

**Essential Newborn Care Workshop: 22<sup>nd</sup> to 23<sup>rd</sup> July 2017,**  
**Command Hospital (Western Command), Chandimandir, India**  
**Technical Report**

**Back ground**

India contributes 1/5<sup>th</sup> of the total global live births and has the dubious distinction of contributing to 21% of under-5 mortality and 27% of neonatal mortality. The current IMR is 42 per 1000 live births and NMR is 29 per 1000 live births (more than 70% of infant mortality is due to neonatal deaths). There has been remarkable progress in decreasing IMR with interventions like ORS, Immunization, Antibiotics for pneumonia etc, but the decrease in NMR is far from satisfactory. The 3 major causes of neonatal deaths in our country are preterm birth complications, infections and birth related complications. There are also huge state-wise, urban-rural and gender differentials in IMR & NMR.

The Govt of India has launched an ambitious India Newborn Action Plan (INAP) in 2014 with the goals of single digit NMR and Stillbirth rate by 2030. The focus is on antenatal care of mothers, care during labour and childbirth, immediate new-born care and care of small and sick newborns. Care received by the mother and infant during the time of birth is crucial and nurses provide this care in most health-care settings and need to be updated and skilled.

**Objectives:**

1. To update and train Nurses and Medical Officers in Essential Newborn Care.
2. To develop local trainers to conduct provider courses for facility based new-born care.

**Terms of Reference**

A detailed program for training was circulated among the faculty prior to the training (Annexure I). All relevant training materials and evaluation tools (pre-test, post-test and structured training evaluation form) and copies were shared before the training (Annexure II). Training of students was conducted for 2 days from 22<sup>nd</sup> to 23<sup>rd</sup> July 2017 at Command Hospital (Western Command), Chandimandir.

**Course coordinator:** Col G Shridhar

**Facilitators:** Total of 10 facilitators (including Doctors and Nurses)

**Participants:** Total participants were 54 (30 students from School of Nursing, Command Hospital, 11 nursing officers from Command Hospital, 4 nurses from PGIMER, 6 interns from Command Hospital and 2 nurses, 1 Medical Officer from Kare Hospital, Panchkula)

**Day 1: Standard treatment protocols:**

The students were trained in standard treatment protocols for management of common newborn conditions at small hospitals. The teaching methodology included small group discussions, case scenarios, skill demonstrations, video podcasts on common equipment and OSCE using simulators, wall charts, and apps on tablets. The common conditions discussed were triaging, hypothermia, feeding of LBW, post asphyxia management, hypoglycaemia, respiratory distress, jaundice, discharge counselling and transport of a sick new-born. A glimpse of various equipment podcasts was also shown. The teaching was done by faculty in 6 groups of 9 participants each. The participants were encouraged to download the app on STPs and FBNC on their mobile phones.

A pre-test and post-test analysis was done by a MCQ questionnaire with 25 questions. A Likert's scale (15 questions) questionnaire on content relevance, teaching methodology, applicability, and perceived utility was administered at the end of the workshop. The assessment of skill scores was performed using three Objective Structured Clinical Examination (OSCE) skill stations (demonstration of alternative method of feeding, preparation of drugs related to the four selected modules (phenobarbitone), and measurement of axillary temperature and management of hypothermia).

The pre-test and post-test MCQ scores are shown below (table 1). There was a significant improvement in the knowledge scores after the workshop (table 2)

**Table 1:** Pre-and post workshop training scores of the participants

	Pre	Post test
Mean Score (max score 0-25)		
Score <10 (n)	10	0
Score 10-14 (n)	28	7
Score 15-19 (n)	16	44
Score > 20 (n)	0	3

**Table 2:** Pre-and post-workshop training scores of the participants

	<b>Pre-workshop Mean (SD)</b>	<b>Post workshop Mean (SD)</b>	<b>Mean difference (CI)</b>	<b>P value</b>
<b>MCQ</b>	12 ± 2.5	16.65 ± 1.48	4.64 (3.85 to 5.42)	< 0.0000001

The following are the skill composite scores and the individual skill scores of all the participants (table 3).

**Table 3:** Post-workshop skill scores (Observed Structured Clinical examination (OSCE) Score) of the participants

<b>OSCE Score</b>	<b>Mean (SD)</b>
Assessment of nasogastric feeding	12.92 ± 1.30
Assessment of temperature of new-born	11.69 ± 1.42
Preparation of medication	11.04 ± 1.39
<b>Total OSCE Score</b>	<b>35.24 ± 3.11</b>

## **Day 2 -Facilitation techniques for Facility based new-born nursing training**

All students were given the learners guide on “Newborn Nursing for facility based care in level II units” 3rd edition. They were shown how to conduct participatory module based teaching learning using the book which has 9 modules on essential and level II new-born care. Various teaching-learning methodologies were used such as self-reading, skill demonstrations, role plays, oral drills, video demonstrations, poster discussions, self-evaluation and giving feedback. To elaborate on the above, 3 modules were discussed in detail - Care of the at-risk and sick neonate, KMC and feeding of healthy and LBW neonates. A feedback based on Likert’s scale including 15 questions was used for evaluation (Annexure III). The mean feedback score was 4.36/5.0 with median of 4-5 i.e. the participants strongly agreed with the various teaching -learning methodologies used during training.

The participants expressed overall satisfaction from the training (Table 4). In addition, all of them felt empowered to be able to implement the techniques learnt, into day to day practice and expressed willingness to continue if an opportunity was given again for new modules.

**Table 4:** Participant's satisfaction from the training on Likert's scale

Content Explicit and clearly defined	5 (4 - 5)
• Flow diagram	5 (4 - 5)
• Standard treatment protocols	5 (4 - 5)
• Videos related to procedures	5 (4 - 5)
• Overall content	4 (4 - 5)
• Equipment demonstration	4 (4 - 5)
Training is useful for professional activities	5 (4 - 5)
Workshop on Apps has increased your confidence to achieve personal objectives	5 (4 - 5)
All the doubts regarding a topic were cleared	4 (4 - 5)
Will you be able to implement the techniques learnt during the sessions?	5 (4 - 5)
The session will help to put the knowledge gained into practice	5 (4 - 5)
Would you recommend similar activity for the benefit of your colleagues	5 (5)
The videos and procedure related skills are related to the context and helpful	4.5 (4-5)
Learning material is exhaustive and time consuming	2 (2 - 4)
The application is easy to learn.	4 (4 - 5)
The application is interactive and user friendly	4 (4 - 5)
The content adds to your previous knowledge and understanding of the specific topic	5 (4 - 5)
The algorithm approach was very useful	4 (4 - 5)

*Note: 1=Strongly Disagree, 2=Disagree, 3= Neither agree nor disagree, 4=Agree, 5= Strongly Agree*

The workshop ended with a vote of thanks, distribution of certificates and a group photograph.

### **Recommendations**

1. The students and 4 selected nurses (from the group) will arrange small group trainings at local hospitals using STPs wall Charts and Nursing Learners Guide.
2. Students can join e-Learning community on Sick Newborn Care and Facility Based Nursing Courses run by AIIMS WHO-CC for SEARO Region (ONTOP).