results Based Management (RBM) Terms. 2000.


32. UNICEF. UNICEF Procedure for Ethical Standards in Research, Evaluation, Data Collection and Analysis. 2015


ANNEXES
Annex 0. State by State Case Summaries

Andhra Pradesh– Key findings

Andhra Pradesh (AP) is one of the five states in southern India. The larger state of the former Andhra Pradesh was divided into the current Andhra Pradesh and Telangana in 2014. Evaluation covered Chittoor and East Godavari districts in the state.

- AP has a relatively well functioning public health system.
- Approximately 16.2 per cent of the state’s population belong to scheduled castes and 6.6 per cent to scheduled tribes.
- About a third of all women in the state are married before the legal age of 18 years
- 43 per cent of married women report experiencing spousal violence.

Methods: Seven in-depth interviews (IDIs) at state level with state officials, UNICEF and development partners and professional associations (NNF); two at the district and four at the facility levels and four focus groups with ASHAs. Four SNCUs and two NBSUs and their maternity wards were assessed for services availability. Data from SNCUs were analysed.

Findings:

- UNICEF’s support to the SNCU programme was aligned to state newborn health priorities.
- SNCUs were established to reflect gender equality and human rights with the state targeting tribal populations in locating SNCUs.
- UNICEF also adjusted its support to the state in response to peculiar needs.

Key Maternal and Newborn Care Indicators

- Maternal mortality ratio ............... 74/100,000LB
- Neonatal mortality rate ............... 23/1000LB
- Early neonatal mortality rate ....... 18/1000LB
- Stillbirth rate ............................. 3/1000TB
- Perinatal mortality rate ............... 20/1000TB
- Institutional birth rate ............... 91.5%
- Literacy rate among women ........ 62.9%

Relevance

- The state government has demonstrated commitment and leadership, and this is regarded as key to the achievement of the programme results.
- SNCUs piloted in E. Godavari were scaled up to all districts by 2013.
- UNICEF supported the initial set with respect to the physical infrastructure, equipment, drugs and supplies.
- UNICEF supported the development of protocols for care, staff training to work in the SNCUs and online data management system.
- SNCUs increased access to newborn care services; in 4 SNCUs with 70 beds, 3625 babies were admitted between March to August 2018 (fig. 1)
- SNCU data shared by UNICEF did not allow for conclusions to be made on mortality trends, but they did not appear to be improving.
- No functional digital thermometers or oxygen concentrators were found in the pilot facility, but scale-up facilities had many. This could have resulted from poor maintenance.

*Note that all maps used in this report are for representation purposes only.
**Effectiveness: Challenges**

**Challenges:** As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for AP are:

i. **Lack of effective referral mechanisms:** There was the concern that referral transport (ambulances) were mostly unavailable but even where ambulances exist, they were adequately equipped to transport sick babies because they lacked trained staff to resuscitate newborns or sterilised equipment with baby warmers for pre- and in-referral care risking hypothermia and infections.

ii. **Usage is affected by socio-cultural factors as well as power dynamics:** FGDs with the ASHAs suggest community attitudes regarding usage of SNCU services are affected by cultural norms and power supplies at homes. There was widespread belief in traditional rather than orthodox care for newborns and gatekeepers such as mothers-in-law influence care-seeking.

“The old generation in the house demotivated them. The wife said that the husband did not want them to go. But, when we went and told the husband, he agreed. But when his mother stopped him, he will stop his wife.”

iii. **Health worker attitudes:** Whilst lack of adequate human resources is a common challenge for the entire country, negative attitudes (including poor communication and non-dignifying treatment) of those at post adversely affects the utilisation of the SNCUs.

“They (mothers) also say that they (HWs) are very harsh at words because when the mother goes to feed the baby, they will say ‘We know how to take care of the baby and when to feed’... they (HWs) will not even say how many days the child has to stay there and what the real problem is with the infant.”

---

**Efficiency**

- The SNCU programme improved coordination and collaboration (horizontally and vertically) within the health system and even supporting partners and UNICEF were instrumental in this at state level.

- UNICEF’s involvement improved accountability of key stakeholders in the SNCU programme

“If UNICEF had not been there, the processes would not have been followed, or that much of accountability has been brought into the system.”

---

**Sustainability**

- UNICEF’s activities were implemented within the NHM, laying the foundations for sustainability.

- Community engagement and trust in the care delivery system is key to sustainability. The increased availability of equipment and supplies for newborn care might positively impact this.

- Key health system building blocks—Health HR and financing together with State political commitment were key factors that influenced the achievements but will be the main factors that can hamper sustainability.

- Other factors that may hinder sustainability include state capacity to maintain infrastructure and equipment, and human resource (HR) availability and capacity to use data to inform quality improvements.
Haryana, in north west India, is one of the wealthiest states in the country. However, the state’s health indicators though lower than the national averages, are not commensurate with its level of economic development. Evaluation was conducted in Rewari and Sonepat districts.

### Key Maternal and Newborn Care Indicators

- Maternal mortality ratio: 101/100000LB
- Neonatal mortality rate: 22/1000LB
- Early neonatal mortality rate: 16/1000LB
- Stillbirth rate: 5/1000LB
- Perinatal mortality rate: 21/1000TB
- Institutional birth rate: 80.4%
- Literacy rate among women: 75.4%

### Methods

- Four IDIs at state level with state officials and development partners and professional associations (that is the NNF); three at district and four at facility levels, and four focus groups with ASHAs.
- Three SNCUs and two NBSUs and their maternity wards were assessed for services availability. SNCU data provided by UNICEF were analysed.

### Findings:

#### Relevance

- UNICEF’s support to the SNCU programme was not direct but aligned to state newborn health priorities of Haryana. “We picked their structure, we took their processes, we took their technical help and program, but we never got their funding, we never got their overt support”
- SNCUs were established to reflect gender equality and human rights but some sex discrimination exists against girls

#### Effectiveness

- Though not a UNICEF- state, state government demonstrated extraordinary commitment and leadership, and this was key to the achievement of the programme results.
- SNCUs piloted in three states Rewari, Mewat and Faridabad and were scaled up to all districts by 2017.
- The State allocated adequate resources for newborn care including the financial assistance to maintain equipment in SNCU facilities.
- SNCUs created demand as communities are better aware and seek proper care for small and sick babies due to the improved infrastructure and perceived quality of care at SNCUs.
- SNCUs increased access to newborn care services; in 3 SNCUs with 45 beds, 1175 babies were admitted between March to August 2018 (fig. 1)
- All SNCUs had protocols and training for newborn care but no refrigerators were found in the pilot one scale-up facility. Oxygen concentrators, weighing scales and transfusion unit were absent in both pilot and scale-up facilities.

### Fig. 1. Evaluation districts’ SNCU-admitted babies’ statistics - Mar to Aug 2018 (N=1175)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very preterm (&lt;34weeks) babies</td>
<td>16.9%</td>
</tr>
<tr>
<td>Very LBW (&lt;1.5kg) babies</td>
<td>7.6%</td>
</tr>
<tr>
<td>SNCU deaths</td>
<td>7.3%</td>
</tr>
<tr>
<td>Post-discharge follow-up</td>
<td>29.2%</td>
</tr>
<tr>
<td>Referral to higher level</td>
<td>10.9%</td>
</tr>
</tbody>
</table>

*Note that all maps used in this report are for representation purposes only.*
Effectiveness: Challenges

Challenges: As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for Haryana are:

i. Poor referral mechanisms: There was the concern that referral transport (ambulances) were mostly not available and the siting of SNCUs distant from communities compounds the problem. Existing ambulances exist were poorly equipped to transport sick babies and the attitudes of some of the health workers especially the ambulance drivers. They were reportedly refusing to go for mothers when contacted and facilities communicate poorly with one another.

"The interactions we had with providers, they also send the baby to us, we have no interaction with them, they are just sending the patient to us without any intimation. If a child is near to Rohtak, then the baby will come to me. I don’t have ventilator, child need a ventilator then I will decide whether the baby need ventilator or not, that baby will go all the way back, so this communication in the SNCU system what I feel is the first problem is manpower and the second big problem is the communication network which we are not having."

ii. Health worker attitudes: Whilst lack of adequate human resources is a common challenge for the entire country, negative attitudes (including poor communication and non-dignifying treatment) affects SNCU use. Some health workers from SNCU treated ASHAs badly in the presence of community members.

"But madam, here no one respects us, the doctor says, ‘so what you are an ASHA? Go and sit outside’. People come here because of us; otherwise, no one wants to come here, they depend on us, but here they see no one gives us respect they do not value our duty, it gives a negative impression to our beneficiaries."

Efficiency

- The SNCU programme improved coordination and collaboration (horizontally and vertically) within the health system and even the supporting partners and UNICEF was instrumental in this at the state level.
- There was wide variation in reported financial utilisation for FBNC operational costs with budget utilisation ranging from very poor (10 per cent) in 2015-16 to over-expenditure (143 per cent) in 2013-14 probably due to incorrect reporting of expenditure, carry over money from previous year not getting reflected in the budget, or under-budgeting.

Sustainability

- Haryana is a model of sustainability because the state implemented the programme on their own and merely sought technical input from UNICEF.
- Community engagement and trust in the care delivery system is key to sustainability. The increased availability of equipment and supplies for newborn care will have a positive effect on this.
- Achievements regarding the improved monitoring system, improved quality of care due to improvement in infrastructures are likely to be sustained.
- Other factors that may hinder sustainability state capacity to maintain infrastructure and equipment, HR availability and capacity to use data to inform quality improvements.
Maharashtra – Key findings

Maharashtra, a state in western India is one of the most economically well-developed states in the country and is also highly industrialised. The state has a well-functioning public health system as demonstrated by the better health indicators than the national average. Evaluation was conducted in Gadchiroli and Parbhani districts.

- Approximately 10.2 per cent of the state’s population belong to the scheduled castes and 8.9 per cent are scheduled tribes.
- 26.3 per cent of women aged 20-24 years were married before 18 years.
- Undernutrition in tribal communities in Maharashtra has received wide media attention in the last three decades and has resulted in specific interventions by the state to address this.

Methods: Four IDIs at state level with state officials UNICEF and development partners and professional associations (NNF); three at the district and four at facility levels, and four focus groups with ASHAs. Three SNCUs and two NBSUs and their maternity wards were assessed for services availability. SNCU data provided by UNICEF were analysed.

Findings:

Relevance
- UNICEF’s support to the SNCU programme was not direct but aligned to state newborn health priorities of Haryana.
  “We picked their structure, we took their processes, we took their technical help and programme, but we never got their funding, we never got their overt support.”
- SNCUs establishment had equity considerations with facilities targeted to tribal areas for example, Palghar, a very remote tribal area.

Effectiveness
- Access to SNCUs has increased substantially with an estimated over 50,000 babies being cared for annually in these facilities. There are 36 SNCUs, one in almost every district except four.
- The state first established SNCUs at district level at District or Women’s Hospitals after the pilot in Gonda. They then extended, in some places to sub-district levels, such as in Jawahar and Pandharpur.
- The state led in implementing the SNCU programme including leadership in the development of infrastructure, HR, procurement.
- Maharashtra reviewed and made specific requests to UNICEF for support for example, in setting up data monitoring system and KMC units.
- SNCUs increased access to newborn care services; in two SNCUs with 50 beds, 2261 babies were admitted between March to August 2018 (fig. 1)
- All SNCUs had protocols and training for newborn care but oxygen concentrators, weighing scales and transfusion were inadequate in all facilities.

Key Maternal and Newborn Care Indicators
- Maternal mortality ratio..............61/100,000LB
- Neonatal mortality rate.............13/1000LB
- Early neonatal mortality rate......11/1000LB
- Stillbirth rate.............................4/1000TB
- Perinatal mortality rate............14/1000TB
- Institutional birth rate..............90.3%
- Literacy rate among women.......80.3%

Fig. 1. Evaluation districts’ SNCU-admitted babies’ statistics - Mar to Aug 2018 (N=2261)

*Note that all maps used in this report are for representation purposes only.*
Effectiveness: Challenges

Challenges: As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for Maharashtra are:

i. Human resource availability and capacity development for and the actual use of data in facilities and districts: Concerns were about low capacity to use data collected on the SNCU programme in the state especially at facility and district levels to inform improvement. This is because the data were handled by UNICEF and outputs were generated through consultants. Facilities, therefore, do not use these data to inform decision making.

ii. Poor data quality: Since the data entry operators are often not paid decent honoraria or salaries, their turnover rates are high leading to lack of continuity. The data entry suffers and hence the quality. Data entry operators were also engaged by the hospital authorities in different activities other than data entry. This results in the delay in the data entry in the SNCU software.

iii. Inaccessibility to some segments of the population: Concerns as to whether babies who are currently admitted to SNCUs are those that really needed admissions were raised. Proximity to SNCUs increases chances of admissions whilst those from distant areas do not. Even in urban slums, access to care is a big challenge; an example was Nandurbar district with many facilities, but institutional delivery is only 55 per cent.

iv. Quality of care: Quality of care in SNCUs is a big challenge because it will be key to translating access not only into mortality reduction but to ensure that babies do not survive with severe damage to their brains. There are also concerns such as overuse of antibiotics and of oxygen in some of these SNCUs.

Efficiency

- The SNCU programme improved coordination and collaboration (horizontally and vertically) within the health system and even the supporting partners and UNICEF was instrumental in this at state level.
- There is wide variation in financial utilisation reported for various FBNC components. While utilisation for operational costs is good (87 per cent), fair utilisation has been reported for F-IMNCI Trainings (66 per cent) whereas very poor utilisation has been reported for Infrastructure (10 per cent) and none for Procurement of FBNC equipment.

Sustainability

- The state demonstrated political will with a clear plan for implementing the SNCU programme. Maharashtra’s government has developed an IYCF policy to promote young child breastfeeding, promote early initiation and to promote breast-crawl method through BPNI (which is very strong in Maharashtra) to get quick access of breastfeeding, improving the rate of breastfeeding. Many people thought this will be key to sustainability of the programme.
- Lack of infrastructure and space: There was a suggestion of inadequate investment in the SNCU programme and as follow-on, some facilities are lacking adequate infrastructure and space. There was concern that the current infrastructure may not be fit for purpose, based on population projections, after the next 10 years. Some facilities do not have salient services such as laboratory support for care of newborns and some of the services are there but not comprehensive. For instance, some laboratories do not conduct blood cultures for babies with sepsis.

“Infrastructure wise, I told you, the space is falling short. Considering for coming 10-15 years ahead, today 20 lakhs of population I have, what happens about 10 years later?”
Madhya Pradesh– Key findings

Madhya Pradesh (MP), a state in central India, is the second largest state in India by land area. It is also one of the High Focus states in the country based on its relatively poor human development and health indicators. Evaluation was conducted in Guna and Jabalpur districts.

- Madhya Pradesh has a relatively high proportion of marginalised communities in its population with 15.2 per cent belonging to the scheduled castes and 20.3 per cent to the scheduled tribes.
- 32.4 per cent of women aged 20-24 years were married before 18 years.

Methods: Seven IDIs at state level with state officials UNICEF and development partners and professional associations (NNF); three at district, six at facility levels and four focus groups with ASHAs. Three SNCUs and two NBSUs and their maternity wards were assessed for services availability. SNCU data provided by UNICEF were analysed.

Findings:

Relevance
- MP was the first state that started implementation of SNCUs in 2007 with UNICEF’s support, after the Purulia pilot.
- MP’s implementation of SNCUs was completely aligned to the national priorities, providing a useful learning platform.
- SNCUs were established to reflect gender equality and human rights but some sex discrimination exists against girls.
- UNICEF also tailored its support to respond differentially to the needs at the pilot and the scale-up phases.

Effectiveness
- The state was awarded the 3rd best prize for newborn survival on account of the scale up of the SNCUs.
- SNCUs were piloted in the Guna and Shivpuri districts and then scaled up to all 50 districts by 2013.
- The State allocated adequate resources for newborn care including the financial assistance to maintain equipment in SNCU facilities.
- SNCUs created demand as communities are better aware and seek proper care for small and sick babies due to the improved infrastructure and perceived quality of care at SNCUs.
- SNCUs increased access to newborn care services; in five SNCUs with 74 beds, 3,236 babies were admitted between March to August 2018 (fig. 1)
- All SNCUs had protocols and training for newborn care but no refrigerators were found in the pilot a one scale-up facility. Oxygen concentrators, weighing scales and transfusion unit were absent in both pilot and scale-up facilities.

Key Maternal and Newborn Care Indicators

- Maternal mortality ratio………………..173/100,000LB
- Neonatal mortality rate………………..32/1000LB
- Early neonatal mortality rate…………24/1000LB
- Stillbirth rate………………………..8/1000TB
- Perinatal mortality rate………………..2/1000TB
- Institutional birth rate………………..80.8%
- Literacy rate among women………..59.4%

*Note that all maps used in this report are for representation purposes only.
Effectiveness: Challenges

As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for Haryana are:

i. Human resource challenges: Only half of positions for specialists, 82 per cent for Medical officers and 77 per cent for staff nurse positions were filled confirming the lack of human resources cited as a challenge to effectiveness of UNICEF’s support.

ii. Lack of access to data to inform implementation: This was cited by various stakeholders. Data was being managed by UNICEF alone and although access has been granted by UNICEF to the state and district level officers, capacity development in these districts to use the data is poor and based on contract staff.

iii. Poor access to care by sections of the population: There were also socio-cultural barriers to care seeking notably poor geographical access to SNCUs in remote areas especially where transport was inadequate; lack of access for baby girls if referred from home to the facility; and economic circumstances. ASHAs thought although free transport to facilities was provided, the lack of free transport after discharge from SNCUs meant some families could see the cost of transport home as deterrent to seeking care.

Efficiency

- There was an upward trend in the total budget allocation for FBNC under NHM during the period, from 2013-14 (INR 4,725 lakhs) to 2015-16 (INR 9,156 lakhs), followed by a sharp decline in approved budget in 2016-17 (INR 5,459 lakhs).
- 62 per cent of the total budget approved during the period 2013-17 was allocated for Human Resources, 18 per cent for Service Delivery, 14 per cent for Equipment Procurement, 3 per cent for Infrastructure, 2 per cent for Training and 1 per cent for Programme Management. This pattern is seen across the individual years.

Sustainability

- Madhya Pradesh has over 50 per cent of the staff nurses as contractual employees, undermining sustainability and efficiency of the care delivery at the facility.
- Efficiency of community linkages with facilities differed between pilot and scale-up communities. While in the pilot facilities ASHAs were informed about discharges from SNCUs, this was not so in scale-up facilities.
- There were also calls for UNICEF to coordinate their efforts with other development partners in newborn health to improve efficiency. This was believed to affect sustainability and result in duplication of efforts.
- There may also be the challenge of how the state government will maintain the infrastructure and equipment when UNICEF’s support ceases. There was also the belief that in the short to medium term, UNICEF will have to continue to support at least the data management system.
Odisha – Key findings

Odisha in eastern India is also one of the High Focus states. The state is also characterised by difficult terrain in several of its districts. Evaluation was conducted in Mayurbhanj and Sundergarh districts.

Key Maternal and Newborn Care Indicators

→ Maternal mortality ratio ............. 180/100,000LB
→ Neonatal mortality rate ............ 32/1000LB
→ Early neonatal mortality rate ...... 24/1000LB
→ Stillbirth rate ............................ 13/1000TB
→ Perinatal mortality rate ............. 37/1000TB
→ Institutional birth rate .......... 85.3%
→ Literacy rate among women ......... 67.4%

Approximately 16.5 per cent of the state’s population are scheduled castes and 22.1 per cent are scheduled tribes.

21.3 per cent of women aged 20-24 years were married before 18 years.

The state, however, pioneered strategies to reduce health inequities in these marginalised communities for over a decade with a Health Equity Strategy (2009) and a Nutrition Operation Plan (2010).

Methods: Five IDIs at state level with state officials UNICEF and development partners and professional associations (NNF); six at the district, six at facility levels and four focus groups with 35 ASHAs. Three SNCUs and one NBSU and their maternity wards were assessed for services availability. SNCU data provided by UNICEF were analysed.

Findings:

Relevance

- UNICEF’s support was completely aligned to state priorities and commitments for the FBNC/SNCU programme enabling easy transfer of implementation to the NHM.
- UNICEF also incorporated flexibility and adjusted the strategy to FBNC needs for example, considering sub-divisional facilities as SNCU facilities in areas with high population densities.
- SNCUs establishment had equity considerations with gender equality and human rights as the primary focus.

Effectiveness

- In Odisha, the SNCU programme started with four beds in Udala hospital with UNICEF’s support. This was extended to 12 beds in Baripada District Hospital that was more centrally located to improve access to many blocks.
- UNICEF has been instrumental in supporting infrastructure for SNCU which started with eight institutions during the pilot phase.
- The state led in implementing the SNCU programme including leadership in the development of infrastructure, HR, procurement
- SNCUs increased access to newborn care services; in 3 SNCUs with 48 beds, 3,096 babies were admitted between March to August 2018 (fig. 1)
- There is a focus on improving access to all segments of the population within the difficult terrains with the introduction of the ‘Sampurna’ programme with transport and referral mechanisms to bring patients to places where vehicles could reach. There are also financial incentives to promote facility service utilisation for delivery and waiting homes.

*Note that all maps used in this report are for representation purposes only.*
Effectiveness: Challenges

Challenges: As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for Odisha are:

i. Inefficient referral transportation systems: Referral transport was mainly unavailable but where it existed, many families were unable to afford the cost of using these ambulances. Other families could not afford the opportunity cost of leaving their daily source of income to attend health facilities with their babies.

ii. Communication between facility staff: Communication was another factor which influenced the effectiveness of the SNCU programme as health workers from the SNCU had challenges in communicating with caregivers or mothers who spoke a different language and these affected perceptions of care.

iii. A case of concern was one facility in Odisha where phototherapy units were inadequate, and the facility did not have functional voltage stabilisers, exposing the few functional units to the risk of damage from power fluctuations.

iv. Lack of medicines and supplies for care at SNCUs: This was seen as a factor compromising the effectiveness of the SNCU programme. There were cases where the caregivers were asked to purchase medicines from the outside the facilities due to stock outs of medicines in the SNCUs. In cases where the caregivers could not afford, ASHAs negotiated with the local pharmacy to get the required medicines but this was challenging to families and ASHAs.

"We were told government services are free, but practically they are not. We handle such cases on our own. We get some medicines from our pocket, and for other medicines, we negotiate with the medicine shop owners. We request him to provide the medicine on our name which we will pay them afterwards."

v. Availability and use of data in the SNCUs: There are challenges with availability and use of data and this affected the performance of SNCUs.

Efficiency

- Odisha state effectively coordinated collaboration and mobilised different organizations for example, UNICEF, WHO, UNFPA, NIPi, DFID and Jhpiego to cover the health needs of the populations including tribal development schemes.

- Total budget allocation for FBNC under NHM has fluctuated considerably over the period 2013-17. The total budget approved in 2014-15 was more than 2.5 times the budget approved in 2013-14.

49 per cent of the total budget approved for the period 2013-17 was allocated for Human Resources, 18 per cent for Procurement of FBNC equipment, 15 per cent for Service Delivery, 12 per cent for Infrastructure and 6 per cent for training.

Sustainability

- State of Odisha has been providing incentives to ASHAs so that they could follow up babies up to 15 months old. They were also trained to identify babies who need to be referred for screening for complications. There are concerns that these may not be sustainable.

- Issues regarding the sustainability of human resource: The state has trained health staff but the current human resource recruitment plan involves contractual staff with fixed-term contracts. This poses a potential for attrition with high staff turn-over.

- Accountability was key to sustaining the achievements gained at SNCUs; without having staff accountable for the outcome for care at health facilities and health outcomes, the positive results of the SNCU programme could not be sustained.
Uttar Pradesh – Key findings

Uttar Pradesh (UP) in northern India is the most populous state in the country. It is also part of the High Focus states due to its relatively poor human development and health indicators. Evaluation was conducted in Allahabad and Raebarelli districts.

Key Maternal and Newborn Care Indicators

- Maternal mortality ratio ............. 201/100,000LB
- Neonatal mortality rate .............. 30/1000LB
- Early neonatal mortality rate ......... 23/1000LB
- Stillbirth rate ........................... 3/1000TB
- Perinatal mortality rate ............... 26/1000TB
- Institutional birth rate ................. 67.8%
- Literacy rate among women .......... 61.0%

- Approximately 21.1 per cent of the state’s population belong to the scheduled castes and 19.3 per cent are Muslims.
- 21.1 per cent of women aged 20-24 years were married before 18 years.
- Health services utilisation and other indicators are comparatively poor. For example, only 5.9 per cent of pregnant women in the state receive full four antenatal care contacts.

Methods: Eight IDIs at state level with state officials UNICEF and development partners and professional associations (NNF); four at the district, four at facility levels and four focus groups with 40 ASHAs. Three SNCUs and two NBSUs and their maternity wards were assessed for services availability. SNCU data provided by UNICEF were analysed.

Findings:

Relevance

- UNICEF’s support was completely aligned to state priorities and commitments for the FBNC/SNCU programme enabling easy transfer of implementation to the NHM.
- UNICEF also incorporated flexibility in their support strategy to adjust according to FBNC needs and roles evolved with time in response to lessons learned and programme needs.
- SNCUs establishment had equity considerations with gender equality and human rights as the primary focus

Effectiveness

- UNICEF’s support for UP started with a pilot SNCU at Lalitpur leading to the scale up of the programme across districts in the state. However, about seven districts still do not have an SNCU.
- The state led in implementing the SNCU programme including leadership in the development of infrastructure, HR, procurement
- SNCUs increased access to newborn care services; in three SNCUs with 39 beds, 994 babies were admitted between March to August 2018 (fig. 1)
- State policy was very strict on admissions to facilities that do not have beds making it potentially punishable. This has therefore resulted in as low bed occupancy as 4.2 admissions per bed per month, reducing congestion in facilities.
- All SNCUs had protocols and training for newborn care and have developed an application for monitoring ASHA visits to SNCU-discharged babies and supervision of ASHAs.

*Note that all maps used in this report are for representation purposes only.*
**Effectiveness: Challenges**

**Challenges:** As well as all the challenges that were reported in the overall report such as lack of human resources, poor equipment maintenance, non-use of data partly due to lack of data managers, neglect of maternity care and care at lower levels (NBSUs) and poor linkages with community-level care for follow-up of SNCU-discharged babies, specific challenges for Uttar Pradesh are:

i. **Inequitable access to care:** Although the restriction on admissions to SNCUs when beds are not available reduced the congestion and quality issues that come with the limited human resources, there were repercussions on community trust in referrals and the work of the ASHAs. Apparently, when staff at SNCUs turn families away after being referred by ASHAs, other families then refuse referrals:

> "Madam (referring to the moderator) we were asked to refer small and sick babies to the children's hospital, but most of the time because of the scarcity of beds, parents are refused to admit their child and sent back to the village, and because of that, other people in the village get influenced, and when we tell them to take their child to the hospital they refuse." [ASHA]

There were suggestions that priority should be given to referred babies or to dedicate some beds to referrals from distant or tribal populations. There were also other cultural and social barriers cited as well as gender biases in care seeking for sick babies.

ii. **Inefficient referral transport systems:** Referral transport was mostly unavailable but where it exist, many families were unable to afford the cost of using these ambulances. Other families could not afford the opportunity cost of leaving their daily source of income to attend health facilities with their babies.

iii. **Negative health worker attitudes:** Mothers who accompany their babies to health facilities sometimes received undignified and abusive care. In some instances, the ASHAs also suffered abuses and non-dignifying treatments.

iv. **Poor data quality:** Very often since the data entry operators are not paid decent honoraria or salaries, their turnover rates are high leading to lack of continuity. The data entry suffers and hence the quality. Data entry operators were also engaged by the hospital authorities in different activities other than data entry. That results in the delay in the data entry in the SNCU software.

---

**Efficiency**

- The SNCU programme improved coordination and collaboration (horizontally and vertically) within the health system and even the supporting partners and UNICEF was instrumental in this at the state level.

- The total FBNC budget under NHM decreased by 24 per cent from 2013-14 to 2014-15 followed by a steep incline (90 per cent increase) in 2015-16 and an increase (8 per cent) in 2016-17. 55 per cent of budget for 2013-17 was for HR, 29 per cent for equipment Procurement, 13 per cent for Service delivery, 2 per cent for Trainings 1 per cent for Infrastructure.

---

**Sustainability**

- There were concerns that, although political will is talked about, leadership for the implementation of the programme is below optimal for the SNCU programme.

- However, due to the strong integration and partnership between UNICEF and the NHM in the implementation of the support for the SNCUs, sustainability of the achievements is attainable in the state of UP. Yet there was still room for improvement and it was thought that UNICEF’s collaboration with organizations such as NIPI, Access or BMGF could also include engaging in supporting newborn care.
### Annex 1. Supplementary Tables and Figures

**Table 13. Configuration of SNCU units showing availability of designated areas for specific care provision to newborn, by state**

<table>
<thead>
<tr>
<th>STATE</th>
<th>DISTRICT</th>
<th>FACILITY</th>
<th>Baby care area</th>
<th>Gowning room</th>
<th>Hand-washing stations</th>
<th>Examination area</th>
<th>Mother’s breast-feeding area</th>
<th>Step down area (room-in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>E. Godavari</td>
<td>Rangaraya MC</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Rewari</td>
<td>Sirsmadilal CH</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MP</td>
<td>Guna</td>
<td>Guna DH</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Gadchiroli</td>
<td>Women’s DH</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>Mayurbhanj</td>
<td>DHH Baripada</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>Allahabad</td>
<td>Sarojini Naidu MC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pilot Facilities</td>
<td></td>
<td>FACILITIES MEETING THE STANDARD</td>
<td>6/6</td>
<td>5/6</td>
<td>6/6</td>
<td>6/6</td>
<td>5/6</td>
<td>6/6</td>
</tr>
<tr>
<td>AP</td>
<td>Chittoor</td>
<td>Chittoor DH</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AP</td>
<td>Chittoor</td>
<td>SVRRGG H</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>AP</td>
<td>E. Godavari</td>
<td>Rampachodavaram AH</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sonipat</td>
<td>Sonipat CH</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sonipat</td>
<td>BPS Gov’t MC</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MP</td>
<td>Jabalpur</td>
<td>Lady Elgin DH</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MP</td>
<td>Jabalpur</td>
<td>NSCB MC</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Parbhani</td>
<td>District Women</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Odisha</td>
<td>Sundargarh</td>
<td>RGH Rourkela</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>Sundargarh</td>
<td>Sundargarh DH</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>Allahabad</td>
<td>DH Women’s</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>Rae Bareli</td>
<td>DH Women’s</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Scale-up Facilities</td>
<td></td>
<td>FACILITIES MEETING THE STANDARD</td>
<td>11/12</td>
<td>11/12</td>
<td>12/12</td>
<td>11/12</td>
<td>12/12</td>
<td>10/12</td>
</tr>
</tbody>
</table>
Table 14. Comparison of the current availability of major equipment for newborn care with the standards set in the FBNC guidelines

<table>
<thead>
<tr>
<th>State</th>
<th>Facility</th>
<th>Back-up generator</th>
<th>Voltage stabiliser</th>
<th>Refrigerator</th>
<th>Autoclaving unit</th>
<th>Benchtop centrifuge</th>
<th>Binocular microscope</th>
<th>Room heater</th>
<th>Wall clock</th>
<th>Wall Thermometer</th>
<th>Bilirubinometer</th>
<th>Glucometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra P</td>
<td>Rangaraya MC</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sirsmadilal CH</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Guna DH</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Women’s DH Gadchiroli</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>DHH Baripada</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Uttar P</td>
<td>Sarojini Naidu MC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number Meeting the Standard</td>
<td></td>
<td>6/6</td>
<td>4/6</td>
<td>5/6</td>
<td>6/6</td>
<td>6/6</td>
<td>5/6</td>
<td>6/6</td>
<td>3/6</td>
<td>4/6</td>
<td>3/6</td>
<td>6/6</td>
</tr>
</tbody>
</table>

| Andhra P       | Chittoor DH                    | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 1           | 1          | 1                | 1               | 1         |
| Andhra P       | SVRRGG H                       | 1                 | 1                 | 1           | 1                | 2                   | 0                    | 1           | 1          | 1                | 1               | 1         |
| Andhra P       | Rampachodavaram AH            | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 1           | 1          | 1                | 1               | 1         |
| Haryana        | Sonipat CH                    | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 0           | 1          | 1                | 0               | 1         |
| Haryana        | BPS Gov’t MC                  | 1                 | 1                 | 0           | 1                | 1                   | 0                    | 0           | 0          | 3                | 1               | 1         |
| Madhya P       | Lady Elgin DH                 | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 0           | 1          | 0                | 2               | 1         |
| Madhya P       | NSCB MC                       | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 1           | 0          | 0                | 0               | 1         |
| Maharashtra    | District Women’s hospital Parbhani | 1           | 1                 | 1           | 1                | 1                   | 1                    | 1           | 0          | 3                | 0               | 1         |
| Odisha         | RGH Rourkela                  | 1                 | 0                 | 1           | 1                | 1                   | 1                    | 1           | 0          | 3                | 1               | 1         |
| Odisha         | Sundargarh DH                 | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 1           | 0          | 3                | 0               | 1         |
| Uttar P        | DH Women’s Allahabad          | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 1           | 0          | 1                | 1               | 1         |
| Uttar P        | DH Women’s Rae Bareli         | 1                 | 1                 | 1           | 1                | 1                   | 1                    | 2           | 0          | 2                | 1               | 1         |
| Number Meeting the Standard |          | 12/12             | 11/12             | 11/12        | 12/12            | 12/12               | 10/12                | 10/12       | 6/12       | 8/12             | 8/12            | 6/6       |
Table 15. Comparison of the current availability of essential equipment for critical newborn care with the standards set in the FBNC guidelines

<table>
<thead>
<tr>
<th>State</th>
<th>Facility</th>
<th>Feeding tube</th>
<th>Endotracheal tube</th>
<th>Transfusion units</th>
<th>Disposable nasal unit</th>
<th>Venous catheter</th>
<th>Neonatal O₂ mask</th>
<th>Neonatal ECG unit</th>
<th>O₂ cylinder</th>
<th>Minor surgery</th>
<th>Audiometry</th>
<th>Visual screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra P</td>
<td>Rangaraya MC</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sirsmadalil CH</td>
<td>100</td>
<td>60</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>23</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Guna DH</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>53</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Women’s DH Gadchiroli</td>
<td>20</td>
<td>20</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>DHH Baripada</td>
<td>100</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Uttar P</td>
<td>Sarojini Naidu MC</td>
<td>30</td>
<td>20</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**Number Meeting the Standard**: 5/6, 5/6, 0/6, 6/6, 1/6, 4/6, 1/6, 6/6, 6/6, 5/6, 5/6

<table>
<thead>
<tr>
<th>State</th>
<th>Facility</th>
<th>Feeding tube</th>
<th>Endotracheal tube</th>
<th>Transfusion units</th>
<th>Disposable nasal unit</th>
<th>Venous catheter</th>
<th>Neonatal O₂ mask</th>
<th>Neonatal ECG unit</th>
<th>O₂ cylinder</th>
<th>Minor surgery</th>
<th>Audiometry</th>
<th>Visual screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra P</td>
<td>Chittoor DH</td>
<td>100</td>
<td>50</td>
<td>0</td>
<td>75</td>
<td>25</td>
<td>20</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Andhra P</td>
<td>SVRRGG H</td>
<td>200</td>
<td>50</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Andhra P</td>
<td>Rampachodavaram AH</td>
<td>150</td>
<td>15</td>
<td>50</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sonipat CH</td>
<td>100</td>
<td>115</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>10</td>
<td>50</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>BPS Gov’t MC</td>
<td>800</td>
<td>100</td>
<td>50</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Lady Elgin DH</td>
<td>Unknown*</td>
<td>Unknown*</td>
<td>Unknown*</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Madhya P</td>
<td>NSCB MC</td>
<td>Unknown*</td>
<td>500</td>
<td>0</td>
<td>50</td>
<td>200</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>District Women’s hosp Parbhani</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>RGH Rourkela</td>
<td>600</td>
<td>40</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>27</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>Sundargarh DH</td>
<td>300</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Uttar P</td>
<td>DH Women’s Allahabad</td>
<td>30</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Uttar P</td>
<td>DH Women’s Rae Bareli</td>
<td>25</td>
<td>20</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Number Meeting the Standard**: 10/12, 11/12, 4/12, 11/12, 5/12, 5/12, 3/12, 12/12, 10/12, 10/12, 11/12

*In some of the facilities visited, the respondents were not sure whether the equipment was available and these were recorded as "unknown"
### Table 16. Comparison of the current availability of essential drugs for newborn care with the standards set in the FBNC guidelines

<table>
<thead>
<tr>
<th>State</th>
<th>Facility</th>
<th>Ampicillin</th>
<th>Benzathine penicillin</th>
<th>Ceftriaxone</th>
<th>Cloxacillin</th>
<th>Gentamicin</th>
<th>Phenobarbitone</th>
<th>Phenytoin</th>
<th>Diazepam</th>
<th>Dexamethasone</th>
<th>Nevirapine</th>
<th>Aminophylline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra P</td>
<td>Rangaraya MC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sirsmadilal CH</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Guna DH</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Women’s DH Gadchiroli</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Odisha</td>
<td>DHH Baripada</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Uttar P</td>
<td>Sarojini Naidu MC</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

**Number Meeting the Standard**

<table>
<thead>
<tr>
<th>Andhra P</th>
<th>6/6</th>
<th>6/6</th>
<th>6/6</th>
<th>6/6</th>
<th>5/6</th>
<th>6/6</th>
<th>6/6</th>
<th>6/6</th>
<th>5/6</th>
<th>6/6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haryana</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
<td>5/6</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
<td>5/6</td>
<td>6/6</td>
</tr>
</tbody>
</table>

**SCALE-UP**

| Andhra P    | Chittoor Dist. H              | 1          | 3                      | 1           | 3           | 1          | 1              | 1         | 3        | 1              | 3          | 1             |
| Andhra P    | SVRRGG H                     | 1          | 3                      | 1           | 3           | 1          | 1              | 1         | 3        | 1              | 3          | 1             |
| Andhra P    | Rampachodavaram Area H       | 1          | 3                      | 1           | 3           | 1          | 1              | 1         | 3        | 1              | 3          | 1             |
| Haryana     | Sonipat Civil H              | 1          | 3                      | 1           | 3           | 1          | 2              | 1         | 3        | 1              | 3          | 3             |
| Haryana     | BPS Gov’t MC                 | 3          | 3                      | 1           | 3           | 1          | 1              | 1         | 3        | 1              | 3          | 3             |
| Madhya P    | Lady Elgin Dist. H           | 1          | 1                      | 1           | 1           | 0          | 1              | 1         | 3        | 1              | 3          | 1             |
| Madhya P    | NSCB MC                      | 1          | 3                      | 2           | 1           | 0          | 1              | 1         | 3        | 1              | 3          | 1             |
| Maharashtra | District Women’s hosp Parbhani| 3          | 3                      | 1           | 2           | 2           | 1              | 1         | 3        | 1              | 0          | 1             |
| Odisha      | RGH Rourkela                 | 3          | 3                      | 1           | 3           | 2           | 1              | 1         | 3        | 1              | 3          | 3             |
| Odisha      | Sundargarh Dist. H           | 2          | 3                      | 1           | 3           | 3           | 1              | 1         | 3        | 1              | 3          | 3             |
| Uttar P     | Dist. H. Women’s Allahabad   | 1          | 3                      | 1           | 3           | 1           | 1              | 1         | 3        | 1              | 3          | 1             |
| Uttar P     | Dist. H Women’s RaeBareli    | 1          | 3                      | 1           | 3           | 1           | 2              | 1         | 3        | 1              | 3          | 1             |

**Number Meeting the Standard**

<table>
<thead>
<tr>
<th>Andhra P</th>
<th>12/12</th>
<th>12/12</th>
<th>12/12</th>
<th>12/12</th>
<th>10/12</th>
<th>12/12</th>
<th>12/12</th>
<th>12/12</th>
<th>11/12</th>
<th>12/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haryana</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
<td>12/12</td>
</tr>
</tbody>
</table>

95
Table 17. Comparison of the essential equipment for newborn care with the standards set in the FBNC guidelines

<table>
<thead>
<tr>
<th>State</th>
<th>Facility</th>
<th># of beds</th>
<th>Radiant warmer units</th>
<th>Phototherapy units</th>
<th>Laryngoscopes</th>
<th>O2 Concentrator</th>
<th>Digital Thermometer</th>
<th>Baby weighing scale</th>
<th>Pulse oximeter</th>
<th>Neonatal stethoscope</th>
<th>Infantometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>---------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>-------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Andhra P</td>
<td>Rangaraya MC</td>
<td>20</td>
<td>46 (2.30)</td>
<td>6 (0.30)</td>
<td>9 (0.45)</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
<td>1 (0.05)</td>
<td>10 (0.50)</td>
<td>20 (1.00)</td>
<td>2 (0.10)</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sirsmadial CH</td>
<td>18</td>
<td>18 (1.00)</td>
<td>6 (0.33)</td>
<td>2 (0.11)</td>
<td>4 (0.22)</td>
<td>1 (0.06)</td>
<td>3 (0.17)</td>
<td>5 (0.28)</td>
<td>18 (1.00)</td>
<td>1 (0.06)</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Guna DH</td>
<td>24</td>
<td>20 (0.83)</td>
<td>9 (0.38)</td>
<td>2 (0.08)</td>
<td>4 (0.17)</td>
<td>2 (0.08)</td>
<td>3 (0.13)</td>
<td>12 (0.50)</td>
<td>24 (1.00)</td>
<td>1 (0.04)</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Women’s DH Gadchiroli</td>
<td>30</td>
<td>25 (0.83)</td>
<td>8 (0.27)</td>
<td>3 (0.10)</td>
<td>7 (0.23)</td>
<td>5 (0.17)</td>
<td>1 (0.10)</td>
<td>5 (0.17)</td>
<td>11 (0.30)</td>
<td>1 (0.03)</td>
</tr>
<tr>
<td>Odisha</td>
<td>DHH Baripada</td>
<td>24</td>
<td>9 (0.38)</td>
<td>7 (0.29)</td>
<td>2 (0.08)</td>
<td>2 (0.08)</td>
<td>10 (0.42)</td>
<td>6 (0.25)</td>
<td>12 (0.50)</td>
<td>6 (0.25)</td>
<td>2 (0.08)</td>
</tr>
<tr>
<td>Uttar P</td>
<td>Sarojini Naidu MC</td>
<td>15</td>
<td>9 (0.60)</td>
<td>8 (0.53)</td>
<td>0 (0.00)</td>
<td>15 (1.00)</td>
<td>2 (0.13)</td>
<td>9 (0.60)</td>
<td>15 (1.00)</td>
<td>2 (0.13)</td>
<td></td>
</tr>
<tr>
<td>Number Meeting the Standard</td>
<td></td>
<td>3/6</td>
<td>1/6</td>
<td>1/6</td>
<td>0/6</td>
<td>1/6</td>
<td>0/6</td>
<td>3/6</td>
<td>3/6</td>
<td>3/6</td>
<td></td>
</tr>
<tr>
<td>Andhra P</td>
<td>Chittoor DH</td>
<td>20</td>
<td>20 (1.00)</td>
<td>8 (0.40)</td>
<td>4 (0.20)</td>
<td>2 (0.10)</td>
<td>1 (0.05)</td>
<td>5 (0.25)</td>
<td>6 (0.30)</td>
<td>20 (1.00)</td>
<td>4 (0.20)</td>
</tr>
<tr>
<td>Andhra P</td>
<td>SVRRGG H</td>
<td>20</td>
<td>19 (0.95)</td>
<td>4 (0.20)</td>
<td>1 (0.05)</td>
<td>0 (0.00)</td>
<td>2 (0.10)</td>
<td>5 (0.25)</td>
<td>5 (0.25)</td>
<td>20 (1.00)</td>
<td>2 (0.10)</td>
</tr>
<tr>
<td>Andhra P</td>
<td>Rampachodavaram AH</td>
<td>10</td>
<td>11 (1.10)</td>
<td>5 (0.50)</td>
<td>2 (0.20)</td>
<td>1 (0.10)</td>
<td>1 (0.10)</td>
<td>4 (0.40)</td>
<td>4 (0.40)</td>
<td>3 (0.30)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td>Haryana</td>
<td>Sonipat CH</td>
<td>18</td>
<td>14 (0.78)</td>
<td>5 (0.28)</td>
<td>4 (0.22)</td>
<td>0 (0.00)</td>
<td>10 (0.56)</td>
<td>4 (0.22)</td>
<td>13 (0.72)</td>
<td>10 (0.56)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td>Haryana</td>
<td>BPS Gov’t MC</td>
<td>9</td>
<td>9 (1.00)</td>
<td>5 (0.56)</td>
<td>3 (0.33)</td>
<td>0 (0.00)</td>
<td>2 (0.22)</td>
<td>1 (0.11)</td>
<td>6 (0.67)</td>
<td>5 (0.56)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td>Madhya P</td>
<td>Lady Elgin DH</td>
<td>20</td>
<td>40 (2.0)</td>
<td>20 (1.0)</td>
<td>4 (0.20)</td>
<td>0 (0.00)</td>
<td>10 (0.50)</td>
<td>4 (0.20)</td>
<td>4 (0.20)</td>
<td>5 (0.25)</td>
<td>6 (0.30)</td>
</tr>
<tr>
<td>Madhya P</td>
<td>NSCB MC</td>
<td>30</td>
<td>22 (0.73)</td>
<td>5 (0.17)</td>
<td>5 (0.17)</td>
<td>4 (0.13)</td>
<td>15 (0.50)</td>
<td>3 (0.10)</td>
<td>8 (0.27)</td>
<td>10 (0.33)</td>
<td>1 (0.03)</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>District Women’s hosp</td>
<td>20</td>
<td>14 (0.70)</td>
<td>4 (0.20)</td>
<td>2 (0.10)</td>
<td>0 (0.00)</td>
<td>20 (1.00)</td>
<td>3 (0.15)</td>
<td>3 (0.15)</td>
<td>20 (1.00)</td>
<td>2 (0.10)</td>
</tr>
<tr>
<td>Odisha</td>
<td>RGH Rourkela</td>
<td>12</td>
<td>13 (1.08)</td>
<td>10 (0.83)</td>
<td>6 (0.50)</td>
<td>8 (0.67)</td>
<td>4 (0.33)</td>
<td>2 (0.17)</td>
<td>13 (1.08)</td>
<td>5 (0.42)</td>
<td>2 (0.17)</td>
</tr>
<tr>
<td>Odisha</td>
<td>Sundargarh DH</td>
<td>12</td>
<td>10 (0.83)</td>
<td>0 (0.17)</td>
<td>1 (0.08)</td>
<td>3 (0.25)</td>
<td>1 (0.08)</td>
<td>2 (0.17)</td>
<td>8 (0.67)</td>
<td>3 (0.25)</td>
<td>2 (0.17)</td>
</tr>
<tr>
<td>Uttar P</td>
<td>DH Women’s Allahabad</td>
<td>12</td>
<td>12 (1.00)</td>
<td>5 (0.42)</td>
<td>6 (0.50)</td>
<td>3 (0.25)</td>
<td>12 (1.00)</td>
<td>4 (0.33)</td>
<td>6 (0.50)</td>
<td>12 (1.00)</td>
<td>1 (0.08)</td>
</tr>
<tr>
<td>Uttar P</td>
<td>DH Women’s Rae Barei</td>
<td>12</td>
<td>12 (1.00)</td>
<td>6 (0.50)</td>
<td>4 (0.33)</td>
<td>0 (0.00)</td>
<td>12 (1.00)</td>
<td>3 (0.25)</td>
<td>6 (0.50)</td>
<td>12 (1.00)</td>
<td>2 (0.17)</td>
</tr>
<tr>
<td>Number Meeting the Standard</td>
<td></td>
<td>8/12</td>
<td>5/12</td>
<td>3/12</td>
<td>1/12</td>
<td>3/12</td>
<td>2/12</td>
<td>6/12</td>
<td>5/12</td>
<td>8/12</td>
<td></td>
</tr>
</tbody>
</table>
Table 18. Comparison of the current availability of protocols and guidelines for care of small and sick babies at SNCUs, by state

<table>
<thead>
<tr>
<th>Protocol or guideline document</th>
<th>AP</th>
<th>Haryana*</th>
<th>Maharashtra</th>
<th>MP</th>
<th>Odisha</th>
<th>UP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SNCUs (N=4)</td>
<td>UNICEF involved</td>
<td>SNCUs (N=2)</td>
<td>UNICEF involved</td>
<td>SNCUs (N=3)</td>
<td>UNICEF involved**</td>
</tr>
<tr>
<td>FBNC</td>
<td>3 (75%)</td>
<td>3</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
</tr>
<tr>
<td>Care of small babies</td>
<td>2 (50%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
</tr>
<tr>
<td>Care of sick babies</td>
<td>4 (100%)</td>
<td>4</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
</tr>
<tr>
<td>Newborn resuscitation</td>
<td>2 (50%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
<td>1 (50%)</td>
<td>1</td>
</tr>
<tr>
<td>Newborn sepsis management</td>
<td>2 (50%)</td>
<td>1</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>1</td>
</tr>
<tr>
<td>Antibiotics for sick babies</td>
<td>2 (50%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
</tr>
<tr>
<td>Pneumonia management</td>
<td>2 (50%)</td>
<td>1</td>
<td>2 (100%)</td>
<td>2</td>
<td>1 (50%)</td>
<td>1</td>
</tr>
<tr>
<td>Small or LBW feeding</td>
<td>2 (50%)</td>
<td>1</td>
<td>2 (100%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
</tr>
<tr>
<td>KMC for small babies</td>
<td>2 (50%)</td>
<td>2</td>
<td>2 (100%)</td>
<td>2</td>
<td>1 (50%)</td>
<td>0</td>
</tr>
</tbody>
</table>

**One of the facilities in Haryana was a NICU and had most protocols except FBNC, care for sick babies, resuscitation and hand hygiene but UNICEF was not involved in the development of any of the protocols.**

**One facility in MP was unsure who had developed the protocols.**
Table 19. Comparison of the current availability of protocols and guidelines for care of small and sick babies at NBSUs, by state

<table>
<thead>
<tr>
<th>Protocol or guideline document</th>
<th># of facilities (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AP</td>
</tr>
<tr>
<td></td>
<td>NBSUs (N=2)</td>
</tr>
<tr>
<td>FBNC</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Care of small babies</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Care of sick babies</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Newborn resuscitation</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Newborn sepsis management</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Antibiotics for sick babies</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Pneumonia management</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Small or LBW feeding</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>KMC for small babies</td>
<td>2 (100%)</td>
</tr>
</tbody>
</table>

**One facility in MP was unsure who had developed the protocols**
Figure 6 Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Andhra Pradesh and Haryana, by birthweight of the baby
Figure 7 Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Maharashtra and Madhya Pradesh, by birthweight of the baby
Figure 8. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Odisha and Uttar Pradesh, by birthweight of the baby
Figure 9 Mortality rates in SNCUs at the state level (AP, Haryana & Maharashtra) and scaleup (s) and pilot(p) districts by diagnosis at admission (small baby, asphyxia & sick babies)
Figure 10 Mortality rates in SNCUs at the state level (MP, Odisha & UP) and scaleup (s) and pilot(p) districts by diagnosis at admission (small baby, asphyxia & sick babies)
Figure 11. Mortality rates in SNCUs at the state level, scaleup (s) and pilot(p) district levels by sex of baby
Figure 12. Distribution of admissions to SNCUs from state, pilot (p) and scale-up (s) district levels in AP and Haryana, by caste
Figure 13. Distribution of admissions to SNCUs from state, pilot(p) and scale-up (s) district levels in Maharashtra and MP, by caste
Figure 14. Distribution of admissions to SNCUs from state, pilot (p) and scale-up (s) district levels in Odisha and Uttar Pradesh, by caste
Figure 15. Mortality rates in SNCUs at the state level (AP, Haryana & Maharashtra) and scaleup (s) and pilot(p) districts by (Scheduled tribe, scheduled caste, OBCs, general)
Figure 16. Mortality rates in SNCUs at the state level (MP, Odisha & UP) and scaleup (s) and pilot(p) districts by (Scheduled tribe, scheduled caste, OBCs, general)
Annex 2. Inception Report

Please see separate document
Annex 3. Terms of reference for the UNICEF call for the evaluation

Background

In 2015, 696,000 babies died in their first month of life in India, representing a neonatal mortality rate of 28 per 1,000 live births. The rate ranges from 15 per 1,000 in urban areas to 31 per 1,000 in rural areas. Neonatal deaths constitute 58% of all deaths among children under 5 years of age in the country, where the top causes of death are preterm births, intrapartum causes, sepsis and congenital anomalies.

UNICEF India has designated preventing newborn deaths as a priority and is working closely with the Government of India (GoI) to reduce the high number of neonatal deaths in the country. Strengthening facility-based newborn care by investing in the care of small and sick newborns can reduce neonatal mortality by 30%. Thus since 2007, UNICEF has supported the GoI to establish facility-based newborn care services at the district level through Special Newborn Care Units (SNCUs). SNCUs are 12 to 20 bed units, each with four trained doctors and 10 to 12 nurses and support staff providing services to sick newborns 24 hours a day for seven days a week. Each SNCU is equipped to provide specialised care at birth including resuscitation of asphyxiated newborns, sick newborn care and routine postnatal care. In addition, follow-up of high risk newborns and immunisation/referral services are provided for. Once the baby is discharged to go home, ASHAs (Accredited Social Health Activists) provide follow-up services for these babies for one year. In addition, the Ministry of Health and Family Welfare (MoHFW) provides free entitlement of care at these centres under the Janani Shishu Suraksha Karyakram (JSSK) scheme which provides a range of services for pregnant women to encourage institutional deliveries.

In particular, UNICEF has provided both technical and financial support for the establishment and ongoing function of SNCUs, starting with the first SNCU which was demonstrated in 2003 in Purulia district of West Bengal. Further, UNICEF has played a key role in partnership with different State governments in the operationalisation and expansion of SNCUs throughout the country. In addition, UNICEF has supported the National Health Mission (NHM) to develop a real time online monitoring system to address the problem of delays in data reporting from SNCUs (particularly between reports being received and feedback shared with districts and States). The online monitoring system was first piloted in Madhya Pradesh and is being scaled up across the country under the India Newborn Action Plan (INAP). In addition to national strategies and priorities, the SNCU programming aligns well with the Call to Action target of ending preventable child deaths and with one of the focus areas of using evidence for policy guidance.

SNCUs are designed to reach all populations in need. However, because the characteristics of newborns and their families utilising SNCUs are closely monitored, it is possible to use the existing data to determine to what extent SNCUs reach disadvantaged populations (e.g., by gender, caste, location, etc.).

With the Government’s strong support and commitment, by 2015, the number of SNCUs had increased to 602. According to the INAP, SNCUs provide care to more than 600,000 newborns in India each year.

---

9 Ibid.
Several studies have documented some of the changes that have occurred since implementation of the SNCUs in India. In 2009, Sen et al conducted a before and after study at a district hospital with 6,500 deliveries a year to evaluate the impact of creating a SNCU on neonatal mortality. The researchers concluded that, compared with the baseline, neonatal mortality was reduced by 14% in the first year and by 21% in the second year after the SNCU became functional. In that time, the district’s neonatal mortality rate declined from 55 to 47 per 1,000 live births.

In 2011 and 2012, State-wide assessments of SNCUs were conducted in Andhra Pradesh and Karnataka. The Andhra Pradesh assessment, conducted by the State government in collaboration with UNICEF Hyderabad, focussed on all 14 existing SNCUs, although only 2 were considered “sanctioned” SNCUs. This assessment found that the infrastructure and design of most of the SNCUs were neither uniform nor consistent with the standards developed by the GoI, the National Neonatology Forum and UNICEF. Most SNCUs had a huge patient load and limited resources. WASH facilities were inadequate in most facilities, electricity supplies fluctuated, and no facility had adequate and exclusive generator back up. No facilities had equipment for safe transfer of newborns, and availability of trained staff was grossly insufficient, as was the collection and assessment of data on admissions. The assessment concluded with a series of recommendations to address these challenges.

The Karnataka assessment, initiated by the State government in collaboration with UNICEF Hyderabad and the Institute of Health Management Research, Bangalore, focussed on all public sector SNCUs that existed at the time. This assessment found that, overall, there was availability of services for the continuum of care from the labour room, operating theatre, to facility-based newborn care including newborn care corners, SNCUs and appropriate postnatal care, including rooming in and breastfeeding services. However, the assessment also identified some areas for quality improvement, particularly relating to the lack of appropriate infrastructure, inadequacy of staff, staff competencies and inadequacy of basic service protocols and guidelines such as infection prevention and rational drug use. This assessment also concluded with a series of recommendations to address these challenges.

A more recent State-wide assessment was conducted of 164 facilities in Bihar that provide newborn care including SNCUs in Bhojpur, Nalanda, Buxar, Bhabua and Sasaram. This assessment concluded that most SNCUs met structural requirements for numbers of beds and types of rooms, WASH infrastructure, and equipment. Drug supply and stock maintenance were weaker, with most SNCUs not passing the assessment for key commodities such as Adrenaline, Sodium bicarbonate, Nalorphine, IV fluids, antibiotics and disinfectants. Display of appropriate protocols was also inadequate in all SNCUs, as was implementation of death reviews and tracking and monitoring of data.

In 2011, Neogi et al published a study showing that rates of admission to SNCUs increased from a median of 16.7 per 100 deliveries in 2008 to 19.5 per 100 deliveries in 2009. Further, they found that the case-fatality rate reduced by 40% within one year of their functioning and that proportional mortality due to sepsis and low birthweight (LBW) declined significantly over the two-year period under review. In a

---

12 Government of Karnataka, IiHMR Bangalore & UNICEF. Assessment of facility based newborn care with special focus on Special Newborn Care Units in Karnataka State 2012. Unpublished.
different article that same year, Neogi et al reported that scaling up SNCUs would face several challenges due to critical constraints such as availability and skills of human resources, maintenance of equipment, and insufficient number of beds to meet the increasing demand.16

To date, UNICEF India’s work on SNCUs has focussed on addressing many of these recognised challenges, including development and implementation of standards, protocols and quality improvement within SNCUs, as well as linking facilities with communities and real time monitoring to ensure credible data to track performance, ensure accountability and initiate timely actions.

1. Rationale

UNICEF India is commissioning an external independent formative evaluation of UNICEF’s contribution to the Government of India’s Special Newborn Care Units (SNCUs). UNICEF India has been supporting SNCUs with considerable resources (through staff time, technical assistance, equipment procurement and infrastructure development) over the past 10 years, though the nature of support and its scope have evolved over this period.

The implications of the effects of and experiences from this work are of relevance to UNICEF, as well as government, other partners and stakeholders. As such, it is of critical importance to undertake an evaluation so that UNICEF India and its partners can benefit from its learnings as it continues its work to reduce newborn deaths. The findings and recommendations will contribute to future related program and policy decisions, and ensure accountability on expected results set out in the MoHFW-UNICEF Programme of Cooperation, Rolling Workplan 2016-17 relating to delivery of quality maternal and newborn care services, with a focus on reducing neonatal deaths and prioritising the most vulnerable communities and groups.

The purpose of this evaluation is to inform programmatic activities and changes towards the achievement of UNICEF India’s expected results relating to newborn care.

The specific objectives of the evaluation are:

1. To determine to what extent and how UNICEF has contributed to India’s SNCUs, particularly those aspects of SNCUs on which UNICEF has focussed, namely the development and implementation of standards, protocols and quality improvement within SNCUs, as well as linking facilities with communities and real time monitoring, and

2. To provide findings, conclusions, recommendations and lessons learned, including gaps and challenges, in UNICEF’s contribution to SNCUs.

The findings, conclusions, recommendations and lessons learned generated from the evaluation will be used to influence strategic direction and UNICEF’s partnership with the GoI as well as programme strategies to achieve the goal and national targets outlined in the INAP. In addition, it is expected that the results will be of broad interest to other stakeholders working on newborn health, including UNICEF’s partners at all levels. UNICEF offices (national and State-level) will constitute an important audience as the evaluation will provide evidence on what has worked well and why or why not.

2. Scope of the Evaluation

This formative evaluation will cover only UNICEF’s contribution to SNCUs, rather than an evaluation of the outcomes and impact of SNCUs more broadly. In particular, the evaluation will assess five particular aspects of UNICEF’s ongoing work relating to SNCUs:

1. **piloting of SNCUs in several States to create a model for sustainable care** by the National Health Mission,
2. the development and implementation of **standards, protocols and quality improvement** within SNCUs,
3. **contributing to scale up of SNCUs**
4. **real time monitoring** to ensure credible data to track performance, ensure accountability and initiate timely actions, and
5. promoting **linkages between SNCUs and community-based follow-up care**.

Within these five aspects, the evaluation will pay particular attention to how UNICEF might have contributed to promoting equity in access and utilisation of SNCUs for the most disadvantaged and excluded children and their families. Factors such as geographic location, gender inequality, economic status, and social and cultural norms/behaviours may be considered. Further, as this evaluation will focus on UNICEF’s specific activities and involvement relating to SNCUs, it should consider how UNICEF has supported the GoI through activities such as capacity building, technical assistance, joint planning, advocacy, field visits, coordination and leveraging resources. UNICEF’s actual financial contribution may be explored during the course of the evaluation based on availability of data, as will trends in GoI contributions to SNCUs during this time period.

**Time period**

The evaluation will focus on UNICEF’s role in SNCUs starting from its engagement in 2007 up to the present time (2016). This timeframe (2007-2016) will be applied to all the evaluation questions around the five main aspects of work outlined above.

**Geographic focus**

The evaluation will assess UNICEF’s contribution to SNCUs nationally and will incorporate additional in-depth information collected within six States (the preliminary States’ list includes: Madhya Pradesh, Odisha, Maharashtra, Andhra Pradesh, Haryana and Uttar Pradesh). These States are proposed because they are geographically dispersed across different parts of India, five have had the presence of UNICEF field offices while one (Haryana) did not, although the national government and Haryana State government requested UNICEF support there. In addition, the choice of States represents a mix of those able to achieve full scale up and one that has not yet been able to achieve full scale up (Uttar Pradesh).

Within each State, data will be collected from two districts: one that was involved in UNICEF’s initial pilot and a second that was involved in scale-up of SNCUs.

**Target groups**

The main target groups who will be involved in generating the response to the evaluation include the main stakeholders in the intervention, namely: National, State and District Government policymakers and managers, programme managers and staff working in SNCUs at District level, UNICEF staff members, consultants and others involved in implementing the programme, and other relevant partners including representatives of professional bodies like the National Neonatology forum. Efforts will be made to engage key stakeholders at State and District levels.
Potential limitations

The focus of this evaluation will be on UNICEF’s contribution to the SNCU programme, and not on the SNCU programme itself. An evaluation of “attribution” to UNICEF of any results of SNCUs will not be possible due to a lack of a counterfactual. Additionally, reductions in neo-natal mortality can be caused by multiple interventions; therefore it would be difficult to evaluate SNCU’s attribution to neo-natal mortality reduction in this case. However, the evaluation team is encouraged to explore whether it would be possible to demonstrate an improvement in coverage, availability and utilisation of services of the population in the programme area due to the contribution of such intervention based on available data and potential methods. A well-thought out proposal with consideration to this will be preferred. This can be finalised in consultation with UNICEF during the inception phase of the evaluation.

Further, the availability of existing data may be a limitation (particularly at baseline and for financial data). However, all available quantitative data (including from the SNCU online monitoring system) will be shared with the evaluation team via an access code provided by UNICEF and/or the Government. The evaluation agency should rely on the institutional memory of staff and the various qualitative techniques available at their disposal but should also be aware of the risks that this approach may cause. Finally, because it may be a challenge to meet with specific individuals in each setting, we request that the evaluation agency carefully considers the amount of time needed to conduct data collection, particularly during the State visits.

Evaluation criteria and questions

All evaluations of UNICEF programmatic activities should also describe the broader context within which the activities have been implemented. As such, the evaluators should describe, as possible within the confines of each specific project, issues such as those outlined by the Organisation for Economic Cooperation and Development definitions and summarised below:\(^{17}\)

*Relevance* represents “The extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.”

*Effectiveness* represents “A measure of the extent to which an aid activity attains its objectives.”

*Efficiency* represents “A measure of how economically resources/inputs (funds, expertise, time, equipment, etc.) are converted into results.”

*Sustainability* “is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally as well as financially sustainable.”

The key questions that this evaluation is expected to provide relevant information are:

1. What was the relevance of UNICEF’s contribution to India’s Special Newborn Care Units?
2. Were UNICEF’s objectives for SNCUs achieved?
3. To what extent did UNICEF’s work represent the best possible use of available resources to achieve results of the greatest possible value to recipients and the community?
4. Are any positive results from UNICEF’s contribution to SNCUs likely to be sustained?

\(^{17}\) OECD. Glossary of Evaluation and Results Based Management (RBM) Terms, OECD (2000).
Specific evaluation questions proposed for this evaluation (to be finalised in collaboration with the Evaluation Reference Group) are included under Methodology below.

5. Methodology

Evaluation Design

The proposed methodology is based on experience designing similar evaluations but should be enhanced based on the interested agencies’ understanding of UNICEF’s requirements. Therefore, the agency could either utilise a similar approach to what is being proposed below or further suggest improvements/modifications that can be considered in their technical proposals. During the inception phase, the proposal may have to be modified based on discussions with the Evaluation Reference Group and a document review. There will be a need to agree on a detailed design, analytical methods and tools between the selected agency and the UNICEF Evaluation Reference Group.
### Figure 1: Theory of change for saving newborns in South Asia

#### Improved newborn survival

<table>
<thead>
<tr>
<th>Service delivery is strengthened</th>
<th>Families and communities are empowered</th>
<th>Positive social norms exist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments in maternal and newborn health services increase (workforce, facilities, commodities, equipment, technology, quality of care)</td>
<td>Government policies promote maternal and newborn health</td>
<td>Knowledge and awareness of positive newborn practices improves</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners are engaged</th>
<th>Evidence is generated and used</th>
<th>Communities are engaged and educated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy for every newborn’s right to health</td>
<td>Provision of technical assistance and quality assurance</td>
<td>Sharing knowledge and promotion through South to South collaboration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Newborns die from preventable causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and behaviour change communication activities are conducted</td>
</tr>
</tbody>
</table>
The evaluation team is expected to work with UNICEF colleagues to create a Theory of Change (ToC) for the SNCU work that will trace the resources programmed, the actions taken and results achieved. This can reflect (or build on) the ToC developed for newborn health by UNICEF’s Regional Office for South Asia (figure 1). The ToC will enable analysis of desired outcomes and the outputs associated with those outcomes; examine resources available and activities implemented to produce these outputs; review the underlying assumptions and contextual factors that may have affected UNICEF India’s activities; and clarify any opportunities and challenges to deliver desired outcomes.

We anticipate that the evaluation will use a mixed methods approach; i.e., one that utilises quantitative data (evaluating changes seen in SNCU functioning over the time period of UNICEF’s activities) as well as qualitative data (such as document reviews and key informant interviews to determine some of the more descriptive results). It could also be helpful to evaluate UNICEF’s contribution across the five areas mentioned under ‘scope of the activity’ using a Likert scale (the specific elements of which will be discussed and finalised in collaboration with the UNICEF team during the planning phase).

We have set up an online Dropbox (https://www.dropbox.com/sh/bsfmlneohn4r56f/AABIE-fsCDpSQd9fMmFcGpGha?dl=0) folder that agencies can access in order to obtain more information about SNCUs and related UNICEF activities. Please note that you are not required to open a Dropbox account to access this folder.

In addition, it is proposed that in-depth case studies be conducted in six States to provide additional insights into UNICEF’s work, including strategies, activities, key challenges, best practices and lessons learned. Finally, the evaluation and subsequent findings and recommendations should include gender/equity dimensions throughout to the extent possible.

Two types of questions will be posed within the evaluation, and the evaluators must be capable of dealing with each. Some will be descriptive questions. Successful responses will involve well organised narratives about the visible and less visible aspects of UNICEF’s work. The bidder’s ability to digest and streamline a range of materials will be paramount. There will also be normative questions. Successful responses will require the application of explicit and defensible criteria for weighing evidence to identify what has worked or not, and why. For all normative questions, the evaluators will need to propose and be clear on what is to be considered as a ‘good’ standard and what is to be considered as a ‘poor’ or ‘not met’ standard.

Agencies are encouraged to reflect on the context of the SNCU programme, and the objectives and criteria of the evaluation, to propose other innovative methods that UNICEF should consider. Accordingly, appropriate protocols will be developed by the evaluation team.

The next table presents a preliminary list of evaluation questions and methods. In their proposals, it is expected that interested agencies will link these questions with each of the five aspects of UNICEF contribution (listed under Scope of the Activity, above). The bidders will use these to decide what is feasible within the given timeframe, data context and budget and is encouraged to improve the matrix as appropriate.
## Preliminary evaluation questions and methods

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>Potential Methods</th>
<th>Potential data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance:</strong> What was the relevance of UNICEF’s contribution to India’s Special Newborn Care Units?</td>
<td>Desk review, key informant interviews</td>
<td>National Family Health Survey (NFHS) 3 and NFHS 4, Sample Registration Surveys (2007-2013), Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakram (JSSK) documents, India Newborn Action Plan, District Level Health Survey 2007-8, SNCU Online Monitoring System, UNICEF Strategic Plan, Country Programme Document (India), UNICEF Country Programme Action Plan</td>
</tr>
<tr>
<td>1. Was the intervention aligned to the country’s commitments, priorities and strategic plan for improving newborn health?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Was the intervention supportive of gender equality and other human rights standards?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Was the intervention adjusted throughout its implementation period to align it with emerging priorities/needs and to ensure support for best practice?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness:</strong> Were UNICEF’s objectives for SNCUs achieved?</td>
<td>Desk review, key informant interviews, scaled questionnaires</td>
<td>UNICEF programme data and SNCU programme data in the five UNICEF programming States, Interviews with government officials, SNCU Online Monitoring System (disaggregated by sex, caste, income, etc.)</td>
</tr>
<tr>
<td>1. Was the intervention implemented according to plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Was timely corrective action taken where necessary?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Were intended results (relating to the five aspects listed above of UNICEF’s ongoing work) achieved?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. What were the factors that influenced the achievement or non-achievement of programme results?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Were results achieved in adherence to equity, gender equality, non-discrimination, and other human rights?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Efficiency:</strong> To what extent did UNICEF’s work represent the best possible use of available resources to achieve results of the greatest possible value to recipients and the community?</td>
<td>Desk review and key informant interviews</td>
<td>UNICEF financial records and work plans, SNCU Online Monitoring System, GoI and State Government contributions to SNCUs and work plans</td>
</tr>
<tr>
<td>1. Did the intervention use the available resources in an economical manner to achieve its objectives?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Did the intervention have sufficient funding support for SNCUs and for the total maintenance cost incurred by NHM for sustaining SNCUs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Did the intervention have sufficient and appropriate staffing resources?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?

<table>
<thead>
<tr>
<th><strong>Sustainability</strong>: Are any positive results from UNICEF’s contribution likely to be sustained?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the positive results and which positive results from UNICEF’s contribution are likely to be sustained? Why and why not?</td>
</tr>
<tr>
<td>2. Was the intervention scaled up sufficiently to achieve the intended impacts?</td>
</tr>
<tr>
<td>3. Were results achieved in a sustainable manner? To what extent can the activities and the benefits of the intervention continue after external funding has ceased?</td>
</tr>
<tr>
<td>4. To what extent has the intervention been mainstreamed in the National Health Mission, particularly in terms of allocation of financial and human resources as UNICEF’s involvement has declined over time?</td>
</tr>
<tr>
<td>5. Are any areas of the intervention clearly unsustainable? What lessons can be learned from such areas?</td>
</tr>
<tr>
<td>6. What were the major factors that influenced the achievement or non-achievement of sustainability of the intervention?</td>
</tr>
</tbody>
</table>

| Desk review and key informant interviews | National Health Mission Programme Implementation Plans (PIPs) focusing on the six focal States, SNCU Online Monitoring System |

*Please note that we have not included questions relating to the OECD criterion “impact” for this evaluation due to the fact that it will not be possible to reconstruct a counterfactual in geographical space or in time.*
Data sources

UNICEF documents from the national and State offices, including programme documentation, assessments, and annual and progress reports, will be made available to the evaluation team. Disaggregated and reliable data from the SNCU online monitoring system will also be made available to enable an analysis of utilisation, outcomes, and performance, particularly with consideration to issues relating to equity and gender equality. In order to address this critical gap in data management and monitoring performance of SNCUs, UNICEF worked closely with the National Health Mission to pilot the SNCU online monitoring system. This system monitors performance of all SNCUs on more than 250 parameters and provide comparison between SNCUs as well as States, thereby helping to prioritise resources and supportive supervision. The quality of data is monitored by the National Cell supported by UNICEF. Additional data may be required to complement programme data and for triangulation purposes. UNICEF India will work to ensure that the relevant data are accessible to the evaluators. In addition, it will be important to talk with key decision-makers and implementers at different levels. No original data gathering is anticipated beyond potential interviews with key partners and stakeholders, and a review of documentation.

Sampling Strategy

The following sample size (in six intervention States) is only indicative for the purposes of bidding. Agencies are requested to either validate the suggestion or propose an alternative approach with well-thought out explanations as to why the alternative approach is more appropriate.

The following list includes the types of individuals who should be interviewed as key informants for this evaluation (and the suggested number of each type).

1) National Level – approximately 20 key informants
   - Government of India MOH officials (current and past staff) - 5
   - National Neonatology Forum (current and past) – 3
   - Other development partners - 4
   - Collaborative centers and medical colleges – 3
   - UNICEF staff - 5

2) State Level – approximately 10 key informants in each of the six States
   - State government officials including Mission Director and Deputy Director Child Health (current and past) - 3
   - National Neonatology Forum – 1
   - Other development partners in the State - 2
   - Collaborative centers and medical colleges – 2
   - UNICEF staff – 2 (except in Haryana where UNICEF does not have a State office)
3) **District level – approximately 8 to 10 key informants in each district (2 districts per State)**

- District health managers including District Collector, Chief Medical Officer, Civil Surgeon/Hospital Superintendent (current and past) – 3-4
- SNCU staff (doctors/nurses/data entry operator and affiliated community-based staff such as ASHAs and ANMs in order to evaluate linkages to the community) – 5
- UNICEF district consultants (if any) – 1

**Phases of the Evaluation**

We anticipate that the evaluation will need to be carried out in three phases encompassing approximately 20 weeks over a 24-week period.

**Phase 1 (inception)** will involve document review, finalisation of the evaluation methodology and work plan with the Evaluation Reference Group, particularly pertaining to data and information that need to be made available. This will commence approximately three weeks after the contract with the evaluation team is finalised, to allow preparation by UNICEF to ensure that all relevant data and information are compiled in advance and available for the evaluation team as soon as they start to work.

**Phase 2 (data collection and analysis)** will commence at the end of the inception period and will involve execution of the evaluation, particularly the data review and six in-depth State case studies to collect data from key informant interviews.

**Phase 3** is the product delivery (reporting and dissemination) phase and will involve drafting, review and finalisation of project deliverables such as the evaluation report and a PowerPoint presentation. During Phase 3, a presentation and report of preliminary findings should be developed and shared with the Evaluation Reference Group, which will provide an opportunity to provide additional information and feedback to the evaluation team. Subsequent to that, the final evaluation report will be completed. The primary audience of the evaluation report is UNICEF India, but also other key partners, particularly GoI as the main implementing partner. The results will also be shared with relevant UNICEF India State offices and thus State-specific findings should be presented in the report (e.g., in short text boxes that indicate key insights including challenges and barriers).

The selected evaluation agency should further advise on the evaluation design, implementation and analysis specifics. Interested bidders are expected to propose specific details for how each Phase of the evaluation will be conducted in their proposals.

**6. Ethics**

Evaluation teams (and Evaluation Management Teams such as the Evaluation Reference Group for this particular project) are expected to follow the ethical principles and considerations outlined in the United Nations Evaluation Group (UNEG) Ethical Guidelines for Evaluation. In addition, the UNEG norms and standards will be observed. Sensitive information may derive from data collection and the evaluation team will ensure the utmost confidentiality when conducting such research. Any interviews conducted with stakeholders must only be carried out with proper consent. Interested agencies should detail their ethical protocols in their proposals.
7. Timeline and Schedule of Tasks

The tentative timeline for this evaluation is 3 October 2016 to 17 March 2017 (representing approximately 24 weeks of time for the contract period and 20 weeks of payable work weeks). Specific tasks and the number of weeks anticipated to complete each are included in the table below. In addition, prior to the commencement of activities in week 1, there will be a period of up to 3 weeks of preparation by UNICEF to ensure that all relevant data and information are compiled in advance and available for the evaluation team as soon as they start to work.

A pre-bid meeting will be held approximately one week after the Request for Proposal has been issued. At this pre-bid meeting, UNICEF India and ROSA will explain its requirements and answer any questions that interested bidders may have. A post-bid meeting is also expected for agencies that meet the minimum requirements based on their technical proposals. This provides UNICEF India and ROSA an opportunity to seek clarity on the proposals received. After the selection process is completed, the evaluation agency will develop a protocol that details sample size estimation, sample selection procedures, select districts for the evaluation, validate or reconstruct the Theory of Change of the SNCU intervention, indicators, questionnaires/tools for data collection, survey implementation plan, data processing and analysis plan, and dissemination plan.
### Timeline and Schedule of Tasks

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Phase 1: Inception</strong></td>
<td></td>
</tr>
<tr>
<td>Review available documentation and develop a detailed evaluation</td>
<td></td>
</tr>
<tr>
<td>work plan, protocol, and timeline in the form of an Inception Report</td>
<td></td>
</tr>
<tr>
<td>Develop, review and finalise tools for data collection</td>
<td></td>
</tr>
<tr>
<td>Following feedback, modify and finalise the work plan, protocol,</td>
<td></td>
</tr>
<tr>
<td>and timeline in the Inception Report + conduct training/orientation</td>
<td></td>
</tr>
<tr>
<td>on the tools</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2: Data collection and analysis</strong></td>
<td></td>
</tr>
<tr>
<td>Conduct review and analysis of existing documentation and data</td>
<td></td>
</tr>
<tr>
<td>Conduct interviews in Delhi and the six States</td>
<td></td>
</tr>
<tr>
<td>Finalise analysis of existing and new data</td>
<td></td>
</tr>
</tbody>
</table>
Prepare records of routines devised and executed for data collection, data processing, quality assessment, data analysis and other activities

**Phase 3: Reporting and dissemination**

| Presentation of preliminary findings based on the desk review and qualitative work to the Evaluation Reference Group for initial feedback/reaction |
| Prepare draft evaluation report including executive summary, methods, limitations, findings, discussion and implications and share with Evaluation Reference Group |
| Prepare final evaluation report based on feedback received on initial report |
| One PowerPoint presentation including speaking notes |
| Presentation of the evaluation report and findings in Delhi |
8. Deliverables

**Phase 1: Inception**

1. A detailed overall evaluation work plan, protocol and timeline as part of the Inception Report including:
   a. an evaluation design matrix
   b. evaluation questions and sub-questions
   c. plans for collection of data
   d. plans for assessment and synthesis of quality of existing data.
2. Draft and finalise tools for primary data collection.
3. Audit trail 1 of comments on the draft Inception Report (to keep track of comments and how they are being addressed).

**Phase 2: Data collection and analysis**

4. Data collection and analysis, including State visits.
5. Records of routines devised and executed for data collection, data processing, quality assessment, data analysis and other activities, if requested.
6. Field implementation report

**Phase 3: Reporting and dissemination**

7. Participate in a preliminary findings meeting (or call) before the draft report is shared.
8. An initial evaluation draft report including executive summary, methods, limitations, findings, discussion and recommendations will be presented to the Evaluation Reference Group which will then provide feedback to the evaluation team. Data from the six in-depth State case studies should be embedded in this evaluation report. In addition, please note that the report must conform to the **UNICEF-Adapted UNEG Evaluation Reports Standards** and that the evaluation team will carry out the evaluation in conformity with the **OECD/DAC (2010) Quality Standards for Development Evaluation** and best practices in evaluation.
9. Audit trail 2 of comments on the initial draft Report (to keep track of comments and how they are being addressed).
10. A draft final report which incorporates the first round of writing comments by the Evaluation Reference Group will be circulated for another round of feedback. This draft final report will also be externally assessed by an independent agency managed by ROSA with the view to help improve its quality.
11. Audit trail 3 of comments on the initial draft Report (to keep track of comments and how they are being addressed).
12. A final evaluation report based on feedback received from the Evaluation Reference Group and the external agency on the initial report. Please note that the final evaluation report will be posted onto UNICEF’s internal and external Global Evaluation Reports Oversight System (GEROS).18
13. A PowerPoint presentation summarising the evaluation findings, lessons learned and recommendations.
14. Presentation at a one-day feedback meeting in Delhi to summarise the evaluation report.

---

18 GEROS has four main objectives: 1) To provide senior UNICEF managers with a clear and independent assessment of the quality and usefulness of evaluation reports; 2) To strengthen internal evaluation capacity, through practical feedback on how to improve future evaluations; 3) To contribute to corporate knowledge management and organizational learning, making available good-quality evaluations; and 4) To report to the Executive Board on the quality of evaluation reports.

Throughout all three phases, the evaluation team is expected to maintain ongoing communication with UNICEF India to provide updates on progress, challenges and requirements.

15. Qualifications & Experience Required

The selected agency should adequately demonstrate the availability of high calibre experts in the evaluation of health programs relating to maternal, newborn and child health in developing countries.

The Team Leader must be an experienced evaluator with at least a Master’s Degree, PhD degree preferred, and with a solid understanding of OECD/DAC Standards for Development Evaluation and at least 10 years of progressively responsible professional work experience at national and international levels in conceptualising, designing and implementing evaluations and/or research of maternal, newborn and child health-related programs in developing countries.

In addition, the institution should preferably provide a gender-balanced and culturally diverse team of at least 3-4 professionals who serve as team members and are able to carry out data collection and analysis and who have:

- Neonatology or paediatrician credentials, with an understanding and institutional knowledge of SNCU scale up in India.
- A Masters or Advanced Degree (Ph.D. Desirable) in public health monitoring and evaluation, epidemiology, anthropology or related fields.
- Strong or proven (at least 5 years) experience with health programs in low and middle income countries.
- Demonstrated ability to produce high quality evaluation and/or analytical research reports *Please submit soft copies (.pdf) or links to two recent evaluation reports*.* The reports could be from any of the team members, preferably the team leader.*
- Familiarity with UNICEF’s work and India.
- No potential conflict of interest in the SNCU implementation.
- Excellent spoken and written fluency in English.
- Knowledge of Hindi for district level field work by at least one team member is preferred (if not available, please budget for an interpreter).

11. Evaluation Management:

**UNICEF India’s Responsibilities**

The Research and Evaluation Specialist, UNICEF Delhi, manages all evaluations conducted at UNICEF India under the overall oversight of the Representative and with the support of an Evaluation Management Consultant, in order to ensure quality, transparency, and independence.

A Reference Group with 5-6 members will be formed to oversee the evaluation process and ensure compliance to UNEG Norms and Standards. It is an independent group of UNICEF and non-UNICEF experts constituted for a specific evaluation by UNICEF India. It serves as an advisory body which supports the evaluation by a) providing strategic direction and technical inputs, b) monitoring progress and quality, c) supporting dissemination of findings, as applicable, and d) bringing critical issues to the notice of the Research and Evaluation Specialist, UNICEF Delhi.

UNICEF India will be responsible for providing the evaluation team with the necessary background information and data to carry out the evaluation as well as technical inputs throughout. UNICEF India
will also keep the evaluation team updated on any changes or developments that may affect the evaluation.

For local logistics, the UNICEF State offices will provide the necessary support to the evaluation team, such as making introductions to key informants and certain stakeholders.

**Responsibilities of the Evaluation Agency**

The agency will provide its own computers. On an as-needed basis, the evaluation team will be granted access to UNICEF databases and necessary software to utilise them.

The agency will be expected to handle the following responsibilities:

- Accommodation, food, travel and appropriate insurance of the evaluation team. This includes life and health insurance.
- Copying of information in hard copy or electronic form.
- Hiring and travel of local translators, interviewers, drivers, etc.
- Renting of office space, information technology, outside of what UNICEF will make available at sites where it has existing offices.

12. **Duty Station**

This work can be carried out remotely but with field work conducted in Delhi, six States’ capitals and two districts within each State.

13. **Official travel involved**

The evaluators will be expected to travel within India to the six States chosen for in-depth case studies.
## Annex 4. Linkages between the conceptual framework and the theory of change

<table>
<thead>
<tr>
<th>Evaluation questions</th>
<th>Means of assessment</th>
<th>ToC component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance</strong>: What was the relevance of UNICEF’s contribution to India’s Special Newborn Care Units?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the intervention aligned to the country’s commitments, priorities and strategic plan for improving newborn health?</td>
<td>Desk review</td>
<td>B3</td>
</tr>
<tr>
<td>Was the intervention supportive of gender equality and other human rights standards?</td>
<td>Secondary data analysis</td>
<td>E1 E2</td>
</tr>
<tr>
<td>Was the intervention adjusted throughout its implementation period to align it with emerging priorities/needs and to ensure support for best practice?</td>
<td>Desk review KII s</td>
<td>C4 D3 D4</td>
</tr>
<tr>
<td><strong>Effectiveness</strong>: Was UNICEF’s work effective or were the objectives for SNCUs achieved?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was timely corrective action taken where necessary?</td>
<td>Desk review KII s</td>
<td>D4</td>
</tr>
<tr>
<td>Were intended results (relating to the five aspects listed above of UNICEF’s ongoing work) achieved?</td>
<td>Desk review KII s</td>
<td>E1-E3</td>
</tr>
<tr>
<td>What were the factors that influenced the achievement or non-achievement of programme results?</td>
<td>KII s FGDs</td>
<td>ALL</td>
</tr>
<tr>
<td>Were results achieved in adherence to equity, gender equality, non-discrimination, and other human rights?</td>
<td>Secondary data analyses</td>
<td>E2</td>
</tr>
</tbody>
</table>
**Efficiency:** To what extent did UNICEF’s work represent the best possible use of available resources to achieve results of the greatest possible value to recipients & community?

<table>
<thead>
<tr>
<th>Question</th>
<th>Method</th>
<th>Cross-cutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the intervention use the available resources in an economical manner to achieve its objectives?</td>
<td>Desk review KII</td>
<td></td>
</tr>
<tr>
<td>Did the intervention have sufficient funding support for SNCUs and for the total maintenance cost incurred by NHM for sustaining SNCUs?</td>
<td>Desk review KII</td>
<td></td>
</tr>
<tr>
<td>Did the intervention have sufficient and appropriate staffing resources?</td>
<td>Desk review KII</td>
<td></td>
</tr>
<tr>
<td>To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?</td>
<td>Desk review KII</td>
<td><strong>Cross-cutting</strong></td>
</tr>
</tbody>
</table>

**Sustainability:** Are any positive results from UNICEF’s contributions likely to be sustained?

<table>
<thead>
<tr>
<th>Question</th>
<th>Method</th>
<th>Cross-cutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the positive results? Were they achieved in a sustainable manner? Which positive results from UNICEF’s contribution are likely to be sustained? Which factors influenced the achievement or non-achievement of sustainability of the intervention?</td>
<td>Desk Review KII, FDGs</td>
<td></td>
</tr>
<tr>
<td>Did the intervention have sufficient and appropriate staffing resources?</td>
<td>Desk review KII</td>
<td><strong>Cross-cutting</strong></td>
</tr>
<tr>
<td>To what extent has effective coordination and collaboration with existing interventions and partners been addressed and achieved?</td>
<td>Desk review KII</td>
<td></td>
</tr>
<tr>
<td>To what extent can the activities and the benefits of the intervention continue after external funding has ceased?</td>
<td>Desk review KII</td>
<td></td>
</tr>
</tbody>
</table>
Annex 5. Data Collection Tools- Original

Focus Group Discussion GUIDE for ASHA

Effectiveness

1. What is your role regarding newborn care within your communities?
2. How and when did you start doing this work in the community?
3. How were you prepared to play your role in newborn care in this community? (Probe for
   • the training received,
   • who trained,
   • for how long and
   • what job aides have been provided for the work?
4. Are there any documents (manuals or protocols) that guide you in the provision of care for
   newborns in your communities; how were they developed and by who? Did you use them in
   providing newborn care?
5. Do you know about the SNCUs in this district? How is your work linked to care at (mention SNCU)?
   Probe for:
   • Location and kind of services available at the SNCU
6. Do you know whether UNICEF was involved in your work around newborn care in the district?
   How are they involved? Does it also include care in the facilities (mention SNCU).
7. In your opinion, how effectively are the SNCUs functioning in your district. Please explain your
   response.
8. What information is being collected regarding your work around newborn care? When and how
   did they start collecting these in (mention Facility)? Are there any forms you fill as part of your
   work? Probe for:
   • What roles did UNICEF play in the process and what are your views on that?
   • What will you describe as the main challenges confronting this process?
   • Any suggestion to improve if any?)
9. Have you referred any newborn baby to an SNCU in the last 6 months and what happened thereafter?
   Probe for:
   • How many children have been referred
   • Reasons for referral
   • Whether the family took the baby to the SNCU
   • What happened at the SNCU, if they know
   • Outcome for the infant.
10. Do you routinely follow-up infants who are discharged from SNCUs? (probe for process regarding
    • How do they receive information about the discharge of the infant from the SNCU?
    • What is involved in the follow-up care? and
    • What duration do they have to follow-up children for?)

Relevance
11. Before the SNCU was set up, where were newborns who fell ill in your area being treated? Probe for:
   - Public or private facility
   - Location and distance to the facility
   - Challenges mothers and families face taking their babies to the facility

12. How did you know about this SNCU in this district? What changes have taken place in (mention Facility) to make it an SNCU and why? Probe for changes in:
   - Structure, staffing, case management, equipment

13. Which stakeholders worked with you to provide care for the newborns discharged from the facilities? Were you consulted in planning for your tasks? What inputs did you make and why? Probe for:
   - How frequently they come to support you and how useful it was.

14. What would you say are the key challenges that SNCUs in your district are currently facing? Do you think these challenges are specific to your district? Are they the same across the whole state (mention state) or country?

15. In your opinion, how would you say these challenges are affect the provision of quality care for newborns in the district?

16. Which of these challenges do you consider the most important and how do you think they can be addressed? Probe for:
   - Who provides support in terms of structure, staffing, equipment, financing, etc

17. What additional support should be provided to improve newborn care in this facility?

Efficiency

18. Which other institutions or stakeholders are currently supporting your work and the SNCU programme in (mention District)? Probe for the type of support they provide for their work; be it capacity development/training, provision of job aids, tools, guides, incentives, etc.?

19. If you were to advice on investment of the same resources into the SNCU programme in (mention District), which areas would have been your priority areas and why?

20. UNICEF supported the programme by developing data monitoring tools, trained the staff, provided support for making sure your work is linked to care for babies at SNCUs and built some of the facilities,
   - do you know if other organizations supported in these areas?
   - how is the support coordinated between the different stakeholders in (mention District)?
   - are there instances where you thought there is duplication of these functions UNICEF is performing, please explain and tell me why you think this is happening?

Sustainability

21. In general, how do you think do you think the support UNICEF gave to the SNCUs in your district can be sustained in the long term? What about UNICEF’s support for ASHAs – can it be sustained?
22. What will you describe as the positive results obtained after the establishment of the SNCU programme in (mention District)?

23. In your opinion, what helped UNICEF to support your work in this area? Probe for:

- It is your commitment,
- Resource availability,
- Support from other partners, or
- Their reputation and track record, etc

24. In your opinion, are any components of these positive results unsustainable?

- Why do you think so?
- What can be done differently in (mention District) if they are to be sustained?
- What lessons can be learned from such areas?
Interview topic guide-I. UNICEF Staff (National and State levels)

Relevance

1. What do you think is the situation of newborn health in India over the past decade? Probe for:
   a. What the national commitments, priorities and strategies are,
   b. What are the challenges,
   c. Facility vs community newborn care
   d. Whether there are inter-state differences and why so;
   e. The situation (of newborn health) in the six states - Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Haryana, Maharashtra and Odisha – and whether they are different from the rest of the country)

2. How is newborn health in India addressed in the implementation of the facility based newborn care (FBNC) programme? Probe for:
   a. What role is being played by facilities at the various levels from community to tertiary hospitals?

3. How do you find the role of SNCUs in newborn health in India?
   a. Why they are needed?
   b. Which locations they are and whether those are ideal?
   c. How their roles have changed over time and what accounted for those changes?
   d. What challenges they have encountered?

4. What changes have taken place in the approach to the implementation of SNCUs over time and why? Probe for changes in structure, staffing, case management.

5. Can you share in detail what role UNICEF played in the implementation of FBNC programme? Probe for the followings but also ask specifically for SNCU:
   a. When and how did they get involved-FBNC and SNCU?
   b. Which stakeholders were involved in the decision on which areas UNICEF should focus on?
   c. How relevant is UNICEF’s support for the SNCU programme?
   d. How is this support from UNICEF aligned to national commitments, priorities and strategies?)

6. Were there any changes or modifications in UNICEF’s support for the FBNC and SNCU programme throughout its implementation? Why (what informed those changes) and how?

7. What additional strategies should UNICEF be doing to improve newborn health apart from the SNCUs?
Effectiveness

8. What were the key foci of UNICEF’s involvement in the (FBNC and particularly the) SNCU programme? What were UNICEF’s objectives (intended results) for involvement?

9. What was UNICEF’s strategic plan for involvement in the SNCU programme with respect to the following areas:
   a. Implementation (pilot and scale up)
   b. Human resources and capacity building
   c. Assessment of progress of implementation
   d. Corrective actions when needed and how were these to be done?

10. How was UNICEF engaged on the programme during the pilot phase and scale up phase of the programme?

11. Who were the stakeholders UNICEF engaged in developing this strategic plan for involvement in the SNCU programme? And how were they selected?

12. Do you think that UNICEF achieved those intended results? If yes, what made them possible to be achieved?
   a. Were there some intended results that were not achieved? If yes, what were they and why were they not achieved?

13. How was government’s engagement in support for UNICEF’s areas of focus? Were there resistance or challenges? At what stage were the challenges substantial – pilot or scale-up?

14. How did UNICEF’s involvement improve equity in access to skilled newborn care particularly within health facilities (and SNCUs)? Probe for:
   a. Selection of pilot locations vis-à-vis the population coverage
   b. Identifying sub-populations that are not getting access and developing mechanisms to reach them
   c. Removal of barriers to access for all members of the communities

15. How did UNICEF’s involvement improve quality of newborn care within SNCUs? Were there negative effects of these on the overall facility-based care for newborns? (DON’T READ OUT: for instance, has the improvement in quality resulted in mothers by-passing lower level facilities, overcrowding the SNCUs and hence compromising quality)

16. What was UNICEF’s plan for care of babies after they are discharged from SNCUs to communities and how was this plan implemented? Did this plan achieve the intended results? Explain

Efficiency

17. How did UNICEF channel resources into SNCU as part of their involvement in the programme with respect to:
   a. Infrastructure development/improvement,
   b. Procurement of drugs, equipment and supplies,
c. Capacity development and human resource management,
d. Ensuring high quality and uniform standards of care for newborns

Request for a copy of the Programme Implementation Plan (PIP) for the period 2007-2017

18. What accountability mechanisms are in place to optimise the use of these resources? Probe for:
   a. Who is implementing these accountability mechanisms UNICEF or MOHFW
   b. Are there guidelines for accountability?
   c. Who is implementing or monitoring optimal use of these resources?

19. Which other institutions or stakeholders are currently supporting the SNCU programme? Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and how has UNICEF leveraged these for their involvement in the SNCU programme?

20. How has UNICEF involved the government in procurement of resources for SNCUs? Probe for whether they:
   a. used parallel systems or built on existing processes
   b. used local expertise vs. external consultants
   c. used locally manufactured equipment vs imported ones
   d. were able to unlock government funding in their priority procurements for the running of SNCUs and how they did that?)

21. Do you think the areas UNICEF concentrated their resources in are the most important areas that need to be addressed in the SNCU programme? Explain

22. On hind sight, if you were to advice now on investment of the same resources into the FBNC or SNCU programme, which areas would have been your priority areas and why? Would it be at the SNCU level or another?

23. How is the support for SNCUs coordinated between the different stakeholders? Do you think some of the functions UNICEF is performing in the programme are being duplicated by other organizations or the MoHFW? Can you cite examples of which areas, and why you think that this duplication is happening?

Sustainability

24. How will you describe the contribution of the FBNC and SNCU programmes to newborn health in India? Probe for:
   a. the positive and negative results – these should not only be limited to outcomes such as mortality but also partner engagement with the subject area, political will, accessibility and availability of care for newborns, etc.

25. In general, do you think the SNCU programme is sustainable in the long term? What were the major factors that will influence the sustainability of the programme? Probe for:
   a. Political commitment
   b. Partner/stakeholder involvement
c. Other social interventions such as the JSY or the JSSK programmes,
d. Any specific programmes in specific states, etc.

26. How were communities involved in the implementation of the FBNC (and establishment of SNCUs) to promote ownership? Who led these efforts and what form did they take?

27. In the focal areas where UNICEF has supported the SNCU programme, what mechanisms have been put in place to ensure the gains made are sustained within the NHM in the long term?

28. What were these lessons learned from the pilot by UNICEF? Have these lessons been shared and with who? How were these lessons used to inform the scale-up to other districts and states?

29. Can you provide examples of modifications and adaptations that were made between the pilot and the scale-up phase in any state to ensure sustainability? What role did UNICEF play in the process?

30. To what extent has UNICEF’s mechanism of support and resource investment been mainstreamed into the systems at the MOHFW (or NHM)? Explain

31. How do you think that the country’s health systems can sustain the positive results from UNICEF’s support in the SNCU programme? What additional interventions are needed; by who and how?

32. In your opinion, are any components of these positive results unsustainable? Why do you think so? What can be done differently if they are to be sustained? What lessons can be learned from such areas?
Interview topic guide-IIa. National Level (MOHFW)

Relevance

1. What do you think is the situation of newborn health in India over the past decade? Probe for:
   a. What is the national vision for newborn care?
   b. What the national commitments, priorities and strategies are?
   c. What are the challenges?
   d. Facility vs community newborn care?
   e. Whether there are inter-state differences and why so?
   f. The situation in the six states: Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Haryana, Maharashtra and Odisha?

2. What impact do you think the implementation of the FBNC programme has had on facility care for newborns in the country?

3. How do you find the role of SNCUs in facility newborn care? Probe for:
   a. Why they are needed
   b. Which locations they are and whether those are ideal
   c. How their roles have changed over time and what accounted for those changes
   d. What challenges they have encountered)

4. What changes have taken place in the approach to the implementation of SNCUs in the various states over time and why? Probe for changes in structure, staffing, case management

5. Can you share in detail what role UNICEF played in the implementation of FBNC (facility based newborn care) programme? Probe for the followings but also ask specifically for SNCU:
   a. When and how did they get involved-FBNC and SNCU?
   b. Which stakeholders were involved in the decision on which areas UNICEF should focus on?
   c. How relevant is UNICEF’s support for the SNCU programme?
   d. How is this support from UNICEF aligned to national commitments, priorities and strategies?

6. Were there any changes or modifications in UNICEF’s support for the FBNC and SNCU programme throughout its implementation? Why (what informed those changes) and how?

7. What additional strategies should UNICEF be doing to improve newborn health apart from the SNCUs?

Effectiveness

8. What were the objectives (intended results) of SNCU programme as part of the FBNC programme?

9. What was the strategic plan for:
   a. Implementation (pilot and scale-up)
   b. Human resources and capacity building
   c. Assessment of progress of implementation (monitoring and quality assurance)
   d. Corrective actions when needed and how were these to be done?
10. Who were the stakeholders involved in developing this strategic plan? And how were they selected?

11. What role did UNICEF play in the following aspects:
   a. Implementation (pilot and scale up)
   b. Human resources and capacity building
   c. Assessment of progress of implementation
   d. Corrective actions when needed

12. Are there any documents that guide the provision of care within SNCUs; how were they developed and by who?
   a. UNICEF’s role in the process and whether this was important

13. What information is being collected on the use of SNCUs? When and how did they start collecting these?
   Probe for
   a. What specific roles did UNICEF play in the process and what are your views on that?
   b. What will you describe as the main challenges confronting this process?
   c. Any suggestion to improve if any?

14. Do you think that the SNCU programme has achieved its intended results? Can you describe some of these results?
   a. If it has, what made them possible to be achieved?
   b. Were there some intended results that were not achieved?
      i. What were they? and
      ii. Why were they not achieved?

15. Are there some group of sub-populations that do not have access to SNCU services? Why? How can we ensure that SNCU services reach them? What role can UNICEF play in that?

16. What happens after babies are discharged from SNCUs to communities? Do you know whether UNICEF played any roles in this and how this has helped the programme?

Efficiency

17. How has the government of India channelled resources (procurement, capacity development) for the implementation of the SNCU programme with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc)? Request for a copy of the Programme Implementation Plan (PIP) for the period 2007-2017

18. What accountability mechanisms are in place to optimise the use of these resources? Probe for:
   a. Who is implementing these accountability mechanisms UNICEF or MOHFW
   b. Are there guidelines for accountability?
   c. Who is implementing or monitoring optimal use of these resources?
19. Can you summarise all the ways in which UNICEF has supported the implementation of the SNCU programme? You can mention some of the things we have already talked about just for emphasis. Probe for:
   a. Which specific areas UNICEF’s investments have focussed on?
   b. Specific resources invested into the programme and in what form (technical, infrastructure development, equipment, drugs and supplies, financial, capacity building, etc)?

20. Which other institutions or stakeholders are currently supporting the SNCU programme? Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and how has UNICEF leveraged these for their involvement in the SNCU programme?

21. How has UNICEF involved the government in procurement of resources for SNCUs? Probe for whether they used:
   a. Parallel systems or built on existing processes?
   b. Local expertise vs. external consultants?
   c. Locally manufactured equipment vs imported ones?

22. Do you think the areas UNICEF concentrated their resources in are the most important areas that need to be addressed in the SNCU programme? Explain

23. If you were to advice on investment of the same resources into the SNCU programme, which areas would have been your priority areas and why?

24. How is the support for SNCUs coordinated between the different stakeholders? Is there a duplication of the functions UNICEF is performing in the programme, in which areas, and why do you think this duplication is occurring?

Sustainability

25. The MOHFW has evolved over time through NRHM and now the NHM. How was the FBNC programme affected by this evolution?

26. In general, do you think the SNCU programme is sustainable in the long term? What were the major factors that will influence the sustainability of the programme?

27. What will you describe as the positive results obtained from UNICEF’s support for the SNCU programme?

28. In your opinion, what helped UNICEF to attain these results? Probe for:
   a. Commitment
   b. Leadership
   c. Resource availability
   d. Partner engagement
   e. Reputation and track record, etc
29. To what extent has UNICEF’s mechanism of support and resource investment been mainstreamed into the National Health Mission?

30. How do you think that the current health system’s capacity can continue to sustain these positive results in the SNCU programme that were directly from UNICEF’s support? What additional interventions are needed; by who and how?

31. In your opinion, are any components of these positive results unsustainable? Why do you think so? What can be done differently is they are to be sustained? What lessons can be learned from such areas?
Interview topic guide-IIb. State level (MOHFW)

Relevance

1. What do you think is the situation of newborn health in (mention state) over the past decade? Probe for:
   a. What the national commitments, priorities and strategies are?
   b. Are there specific commitments, strategies and priorities for (mention state)?
   c. What are the challenges?
   d. Facility vs community newborn care?
   e. Whether there are any differences between (mention state) and other states and why so?

2. How will you describe the implementation of the government’s facility based newborn care (FBNC) programme in this state (Mention state)
   a. Were there specific objectives and targets for the state?
   b. What approach did you use in this state and why?
   c. How has the programme impacted on facility care for newborns in the state?
   d. Who have been the main players (stakeholders) who supported your state in the implementation?

3. How do you find the role of SNCUs in newborn health in (mention state)? Probe for:
   a. What role are they expected to play?
   b. In which districts are they located and how did you decide on these locations?
   c. Have the role of SNCUs changed over time and what accounted for those changes?
   d. What challenges have SNCUs in your state encountered from start till now?

4. What changes have taken place in the approach to the implementation of SNCUs in (mention state) over time and why? Probe for changes in structure, staffing, case management

5. I am particularly interested what roles UNICEF played in the implementation of the FBGNC and the SNCU programme: Can you share in detail what their contributions were? Probe for the followings but also ask specifically for SNCU:
   a. When and how did they get involved-FBNC and SNCU?
   b. Which aspects of the programme has UNICEF focussed on?
   c. Who were involved in deciding on the areas UNICEF focussed on?
   d. How relevant do you think UNICEF’s support was for the SNCU programme? Why do you say so?
   e. How is this support from UNICEF aligned to national commitments, priorities and strategies?

6. Did the state change UNICEF’s areas of support over the period of implementation?
   a. What were these changes?
   b. Why (what informed those changes)? and
   c. How were these changes effected?
   d. What impact did these changes have on the overall FBNC and SNCU implementation?
7. In your view, do you think the areas UNICEF supported in are still relevant or what additional strategies should UNICEF be putting in place within this state to improve newborn health?

Effectiveness

8. In this state, how did you decide on the strategic plan for the SNCU programme in districts:
   a. Implementation (pilot and scale up)
   b. Human resources and capacity building
   c. Assessment of progress of implementation
   d. Corrective actions when needed and how were these to be done?

9. Who were the stakeholders involved in developing this strategic plan in (mention state)? What roles did they play and how were these stakeholders selected? Was UNICEF involved and in what ways?

10. Are there any documents specific for this state that guide the provision of care for newborns within SNCUs?
    a. how were these documents developed?
    b. who support the state in their development and in what ways?
    c. Did UNICEF’s play any roles in the process? and
    d. Did you have objectives for UNICEF’s involvement in this and were the objectives achieved?

11. What information is being collected on the use of SNCUs in (mention state)? When and how did they start collecting these in (mention state)? Probe for:
    a. What specific roles did UNICEF play in the process and what are your views on that?
    b. What will you describe as the main challenges confronting this process?
    c. How are these data used in the state?
    d. Any suggestion to improve if any?

12. In this state, would you say that the SNCU programme has achieved its intended results? Can you describe some of these results?
    a. If it has, what made them possible to be achieved?
    b. Were there some intended results that were not achieved?
       i. what were they and
       ii. Why were they not achieved?

13. Are there some group of sub-populations in (mention state) that do not have access to SNCU services? Why? How can we ensure that SNCU services reach them? What role can UNICEF play in that?

14. What happens after babies are discharged from SNCUs to communities in (mention state)? Do you know whether UNICEF played any roles in this and how this has helped the programme?

Efficiency
15. How has the (mention state) government channelled resources (procurement, capacity development) for the implementation of the SNCU programme with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc)? Request for a copy of the Programme Implementation Plan (PIP) for the period 2007-2017

16. What accountability mechanisms are in place to optimise the use of these resources? Probe for:
   a. Who is implementing these accountability mechanisms UNICEF or MOHFW?
   b. Are there guidelines for accountability?
   c. Who is implementing or monitoring optimal use of these resources?

17. Can you summarise all the ways in which UNICEF has supported the implementation of the SNCU programme in this (mention state)? You can mention some of the things we have already talked about just for emphasis. Probe for:
   a. Specific resources invested into the programme and in what form (technical, infrastructure development, equipment, drugs and supplies, financial, capacity building, etc)?
   b. Which specific areas UNICEF’s investments have focussed on in (mention state)?

18. Which other institutions or stakeholders are currently supporting the SNCU programme in (mention state)? Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and how has UNICEF leveraged these for their involvement in the SNCU programme?

19. How has UNICEF involved the state government and MOHFW in procurement of resources for SNCUs in (mention state)? Probe for whether they used:
   a. Parallel systems or built on existing processes?
   b. Local expertise vs. external consultants?
   c. Locally manufactured equipment vs imported ones?

20. Do you think the areas UNICEF concentrated their resources in are the most important areas that need to be addressed in the SNCU programme in (mention state)? Explain

21. If you were to advice on investment of the same resources into the SNCU programme in (mention state), which areas would have been your priority areas and why?

22. How is the support for SNCUs coordinated between the different stakeholders in (mention state)? Is there a duplication of the functions UNICEF is performing in the programme, in which areas, and why do you think this duplication is occurring?

Sustainability

23. In general, do you think the SNCU programme is sustainable in the long term? What were the major factors that will influence the sustainability of the programme?

24. What will you describe as the positive results obtained from UNICEF’s support for the SNCU programme in (mention state)?
25. In your opinion, what helped UNICEF to attain these results in *mention state*? Probe for:
   a. Commitment
   b. Leadership
   c. Resource availability
   d. Partner engagement
   e. Reputation and track record, etc

26. To what extent has UNICEF’s mechanism of support and resource investment been mainstreamed into the National Health Mission in *mention state*?

27. How do you think that the current health system’s capacity in *mention state* can continue to sustain these positive results in the SNCU programme that were directly from UNICEF’s support? What additional interventions are needed; by who and how?

28. In your opinion, are any components of these positive results unsustainable? Why do you think so? What can be done differently in *mention state* if they are to be sustained? What lessons can be learned from such areas?
Interview topic guide-Ilb. District level (MOHFW)

Relevance

1. How has newborn health (facility births, mortality, etc) changed in (mention District) over the past decade?
   a. How are you monitoring progress?
   b. What will you call the success stories?
   c. What have been the challenges?

2. For newborn health in this district,
   a. Are there specific objectives, strategies, targets and priorities? What were they?
   b. How differently has provision of facility-based as against community-based newborn care progressed?
   c. How have you linked community-based care to facilities - describe mechanisms, infrastructure?
   d. are there differences between (mention district) and other districts and why do you think this is the case – give examples?

3. How many facilities in your district are currently having SNCUS?
   a. Do you think these SNCUs are important in this district, please explain why?
   b. Where are the SNCUs located in the district and how did you decide these locations?
   c. How have you linked care in NBSUs with those in the SNCUs
      i. Transportation
      ii. Capacity development
      iii. Supervision of care in NBSUs, etc.
   d. Have SNCUs’ roles changed over time and what accounted for those changes?
   e. What challenges the SNCUs encountered in undertaking these roles?
   f. How did your district mitigate these challenges?)

4. Are there other facilities in the district that deserve to have SNCUs but currently do not have?
   a. Why do you think so? Has it got to do with the strategy for implementation?
   b. How was this district’s approach to implementation of the SNCU programme?

5. In the implementation of the FBNC and SNCUs in this district, which organizations – governmental and non-governmental – have provided support?

6. In want to focus on UNICEF: can you share with me in detail what role they played in the implementation of FBNC programme and particularly the SNCUs in this district?
   a. When and how did they get involved?
   b. Who decided how they should be involved and which areas they should focus on?
   c. So far which areas have UNICEF’s support focussed on?
   d. Do you think these are the most relevant support you require for the programme in this district? Explain
   e. How is this support from UNICEF aligned to your priorities as a district?
29. Did you (as a district) ever change UNICEF’s areas of support for the SNCUs over the period of implementation?
   a. What were these changes?
   b. Why (what informed those changes)? and
   c. How were these changes effected?
   d. What impact did these changes have on the overall FBNC and SNCU implementation?

7. What additional strategies should UNICEF be putting in place to improve newborn health apart from the SNCUs?

Effectiveness

8. In this district, how did you decide on the strategy for the SNCU programme in the facilities:
   a. Erection of infrastructure
   b. Human resources and capacity building
   c. Monitoring the implementation
   d. System for addressing emerging challenges?

9. Who were the stakeholders involved in developing this strategic plan in (mention district)? What roles did they play and how were these stakeholders selected? Was UNICEF involved and in what ways?

10. Are there any documents specific for this state that guide the provision of care for newborns within SNCUs?
    a. How were these documents developed
    b. Who support the state in their development and in what ways?
    c. Did UNICEF’s play any roles in the process and
    d. Did you have objectives for UNICEF’s involvement in this and were the objectives achieved?

11. In this district, do you routinely collect data on the work in the SNCUs?
    a. What data is collected?
    b. When and how did they start collecting?
    c. What do you do with the data?
    d. Did UNICEF help in the process? What did they do?
    e. What will you describe as the main challenges confronting this data gathering and use?
    f. Any suggestion to improve, if any?

12. Do you think that the SNCU programme has achieved those intended results in (mention District)?
    a. If it has, what made them possible to be achieved?
    b. Were there some intended results that were not achieved?
       i. If yes, what were they and
       ii. why were they not achieved?
13. Are there some group of sub-populations in (mention District) that do not have access to SNCU services? Why? How can we ensure that SNCU services reach them? What role can UNICEF play in that?

14. What happens after babies are discharged from SNCUs to communities in (mention District)?

15. What roles do the ASHA workers play in newborn care within this district?
   a. How were they prepared to carry out these roles? Discuss training and refresher.
   b. What support are they provided? Is it
      i. Supervision
      ii. Job aides
      iii. Remuneration
   c. Who has supported the ASHAs in their work related to newborn care?
      i. Has UNICEF played any role? What role have they played?
      ii. What impact do you think UNICEF’s support has had?
      iii. What are the challenges in the ensuring ASHAs are effective in the jobs in this district.

Efficiency

16. How your district earmarked resources (procurement, capacity development) for the SNCUs with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc) in your PIP and budgets? Request for a copy of the Programme Implementation Plan (PIP) for the period 2007-2017

17. What accountability mechanisms are in place to optimise the use of these resources? Probe for:
   a. Who is implementing these accountability mechanisms UNICEF or MOHFW
   b. Are there guidelines for accountability?
   c. Who is implementing or monitoring optimal use of these resources?

18. Can you summarise all the ways in which UNICEF has supported the implementation of the SNCU programme in this (mention District)? You can mention some of the things we have already talked about just for emphasis. Probe for:
   a. Specific resources invested into the programme and in what form (technical, infrastructure development, equipment, drugs and supplies, financial, capacity building, etc)
   b. Which specific areas UNICEF’s investments have focussed on in (mention District)

19. Which other institutions or stakeholders are currently supporting the SNCUs in (mention District)? Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and how has UNICEF leveraged these for their involvement in the SNCU programme?

20. How has UNICEF involved the district leadership in procurement of resources for SNCUs in (mention District)?
(Probe for whether they used
   a. parallel systems or built on existing processes
   b. local expertise vs. external consultants
   c. locally manufactured equipment vs imported ones)
21. Do you think the areas UNICEF concentrated their resources in are the most important areas that need to be addressed in the SNCU programme in (mention District)? Explain.

22. If you were to advice on investment of the same resources into the SNCU programme in (mention District), which areas would have been your priority areas and why?

23. How is the support for SNCUs coordinated between the different stakeholders in (mention District)? Is there a duplication of the functions UNICEF is performing in the programme, in which areas, and why do you think this duplication is occurring?

**Sustainability**

24. In general, do you think that your district is ready and capable to sustain the SNCU programme in the long term?
   a. What do you foresee as the key things that will help you sustain the good things
   b. What do you think will pose major obstacles to your ability to sustain these efforts?

25. What will you describe as the positive results obtained from UNICEF’s support for the SNCU programme in (mention District)?

26. In your opinion, what helped UNICEF to attain these results in (mention District)?
   Probe for
   a. commitment,
   b. leadership,
   c. resource availability,
   d. partner engagement,
   e. reputation and track record, etc

27. To what extent has UNICEF’s mechanism of support and resource investment been mainstreamed into the National Health Mission in (mention District)?

28. How do you think that the current health system’s capacity in (mention District) can continue to sustain these positive results in the SNCU programme that were directly from UNICEF’s support? What additional interventions are needed; by who and how?

29. In your opinion, are any components of these positive results unsustainable? Why do you think so? What can be done differently in (mention District) if they are to be sustained? What lessons can be learned from such areas?
Interview topic guide-IV (Other stakeholders-professional bodies, UN agencies)

Relevance

1. What do you think is the situation of newborn health in India over the past decade? Probe for:
   a. What the national commitments, priorities and strategies are,
   b. What are the challenges,
   c. Facility vs community newborn care
   d. Whether there are inter-state differences and why so;
   e. The situation in the six states: Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Haryana, Maharashtra and Odisha

2. How do you find the role of SNCUs in newborn health in India? Probe for:
   a. Why they are needed
   b. Which locations they are and whether those are ideal
   c. How their roles have changed over time and what accounted for those changes
   d. What challenges they have encountered)

3. What changes have taken place in the approach to the implementation of SNCUs over time and why? Probe for changes in structure, staffing, case management

4. Do you know which stakeholders were involved in the planning and implementation of India’s FBNC and SNCU programmes? Probe for:
   a. Who made the most significant contributions?
   b. Which areas did they focus on?

5. How was your organization involved in the planning and implementation of the SNCU programme? In which areas has your organization supported? Do you still play any roles and what are these?

6. Can you describe what role UNICEF played in the SNCU programme? Which areas did they focus on?
   a. Do you think they were aligned to national commitments, priorities and strategies around newborn health?
   b. Were there any changes in their support to the programme along the course of implementation? What were these and why (what informed those changes)?

7. UNICEF’s efforts have been focussed on (i) supporting the pilot, (ii) developing the data monitoring system; (iii) improving community linkages and (iv) supporting the scale up of the programme. In your experiences,
   a. Do you think these areas are relevant?
   b. Are there other areas you would have thought would have been more relevant if UNICEF rather focussed on?
   c. Do you know whether there were other organizations working in these same focal areas?
   d. Was UNICEF’s approach integrative or do you think they engaged the relevant stakeholders in these focal areas sufficiently? Explain
Effectiveness

8. Do you know what the objectives (intended results) were for the SNCU programme?

9. What was the strategic plan for:
   a. Implementation (pilot and scale up)
   b. Human resources and capacity building
   c. Assessment of progress of implementation
   d. Corrective actions when needed and how were these to be done?

10. The overall FBNC programme involves various levels of facilities? Which level will you call the weakest link in the provision of facility care for newborns? Why do you think so?

11. Who were the stakeholders involved in developing this strategic plan? And how were they selected?

12. Are there any documents that guide the provision of care within SNCUs; how were they developed and by who? Has your organization been involved in anyway? Do you know of UNICEF’s role in the process?

13. Do you know if data is being systematically collected on the SNCUs?
    a. What data is being collected?
    b. What process is being used for this data collection?
    c. When and how did they start collecting these?
    d. How are the data used and by who?
    e. What will you describe as the main challenges confronting this process?
    f. Any suggestion to improve if any?

14. Do you know of how UNICEF supported the SNCU performance monitoring process?
    a. What are your views on that?

15. Do you think that the SNCU programme has achieved the intended results?
    a. If it has, what made them possible to be achieved?
    b. Were there some intended results that were not achieved?
       i. If yes, what were they and
       ii. why do you think they were not achieved?

16. Are there some sub-populations that do not have access to SNCU services? Why? How can we ensure that SNCU services reach them? In there any organization supporting to ensure improved access to all persons? What role has UNICEF played or can play in that?

17. Do you know of any mechanisms by which newborns who are discharged from SNCUs continue to receive care within their communities?
    a. Who are providing this care?
b. Which organizations have been the main players who supported this aspect of newborn care?

c. Do you know whether UNICEF played any roles in this and how this has helped the programme?

**Efficiency**

18. How were resources channelled into the implementation of the SNCU programme with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc)? Who did what?

19. Do you know whether the government in the central, state or district levels have worked with partners to agree on the accountability mechanisms to be put in place to optimise the use of resources invested into SNCUs? Explain in detail what has been done.

20. Which other institutions or stakeholders are currently supporting the SNCU programme?
   a. Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and
   b. Do you know whether UNICEF leveraged these platforms created by other organizations to improve efficiency during their involvement in the SNCU programme?

21. Do you think the areas where UNICEF focussed their resources are the most important areas that need to be addressed in the SNCU programme? Explain

22. If you were to advice on investment of the same resources into the SNCU programme, which areas would have been your priority areas and why?

23. How is the support for SNCUs coordinated between the different stakeholders? Is there a duplication of the functions UNICEF is performing in the programme, in which areas, and why do you think this duplication is occurring?

**Sustainability**

24. In general, do you think the SNCU programme is sustainable in the long term? What were the major factors that will influence the sustainability of the programme?

25. What will you describe as the positive results obtained from UNICEF’s support for the SNCU programme?

26. In your opinion, what helped UNICEF to attain these results?
Ask about
   a. commitment,
   b. leadership,
   c. resource availability,
   d. partner engagement,
   e. reputation and track record, etc
27. In the focal areas where UNICEF supported the SNCU programme, do you know of any mechanisms they have been put in place to ensure the gains made will be sustainable in the long term?

28. Has any lesson learned from the pilot by UNICEF been shared, what were these lessons and how have they been used to inform the scale-up to other districts and states?

29. Can you provide examples of modifications and adaptations that were made between the pilot and the scale-up phase in any state to ensure sustainability? What role did UNICEF play in the process?

30. To what extent has UNICEF’s mechanism of support and resource investment been mainstreamed into the systems at the Ministry of Health and Family Welfare (NHM)? Explain

31. How do you think that the current health system’s capacity can continue to sustain the positive results in the SNCU programme that were directly from UNICEF’s support? What additional interventions are needed; by who and how?

32. In your opinion, are any components of these positive results unsustainable? Why do you think so? What can be done differently if they are to be sustained? What lessons can be learned from such areas?
Interview topic guide for managers/administrators-V. Facility level

Relevance

1. What would you say were the challenges in newborn care within health facilities before the start of the SNCU programme?

2. How was this facility chosen to have an SNCU? What changes have taken place in the SNCU for newborn care?
   (Probe for changes in structure, staffing, case management, equipment)

3. Which stakeholders involved in establishing this SNCU? Were you consulted in planning to make this place an SNCU? What inputs did you make and why?

4. In your opinion, what would you say are the challenges that this SNCU is facing now?
   a. which of these challenges are most important?
   b. how are you addressing them?
   c. are you receiving support from any sources-government or non-government?
   d. what form of support is this?

5. How is UNICEF involved in the implementation of the SNCU in your facility?
   (Probe for which areas: piloting, community linkages, data monitoring, capacity building, equipment etc.)

6. Do you think UNICEF’s support tackled the most important challenges that you were facing with respect to newborn care in this facility? Why do you think so?

7. What additional support should UNICEF be providing to improve newborn care in this facility?

Effectiveness

8. In your opinion, what were the objectives (intended results) for setting up SNCUs in this district and your facility?

9. Do you know what UNICEF’s objectives were in the involvement in your SNCU?

10. What activities UNICEF roll-out or provided support with in order to achieve these objectives?

11. Are there any documents that guide the provision of care in the SNCU in this facility (Ask to see plan for setting of the unit, clinical protocols, etc);
   a. How were they developed and by who?
   b. How do you ensure they are used in providing newborn care in your facility?
   c. Did UNICEF play any role in the development of these documents in your facility and your impressions about this role of UNICEF.

12. What information is being collected on the performance of your SNCUs?
a. When and how did you start to systematically collect data on the performance of the SNCU?
b. Who set up the data collection system?
c. Do you have access to this data, how frequently and what do you use it for?
d. Do you know whether UNICEF played any role in the process?
e. What will you describe as the main challenges confronting this process?
f. Any suggestion to improve if any?)

13. Do you think that your SNCU has achieved the intended results in (mention District)? Explain.
   a. If it has, what made them possible to be achieved?
   b. Were there some intended results that were not achieved?
      i. If yes, what were they and
      ii. why were they not achieved?

14. Are there some group of sub-populations in (mention District) that do not have access to your services? Why? How can we ensure that SNCU services reach them? What role can UNICEF play in that?

15. What happens after babies are discharged from SNCUs to communities in (mention District)? Do you know whether UNICEF played any roles in this and how this has helped the programme?

   Efficiency

16. How were resources channelled into the implementation of the SNCU in your facility with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc)? Who did what?

17. Do you know whether the government in the central, state or district levels have worked with partners to agree on the accountability mechanisms to be put in place to optimise the use of resources invested into SNCUs? This will include ensuring value for money for all goods and services. Explain in detail what has been done.

18. Can you summarise all the ways in which UNICEF has supported the implementation of the SNCU programme in this facility? You can mention some of the things we have already talked about just for emphasis.
   (Probe for
   a. Specific resources invested into the programme and in what form (technical, infrastructure development, equipment, drugs and supplies, financial, capacity building, etc)
   b. Which specific areas UNICEF’s investments have focussed on in this facility
   c. Are these resources still coming in?

19. Which other institutions or stakeholders are currently supporting the SNCU programme in (mention District)? Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and how has UNICEF leveraged these for their involvement in the SNCU programme?
20. How has UNICEF engaged with you and the government (state or district) in the procurement of resources for your SNCU? 
(Probe for whether they used)
   a. parallel systems or built on existing processes
   b. local expertise vs. external consultants
   c. locally manufactured equipment vs imported ones

21. Do you think the areas UNICEF concentrated their resources in are the most important areas that need to be addressed in the SNCU programme in (mention District)? Explain

22. If you were to advice on investment of the same resources into the SNCU programme in (mention District), which areas would have been your priority areas and why?

23. How is the support for SNCUs coordinated between the different stakeholders in (mention District)? Is there a duplication of the functions UNICEF is performing in the programme, in which areas, and why do you think this duplication is occurring?

Sustainability

24. In general, from your experiences in this facility and perhaps interactions with people in similar positions in this state or elsewhere, do you think the SNCU programme is sustainable in the long term? Explain

25. What do you think would be the major factors that will influence the sustainability of the programme? (Probe for)
   a. political will,
   b. availability of funding,
   c. human resources – their numbers, commitment and motivation

26. From your knowledge of how UNICEF supported the MOHFW in implementing the SNCU programme, what are the positive results obtained from this support in
   a. This facility
   b. This district (mention District)?

27. In your opinion, what factors have helped UNICEF in better supporting the MOHFW to attain these positive results in facility and district?
(Probe for (and ask them to explain with examples, if possible))
   a. commitment,
   b. leadership,
   c. openness and dialogue with government,
   d. resource availability,
   e. partner engagement,
   f. reputation and track record, etc

28. In you consider the various aspects of the implementation of this programme that UNICEF has supported, how do you think UNICEF’s mechanism of support and resource investment have been
mainstreamed into the processes within the MOHFW in this mention District? For example which aspect of these support are currently being handled by the MOHFW?

29. How do you think that the current health system’s capacity in (mention District) can continue to sustain these positive results in the SNCU programme that were directly from UNICEF’s support?
   a. Do you think it will require additional interventions and support?
   b. Who is best placed to provide such support and
   c. How do you think this support must be fashioned?

30. In your opinion, are there components of the positive contributions from UNICEF’s support to the MOHFW in the SNCU implementation that are unsustainable in the current health system?
   a. Why do you think so?
   b. What can be done differently in (mention District) if they are to be sustained?
   c. What lessons can be learned from such areas?
Interview topic guide-V. Facility level Technical/Clinical staff

Care provision in SNCUs

1. Can you please describe the status of newborn care in this facility? Please describe what it was and any changes that might have taken place. Probe for changes in
   a. Structure
   b. Equipment drugs and supplies
   c. Staffing and their training to serve in various capacities
   d. Process and content of client care

2. How has the setting up of the SNCU affected these changes?
   a. Were the changes already occurring before the SNCU establishment?
   b. What are the major gains after the SNCU establishment?

3. What would you say are the major challenges in newborn care in this facility?
   a. HR, equipment, supplies, structures or space, etc
   b. How can these be addressed?
      i. Who needs to be involved,
      ii. Who is helping, and with what?

4. What are the range of newborn care services provided in this facility?
   a. What is not covered in newborn care in this facility?
   b. What is not covered that you wish is covered?
   c. Are there services that ideally should not be in SNCUs but you are performing in this facility and why?
   d. What expertise is used for providing these facilities and at what cost to the facility?

5. What are the current protocols for discharging newborns from this facility?
   a. What are the criteria?
   b. What must be checked?
   c. What information is provided and to who – mothers alone or with companions?
   d. For how long is this education provided?

6. How do you access self-efficacy of women before they leave the SNCU with their newborn after discharge from the facility?

7. SNCUs refer babies to higher level facilities when needed. What is your procedure in this facility for referring babies?
   a. Who does the triaging (selecting who should go to where)?
   b. Do you have protocols for communicating with the destination facility?
   c. Do you request or receive follow-up on referred babies?
   d. Do you provide ambulance services? Who pays for the ambulance transport?

8. Can you describe all interactions you have with providers at lower level health facilities that provide newborn care and referrals (NBSUs and NBCCs)?
a. Is it training, supervision, mentoring?

b. Is there communication when they refer babies to you?

c. Do you communicate when you downgrade newborn care to them after discharge from the SNCU?

d. What mediums of communication? – Whatsapp, Calls, Skype, Teleconferencing, Written notes, etc.

9. Is there any follow-up care for newborns discharged from this SNCU?
   a. How is this follow-up care organised? How long does this care last for a **small and sick baby** discharged from the SNCU?
   b. What **health facilities or cadres of health workers** are involved?

10. How does clinical care continue at the community level after discharge of small and sick babies from this SNCU?
   a. Could you please describe who in the community support newborn care after discharge – ASHAs, Anganwadi workers or ANMs, etc
   b. Could you explain any roles that ASHAs play in the follow-on care of babies discharged from SNCUs?
   c. How were ASHAs prepared to carry out these roles? Any training, equipment?
   d. How are they supported? Remuneration, supervision, motivation, incentives, etc?
   e. Does your facility support or lead any of these activities for ASHAs?
   f. Do you know what roles UNICEF played in ensuring continued care at the community level for SNCU-discharged newborns? Please explain.

11. How would you describe access to newborn care in this facility for out-born babies who need care?
   a. Do you think there are some sub-populations that are not being covered? Who are these?
   b. What is making the facility inaccessible to some population groups? Cost, distance, religion, caste, etc.?
   c. How do you think this access could be improved further?

Relevance

12. Which stakeholders were involved in making this place an SNCU?
   a. Do you know whether staff in this facility were consulted in the planning to establish SNCU in this facility?
   b. What inputs did you (or other staff in this facility) make and why?

13. Do you know whether UNICEF was involved in the planning and establishment of SNCU in your facility? Probe for which areas UNICEF supported governments in:
   a. piloting,
   b. community linkages,
   c. data monitoring,
   d. capacity building,
   e. equipment etc.
14. In the previous question, you mentioned the areas UNICEF supported MOHFW with in the establishment and running of the SNCU in this facility. Would you say that UNICEF’s support to this facility tackled the most important challenges that you were facing? Why and how?

15. What additional support should UNICEF be providing to improve newborn care in this facility?

**Effectiveness**

16. Do you know what UNICEF’s objectives were in their involvement with the SNCUs?  
   a. Were these objectives communicated to you?

17. What activities did UNICEF lead or support with to achieve their objectives? Probe for
   
   a. Training?  
   b. Providing funds?  
   c. Providing technical expertise?  
   d. Mobilising other stakeholders, etc?

18. What was required of you (as an institution) as part of partnership with UNICEF for implementing these activities?

19. Are there any documents that guide the provision of care in the SNCU in this (mention Facility);  
   a. how were they developed and by who?  
   b. Were you or staff from your facility involved in their development?  
   c. Were they adapted in any way for use in your facility?  
   d. Are there some aspects that are not relevant for your care provision in this facility? What are these?  
   e. What was UNICEF’s role in the process and was this important?

20. What information is being collected on the use of SNCUs in (mention Facility)?  
   a. When and how did they start collecting these in (mention Facility)?  
   b. What specific roles did UNICEF play in the process and what are your views on that?  
   c. What will you describe as the main challenges confronting this process?  
   d. Any suggestion to improve if any?

21. How will you describe the outcomes of UNICEF’s activities in this facility’s SNCU?

22. Do you think that the SNCU programme has achieved its intended results in facility and district?  
   a. If it has, what made them possible to be achieved?  
   b. Were there some intended results that were not achieved?  
      i. If yes, what were they and  
      ii. why were they not achieved?
Efficiency

23. Can you describe how this district and the management of this facility have channelled resources (procurement, capacity development) for the implementation of the SNCU programme with respect to provision of infrastructure, drugs, equipment and supplies, human resources, guidelines, protocols and standards, etc)?
   a. Were they guided by an implementation plan?
   b. Request for a copy of the Programme Implementation Plan (PIP) for the period 2007-2017

24. What accountability mechanisms are in place to optimise the use of resources (inputs such as equipment, drugs, training and quality of patient care) in this facility?
   Probe for
   a. Can you describe the response you receive when you request for inputs into clinical care - new or replacement of old ones?
   b. How do prevent wastage in the use of resources in this facility?
   c. Are there guidelines for staff to ensure they use resources of the SNCU efficiently?
   d. Who, in this facility, is responsible for monitoring optimal use of funds in this SNCU?

25. Can you summarise all the resources UNICEF invested into this SNCU and in what form (technical, infrastructure development, equipment, drugs and supplies, financial, capacity building, etc) they took? Are these resources still coming in?

26. Which other institutions or stakeholders are currently supporting your SNCU in (mention facility)?
   a. Are there interventions (capacity, resources) by these stakeholders in the focal areas of UNICEF and
   b. how has UNICEF leveraged these in their involvement in your SNCU in order not to duplicate functions (or re-invent the wheel)?

27. During UNICEF’s period of involvement with your SNCU, how did they procure resources?
   (Probe for whether they used
   a. parallel systems or built on existing processes
   b. local expertise vs. external consultants
   c. locally manufactured equipment vs imported ones
   d. do you know what the national guidelines for procurement for SNCUs requires regarding procurement?)

28. Do you think the areas UNICEF concentrated their resources on are the most important areas that need to be addressed in your SNCU? Explain

29. If you were to advice on investment of the same resources into your SNCU, which areas would have been your priority areas and why? Explain how they are similar or different from UNICEF’s?

30. Did you see any joint actions between different stakeholders in their support for newborn care in this SNCU? Give examples
   a. Has there been any of these joint actions that were between UNICEF and another organization apart from the government?
b. Is there a duplication of the support UNICEF is providing to this SNCU, in which areas, and

Sustainability
31. In general, do you think the SNCU programme is sustainable in the long term? What were the
major factors that will influence the sustainability of the programme?

32. If you are looking solely at UNICEF’s support to this SNCU, what will you describe as the positive
results?

33. Are there some negative impacts of UNICEF’s work on the SNCU and facility in general? explain

34. In your opinion, what helped UNICEF to achieve these positive results?
(Probe for
   a. commitment,
   b. leadership,
   c. resource availability,
   d. partner engagement,
   e. reputation and track record, etc.)

35. How do you think that this facility can continue to sustain the positive contributions UNICEF made
to this SNCU? What additional support will be required; by who and how?

36. In your opinion, are any components of the positive contributions from UNICEF unsustainable?
   a. Why do you think so?
   b. What can be done differently in (mention District) if they are to be sustained?
   c. What lessons can be learned from such areas?
Interview topic guide for collaborative centres

1. As a collaborative centre, in what ways have you been involved in newborn care in the country?

2. How have you been involved in the government’s Facility Based Newborn Care (FBNC) programme?
   a. What were your terms of reference,
   b. Which areas did you prioritise?
   c. How much of your support went into the Special Newborn Care Units (SNCUs)?

3. Can you describe in detail who funded you to provide this support to the FBNC and SNCU programmes? Probe for
   a. government’s contributions as well as other donors
   b. obtain a sense of what proportion of the contribution was from government

4. How was UNICEF involved in your support for the FBNC and SNCU programmes?
   Probe for
   - Types of support received from UNICEF – technical or financial
   - What was the focal areas UNICEF’s support concentrated on – capacity building? Records keeping and reporting? Quality assurance? Operational research? Or Review meetings?
   - How UNICEF selected those areas of support

5. Can you describe whether there was a UNICEF plan of support for your institution to support the FBNC and SNCU programmes and what this plan was? Probe whether
   - there were agreements and terms of reference (Obtain a copy)
   - this plan evolved over time with the changing newborn health landscape?

6. In your view,
   a. how will you describe the relevance of UNICEF’s contribution to the FBNC and SNCU programme? Do they align with national priorities and strategies?
   b. how do you think UNICEF’s support met the objectives of the FBNC and SNCU programmes in general?
      i. Which objectives were met, and which were not met?
   c. how do you think UNICEF’s contributions to the programme represent the best possible use of resources? Could it have been better and in what ways?
   d. how can UNICEF’s support to the FBNC and SNCU programmes be sustained after they withdraw their support?
   e. Please describe any mechanisms in place to ensure that UNICEF’s support to you for the SNCU programme will be sustainable after they withdraw their funding?
   f. To what extent have UNICEF’s support been mainstreamed into the NHM?

7. How do you think UNICEF’s support for the programme should continue going forward?
   Probe for
   - Which aspects need to be maintained?
   - What new areas must UNICEF support in?
   - How do you think UNICEF could provide such support?
   - Who (organizations) should be involved in this?

8. How do you think your institution’s role in supporting the FBNC and SNCU programmes change going into the future based on your experiences over the past decade?
### Checklist for Observation at NBCCs, NBSUs, SNCUs & NICUs

#### Services Available at the Unit (ASK)

<table>
<thead>
<tr>
<th>Service</th>
<th>Available</th>
<th>VARNA ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Newborn resuscitation</td>
<td>Yes; No</td>
<td>VARNA ME</td>
</tr>
<tr>
<td>2. Managing sick newborns</td>
<td>Yes; No</td>
<td>SICKNB</td>
</tr>
<tr>
<td>3. Postnatal care</td>
<td>Yes; No</td>
<td>PNC</td>
</tr>
<tr>
<td>4. Follow-up of high risk newborns</td>
<td>Yes; No</td>
<td>RISKFU</td>
</tr>
<tr>
<td>5. Referral Services</td>
<td>Yes; No</td>
<td>REFERRAL</td>
</tr>
<tr>
<td>6. Immunisation services</td>
<td>Yes; No</td>
<td>IMMUNIZ</td>
</tr>
<tr>
<td>7. Has a baby care area</td>
<td>Yes; No</td>
<td>CAREAREA</td>
</tr>
<tr>
<td>8. Gowning area at entrance</td>
<td>Yes; No</td>
<td>GOWNAR</td>
</tr>
<tr>
<td>9. Handwashing station(s)-number</td>
<td>Yes; No</td>
<td>IVMIXAREA</td>
</tr>
<tr>
<td>10. Examination Area</td>
<td>Yes; No</td>
<td>LAB</td>
</tr>
<tr>
<td>11. Area for mixing IV medications</td>
<td>Yes; No</td>
<td>STEPDOWN</td>
</tr>
<tr>
<td>12. Mothers’ area to express breastmilk</td>
<td>Yes; No</td>
<td>LIGHTING</td>
</tr>
<tr>
<td>13. Laboratory</td>
<td>Yes; No</td>
<td>LIGHTING</td>
</tr>
<tr>
<td>14. Boiling &amp; Autoclaving</td>
<td>Yes; No</td>
<td>EXAMARE</td>
</tr>
<tr>
<td>15. Step down area (for rooming in)</td>
<td>Yes; No</td>
<td>EXAMARE</td>
</tr>
<tr>
<td>16. Backup generator</td>
<td>Yes; No</td>
<td>GENERAT</td>
</tr>
<tr>
<td>17. Voltage stabiliser</td>
<td>Yes; No</td>
<td>ELECT</td>
</tr>
<tr>
<td>18. Procedure lightning in baby care area</td>
<td>Yes; No</td>
<td>EX</td>
</tr>
<tr>
<td>19. Ambient/White light</td>
<td>Yes; No</td>
<td>WALLTHER</td>
</tr>
<tr>
<td>20. (Supply-and-) Exhaust ventilation</td>
<td>Yes; No</td>
<td>OXIMETER</td>
</tr>
<tr>
<td>21. Thermometer for room temp</td>
<td>Yes; No</td>
<td>XRAY</td>
</tr>
<tr>
<td>22. Room heater</td>
<td>Yes; No</td>
<td>XRAY</td>
</tr>
<tr>
<td>23. Wall clock with second hand</td>
<td>Yes; No</td>
<td>XRAY</td>
</tr>
<tr>
<td>24. Refrigerator</td>
<td>Yes; No</td>
<td>XRAY</td>
</tr>
<tr>
<td>25. Chlorhexidine disinfectant stock</td>
<td>Yes; No</td>
<td>CHLORHEX</td>
</tr>
<tr>
<td>26. Referral transport</td>
<td>Yes; No</td>
<td>AMBULANCE</td>
</tr>
<tr>
<td>27. Benchtop Centrifuge</td>
<td>Yes; No</td>
<td>CENTRIFUGE</td>
</tr>
<tr>
<td>28. Binocular Microscope</td>
<td>Yes; No</td>
<td>MICROSCOPE</td>
</tr>
<tr>
<td>29. Bilirubinometer</td>
<td>Yes; No</td>
<td>BILIRUBIN</td>
</tr>
<tr>
<td>30. Glucometer with dextrostix</td>
<td>Yes; No</td>
<td>GLUCOMETER</td>
</tr>
<tr>
<td>31. Phototherapy Unit</td>
<td>Yes; No</td>
<td>PHOTOARRY</td>
</tr>
<tr>
<td>32. Radiant warmer</td>
<td>Yes; No</td>
<td>RADIANT</td>
</tr>
<tr>
<td>33. Infusion pump</td>
<td>Yes; No</td>
<td>INFPUMP</td>
</tr>
<tr>
<td>34. Oxygen concentrator</td>
<td>Yes; No</td>
<td>OXYCONC</td>
</tr>
<tr>
<td>35. Laryngoscope for neonates</td>
<td>Yes; No</td>
<td>LARYNGOSCOPE</td>
</tr>
<tr>
<td>36. Clinical digital thermometer</td>
<td>Yes; No</td>
<td>THERMCLIN</td>
</tr>
<tr>
<td>37. Mucus extractor</td>
<td>Yes; No</td>
<td>MUCUSEXTACT</td>
</tr>
<tr>
<td>38. Baby weighing scale; 10kg; 5g graduation</td>
<td>Yes; No</td>
<td>SCALE</td>
</tr>
<tr>
<td>39. Feeding tube</td>
<td>Yes; No</td>
<td>FEEDTUBE</td>
</tr>
<tr>
<td>40. Pulse oximeter (neonatal), bedside</td>
<td>Yes; No</td>
<td>OXIMETER</td>
</tr>
<tr>
<td>41. Neonatal Stethoscope</td>
<td>Yes; No</td>
<td>STETH</td>
</tr>
<tr>
<td>42. Neonatal Sphygmomanometer</td>
<td>Yes; No</td>
<td>SPHYG</td>
</tr>
<tr>
<td>43. Incubators</td>
<td>Yes; No</td>
<td>INCUBATOR</td>
</tr>
<tr>
<td>44. Infantometer</td>
<td>Yes; No</td>
<td>INFANTOMETER</td>
</tr>
<tr>
<td>45. Endotracheal tubes</td>
<td>Yes; No</td>
<td>ENODTUBE</td>
</tr>
<tr>
<td>46. Transfusion set (blood)</td>
<td>Yes; No</td>
<td>TRANSFUSET</td>
</tr>
<tr>
<td>47. Disposable nasal prongs</td>
<td>Yes; No</td>
<td>NASALPRONGS</td>
</tr>
<tr>
<td>48. Umbilical venous catheter</td>
<td>Yes; No</td>
<td>UMBICAT</td>
</tr>
</tbody>
</table>

#### Configuration of the Unit (CHECK TO SEE)

#### Essential Laboratory equipment (CHECK TO SEE)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Available</th>
<th>VARNA ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Benchtop Centrifuge</td>
<td>Yes; No</td>
<td>CENTRIFUGE</td>
</tr>
<tr>
<td>28. Binocular Microscope</td>
<td>Yes; No</td>
<td>MICROSCOPE</td>
</tr>
<tr>
<td>29. Bilirubinometer</td>
<td>Yes; No</td>
<td>BILIRUBIN</td>
</tr>
<tr>
<td>30. Glucometer with dextrostix</td>
<td>Yes; No</td>
<td>GLUCOMETER</td>
</tr>
</tbody>
</table>

#### Essential equipment (enter the numbers available) for Newborn care (CHECK AND ASK)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Available</th>
<th>VARNA ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. Phototherapy Unit</td>
<td>Yes; No</td>
<td>PHOTOARRY</td>
</tr>
<tr>
<td>32. Radiant warmer</td>
<td>Yes; No</td>
<td>RADIANT</td>
</tr>
<tr>
<td>33. Infusion pump</td>
<td>Yes; No</td>
<td>INFPUMP</td>
</tr>
<tr>
<td>34. Oxygen concentrator</td>
<td>Yes; No</td>
<td>OXYCONC</td>
</tr>
<tr>
<td>35. Laryngoscope for neonates</td>
<td>Yes; No</td>
<td>LARYNGOSCOPE</td>
</tr>
<tr>
<td>36. Clinical digital thermometer</td>
<td>Yes; No</td>
<td>THERMCLIN</td>
</tr>
<tr>
<td>37. Mucus extractor</td>
<td>Yes; No</td>
<td>MUCUSEXTACT</td>
</tr>
<tr>
<td>38. Baby weighing scale; 10kg; 5g graduation</td>
<td>Yes; No</td>
<td>SCALE</td>
</tr>
<tr>
<td>39. Feeding tube</td>
<td>Yes; No</td>
<td>FEEDTUBE</td>
</tr>
<tr>
<td>40. Pulse oximeter (neonatal), bedside</td>
<td>Yes; No</td>
<td>OXIMETER</td>
</tr>
<tr>
<td>41. Neonatal Stethoscope</td>
<td>Yes; No</td>
<td>STETH</td>
</tr>
<tr>
<td>42. Neonatal Sphygmomanometer</td>
<td>Yes; No</td>
<td>SPHYG</td>
</tr>
<tr>
<td>43. Incubators</td>
<td>Yes; No</td>
<td>INCUBATOR</td>
</tr>
<tr>
<td>44. Infantometer</td>
<td>Yes; No</td>
<td>INFANTOMETER</td>
</tr>
<tr>
<td>45. Endotracheal tubes</td>
<td>Yes; No</td>
<td>ENODTUBE</td>
</tr>
<tr>
<td>46. Transfusion set (blood)</td>
<td>Yes; No</td>
<td>TRANSFUSET</td>
</tr>
<tr>
<td>47. Disposable nasal prongs</td>
<td>Yes; No</td>
<td>NASALPRONGS</td>
</tr>
<tr>
<td>48. Umbilical venous catheter</td>
<td>Yes; No</td>
<td>UMBICAT</td>
</tr>
<tr>
<td>49. Newborn size oxygen mask</td>
<td>OXYMASK</td>
<td>50. Neonatal electrodes for ECG</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>51. Oxygen cylinder</td>
<td>OXYCYLIN</td>
<td>52.</td>
</tr>
</tbody>
</table>

### Human Resources Available at the Unit (ASK)

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
<th>VARNAME ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Staff Nurses</td>
<td>SNAVAIL</td>
<td>NEONURAVAIL</td>
</tr>
<tr>
<td>2. Neonatal Nurse</td>
<td>NEONURAVAIL</td>
<td></td>
</tr>
<tr>
<td>3. Midwives</td>
<td>MWAVAIL</td>
<td>PAAVAIL</td>
</tr>
<tr>
<td>4. Paediatric nurse</td>
<td>PAEDAVAIL</td>
<td></td>
</tr>
<tr>
<td>5. Other nurses1(specify)</td>
<td>OTHNUR1AVAIL</td>
<td></td>
</tr>
<tr>
<td>6. Other nurses2(specify)</td>
<td>OTHNUR2AVAIL</td>
<td></td>
</tr>
<tr>
<td>7. Physician Assistant</td>
<td>PAAVAIL</td>
<td>MOAVAIL</td>
</tr>
<tr>
<td>8. Doctors - Medical Officers</td>
<td>MOAVAIL</td>
<td></td>
</tr>
<tr>
<td>9. Doctors - Paediatricists</td>
<td>PAEDAVAIL</td>
<td></td>
</tr>
<tr>
<td>10. Doctors - Neonatologists</td>
<td>NEONYAVAIL</td>
<td></td>
</tr>
<tr>
<td>11. Lab technologist/technician</td>
<td>LABTECHAVAIL</td>
<td></td>
</tr>
<tr>
<td>12. Radiologist</td>
<td>RADIOAVAIL</td>
<td></td>
</tr>
<tr>
<td>13. Anaesthetist/anaesthetologist</td>
<td>ANAESTHAVAIL</td>
<td></td>
</tr>
<tr>
<td>14. Support staff1(specify)</td>
<td>SUPPORT1AVAIL</td>
<td></td>
</tr>
<tr>
<td>15. Support staff2(specify)</td>
<td>SUPPORT2AVAIL</td>
<td></td>
</tr>
<tr>
<td>16. Support staff3(specify)</td>
<td>SUPPORT3AVAIL</td>
<td></td>
</tr>
</tbody>
</table>

### 17. Does this facility offer 24-hour services to clients?
1=Yes; 2=No 24HRS

### 18. How many staff are on duty now? (ENTER THE NUMBERS)

| a. Neonatal nurses         | NOWNIGHT |
| b. Staff nurses            | SNONIGHT |
| c. Physicians – Medical officers | MOONIGHT |
| d. Paediatricians/Neonatologists | PAEDONIGHT |
| e. Support Staff           | SUPNIGHT |

### 19. How many staff were on duty last night? (ENTER THE NUMBERS)

| a. Neonatal nurses         | NOWNIGHT |
| b. Staff nurses            | SNONIGHT |
| c. Physicians – Medical officers | MOONIGHT |
| d. Paediatricians/Neonatologists | PAEDONIGHT |
| e. Support Staff           | SUPNIGHT |

### 20. Are there written protocols for caring managing sick newborns in this facility and was UNICEF involved in their development? (ASK & CHECK)

| a. Protocols for care of small babies       | 1=Yes; with UNICEF | 2=Yes, but NO UNICEF involvement in development | 3=No protocols exist | PROTOCOLS |
| b. Protocols for care of sick babies        | 1=Yes; with UNICEF | 2=Yes, No UNICEF | 3=No such protocol | LBWPRTC'L |
| c. Protocol for resuscitation of newborns    | 1=Yes; with UNICEF | 2=Yes, No UNICEF | 3=No such protocol | RESUSPR'TCL |
| d. Protocol for hand hygiene                 | 1=Yes; with UNICEF | 2=Yes, No UNICEF | 3=No such protocol | WASHPR'TCL |
|   | e. Protocol for KMC care for small babies | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | KMCRTC   |
|   | f. Protocol for antibiotic treatment for sick newborns | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | ATBRTC   |
|   | g. Protocols for managing pneumonia or newborn sepsis | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | PNEUPRTC |
|   | h. Protocol for oxygen therapy for newborns | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | OXYGENRTC |
|   | i. Protocol for small or low birthweight baby feeding | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | FEEDRTC   |
|   | j. Other protocols for sick and small newborn care | 1=Yes; 2=Yes, with UNICEF; 3=No protocol | OTHRTC    |
| 21. | Are mothers allowed to stay with their sick or small babies during care? | 1=Yes; 2=No | MUMSINC   |
| 22. | Do mothers have a place to sleep at night whilst they care for their newborns | 1=Yes; 2=No | ROOMING   |
| 23. | Are data on all admissions recorded? | 1=Yes; 2=No | DATINGREC  |
| 24. | How are these data used? | 1=For District/State statistics only; 2=To improve care; 3=Don’t know; 4=NA, no data collected | DATINGUSE  |
| 25. | What happens when babies are discharged home? | 1=Referred to ASHA; 2=Asked to return for review; 3=Leave care to the family | DISCHARGE  |
| 26. | Is there a referral card? **(ASK AND CHECK)** | 1=Yes, seen; 2=Yes, not seen; 3=No, no card | REFERRALCARD |
| 27. | Is there a document that is used when referring newborns to ASHA for community care? | 1=Yes, seen; 2=Yes, not seen; 3=No, no card; 9=NA, not done | ASHAREFEC |
| 28. | Does this facility provide supervision to any other facility or individuals? Is it one of the following: | 1=Yes; 2=No | SUPERVISESFAC  |
| a. | Newborn care corners (NBCCs) | 1=Yes; 2=No; 9=NA | NBCCSUPVSE |
| b. | Newborn Stabilisation Units (NBSUs) | 1=Yes; 2=No; 9=NA | NBSUSUPVSE |
| c. | Special Newborn Care Units (SNCUs) | 1=Yes; 2=No; 9=NA | SNCUSUPVSE |
| 29. | Is there a quality of care assurance unit in this facility? | 1=Yes; 2=No | QAUNIT    |
| 30. | Is there an external supervision to assess quality of care in this facility? | 1=Yes; 2=No | EXTNALSUP  |
Annex 6. Revised Tools Following Data Collection in MP

Interview topic guide-IIb. DISTRICT level (MOHFW)

1. In this DISTRICT, in what ways do you think newborn health has changed over the past 10 years? Prompt on
   a. facility versus community newborn health
   b. mortality trends
   c. progress and programme monitoring

2. Can you tell me whether there are specific targets set for community and facility newborn care in your DISTRICT?

About SNCUs

3. How important are SNCUs in providing newborn care in this district since they started?
   a. Where are the SNCUs located in the district and how did you decide these locations?
   b. Services being provided
   c. Have SNCUs’ roles changed over time and what accounted for those changes?

4. What was your district’s approach to implementing the SNCU programme?
   a. What criteria were used to select facilities
   b. Was the selection of facilities driven by non-governmental organizations or UN agencies and who were these organizations?
   c. Are there other facilities in the district that need to have SNCUs but currently do not? Why do you think so?

5. What support does your district provide to the SNCUs?
   Probe for
   a. Supporting infrastructure improvement
   b. Human resources and capacity building
   c. Monitoring the implementation
   d. Linkages with community care for newborns
   e. System for addressing emerging challenges?

6. Which organizations supported you to implement SNCUs in this district and which areas did they support (list all the organizations first and take them one after the other and get the support they provided)
   Probe for
   a. Governmental and non-governmental organizations including UN agencies and CSOs
   b. Did UNICEF play any role?

7. Can you please share with us how your district allocates resources for SNCUs within your Programme Implementation Plan (PIP)? Request for a copy of the PIP for the period 2007-2017
   Probe for whether they consider
a. Procurement
b. Capacity development
c. Infrastructure, drugs, equipment and supplies, human resources, protocols, etc.

8. How is the **district involved** in **allocating staff and procuring resources** (such as equipment) for SNCUs?

Probe for whether they use

a. Staff: local expertise vs. external consultants
b. Equipment: existing processes or developed parallel systems of procurement
c. Equipment: locally manufactured equipment vs imported ones)

9. How does the district hold people accountable for resources (money, materials, etc) that have been allocated to SNCUs?

Probe for

a. How would people who do not use resources (financial and other) appropriately be identified and what actions will be taken against them?

10. Do you know of any documents (guidelines, SOPs, protocols) that guide the provision of care for newborns within SNCUs in this district?

a. how were these documents developed?
b. Who supported in their development and in what ways?
c. Did UNICEF’s play any role in the process

11. In this district, do you routinely collect data on the work around newborn care in the SNCUs?

a. What data is collected?
b. When and how did they start collecting?
c. What does the district do with the data?
d. Did UNICEF help in the process? What did they do?
e. What will you describe as the main challenges confronting this data gathering and use?
f. Any suggestion to improve, if any?

12. Are there sub-groups in the population in this DISTRICT that do not or are not able to use SNCU services?

Probe for

a. female vs. male babies,
b. tribal populations or castes
c. Any specific geographic areas with limited access
d. what plans are in place to ensure these sub-groups also access services?

13. What mechanisms are in place to support babies within communities once they are discharged from SNCUs?

Probe for
a. What support is provided to those involved in the care of babies discharged from SNCUs in the community?
   i. Training
   ii. Supervision
   iii. Job aids
   iv. Remuneration

14. Do ASHA workers have a role in community care for SNCU-discharged newborns?
   a. Which organizations or individuals have supported the ASHAs in their work related to newborn care?
   b. Has UNICEF played any role? If yes, what role did they play?
   c. What impact do you think UNICEF’s support has had?

15. How are SNCUs linked to newborn care in other facilities higher or lower than their level in this district?
   i. Link to NBSUs
   ii. Link to Medical College Hospitals
   iii. District Early Intervention Centres (DEICs) within the NHM
   iv. Nutrition units

**About UNICEF’s specific Involvement**

16. From your understanding, what were UNICEF’s goals for supporting the SNCU programme in this DISTRICT?

17. Can you outline all the ways in which UNICEF has supported the implementation of the SNCU programme in this DISTRICT? You may repeat previously mentioned roles for emphasis.
   (Probe for
   a. Resources invested into the programme (technical, infrastructure development, equipment, drugs, and supplies, financial, capacity building, etc.)

18. As leaders/managers in this district, have you ever suggested any changes to UNICEF’s areas of support for the SNCUs in your district?
   a. What were these changes you suggested? And why?
   b. How did UNICEF respond to your suggestions?
   c. What impact did these changes have on the overall SNCU implementation?

19. Do you think UNICEF focussed their resources in the most important areas of the SNCU programme in this DISTRICT? Explain

20. If you were to invest the same resources that UNICEF had into SNCUs in this district, what would do differently and why?

21. How has UNICEF’s support to the SNCU programme been mainstreamed into MOHFW activities in the DISTRICT? If your DISTRICT is to carry on with these activities, what additional support will you require?
Sustainability of the SNCU programme

22. In general, do you think this DISTRICT is ready and able to carry on the SNCU programme in the long term?
   a. What do you foresee as the key things that will help you carry on the positive results?
   b. What are the challenges to continuing these results?
## India SNCU Facility Assessment Tool

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of survey</td>
<td></td>
</tr>
<tr>
<td>Name of State</td>
<td></td>
</tr>
<tr>
<td>Name of District</td>
<td></td>
</tr>
<tr>
<td>Name of Facility</td>
<td></td>
</tr>
<tr>
<td>Facility Designation</td>
<td>District Hospital</td>
</tr>
<tr>
<td>Is this facility a?</td>
<td>NBCC</td>
</tr>
<tr>
<td>Number of beds in SNCU</td>
<td></td>
</tr>
</tbody>
</table>

### Details for key contact

#### Person completing this form

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
</tbody>
</table>

#### Contact at this facility

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of SNCU in charge</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
</tbody>
</table>
## i. Checklist for Observation

<table>
<thead>
<tr>
<th>a) Available services</th>
<th>Available</th>
<th>a) Available services</th>
<th>Available</th>
<th>b) Configuration of the Unit</th>
<th>Available</th>
<th>b) Configuration of the Unit</th>
<th>Available</th>
<th>c) Configuration of the Unit... Continued</th>
<th>Available</th>
<th>c) Configuration of the Unit... Continued</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Newborn Resuscitation</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>5) Area for mixing IV medications</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>9) Chlorhexidine disinfectant stock</td>
<td>Yes</td>
</tr>
<tr>
<td>2) Managing sick newborns</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>6) Mothers' area for express breastfeeding</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>10) Mechanical ventilation</td>
<td>Yes</td>
</tr>
<tr>
<td>3) Postnatal care</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>7) Laboratory</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>11) Surfactant therapy</td>
<td>Yes</td>
</tr>
<tr>
<td>4) Community based follow-up of high risk newborns</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>8) Step down area (for rooming in)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>12) CPAP</td>
<td>Yes</td>
</tr>
<tr>
<td>5) Facility based follow-up of high risk newborns</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>13) Minor surgical procedures</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>14) Screening for: (i) audiometry (ii) Visual impairment</td>
<td>Yes</td>
</tr>
<tr>
<td>6) Referral services</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>7) Refrigerator</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Not available</td>
<td>9) Boiling and Autoclaving</td>
<td>Yes</td>
</tr>
<tr>
<td>7) Functional ambulance</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>8) Backup generator</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Not available</td>
<td>10) Benchtop centrifuge</td>
<td>Yes, functional</td>
</tr>
<tr>
<td>8) Charges/fees for use of ambulance</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>9) Voltage stabiliser</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
<td>11) Binocular Microscope</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
</tr>
</tbody>
</table>

## ii. Essential Laboratory equipment

<table>
<thead>
<tr>
<th>a) Available services</th>
<th>Available</th>
<th>a) Available services</th>
<th>Available</th>
<th>b) Configuration of the Unit</th>
<th>Available</th>
<th>b) Configuration of the Unit</th>
<th>Available</th>
<th>c) Configuration of the Unit... Continued</th>
<th>Available</th>
<th>c) Configuration of the Unit... Continued</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Benchtop centrifuge</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
</tr>
<tr>
<td>2) Binocular Microscope</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
</tr>
<tr>
<td>3) Bilirubinometer</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
</tr>
<tr>
<td>4) Glucometer</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
</tr>
<tr>
<td>5) Dextrostix</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>No</td>
<td>Available</td>
<td>Yes, functional</td>
<td>Yes, not functional</td>
<td>Not available</td>
</tr>
</tbody>
</table>
### iii. Essential functional equipment for newborn care

<table>
<thead>
<tr>
<th>Number of units</th>
<th>Number of functional units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Phototherapy Unit
2) Radiant warmer
3) Infusion pump
4) Oxygen concentrator
5) Laryngoscope for neonates
6) Clinical digital thermometer
7) Mucus extractor
8) Baby weighing scale; 10kg; 3g graduation
9) Feeding tube
10) Pulse oximeter (neonatal), bedside
11) Neonatal Stethoscope
12) Neonatal Sphygmomanometer
13) Incubators
14) Infantometer
15) Endotracheal tubes
16) Transfusion set (blood)
17) Disposable nasal prongs
18) Umbilical venous catheter
19) Newborn size oxygen mask
20) Neonatal electrodes for ECG
21) Oxygen cylinder

- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
- ☐ Units not available
### iv. Essential drugs and supplies (Talk to pharmacist/in-charge)

#### A) ANTIBIOTICS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Ampicillin powder for injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Benzathine benzylpenicillin powder for injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>3) Ceftriaxone injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>4) Cloxacillin injections</td>
<td>Drug available today</td>
</tr>
<tr>
<td>5) Gentamycin Injection</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>

#### B) ANTIFUNGALS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Gentian violet (crystals or reconstituted)</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Mycostatin liquid</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>

#### C) SEDATIVES/ANTICONVULSANTS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Phenoobarbital Injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Phenytion Injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>3) Lorazepam Injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>4) Midazolam Injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>5) Diazepam suppository</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>

#### D) STEROIDS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Betamethasone</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Dexamethasone</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>

#### E) IVFs

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Dextrose and water 5% (D5W) intravenous solution</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Dextrose and water 10% (D10W) intravenous solution</td>
<td>Drug available today</td>
</tr>
<tr>
<td>3) Sodium Chloride (0.9NS) intravenous solution</td>
<td>Drug available today</td>
</tr>
<tr>
<td>4) Other plasma expander such as Ringers Lactate (RL)</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>

#### F) OTHER DRUGS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Novapino syrup</td>
<td>Drug available today</td>
</tr>
<tr>
<td>2) Caffeine citrate injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>3) Dopamine injection</td>
<td>Drug available today</td>
</tr>
<tr>
<td>4) Theophylline injection</td>
<td>Drug available today</td>
</tr>
</tbody>
</table>
### F. OTHER DRUGS... CONTINUED

<table>
<thead>
<tr>
<th>Drug</th>
<th>Drug available today</th>
<th>Stockout over past month</th>
<th>Drug never available</th>
</tr>
</thead>
<tbody>
<tr>
<td>5) Aminophylline injection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Vitamin K injection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Magnesium sulfate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### v. Human Resources (Ask the in-charge Administrator)

<table>
<thead>
<tr>
<th>Cadre</th>
<th>Number sanctioned posts</th>
<th>Number of sanctioned posts filled</th>
<th>Number on deputation</th>
<th>Number of contractual staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Staff nurses (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Nurses with FBNC training (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Other nurse (specify)…</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Physician assistant (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Doctors - Medical officers (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Medical officers with FBNC training (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Doctors - Paediatricians (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Doctors - Neonatologists (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) Lab technologist/technician (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) Radiologist (in the facility)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11) Anaesthetist/anaesthesiologist (in the facility)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12) Data entry operator (in SNCU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13) Support staff (specify)…</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14) Does this facility offer 24-hour services to clients?  
   - Yes  
   - No

   i) If no, what are the opening times of this facility? (use 24 hour format)
   - HH:  
   - MM:  
   - HH:  
   - MM:
### v. Human Resources (Ask the in-charge Administrator). Continued

15) How many staff are on duty now (Please check and match with duty roster)

- a) Nurses with FENC training
- b) Staff nurses
- c) Physicians - Medical officer
- d) Medical officer with FENC training
- e) Paediatrician
- f) Neonatologist
- g) Support staff

16) How many staff were on duty last night (Please check and match with duty roster)

- a) Nurses with FENC training
- b) Staff nurses
- c) Physicians - Medical officer
- d) Medical officer with FENC training
- e) Paediatrician
- f) Neonatologist
- g) Support staff

### vi. Protocols

1) Are there written protocols for managing sick newborns in this facility and were UNICEF involved in their development? (Ask & check for display)

- a) Protocols for care of small babies
  - Yes, developed with UNICEF involvement
  - Yes, but NO UNICEF involvement
  - Yes, not sure
  - No protocols exist

  - i) Was the protocol seen
    - Yes
    - No
  - ii) If yes, version date

- b) Protocols for care of sick babies
  - Yes, developed with UNICEF involvement
  - Yes, but NO UNICEF involvement
  - Yes, not sure
  - No protocols exist

  - i) Was the protocol seen
    - Yes
    - No
  - ii) If yes, version date

- c) Protocol for resuscitation of newborns
  - Yes, developed with UNICEF involvement
  - Yes, but NO UNICEF involvement
  - Yes, not sure
  - No protocols exist

  - i) Was the protocol seen
    - Yes
    - No
  - ii) If yes, version date
### Protocol for Hand Hygiene

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Protocol for KMC care for small babies

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Protocol for Antibiotic Treatment for Sick Newborns

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Protocols for Managing Pneumonia

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Protocol for Oxygen Therapy for Newborns

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Protocol for Small or Low Birthweight Baby Feeding

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available

### Other Protocols for Sick and Small Newborn Care, state:

- [ ] Yes, developed with UNICEF involvement
- [ ] Yes, but NO UNICEF involvement
- [ ] Yes, not sure
- [ ] No protocols exist

- **i)** Was the protocol seen
  - [ ] Yes
  - [ ] No

- **ii)** If yes, version date
  - [ ] DD
  - [ ] MM
  - [ ] YYYY

- [ ] No version date available
k) Protocols for managing newborn sepsis
- Yes, developed with UNICEF involvement
- Yes, but NO UNICEF involvement
- Yes, not sure
- No protocols exist

i) Was the protocol seen?
- Yes
- No

ii) If yes, version date
- DD
- MM
- YYYY
- No version date available

vii. Documentation/Audit activities
(Please tick multiple answers if necessary)

1) Are mothers/carers allowed to stay with their sick or small babies during care?
- Yes
- No

2) Do mothers/carers have a place to sleep at night whilst they care for their newborn (please visit mothers' ward)?
- Yes
- No

3) Are data on all admissions recorded?
- Yes
- No

i) If yes, how is this data used?
- For district/state statistics only
- To improve care
- Don't know
- NA, no data collected

4) What happens when babies are discharged home?
- Referred to ASHA
- Asked to return for review
- Leave care to the family

5) Is there a referral card? (Ask & Check)
- Yes, seen
- Yes, not seen
- No, no card

6) Is there a document that is used when referring newborns to ASHA for community care?
- Yes, seen
- Yes, not seen
- No, no card
- NA, not done

7) How are the ASHAs getting information about the SNCU discharged newborns?

8) Does this facility provide supervision to any other facility or individuals? Is it one of the following?
- Yes
- No

   a) Newborn care corners (NBCCs)
   - Yes
   - No

   b) Newborn stabilisation units (NBSUs)
   - Yes
   - No

   c) Special newborn care units (SNCUs)
   - Yes
   - No

9) Is there a quality of care assurance unit in this facility?
- Yes
- No

   a) If yes, is it:
   - District
   - Facility
   - Other

   b) If other please state:

10) Is there an external supervision to assess quality of care in this facility?
   - Yes
   - No

   i) If yes, then how frequently?

11) Does this SNCU have a mortality audit committee?
- Yes
- No
12) How frequently do SNCU staff have review meeting?

13) All newborn deaths (past 6 months) audited? □ All □ Some □ None
   i) Was action taken? □ Yes □ No
   ii) If yes, what action was taken?

viii. Performance indicators of the last 6 months

<table>
<thead>
<tr>
<th>Item</th>
<th>Inborn</th>
<th>Out born</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Number of admissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Number of deaths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Number of babies &lt;34 weeks gestational age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Number of babies with birthweight ~ 1500 grams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Number of referrals to higher centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Number of babies followed up at community level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ix. Labour Room - Essential drugs and supplies (Talk to pharmacist/in-charge)

A) INJECTABLE ANTIBIOTICS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Penicillin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
<tr>
<td>2) Ampicillin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
<tr>
<td>3) Amoxycillin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
<tr>
<td>4) Metronidazole</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
<tr>
<td>5) Gentamicin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
<tr>
<td>6) Amikacin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
</tbody>
</table>

B) UTEROTONICS

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Oxytocin</td>
<td>□ Drug available today</td>
</tr>
<tr>
<td></td>
<td>□ Stockout over past month</td>
</tr>
</tbody>
</table>

179
C) ANTI-CONVULSANTS

1) Magnesium Sulphate
   - Drug available today
   - Stockout over past month
   - Drug never available

D) ANTI-HYPERTENSIVES

1) Nifedipine
   - Drug available today
   - Stockout over past month
   - Drug never available

E) INJECTABLE STEROIDS

1) Betamethasone
   - Drug available today
   - Stockout over past month
   - Drug never available
2) Dexamethasone
   - Drug available today
   - Stockout over past month
   - Drug never available

x. Labour Room - Essential functional equipment

<table>
<thead>
<tr>
<th>Number of units</th>
<th>Number of functional units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) BP Machine</td>
<td></td>
</tr>
<tr>
<td>2) IV giving sets</td>
<td></td>
</tr>
<tr>
<td>3) Fridge for storing Oxytocin</td>
<td></td>
</tr>
<tr>
<td>3) Pinard stethoscope</td>
<td></td>
</tr>
<tr>
<td>4) Sonicaid/Doppler</td>
<td></td>
</tr>
</tbody>
</table>

5) Partograph - Please check the last 10 partographs prior to day of assessment
   i) Number of partographs where foetal heart rate (FHR) was recorded
   ii) Number of partographs where FHR was recorded every 30 minutes throughout
   iii) Number of partographs where colour of liquor was recorded

xi. NBCC Corner - Essential functional equipment

<table>
<thead>
<tr>
<th>Number of units</th>
<th>Number of functional units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Radiant warmer</td>
<td></td>
</tr>
<tr>
<td>2) Oxygen concentrator</td>
<td></td>
</tr>
<tr>
<td>3) Oxygen cylinder</td>
<td></td>
</tr>
<tr>
<td>4) Newborn size oxygen mask - 0</td>
<td></td>
</tr>
<tr>
<td>5) Newborn size oxygen mask - 1</td>
<td></td>
</tr>
<tr>
<td>6) Newborn weighing machine</td>
<td></td>
</tr>
<tr>
<td>7) Newborn size ambubag</td>
<td></td>
</tr>
</tbody>
</table>
xii. Labour Room - Human Resources (Ask the in-charge Administrator)

<table>
<thead>
<tr>
<th>Cadre</th>
<th>Number of staff trained in NNR and essential newborn care present in labour room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Staff nurses</td>
<td></td>
</tr>
<tr>
<td>2) Other nurse (specify)....</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
</tr>
<tr>
<td>3) Physician assistant</td>
<td></td>
</tr>
<tr>
<td>4) Doctors - Medical officers</td>
<td></td>
</tr>
<tr>
<td>5) Doctors - Paediatricians</td>
<td></td>
</tr>
<tr>
<td>6) Doctors - Neonatologists</td>
<td></td>
</tr>
<tr>
<td>7) Support staff (specify)....</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
</tr>
</tbody>
</table>

xiii. Operating Theatre - Essential functional equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Number of units</th>
<th>Number of functional units</th>
<th>Units not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) BP machine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) IV giving set</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Sonicaid/Doppler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) C-section kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Radiant warmer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Newborn resuscitation kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Sterile gloves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Laparotomy Kit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

xiv. Maternal Health Outcomes (Month of survey)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Number of women who gave birth</td>
<td></td>
</tr>
<tr>
<td>2) Number of breech vaginal deliveries</td>
<td></td>
</tr>
<tr>
<td>3) Number of forceps vaginal deliveries</td>
<td></td>
</tr>
<tr>
<td>4) Number of vacuum extraction vaginal deliveries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Day</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
</tr>
<tr>
<td>5) Number of caesarean sections</td>
<td></td>
</tr>
<tr>
<td>6) Indications for c-sections:</td>
<td></td>
</tr>
<tr>
<td>i) Foetal distress - MSAF</td>
<td></td>
</tr>
<tr>
<td>ii) Foetal distress - Cord prolapse</td>
<td></td>
</tr>
<tr>
<td>iii) Previous c-section</td>
<td></td>
</tr>
<tr>
<td>iv) Antepartum haemorrhage</td>
<td></td>
</tr>
<tr>
<td>v) Malpresentation</td>
<td></td>
</tr>
<tr>
<td>vi) Dystocia</td>
<td></td>
</tr>
<tr>
<td>vii) Other: <em>(please specify below)</em></td>
<td></td>
</tr>
</tbody>
</table>

**xv. Comments**

*Please add the title of the section when commenting.*
1. What is your role regarding newborn care within your communities and how did you get involved in this?

2. How were you prepared to play your role in newborn care in this community? (ask to see any kits including books, supplies, equipment and drugs if available)
   (probe regarding
   a. training (what training, who trained and for how long)
   b. documents, manuals, guidelines
   c. equipment
   d. medicines and supplies

3. Were you consulted in planning for your tasks?
   - What inputs did you make and why?

4. What type of support do you receive for your work around newborn care? Who provides this support?
   Probe:
   a. Anganwadi workers, ANMs, PHC medical officer, ASHA supervisors
   b. Is the support in the form of problem-solving, training, replenishing stock of drugs and supplies, tools and equipment repair, etc.
   c. Are there any organizations that support your work around newborn care?
   d. How will you describe the usefulness of this support? Explain why.
   e. For you to work more efficiently, what changes would you want in the support you have been receiving for your work on newborn care.

5. How are community leaders (e.g. Panchayat leaders, etc) involved in the work you do for newborns in this community?
   a. On your work around newborns, who are the leaders who provide this support?
   b. On your work around newborns, how do they support you?
   c. On your work around newborns, what changes would you like in the support provided by these leaders?

6. In spite of all your efforts, sometimes some women end up giving birth at home, what care do you provide to such babies born at home?
   Probe for
   a. How they identify such babies?
   b. How and who prepared you to care for babies born at home?

7. Are there forms or registers you fill to record your work on newborn care in your communities and who do you submit these to?
   Probe for
   • Are there any challenges you face filling and submitting these forms? What are they?

8. Why do you help newborn babies in your community?
   Probe to find out about
   - incentives and motivation such as social recognition, social status, voluntarism, monetary incentives, job opportunities, career progression etc.
9. How do you provide care for newborn babies who are small and sick in your community?
   Probe for
   a. How they identify such babies?
   b. How and who prepared them to provide care for small and sick newborn babies?
   c. Where do they refer small and sick newborn babies?

10. Which facilities provide care for small and sick newborn babies in your communities?

**SNCUs**

11. What role does the district SNCU play in newborn care?

12. Before the SNCU was set up, where were sick and small newborns in your communities cared for?
   Probe for
   a. Public or private facility
   b. Location and distance to the facility
   c. Challenges mothers and families faced taking their babies to the facility

13. How did you know about this SNCU in this district?
   i. Have you ever visited the SNCU?
   ii. What was the purpose of the visit?

14. In the last six months, how many newborns have you referred to the SNCU for care? *(facilitator to ask all participants)*
   i. How will you describe the quality of services provided in the SNCU?
   ii. What feedback have you received from women or families whose babies were sent to or treated at the SNCU?

15. What do you routinely do for newborns who are discharged from SNCUs?
   Probe
   a. How do you get to know when the newborn is discharged from the SNCU for you to carry out the follow-up visit(s)?
   b. Is there a schedule for when to carry out follow-up visits? What to do at each visit? Does what you do at each visit differ?
   c. Are you able to follow this schedule? Explain why and why not
   d. How do community members find your role in this?
   e. Have you received any additional training to perform this specific role?

16. Do staff from the SNCU also come into this community to provide care for babies discharged from SNCUs?
   i. What do they do?
   ii. Do they involve you in these follow-ups?
   iii. What roles do they make you play?
17. In your opinion, what are the challenges in getting SNCU services for the small and sick newborns in your communities?

Probe
a. Are there some women who are not able to go to facility for newborn care? Which persons are not able to go and why is this so? Probe for home birth, poverty, literacy, ethnicity, caste, distance, provider attitudes, etc.
b. Are there some babies that parents do not want to take to facilities when they fall ill? Probe for home births, sex of the baby, myths and beliefs, ethnicity, etc.
c. Their opinion on how women overcome these challenges and do they as ASHAs play any role in helping them overcome these challenges

UNICEF
18. Have you heard about the organization called UNICEF? (Show them the logo of UNICEF and ask)
   i. How have they been involved in the work you do for newborns in this community?

Probe for
a. training (did anybody say they were coming from UNICEF)
b. materials you use for newborn care (do they have this logo)
c. supervision
d. Did you find that logo on any vehicle that comes to support your work in the community, PHC or at the SNCU?

19. Are you paid for the work you do? (facilitator to ask all participants)
   i. What are the tasks around newborn care that are paid for and how much?
   ii. Is this payment regular or now and then?
   iii. Are there challenges you face with receiving these payments?
Interview topic guide- I. UNICEF Staff (National and State levels)

A. Overall status of newborn health in India

1. In what ways do you think newborn health in India has evolved over the past 10 years?
   Prompt on
   d. National priorities, commitments and strategies
   e. facility versus community newborn health
   f. mortality trends
   g. progress and programme monitoring
   h. are there differences between states

2. What are the objectives of the facility based newborn care (FBNC) programme and how does it address newborn care at all levels in India?
   Probe for
   d. What was the rationale for the FBNC programme?
   e. What is the implementation strategy at all levels of health facilities?
   f. What mechanisms are in place to facilitate linkages between newborn care at NBCCs, NBSUs and SNCUs

B. About SNCUs

3. Can you describe the role of the SNCUs in newborn care?
   Probe for
   a. Why they are needed
   b. Which locations they are and whether those are ideal
   c. How their roles have changed over time and what accounted for those changes

4. Has there been any changes in the SNCU programme since it started, what were these and what informed the changes?
   Probe for
   a. changes in approach to implementation in terms of structure, staffing, case management
   b. changes in services provided
   c. Criteria for admission
   d. Focus on mother and baby

5. Which other organizations or institutions supported the implementation of the SNCU programme in India and how has UNICEF collaborated with these organizations to achieve its objectives?

C. Community care for babies discharged from SNCUs

6. What mechanisms are in place to support babies within communities once they are discharged from SNCUs?

7. What support is provided to those involved in the care of babies discharged from SNCUs in the community?
i. Training
ii. Supervision
iii. Job aids
iv. Remuneration

8. How has UNICEF been involved in this care of babies after they are discharged from SNCUs to communities?

Probe for mechanisms to
   a. Train and provide support to people who do follow-up
   b. Monitor on-going care for the baby
   c. Facilitate refer of babies to facilities when they need follow-up specialised care

9. Do ASHA workers have a role in community care for SNCU-discharged newborns?
   a. Which organizations or individuals have supported the ASHAs in their work related to newborn care?
   b. Has UNICEF played any role? If yes, what role did they play?
   c. What impact do you think UNICEF’s support has had?

D. UNICEF’s involvement in the FBNC/SNCU programme

10. To your knowledge, in which areas did UNICEF support the SNCU programme and how did you decide on these?

Prompt for
   a. Supporting infrastructure improvement
   b. Human resources and capacity building
   c. Development of guidelines and protocols
   d. Monitoring care provision for newborns
   e. Data collection and use
   f. System for addressing emerging challenges?

11. Can you please share with us how UNICEF allocated resources in your support for the SNCU Programme?

Probe for
   a. Procurement
   b. Human resources and Capacity development
   c. infrastructure, drugs, equipment and supplies
   d. involvement of MOHFW in the decisions

12. How does UNICEF procure resources for SNCUs?
   (Probe for whether they used
   a. Parallel systems or built on existing processes
   b. Local expertise vs. external consultants
   c. Locally manufactured equipment vs imported ones
13. What **accountability mechanisms** are in place to ensure that UNICEF’s investments in the SNCU programme go into the right areas?
   Probe for
   - b. Mechanisms within UNICEF and MOHFW
   - c. value-for-money considerations
   - d. involving government
   - e. Mechanisms to address situations where investment are not appropriate

14. Which other areas, **apart from SNCUs**, is UNICEF involved in facility-based care for newborns?
   Probe for
   - a. Support for NBSUs and NCCs
   - b. Collaborating centres
   - c. Medical colleges
   - d. NICUs
   - e. Pre-service training of health care workers

15. Do you know if there are **sub-populations who do not have access** to skilled newborn care services and **how has UNICEF helped in improving** access to these sub-populations?
   Prompt for
   - a. female vs. male babies,
   - b. tribal populations or castes

**Data monitoring system in SNCUs and linkages to other data collected in districts and states**

16. What is the **purpose of the data monitoring** system UNICEF has set up in the SNCUs and **what role is UNICEF playing in the day-to-day running** of the system?
   Prompt for
   - a. How it started?
   - b. Which aspects the data monitoring did UNICEF support - software, HR, training, etc.
   - c. How the NHM was involved in the setting-up
   - d. How this system is linked to other health data collected in the district, state, etc.
   - e. How is this data used in monitoring and further planning? Is it fed back to the districts and facilities concerned?
   - f. How data quality is ensured
   - g. What the main challenges (HR, skills, etc.) are and any suggestion to improve on these
   - h. How the system can be sustained after UNICEF’s support ceases

17. Has UNICEF ever had to **change its areas of support to SNCUs** since the programme began?
   a. What were these changes?
   b. What informed those changes?
   c. What impact did these changes have on the overall FBNC and SNCU implementation?

18. If **you, as a person**, were to invest the **same resources that UNICEF had** into the SNCU programme which areas would have been **your priority areas and why**?

**Sustainability of the SNCU programme**
19. In your view, what were the intended results of the SNCU programme?

20. Do you think that the SNCU programme has achieved the results you just described?
   a. If it has, what made them possible to be achieved?
   b. Were there some results that were not achieved? Why were they not achieved?

21. What are the results of UNICEF’s support to the SNCU programme?
   Probe for both
   i. positive and negative results
   ii. intended and unintended
   iii. Were there some intended results of UNICEF’s involvement in the SNCU programme that were not achieved? Why were they not achieved?

22. How has UNICEF’s support to the SNCU programme been mainstreamed into The NHM’s activities?

23. In general, do you think that India and the various states are ready and able to carry on the SNCU programme in the long term?
   a. What do you foresee as the key things that will help carry on the positive results of the SNCU programme?
   b. What will be the challenges?
Interview topic guide-IIb. State level (MOHFW)

23. In this state, in what ways do you think newborn health has changed over the past 10 years?
Prompt on
   a. facility versus community newborn health
   b. mortality trends
   c. progress and programme monitoring

24. Can you tell me whether there is a strategic plan for newborn health in this state and what this plan is?
   Probe
   a. Are there specific objectives, targets?
   b. strategies, and priorities?
   c. facility-based as against community-based newborn care and mechanisms linking the two?
   d. Do you know of any differences between districts in this state? Explain

About SNCUs
25. Can you describe the status of the SNCU programme in your state?
Prompt
   a. Are there other facilities in the State that deserve to have SNCUs but currently do not have? Explain why you think so
   b. What is this State’s approach to implementation of the SNCU programme?

26. In this State, how did you decide on the strategy for implementing the SNCU programme:
   a. Supporting infrastructure improvement
   b. Human resources and capacity building
   c. Monitoring the implementation
   d. What challenges they are facing and system for addressing emerging challenges?

27. Can you please share with us how your state allocates resources for the SNCUs within your Programme Implementation Plan (PIP)? Request for a copy of the PIP for the period 2007-2017
   Probe for whether they consider
   a. Procurement
   b. Capacity development
   c. infrastructure, drugs, equipment and supplies, human resources, protocols, etc.

28. How is the state involved in allocating staff and procuring resources (such as equipment) for SNCUs?
   Probe for whether they use
   d. Staff: local expertise vs. external consultants
   e. Equipment: existing processes or developed parallel systems of procurement
   f. Equipment: locally manufactured equipment vs imported ones)

29. How does the state hold people accountable for resources (money, materials, etc) that have been allocated to SNCUs?
Probe for
a. How people who do not use resources appropriately (financial and other) can be identified and what actions are taken against such people.
b. Are there any rules for accountability?

30. In this state, which organizations supported you to implement the SNCU programme and in which areas did they support (list all the organizations first and take them one after the other and get the support they provided)

a. What role did UNICEF play?

31. Are there any documents (guidelines, SOPs, protocols), specific to this state, that guide the provision of care for newborns within SNCUs?
   d. how were these documents developed?
   e. Who supported the state in their development and in what ways?
   f. Did UNICEF’s play any roles in the process and

32. In this State, what data is routinely collected on the work of the SNCUs?
   a. What do you do with the data?
   b. How do you check the quality of the data?
   c. When and how did they start collecting?
   d. Did UNICEF help in the process? What did they do?
   e. What will you describe as the main challenges confronting this data gathering and use?
   f. Any suggestion to improve the process?

33. Are there sub-groups in the population in this state that do not or are not able to use SNCU services?
   Probe for
   a. female vs. male babies,
   b. tribal populations or castes
   c. Any specific geographic areas with limited access
   d. what plans are in place to ensure these sub-groups also access services?

34. What mechanisms are in place to support babies within communities once they are discharged from SNCUs?
   b. What support is provided to those involved in the care of babies discharged from SNCUs in the community?
      v. Training
      vi. Supervision
      vii. Job aids
      viii. Remuneration

35. Do ASHA workers have a role in community care for SNCU-discharged newborns?
a. Which organizations or individuals have supported the ASHAs in their work related to newborn care?
b. Has UNICEF played any role? If yes, what role did they play?
c. What impact do you think UNICEF’s support has had?

36. How are SNCUs linked to newborn care in other facilities higher or lower than their level?
   v. Link to NBSUs
   vi. Link to Medical College Hospitals
   vii. District Early Intervention Centres (DEICs) within the NHM
   viii. Nutrition units

About UNICEF’s specific Involvement
37. From your understanding, what were UNICEF’s goals for supporting the SNCU programme in this state?

38. Can you outline all the ways in which UNICEF has supported the implementation of the SNCU programme in this State? You may repeat previously mentioned roles for emphasis.
   (Probe for
   b. Resources invested into the programme (technical, infrastructure development, equipment, drugs, and supplies, financial, capacity building, etc.)

39. Did this state ever suggest any changes to UNICEF’s areas of support for the SNCUs?
   d. What were these changes? And why?
   e. How did UNICEF respond to your suggestion?
   f. What impact did these changes have on the overall SNCU implementation?

40. Do you think UNICEF focussed their resources in the most important areas of the SNCU programme in your state? Explain

41. If you were to invest the same resources that UNICEF had into the SNCU programme what would do differently and why?
   What are the results of UNICEF’s support to the SNCU programme in this State?
   Probe for both
   i. positive and negative results
   ii. intended and unintended

42. How has UNICEF’s support to the SNCU programme been mainstreamed into NHM activities in the state? If the state is to carry on with these, what additional support will they require?

Sustainability of the SNCU programme
43. In your view, what were the intended results of the SNCU programme?
44. Do you think that the SNCU programme has achieved the results you just described?
   a. If it has, what made them possible to be achieved?
   b. Were there some results that were not achieved? Why were they not achieved?
45. In general, do you think that your State is ready and able to carry on the SNCU programme in the long term?
c. What do you foresee as the key things that will help you carry on the positive results of the SNCU programme?

d. What are the challenges to continuing these results of?
Interview topic guide for managers/administrators-V. Facility level

1. In **what ways** do you think **newborn health has changed** over the **past 10 years** in the catchment population of this facility?

   Prompt on
   a. facility versus community newborn health
   b. mortality trends
   c. progress and programme monitoring

   **A. ABOUT THE SNCU**

2. **Why** and **how** was this facility chosen to have an SNCU? What additional roles is this facility expected to play after becoming an SNCU?

3. What **changes were made** in this facility **since becoming an SNCU**?

   Probe for changes in
   a. structure,
   b. equipment,
   c. staffing and training,
   d. case management protocols,

4. Apart from providing care for newborns who are brought to the SNCU, do you provide **any other support to other facilities**?

   Probe for
   a. NBSUs
   b. NCCs
   c. Labour wards

5. What was **your role in the process to** establish the SNCU in this facility?

   Probe for
   a. What were your expectations of having the SNCU here in this facility?
   b. Were you consulted in planning to make this place an SNCU?
   c. Design of the facility
   d. Procurement of resources
   e. Capacity development (staffing levels, training and orientation)

6. Which **stakeholders supported** in establishing your SNCU and **what roles** did they play?

   Probe for
   a. What resources were provided by who
   b. UNICEF’s role

7. How does this **facility hold people accountable for resources** (money, materials, etc) that have been allocated to SNCUs?

   Probe for
   a. How people who do not use resources (financial and other) appropriately can be identified and what actions are taken against such people.
b. Are there any rules for accountability?

8. In this facility, **what data is routinely collected** on the work of the SNCUs?
   a. What do you do with the data?
   b. How do you check the quality of the data?
   c. When and how did they start collecting?
   d. Did UNICEF help in the process? What did they do?
   e. What will you describe as the main challenges confronting this data gathering and use?
   f. Any suggestion to improve the process?

9. Are there **sub-groups in the population** in the catchment area that do not or are not able to use SNCU services?
   Probe for
   a. female vs. male babies,
   b. tribal populations or castes
   c. Any specific geographic areas with limited access
   d. what plans are in place to ensure these sub-groups also access services?

10. What mechanisms are in place to **support babies within communities** once they are discharged from your facility?
    a. What support is provided to those involved in the care of babies discharged from SNCUs in the community?
       i. Training
       ii. Supervision
       iii. Job aids
       iv. Remuneration
    b. Do **staff in your facility** support **babies in the communities** once they are discharged?

11. Does any **organization** support the **day-to-day running** of this SNCU?
    Prompt for
    a. Which organizations?
    b. In which areas do they assist?
    c. UNICEF’s specific areas of support
    d. Do the organizations’ consult with you in their choice of areas of support?

**B. UNICEF’S SUPPORT TO SNCUs**

12. Can you **summarise all the areas** in which **UNICEF has supported** your SNCU?

13. Do you think the **areas UNICEF concentrated** their resources in were the **most important areas** that needed to be addressed in your SNCU? **Explain.**

14. If you were to invest the **same resources that UNICEF had** into your facility’s SNCU, **what would do differently and why?**
C. OUTCOMES & SUSTAINABILITY

15. Do you think that, so far, the role and performance of the SNCU in this facility have met your expectations? explain
   Probe for
   a. If it has, what made it possible for them to meet your expectations?
   b. Were there some expectations that were not met? Why?

16. In general, do you think that your facility is ready and able to carry on providing SNCU services in the long term?
   a. What do you foresee as the key things that will help you carry on the positive results?
   b. What do you think will pose major obstacles to your ability to continue these efforts?

17. How much has the support provided by the various stakeholders into the day-to-day running of the SNCU in your facility been mainstreamed into your PIPs?
Interview topic guide-V. Facility level Technical/Clinical staff

1. How has the management of small and sick newborns changed since the establishment of the SNCU in this facility?
   Probe for
   d. Range of services available before and after the designation.
   e. HR and capacity development
   f. protocols for care
   g. data recording, management and use
   h. What is not covered that you wish is covered?

2. What are the current protocols for discharging newborns from this facility?
   a. What are the criteria?
   b. What must be checked?
   c. What information is provided and to who – mothers alone or with companions?
   d. For how long is this education provided?

   A. ABOUT SNCU

3. How does clinical care continue at the community level after discharge of small and sick babies from this SNCU?
   How is this follow-up care organised?
   a. How long does this care last for a small and sick baby discharged from the SNCU?
   b. What health facilities or cadres of health workers are involved?
   c. who in the community supports newborn care after discharge?
   d. any roles that ASHAs play in this follow-on care?

4. SNCUs refer babies to higher or lower level facilities when needed. What is your procedure in this facility for referring babies?
   a. Who does the triaging (selecting who should go to where)?
   b. Do you have protocols for communicating with the destination facility?
   c. Do you request or receive follow-up on referred babies?
   d. Do you provide ambulance services? Who pays for the ambulance transport?

5. Can you describe all interactions you have with providers at lower level health facilities (NBSUs, NBCCs) and in the communities (ASHA) who provide newborn care and referrals?
   e. Is it training, supervision, mentoring?
   f. Is there communication when they refer babies to you?
   g. Do you communicate when you delegate newborn care to them after discharge from the SNCU?
   h. What mediums of communication? – Whatsapp, Calls, Skype, Teleconferencing, Written notes, etc.

6. How would you describe access to newborn care in this facility for out-born babies who need it?
   a. How do you think this access could be improved further for out-born babies?

7. Are there sub-groups in the population in the catchment area that do not or are not able to use SNCU services?
8. How does this facility hold people accountable for resources invested (money, materials, etc) and outcomes of care (quality, etc) in the SNCU? 
Probe for
a. How people who do not use resources (financial and other) appropriately can be identified and what actions are taken against such people.
b. Are there any quality assurance and control mechanisms in place?

**B. UNICEF’S SUPPORT TO SNCUs**

9. Can you outline all the ways in which UNICEF has supported care provision for newborns in this SNCU. 
(Probe for
a. In what ways have they supported (technical, infrastructure development, equipment, drugs, and supplies, financial, capacity building, etc.)
b. What will you describe as the positive results obtained from UNICEF’s support to this SNCU?

10. If you were to invest the same resources that UNICEF had into your facility’s SNCU, what would do differently and why?

11. Do you think that, so far, the role and performance of the SNCU in this facility have met your expectations? explain
Probe for
a. If it has, what made it possible for them to meet your expectations?
b. Were there some expectations that were not met? Why?

12. In general, do you think that your facility is ready and able to carry on providing SNCU services in the long term?
a. What do you foresee as the key things that will help you carry on the positive results?
b. What do you think will pose major obstacles to your ability to continue these efforts?
Annex 7. List of meetings attended

27th November 2017, LSTM team visited the UNICEF office for a formal introduction and to plan activities to meet the objectives of the scoping visit.

28th of November 2017, LSTM team had a meeting with the UNICEF India Research and Evaluation Specialist, Rose Meri Thompson, and a consultant, Manveen Kohli, to discuss UNICEF’s requirements for the evaluation and the required format for the inception report.

29th November 2017, a meeting of stakeholders from the MOHFW, UNICEF, WHO and other professional bodies was convened in the UNICEF premises. The objectives of the meetings were to review the proposed strategy for the evaluation, the theory of change and obtain input into these.

26th April 2018, a meeting with CMNH-LSTM and UNICEF India to update on progress of the evaluation.

27th April 2018, skype call with LSTM, UNICEF India and MP team to plan for data collection in MP.

8th May 2018, meeting with CMNH-LSTM and MP state level officials to appraise them of the evaluation key objectives, recommended key informants and the relevant documentation needed for the evaluation.

5th June 2018, skype call with LSTM, UNICEF India and State Offices to plan for data collection in the states.

13th November 2018, preliminary presentation to UNICEF India.
Annex 8. Key data sources

The main sources of data for the analyses included the following:

- National Family Health Survey – 4 (2015-2016)
- Sample Registration Surveys Bulletins (SRS Bulletins 2007-2015)
- Sample Registration Survey Statistical Reports (SRS Report, 2010-2015)
- Janani Suraksha Yojana (JSY) – NHM Online (Accessed March 2018)
- Janani-Shishu Suraksha Karyakram (JSSK) Guidelines (2011)
- India Newborn Action Plan (2014)
- State reports on the SNCU programme from the six focal states (2011-2015)
- State of India’s Newborns Report (2014)
- India National Reproductive, Maternal, Newborn, Child and Adolescent Health Strategy (2013)

Other sources of data explored for the analyses include the following:

- UNICEF financial records and work plans for the period of the evaluation (2007-2017)
- Central and State Government contributions to SNCUs and work plans (2007-2017)