



RAMA
UNIVERSITY

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FACULTY OF NURSING

ORGANIZATION OF NICU

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INTRODUCTION

- The organization of a good quality neonatal care unit is essential for reducing the neonatal mortality and improving the quality of life among the survivors.

AIMS OF ORGANIZING OF NICU

Reducing the neonatal mortality and improving the quality of life among the survivors

OBJECTIVES-

- To save the life of the sick new born
- To prevent damage in infants with problems at birth and also reduce morbidity in later life.
- To monitor high risk newborns so as to reduce mortality and morbidity in these babies

BASIC FACILITIES-

- Adequate space
- Availability of running water
- Centralized oxygen and suction facilities
- Maintenance of thermo- neutral environment
- Availability of plenty of linen and disposables
- Facilities for availability to treat common neonatal problems

MAIN COMPONENTS TO BE CONSIDER WHILE ORGANIZING A NICU:

- **PHYSICAL FACILITIES**
- **PERSONNEL**
- **EQUIPMENTS**
- **LABORATORY FACILITIES**
- **PROCEDURE MANUAL**
- **TRANSPORT OF SICK INFANTS**
- **COOPERATION BETWEEN THE OBSTETRICIAN
AND NEONATOLOGIST**

1. PHYSICAL FACILITIES:

- Location
- Space
- Floor plan
- Lighting
- Environmental temperature and humidity
- Handling and social contacts
- Communication system
- Acoustic characteristics
- Ventilation
- Electrical outlets

LOCATION-

- Located as close as to labour room and obstetric care unit
- Adequate sunlight for illumination
- Fair degree of ventilation for fresh air

SPACE-

- serve as a referral unit for the infants born outside the hospital
- Each infant should be provided with a minimum area of 100 sq. ft. or 10sq. meter
- Space for promotion of breast feeding
- 500-600 Gross square feet per bed.
- Space includes patient care area, storage area, space for doctors, nurses, other staff, office area, seminar room area, laboratory area and space for families

FLOOR PLAN-

- Open encumbered space
- The walls should be made of washable glazed tiles and windows should have two layers of glass panes.
- Wash basins with elbow or floor operated taps facility having constant round-the clock water supply should be provided.
- The doors should be provided with automatic door closers.
- Isolation room

VENTILATION-

- Effective air ventilation
- Central air conditioning

LIGHTING-

- The whole unit must be well illuminated and painted white
- The lighting arrangement should provided uniform shadow-free, illumination of 100 foot candles at the baby's level

ENVIRONMENTAL TEMPERATURE AND HUMIDITY-

- The temperature inside the unit should be maintained at $28' \pm 2'C$, while the humidity must be above 50%.
- Portable radiant heater, infra red lamp can be used

ACOUSTIC CHARACTERISTICS-

- The ventilation system, incubators, air compressors, suction pumps and many other devices used in the nursery produce noise.
- Sound intensity in the unit should be exceed 75 decibels.
- Telephone rings and equipment alarms should be replaced by blinking lights

COMMUNICATION SYSTEM-

- The unit should also have an intercom & a direct outside telephone line

ELECTRICAL OUTLETS-

- Each patient station should have 12 to 16 central voltage – stabilized electrical outlets sufficient to handle all pieces of equipment
- An additional power plug point
- There should be round-the-clock power back up including provision of UPS system

STAFF-

- A direct who is a full time neonatologist
- One neonatal physician is required for every 6-10 patients
- One resident doctor should be present in the unit round-the-clock.
- Anesthetist - pediatric surgeon and pediatric pathologist are essential persons in establishment of a good quality NICU

OTHER STAFF-

- Respiratory therapist
- Laboratory technician
- Public health nurse or social worker
- Biomedical engineer
- Clark

DISPOSABLE ARTICLES REQUIRED FOR **THE NICU-**

- IV Catheters
- IV sets
- Micro burette sets
- Bacterial filters
- Feeding tubes
- Endotracheal tubes
- Suction catheters
- Three-way stopcocks
- Extension tubing

PERSONNEL-

- Skilled nurses
- Neonatologists
- Lab technician
- Biomedical technician
- Respiratory therapists
- Pathologists

EQUIPMENTS-

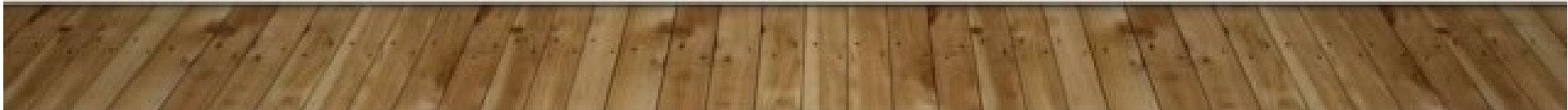
- Resuscitation equipment
- Oxygen and suction facilities
- Catheter, syringes, needles
- Feeding equipments
- Incubator
- Radiant warmer
- Weighing machine
- Thermometer
- Oxygen concentrator
- Oxygen hood

- Phototherapy unit
- Heart rate monitor
- Respiratory rate monitor
- Infusion pump
- Bilirubin analyzer
- Pulse oximeter
- Neonatal ventilators
- Cranial ultrasonography

RADIANT WARMER:











LEVELS OR GRADES OF NEONATAL CARE-

- Level I •
- Level II •
- Level III

