

TEACHING DEVELOPMENTAL CARE IN NEONATAL INTENSIVE CARE IN NEPAL

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INTRODUCTION

- NICU is an environment that puts the sick newborn at risks of altered physical, sensori-motor, cognitive, psychological and relational development.
- Developmental care (DC) is the use of range of nursing interventions to decrease dystimulations and stress and to support adequate neurodevelopment and the maturation of sensory-motor processes including orality and feeding.
- DC aims to providing adequate support to the developing brain through adapted care.
- DC reduces morbidity, mortality, length of stay and ameliorates neurodevelopment and parental involvement of children
- Sensory-Motor Developmental Care (SMDC) was developed in Pediatric Department, Geneva University Hospital
- DC was not implemented in BPKIHS NICU



MISSION

- To introduce SMDC in NICU of BPKIHS in order to improve care and outcomes of babies
- To evaluate effects of SMDC on health parameters and length of stay of babies admitted
- To evaluate satisfaction of staff regarding changes in care

THEORETICAL TEACHING TO MEDICAL AND NURSING STAFF ABOUT DC

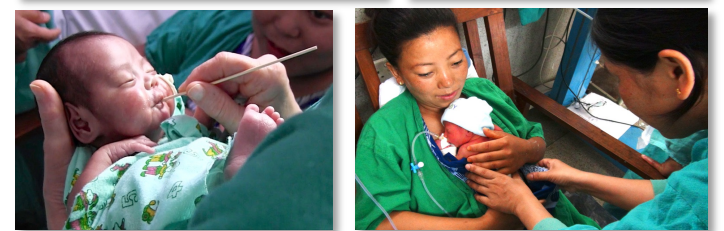
- Introduction to the sensori-motor DC approach
- Supports alertness and sleep of baby
- Positioning and support of spontaneous motricity
- Oral stimulation before feeding to facilitate oral activity
- Behaviour observation of the baby: Observation scale and guide
- Physical and NICU environment adaptation
- Parental involvement in care
- DC and brain development

Sensory-motor behaviour observation scale

Date: _____ Gestational age: _____ actual age: _____

Type of care: _____
 Care realised: with parents with colleague alone Length of care: _____

Behaviour - Expression	score	score	Comments	
Eye state				
Eye state				
Oral state				
Oral state				
Agitation				
Agitation				
Physiological domains				
C Cardio-respiratory state				
1 Normal respiratory rate 30 - 60/min				
2 High respiratory rate > 60/min				
3 Low respiratory rate < 30/min				
4 Normal respiratory and amplitude > 2cm				
5 Normal respiratory and amplitude < 2cm				
6 Abnormal respiratory and amplitude < 2cm				
7 Pulse in Bradycardia or Apnea < 10 sec				
8 Cardiovascular stability				
9 Normal heart rate > 100/min				
10 Low heart rate < 100/min				
11 Normal heart rate > 100/min				
12 Normal heart rate < 100/min				
13 Abnormal heart rate < 100/min				
14 Normal frequency and amplitude > 2cm				
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PRACTICE TRAINING

- Practical approach in ward: Direct teaching with patients for positioning, care, feeding, use of the scale
- Video practice: Video examples for use of the sensory-motor observation scale
- Video feedback: Video watching in group to assess practice before and after DC teaching

OUTPUT AND DISSEMINATION

- 7 Workshops in BPKIHS between 2016 and 2023 (interrupted by COVID)
- About NICU 50 nurses and 20 doctors attended from one to the 7 workshops
- Implementation of in the 3 units: NICU, Nursery and Neonatal ward (26 beds)
- 5 nurses came in Geneva for two weeks of DC training in neonatology
- Certification of 7 Referent Nurses in DC with examination validated by Nursing School of BPKIHS and Education Centre from HUG

- Same program started in December 2023 in Neonatology in Tribhuvan University Teaching Hospital (TUTH), Kathmandu
- DC nurse from BPKIHS are coming in TUTH to teach their Nepali colleagues
- Neonatology Unit in Lubini State Hospital is willing to start the training with support by the team of BPKIHS
- BPKIHS aims to become the reference centre for DC teaching in Neonatology (to be inaugurated in December 2024)



Videos of BPKIHS and TUTH, before and after DC teaching

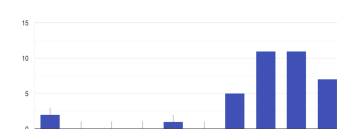
EVALUATION

Assessment of the observation scale usefulness and overall appreciation of DC workshop by NICU staff. 0=not useful, 10=extremely useful

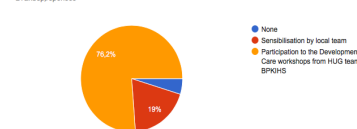
1. Is the grid useful for your professional practice? 37/40 responses



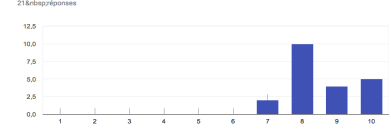
2. Does the grid provide a better understanding of the child behaviour? 37/40 responses



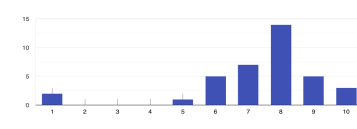
3. Training level in Developmental Care (DC) 21/40 responses



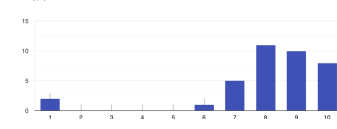
4. For easy application of DC in daily practice. Have you acquired new knowledge? 21/40 responses



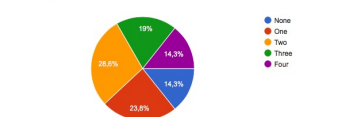
5. Is the grid easy to use? 37/40 responses



6. Number of DC workshop from HUG team you attended 21/40 responses



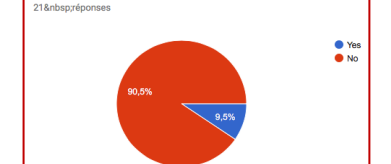
7. For the basis of developmental care in general. Have you acquired new knowledge? 21/40 responses



8. What was the most useful teaching method



9. Would you go backwards? 21/40 responses



CONCLUSION

- Implementation of DC requires real changes in nursing and medical practices that can only be done through teaching, support and continuous education
- Even if it is a cost/effective practice, it is also a change in habits that needs time, must be adapted to local conditions such as space, facilities, manpower but also cultural, ethical and legal aspects

Quote from a Nepali nurse: "A better start in new life"