

## Critical Care Nursing



**PANNA DHAI MAA SUBHARTI NURSING COLLEGE**  
SWAMI VIVEKANAND SUBHARTI UNIVERSITY, MEERUT



### Value Added Course

**From  
December  
2016**

**On**

**Register  
Soon**

### Critical Care Nursing

**Beneficiaries: B.Sc(N) III Year**

#### Venue:

**Nursing Foundation Lab, Panna Dhai Maa Subharti Nursing College**



**SWAMI VIVEKANAND  
SUBHARTI  
UNIVERSITY**  
Meerut  
UGC Approved  
*Where Education is a Passion ...*



**Panna Dhai Maa Subharti Nursing College**

#### Value Added Course

on

### Critical Care Nursing

**Date: 10/12/2016 – 20/12/2016**

**Time: 2 – 4 PM daily**



**All registered Students to report at Nursing Foundation Lab daily by 1:50 PM**

## 2. CRITICAL CARE NURSING:

### **Introduction:**

The Critical Care Unit is not merely a room or series of rooms filled with patients attached to interventional technology; it is the home of an Organization: the Critical Care Team

### **Critical Care Nursing:**

Critical Care Nursing is that specialty within nursing that deals specifically with human responses to life-threatening problems

### **7C's of Critical Care:**

Compassion , Communication , Consideration (of patients, relatives and colleagues) and avoidance of Conflict , Comfort: protection of patient from suffering, Carefulness: avoidance of injury ,Consistency (of observation and care), Closure (Ethics and Withdrawal of treatment)

### **Critical Care Nurse:**

A Critical Care Nurse is a licensed professional nurse who is responsible for ensuring that acutely and critically ill patients and their families receive optimal care

### **Critical Care Unit:**

Critical Care Unit is a specially designed and equipped facility staffed by skilled personnel to provide effective and safe care for patients with a life- threatening problem that is potentially reversible

### **Evolution of Critical Care Nursing:**

Critical care units have evolved over the last many decades in response to medical advances

#### **Historical Perspective :**

Florence Nightingale recognized the need to consider the severity of illness for bed allocation of patients and she placed the seriously ill patients near the nurses' station.

- In 1923, John Hopkins University Hospital developed a special care unit for neurosurgical patients .
- After World War II: Modern medicines, concept of triage and speciality nursing came into existence. As surgical techniques advanced, it became necessary that post-operative patients required careful monitoring and this brought about the Recovery Room

- In 1950, the epidemic of poliomyelitis necessitated thousands of patients requiring respiratory assist devices and intensive nursing care
- At the same time came about newer horizons in cardiothoracic surgery, with refinements in intra-operative membrane oxygen techniques
- Late 1950's – beginning of Critical Care Units • 1965 – 1st specialized ICU – The Coronary Care Unit • Emergence of Specialized ICUs

#### **Levels of ICU:**

##### Level I ICU :

Referred to as high dependency , Resuscitation, short term mechanical ventilation and simple invasive cardiovascular monitoring for <24 hours

##### Level II ICU:

Located in general hospital, undertake more prolonged ventilation. • Provides a high standard of general intensive care, including complex multi-system life support

##### Level III ICU :

Tertiary referral unit for intensive care patients • Provides comprehensive critical care including complex multi-system life support for an indefinite period • Demonstrated commitment to academic education and research

#### **Roles and Responsibilities of Critical Care Nurse:**

- Assessing a patient's condition and planning and implementing patient care plans
- Provides direct comprehensive bedside care to patients
- Treating wounds and providing advanced life support
- Assisting physicians in performing procedures
- Able to attach equipments on patients as ordered and interprets the data, graphs on monitors etc.
- Observing and recording patient vital signs
- Ensuring that ventilators, monitors and other types of medical equipment function properly
- Administering intravenous fluids and medications
- Collaborating with fellow members of the critical care team
- Responding to life-saving situations, using nursing standards and protocols for treatment
- Acting as patient advocate
- Documents appropriately
- Ensures patient safety



- Follows the policies and procedures of the unit and the institution
- Is an expert in nursing knowledge and practice
- Promotes quality assurance in nursing
- Providing education and support to patient families

**Principles of Critical Care Nursing:**

Anticipatory Nursing Care

Early Detection and Prompt Action

Expertise

Supportive Care

Communication

Collaborative Practice

Preservation of Patient's Physiological Defenses

Prevention of Infection

Crisis Intervention

Stress Reduction and

Ethical Principles

**ORGANIZATIONAL MODELS FOR ICU**

Open model allows many different members of the medical staff to manage patients in the ICU

Closed model is limited to ICU-certified physicians/ intensivists managing the care of all patients

Hybrid model, which combines aspects of open and closed models by staffing the ICU with an attending physician and/or team to work in association with primary physicians

**Staffing:**

Medical staffing, including an ICU Director/Intensivist, with sufficient experience to provide for patient care, administration, teaching, research, audits etc.

- Trained Nursing staff: 1:1 for ventilated patients and 1:2 for other patients; Nurse in charge with ICU qualification
- Allied health and ancillary staff: Respiratory services, physiotherapist, dietician, biomedical engineer, technicians, computer programmer, social worker, counsellor, housekeeping staff etc.

**Organization of ICU:**

- It requires intelligent planning

- One must keep the need of the hospital and its location
- One ICU may not cater to all needs
- An institute may plan beds into multiple units under separate management by single discipline specialist such as Medical ICU, Surgical ICU, CCU, Burns ICU, Trauma ICU etc.
- The number of ICU beds in a hospital ranges from 2 to 20% of the total number of hospital beds. ICUs with fewer than the recommended number of beds are not cost- effective and excess beds are unmanageable. 10% of total ICU beds are allotted towards Isolation Room.
- Each intensive care unit should be a geographically distinct area within the hospital with controlled access
- No through traffic to other departments should occur
- Supply and professional traffic should be separated from public/visitor traffic
- Location should be chosen so that the unit is adjacent to, or within direct elevator travel to and from, the Emergency Department, Operating Room, Intermediate care units, and Radiology Department. Corridors, lifts and ramps should be spacious enough to provide easy movement of bed/ trolley of a critically sick patient

#### **Organization of ICU Bed Space**

- 150- 200 sq. ft. area per open bed with 8 ft. between beds • 225- 250 sq. ft. area per bed if in a single room. Beds should be adjustable with side rails and wheels; no head board should be there.

Isolation Room: 250 sq. ft

**Patient Areas** • 3 oxygen outlets, 3 suction outlets (gastric, tracheal and underwater seal), 2 compressed air outlets and 16 power outlets per bed • Bedside storage, hand rinse solution, equipment shelf on head end • Storage must be provided for each patient's personal belongings, patient care supplies, linen and toiletries. Locking drawers and cabinets must be used if syringes and pharmaceuticals are stored at the bedside. • Hooks and devices to hang infusions/ blood bags extended from the ceiling with a sliding rail to position. Multi- channel invasive monitors, ventilators, infusion pumps, portable X- Ray unit, fluid and bed warmers, portable light, defibrillators, anesthesia machines and difficult airway management equipments are necessary • A cardiac arrest/emergency alarm button must be present at every bedside within the ICU. The alarm should automatically sound in the hospital telecommunications center, central nursing station, ICU conference room, staff lounge, and any on-call rooms.

#### **Therapeutic Elements in ICU Environment:**

- Window and art that provides natural views; views of nature can reduce stress, hasten recovery, lower blood pressure and lower pain medication needs.
- Family participation, including facilities for overnight stay and comfortable waiting rooms
- Providing a measure of privacy and personal control through adjustable curtains and blinds, accessible bed controls
- Noise reduction through computerized pagers and silent alarms • Medical team continuity that allows one team to follow the patient through his or her entire stay

**Central Nursing Station :**

- Patients must be situated so that direct or indirect (e.g. by video monitor) visualization by healthcare providers is possible at all times. This permits the monitoring of patient status under both routine and emergency circumstances. The preferred design is to allow a direct line of vision between the patient and the central nursing station.
  - In ICUs with a modular design, patients should be visible from their respective nursing substation
- Central Nursing Station Sliding glass doors and partitions facilitate this arrangement, and increase access to the room in emergency situations, X- Ray Viewing Area, Work Areas and Storage, Equipment Storage, Special Procedures Room, Reception Area, Clean Utility Room, Dirty Utility Room, Pantry, Staff Lounge, Conference Room, Visitors' Lounge or Waiting Area, Patient Transportation, Supply and Service Corridors, Patient Modules, Each Intensive Care Unit must have :-
- Electric Power
  - Water Supply
  - Oxygen, Compressed Air, Vacuum
  - Lighting
  - Environmental control systems, Electric Supply, Water Supply, Lighting , Environmental Control Systems, Computerized Charting, Other Facilities.





# Panna Dhai Maa Subharti Nursing College

Recognized by Govt. of India, Indian Nursing Council, INC Letter No. 18-1108/2000-INC  
Website: nursing.subharti.org, e-mail: nursing@subharti.org, Ph: 0121-3024229 (Extn: 3506, 3527), Telefax: 0121-2439067  
A constituent college of

## SWAMI VIVEKANAND SUBHARTI UNIVERSITY

(Established under U.P. Govt. Act no. 29 of 2008 and approved under section 2(f) of UGC Act 1956)

### Critical Care Nursing

List of Students Enrolled	
Aditya Malik	Preeti
Akash Tyagi	Priyanka
Anuj Saini	Priyanka
Anurag Samuel	Priyanka Yadav
Asha Rani	Sakshi
Chetna	Sakshi Saini
Chhaya Sharma	Sarvita
Gaurav Sharma	Seeba Yadav
Heema	Shivakar
Himanshu	Shubham Tyagi
Israel	Shweta
Jaidave	Soniya Pal
Jibsey John	Tanvi Chaudhary
Jyoti Mandal	Vipin
Manika Pal	Vishal Tyagi
Mansi	Archana Shankar
Meenakshi Sharma	Deepa
Mohd. Naseem	Deepika Karanwal
Pooja Sharma	Deepshikha
Guddan	Vijeta Rana
Neeraj Kumar	Vikrant Singh
Praise J Isaac	Vimal Kumar
Prisca J Rose	Jaskirat Kaur Narang
Priya Bhardwaj	Komal
Sakshi Rani	Mansi Rai
Salma Mohommad Ibrahim	Mansi Sain
Sonika	Mohd Danish
	Mohd Uvesh Saifi

  
Registrar  
Swami Vivekanand  
Subharti University  
MEERUT

  
PRINCIPAL  
Panna Dhai Maa  
Subharti Nursing College  
MEERUT

## Report on Critical Care Nursing

The aims of Intensive and Critical Care Nursing are to promote excellence of **care of critically ill** patients by specialist nurses and their professional colleagues; to provide an international and interdisciplinary forum for the publication, dissemination and exchange of research findings, experience and ideas; to develop and enhance the knowledge, skills, attitudes and creative thinking essential to good **critical care nursing** practice.

The Critical Nursing care is a one of the best and important value-added courses for the nursing students which were held at Panna Dhai Maa Subharti Nursing College at Skill Lab from 10-20/12/2016. The beneficiaries of the program are Bsc Nursing III year. The total number of students registered and participated was 55 all these students were completed the course and certificate was awarded. The course code is VAC/SNC 04. At the end of the course students gained knowledge and skills on critical care.



*Pananda*

PRINCIPAL

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Subharti Nursing College,  
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Demonstration and Hands on training on various aspects of critical care



**SWAMI VIVEKANAND SUBHARTI  
UNIVERSITY, MEERUT**  
**PANNA DHAI MAA SUBHARTI NURSING  
COLLEGE**



**Certificate of Participation**

This is to certify that Ms. /Mr. / Mrs **Asha Rani** of **B.Sc Nursing** has attended the value added course (SNC-VAC-04) **Critical Care Nursing** organized by Faculty of Nursing, Swami Vivekanand Subharti University during academic session **2016-17**.

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**HEAD OF THE INSTITUTION**

Faculty of Nursing  
Swami Vivekanand Subharti University, Meerut

उत्तिष्ठत जाग्रत पाण्डु त्रैलोक्येभ्यः



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UNIVERSITY, MEERUT**  
**PANNA DHAI MAA SUBHARTI NURSING  
COLLEGE**



**Certificate of Participation**

This is to certify that Ms. /Mr. / Mrs **Sakshi** of **B.Sc Nursing** has attended the value added course (SNC-VAC-04) **Critical Care Nursing** organized by Faculty of Nursing, Swami Vivekanand Subharti University during academic session **2016-17**.

*Paswanda*

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