

TATA MEDICAL CENTER



**act**  
on the **silence**  
**before storm**

**CRITICAL CARE WORKSHOP**

**6<sup>th</sup> -7<sup>th</sup> February, 2020**

**ORGANIZED BY: Intensive Care Unit Nursing  
Team & M.Sc. Nursing 1<sup>st</sup> year  
Tata Medical Center, Kolkata**

**Sub-theme:**

- **Better to protect rather than regret.**
- **Time is life when it comes to fighting infection.**
- **Evidence based practice is the key to effective nursing care.**
- **Stick to the golden rules to make the critical hours count.**
- **An ounce of prevention is worth a pound of care.**

## **OBJECTIVES**

- To correlate theory and clinical events in critical care unit.
- To focus on current approaches in management of sepsis in adult and pediatric population in the light of latest guide lines.
- To focus on difficulties in communication and burnout issues of critical care nurses.
- To reinforce daily practice guidelines.
- To review importance of knowledge on emergency medicines in critical care nursing.

# ORGANIZING COMMITTEE

1. **Organizing secretary:** Sananda Chakraborty
2. **Joint secretary:** Sulata jana
3. **Treasurer:** Sucharita Maity, Rupa Panja
4. **Scientific committee:** Chaitali Biswas, Chitra Sengupta, Sananda Chakraborty Sadhana Chattapadhyay, Sucharita Maity.S. Nirupama Devi , Maitrayee Sarkar De, Pinki Pal
5. **Souvenir Committee:** Chaitali Biswas, Sucharita Maity, S. Nirupama Devi, Rubia Tracy, Pratyusha Paul, Ashapurna Singha
6. **Invitation Committee:** Ms. Piyali Bose, Sapna Katiyar, Shantilata Dolui, Moumita Chakraborty, Pratyusha Paul
7. **Registration Committee:** Shantilata Dolui, Moumita Chakraborty Shyamali
8. **Accomodation /Transport Committee:** Jijo Scaria, Beauty Som
9. **Purchase Committee:** Irengbam Nganthoi Devi, Sulata Jana, Shymali Ghosh, Beuty Som, Rupa Panja, Suvra Goswami, Ashapurna Singha, Rebecca Zodinpuui, Pinki Paul, Pratyusha Paul
10. **Refreshment Committee:** Chita Sengupta, Sucharita Maity, Sadhana Chattapadhyay, Pratyusha Paul, Ashapurna Singha
11. **Reception/ Felicitation Committee:** W. Lukeswori Devi, Rebecca, P. Rosy Devi
12. **Decoration & Hall management Committee:** Sucharita Maity, Jayita Biswas, Pinki Paul, Pratysha Paul
13. **Cultural Committee:**-Chitra Sengupta, Beuty Som, Sulata Jana, Shymali Ghosh Subhakant & Team
14. **Health committee:** Jasmina Khatun, Rupa Panaja,
15. **Media & Publicity:** Piyali Bose, Sananda chakraborty
16. **Workstation Committee:** Irengbam Nganthoibi Devi, Sapna Katiyar, Pamela Bhattacharya, Pratyusha Paul, Rebecca Zodinpuui, , Prakash Jena, Dr. Pralay Ghosh, Jayita Biswas, BD co.
17. **Minute Committee:** Sulata Jana, Pratyusha Paul, Rupa Panaja, Suvra
18. **Feedback Committee:** Maitreyee De Sarkar, Pratyusha Paul, Ashapurna Singha, S. Nirupama Devi, Sulata Jana

# PROGRAMME SCHEDULE

## Day -1 (06.02.2020)

Sl no	Topic	Duration	Resource person
1	Registration	8:00am - 9:00am	Ms.Moumita Chakraborty Ms.Shantilata Dolui, Ms. Shamali Ghosh
2	Welcome Address	9:00am-9:05am	Ms. Sananda Chakraborty
3	Inauguration <ul style="list-style-type: none"> <li>• Inaugural song</li> <li>• Welcome and felicitation of dignitaries</li> <li>• Lamp lighting ceremony</li> <li>• Unfolding of the theme</li> <li>• Speech by Guest of honor</li> <li>• Speech by Special guest</li> <li>• Releasing of Souvenir</li> <li>• Speech by Chief guest</li> <li>• Speech by dignitaries</li> </ul>	9:05am- 9:30am	Ms. Beuty & team Team Nursing  Dignitaries Ms. Sucharita Maity Dr. Mammen Chandy Dr. V.R. Ramanan Dr. V.R. Ramanan Dr. Unmona Borgohain Saikia Nursing administration team
4	Vote of thanks	9:30am-9:45am	Ms. Sulata Jana
5	Assessment and care of intubated patient	9:45am -10:45am	<b>Moderator:</b> Ms. Chitra Sengupta <b>Speaker:</b> 1. Ms. Sadhana Chattyopadhyay 2. Ms. Sananda Chakraborty
6	Tea break	10:45am-11:00am	
7	Infection control aspects in PICU	11:00am-11:45am	Dr. Partha Sarathi Bhattacharya
8	Vaso-pressors, ionotrops and antibiotics: what we must know	11:45am-12:30pm	Dr. Pralay Shankar Ghosh
9	Communication in critical care team: breaking the bad news and burnout issues	12:30pm-1:15pm	Dr. Soumitra Shankar Datta
10	Lunch	1:15pm-2:00pm	
11	Panel discussion on role of <b>Hour one bundle</b> in neutropenic sepsis	2:00pm-3:00pm	<b>Chairperson:</b> Ms. Maitrayee Sarkar De <b>Panelist:</b> Dr. Sudipta Mukherjee Ms. Rubiya Tracy Ms. Jasmina Khatoon
12	Importance of enteral and parenteral nutrition in critically ill patient	3:00pm-3:45pm	Ms. Reshma Ray
13	Scientific paper presentation	3:45pm-4:45pm	<b>Judge:</b> 1. Ms. Madhusri Manna 2. Lt.Col. Kabita Jana
14	Tea break	4:45pm-5:00pm	

# PROGRAMME SCHEDULE

## DAY -2 (07.02.2020)

Sl no	Topic	Duration	Resource person
1	<b>Work – stations:</b> <b>T1:</b> Hospital infection control <b>T2:</b> ABG <b>T3:</b> Equipment used for non-invasive ventilation	9am-10am	<b>T1:</b> Ms. Sapna Katiyar, Ms. Pamela Bhattacharya, Ms.Pratyusha Paul <b>T2:</b> Dr. P.S. Ghosh, Ms. Jayita Biswas <b>T3:</b> Ms. Nganthoibi Devi, Mr. Prakash C. Jena, Ms. Rebecca
2	Tea break	10am-10:30am	
3	Early ambulation and edema management in critically ill patients	10:30am-11:15am	Mr. Sayantan Chattopadhyay
4	Quiz	11:15am-12noon	Ms. Sadhana Chattopadhyay Ms. Nirupama Devi
5	Vote of thanks Cultural program	12pm-1pm	Ms. Subhra Goswami ICU nursing team
6	Lunch	1pm-2pm	
7	Tour	2pm onwards	

## MESSAGE



I am happy to note that the Intensive Care Unit (ICU) of Tata Medical Center, Kolkata is conducting a workshop entitled -“Act on the silence before Storm” on 6<sup>th</sup> – 7<sup>th</sup> February, 2020.

In critical care situations taking appropriate preventive action can often avert serious complications to patients admitted to ICU.

I trust this workshop will educate the delegates on the appropriate measures to be taken to prevent storms of the ICU.

Wishing you a successful event.

**Prof. Dr. Mammen Chandy - MD FRCP FRACP FRCPA**  
**Director, Tata Medical Center**  
**Head, Clinical Haematology and Bone Marrow Transplantation**

## MESSAGE



Thank you so much for the difference you make in the lives of your patients! Your kindness, sincere caring, and concern make everything better and are a great encouragement.”

Thank you so very much for taking care of the patients. Patients may forget your name but will never forget your ‘Yeoman’s Service’.

**Dr. V. R. Ramanan**

**Deputy Director  
Tata Medical Center**

## MESSAGE



On behalf of critical care medicine unit of Tata Medical Center Kolkata, I like to welcome all delegates in "Critical care nursing update 2020". It is an excellent initiative by ICU nursing unit to organise an advance intensive care nursing workshop like this. I must congratulate the whole team and wish them good luck for grand success of this workshop. Best of luck to the delegates too and I hope at the end of one and half days for intense academic discussion, they will go back to their workplace not just with new information, but with knowledge, concept and understanding.

**Dr. Sudipta Mukherjee**

**Consultant and in-charge,  
Critical Care Medicine Unit,  
Tata Medical Center, Kolkata**

## MESSAGE



I am very pleased to extend warm greetings to everyone attending the two days Critical Care Workshop on “Act on the Silence before Storm” organized by ICU team Nurses and 1<sup>st</sup> year M.Sc. Nursing Students of Tata Medical Center, Kolkata on 6<sup>th</sup> and 7<sup>th</sup> February 2020.

The Organizers has chosen the theme of the workshop very correctly to reinforce daily practice guidelines for the critical care nurses to save many lives of the sufferers. The “Silence before the Storm” is more than just a saying it is ‘warning’. During the silence period, if the health team members specially the nurses who are staying with the patients for 24x7 hours; can identify the early features (i.e. silence period prior to storm – cardiac arrest) and act properly, many patient’s life can be survived.

This workshop provides a forum for developing knowledge and skills in order to better address the roles and responsibilities of nurses. I extend my appreciation to the enthusiastic organizers for providing such a valuable and important opportunity for the participants to benefit from the skills, knowledge and experience of the experts.

*Chaitali Boriswaj*

**Principal cum PG Co-ordinator  
Tata Medical Center**

## MESSAGE



I would like to take this opportunity to welcome you all to the Workshop- 'Act on the Silence Before the Storm'- Critical Care Workshop which is organized by Intensive Care Unit-Nursing Team, Tata Medical Center, Kolkata along with M.Sc (N) 1<sup>st</sup> year students.

Since its inception in 2011 Tata Medical Center, Kolkata has come a long way and has established itself as a reputed Oncology Center in India centering around its vision- 'To be a not for profit, state of the art, tertiary care Oncology Center that will provide world class affordable treatment and care to cancer patients'- Critical Care Unit and M.Sc. (N) are two important integral parts of the Institution. The theme chosen by the team “Act on the Silence Before the Storm” is appropriate and will definitely give right direction to the nurses working in the clinical field.

An event like this requires massive coordination from organizers and management. I would like to thank each and everyone involved, in making this workshop a grand success.

**Ms Piyali Bose**

**Nursing Superintendent**

**Tata Medical Center**

## MESSAGE



The Critical care workshop: “Act On The Silence Before Storm’ in February 06-07, 2020 is being held at a juncture when there is an ocean change in the understanding of the profile of patients on critical care as well as efforts for holistic approach to its management.

“An ounce of prevention is worth a pound of care”. Such a conference creates a foundation for one to be equipped with evidence based knowledge which helps towards improved outcome for critically ill Patients and bring confidence and solace to their families. This type of Conference helps one to avail cutting edge education on critical care nursing in an Oncology setup. I am sure that Scientific Sessions and other events will be rich in content and thereby give a great boost to the knowledge of all nurses. Wishing you the very best!

*Chitra Sengupta*

**Deputy Nursing Superintendent cum Assistant professor,**

**Tata Medical Center, Kolkata.**

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## **Assessment & care of Intubated Patient**

**“Breathing is the first act of life and the last”**

**Speaker-Ms. Sadhana Chattopadhyay  
Nurse Educator, Tata Medical Center &  
Ms Sananda Chakraborty  
ICU Supervisor, Tata Medical Center**

### **Introduction:**

Intubation, with subsequent mechanical ventilation, is a common life-saving intervention in the critical care department given the increasing length of stay of ventilated patients in critical care unit, it is necessary for critical care nurse to have a good understanding of techniques to optimize mechanical ventilation and minimize complications to patients who require ventilator support during the journey of hospitalization.

### **Meaning of Mechanical Ventilation:**

A mechanical ventilator is a positive or negative pressure breathing device that can maintain ventilation and oxygen delivery for a prolonged period.

### **Purposes of Intubation:**

- To maintain gas exchange in case of acute and chronic respiratory failure
- To maintain ventilatory support after CPR
- To reduce pulmonary vascular resistance
- To excrete increased CO<sub>2</sub>
- To give general anesthesia with muscle relaxant

### **Working principles of Mechanical ventilator:**

A ventilator is an automatic mechanical device designed to provide all or part of the work the body must produce to move gas into and out of the lungs.

### **Modes of Noninvasive Mechanical Ventilation:**

- i) Bilevel Positive Airway Pressure(BiPAP)
- ii) Continuous Positive Airway Pressure (CPAP)

### **Modes of Ventilation used for intubated patient:**

When patient is on ET tube or Tracheostomy is there we are generally using following modes.

- i) Controlled modes

- ii) Assist control(AC) mode
- iii) Synchronized intermittent mandatory ventilation
- iv) Pressure support mode

**Ventilator parameters:**

- i) Tidal Volume
- ii) Respiratory rate
- iii) Inspiratory Flow Rate
- iv) Fraction of Inspired Oxygen( $F_{iO_2}$ )
- v) Positive End-Expiratory Pressure(PEEP)

**Indication for Intubation:** Mechanical ventilation is indicated when the patient's spontaneous ventilation is inadequate to sustain life.

- Bradypnea or apnea with respiratory arrest
- Upper airway obstruction and Lower airway blockage
- Neuromuscular disorder as in Myasthenia Gravis, Poliomyelitis, Gullian-Barre syndrome, Snake bite and inadequate reversal of anesthesia
- Lung diseases which prevent proper exchange of oxygen and carbon dioxide
- Clinical deterioration
- Respiratory muscle fatigue
- Obtundation or coma
- Respiratory arrest
- During Post op period or long surgery

**Criteria for Institution of Ventilator support:** Clinical presenting features of respiratory insufficiency when confirmed by ABG.Arterial blood Gas –parameter

- $pH < 7.25$
- $Pa O_2 < 60$  mm of Hg
- $PaCO_2 > 50$  mm of Hg

**Types of intubation:** Orotracheal, Nasotracheal, Tracheostomy

**Preparation for Intubation**

1. Recognize the need for intubation.
2. Notify physician and respiratory therapist. Ensure consent obtained if not emergency.
3. Gather all necessary equipment:
  - a. Suction unit-wall or portable
  - b. Sterile suction catheter of appropriate size with Y connector
  - c. Sterile gloves

- d. Normal saline
  - e. Yankuer suction-tip catheter and nasogastric tube
  - f. Intubation equipment: Manual resuscitator bag (MRB), Laryngoscope and blade, Water soluble lubricant(2% Xylocaine jelly,
  - g. 10 ml syringe for balloon inflation
  - h. Endotracheal attachment device (E-tad) or tape
  - i. Ventilator machine with tubings with HME(heat and moisture exchanger)
  - j. Catheter mount
  - k. Sedation-Inj propofol (10ml)/midazolam (2ml-5ml)/rocuronium (1.2 ml/kg BWT /fentanyl(2ml-3ml)
1. For difficult intubation boogie, yankuer suction and Video larynscope
  4. Call for chest x-ray to confirm position of endotracheal tube
  5. Provide emotional support as needed/ ensure family notified of change in condition.

### **Complications of Mechanical Ventilation**

#### **1. Associated with patient's response to mechanical ventilation:**

- a. Decreased Cardiac Output
- b. Barotrauma
- c. Nosocomial Pneumonia
- d. Positive Water Balance

#### **2. Other complications related to Endotracheal intubation.**

- A. Sinusitis and nasal injury
- B. Tracheoesophageal fistula
- C. Mucosal
- D. Laryngeal or tracheal stenosis
- E. Cricoid

### **PLAN OF CARE FOR THE VENTILATED PATIENT**

#### **Patient Goals:**

Patient will have effective breathing pattern.

Patient will have adequate gas exchange.

Patient's nutritional status will be maintained to meet body needs.

Patient will not develop a pulmonary infection.

Patient will not develop problems related to immobility.

Patient and/or family will indicate understanding of the purpose for mechanical ventilation.

## **Nursing responsibilities:**

Prepare a smooth journey by treatment & nursing care for primary illness, prevention of complications & comfortable weaning.

### **General care –**

- **Daily nursing assessment –**
  - ✓ Shift wise assessment
  - ✓ GCS
  - ✓ BRADEN SCALE
- **Ventilator set-up-**
  - ✓ Check parameters –RR,FiO<sub>2</sub>,TV,I:E ratio,PEEP etc
  - ✓ capnography monitor
- **ET suctioning**
  - ✓ Select suction catheter size
  - ✓ Once in a shift and SOS
  - ✓ Cuff pressure checking once in a shift and SOS
  - ✓ Maintain sequence of suctioning during normal suctioning and before extubation
- **Personal hygiene**
  - ✓ Mouth care
  - ✓ Back care
  - ✓ Positioning of patient( use of HOIST)

### **Specific care –**

- Infection control bundle-VAE
- FASTHUGBIDS
- RASS
- FLACC SCALE
- SOFA

## **Trouble shooting of Mechanical ventilator:**

One important consideration in the care of patient on mechanical ventilation is trouble shooting-

- Low pressure alarm
- High pressure alarm
- High or low rate alarm
- High or low Inspiratory alarm
- Low or high expiratory alarm

**Weaning Criteria:** Weaning is a process whereby a patient is transferred from mechanical ventilatory support to spontaneous breathing. Nursing interventions are also the key during the discontinuation of mechanical ventilation; there are currently the followings-

**Criteria for re-intubation:**

- Decreased SpO<sub>2</sub>
- Tachycardia
- Hypotension
- Impaired ABG
- Drowsiness
- Decreased spontaneous breathing effort
- Decreased GCS scale

**Nursing care plan :**

1. Ineffective gas exchange r/t ventilation perfusion mismatch secondary to Et tube obstruction, Tube migration, bronchospasm etc.
2. Ineffective breathing pattern r/t mechanical obstruction secondary to secretion and ET Tube
3. Impaired nutritional status less than body requirement r/t feeding intolerance
4. High risk for infection r/t invasive line, hospitalization and deficient immunological status
5. High risk for injury r/t physical helplessness
6. Interrupted family process r/t situational crisis



# **Infection Control in ICU**

## **The challenges and the way forward in our PICU**

**Speaker- Dr. Parthasarathi Bhattacharyya**

**Senior Consultant, PICU**

**Tata Medical Center, Kolkata.**

**E-mail: [pbhattacharyya65@gmail.com](mailto:pbhattacharyya65@gmail.com)**

*Blind faith, no matter how passionately expressed, won't suffice. Science will test relentlessly every assumption about human condition- Edward Osborne Wilson*

Disease manifestation in Paediatric Intensive Care Unit (PICU) among immunocompromised children afflicted with various childhood malignancies is the result of interaction between agent, host and environment. The PICU environment is often regarded as the epicentre of infections, with sepsis being the commonest cause of non cardiac mortality. PICUs account for 5-15% of total hospital beds but account for 10-25% of total health care costs. Mortality related to sepsis can reach as high as 50% in different centres across the globe while sepsis itself increases the patient care related costs by six fold. At Tata Medical Center, Kolkata treatment cost of Multi Drug Resistant Organism (MDRO) is much higher than treating non-MDRO infection in both hemato-lymphoid and solid organ malignancies. In various studies the 30 day all cause mortality from MDRO infection and related complications could be as high as 60%.

In his nobel acceptance speech in 1945 Alexander Fleming predicted that “ the time may come when penicillin can be bought by anyone in the shops. Then there is the danger the ignorant man may easily under dose himself and by exposing his microbes to non lethal quantities of the drug make them resistant”. We were in pre-antibiotic era before discovery of Penicillin. 21<sup>st</sup> century is often regarded as the second pre antibiotic era predicted by Sir Fleming way back in 1945.

Antimicrobial resistance (AMR) today is a global phenomenon. Coupled with paucity of newer antibiotics in the horizon and emergence of new pathogens (eg. Candida auris) , AMR makes our fight against MDROs much more challenging. More we use our antibiotics injudiciously, bigger the problem of resistance becomes globally.

Under the current circumstances, we believe prevention of infection through rigorous and religious application of Infection Prevention and Control (ICP) measures and implementation of robust Anti Microbial Stewardship Program (AMSP) guiding our antibiotic usage policy will go a long way to

prevent and control infection among the immunocompromised children admitted to our PICU and prevent emergence of MDROs.

The challenges are many in implementation and practice of ICP measures in clinical areas in a resource limited setting. International Nosocomial Infection Control Consortium (INICC) dealing with the epidemiology and prevention of hospital acquired infections (HAI) in ICUs with limited resources recommends simultaneous implementation of (1) Infection prevention practice bundle (2) Education (3) Outcome surveillance (4) Process surveillance (5) Feedback on HAI rates and consequences and (6) Performance feedback. World Health Organization (WHO) recommends 8 core components of IPC to be implemented simultaneously and they are (1) Presence of an ICP program (2) Presence of an IPC guideline (3) Presence of IPC education and training (4) Surveillance of HAI and AMR (5) Implementation of IPC activities using a multimodal and multidisciplinary strategy (6) Monitoring and auditing IPC practices (7) Checking workload, staffing and bed occupancy (8) Building environmental material and equipment for IPC at the facility level.

The collective wisdom and will power to follow all the standard precautions (eg. aseptic techniques and hand hygiene); to adhere to care bundles to prevent ventilator associated events (VAE), catheter associated UTI (CAUTI), central line associated blood stream infection (CLABSI), surgical site infection (SSI); to practice chlorhexidine gluconate body wash will contribute significantly towards reducing the mortality and morbidity from MDRO infection in immunocompromised sick children admitted to PICU, will reduce the number of PICU days and device utilisation rates, reduce the overall length of stay (LOS) in the hospital and reduce cost of health care. Practicing four basic principles of AMSP dealing with timeliness, appropriateness, adequacy and duration of antibiotic usage universally and diligently will go a long way to tackle the global threat of emergence of newer MDROs.

*Cleanliness and order are not matter of instinct, they are matter of education and like most great things, you must cultivate a taste for them- Benjamin Disraeli*



## Communication in ICU and managing burnout: Wounded healers

**Speaker-Soumitra S Datta**

**Consultant Psychiatrist, Tata Medical Centre, Kolkata**

**Visiting Research Associate, University College London**

**Lead Reviewer, Cochrane Collaboration**

**(Research Gate ID [https://www.researchgate.net/profile/Soumitra\\_Datta](https://www.researchgate.net/profile/Soumitra_Datta))**

*“Not everything that counts can be counted, and not everything that can be counted counts.” –*

*Albert Einstein*

Modern medicine is at a juncture where clinicians are drowned with information but are starved of knowledge. The macro ecosystem is often task oriented and does not always encourage and reward young nurses and doctors to gain wisdom and act with empathy. However, when we introspect as a person, we value compassion and care over any other forms of human connection. Being in the nursing profession gives us the unique opportunity to be helpful to those who are wounded in body and in spirit. In this short lecture we would like to connect with our own selves and hopefully will get an introduction to how our own emotions influence our ability to communicate in an intensive care unit. The lecture will also discuss basics tenets of communication with patients, their family members and colleagues. This is an introductory lecture that may pave its way to a formal communication skills course that will be held in Tata Medical Center, Kolkata and the online registration for which is currently open <https://tmckolkata.com/tmc/events/communication-skills-workshop-for-health-care-professionals/>. The lecture will cover ways to improve wellbeing of staff.



# **Importance of enteral and parenteral nutrition in critically ill patient**

**Speaker-Reshma Ray**  
**Senior Clinical Nutritionist**  
**M.Sc. Nursing Faculty**  
**Tata Medical Center, Kolkata**

Nutrition is an integral part of human life. One cannot live long without nutrition. Under normal conditions when the body functions work normally, a person takes food orally in adequate amount to meet not only nutritional needs but satiates one's emotional needs as well.

But when all body functions do not work normally then delivering nutrition becomes challenging. Sometimes one need to restrict any particular nutrient for any disease condition or, sometimes one is not in a position to take food orally or, sometimes one's GI system is not working properly or, one is not hemodynamically stable. At the same time metabolic needs of any trauma patients gets increased. Hence increased nutritional needs along with difficulty in delivery of nutrients cause negative effect on patient's recovery.

To manage nutrition of a critically ill patient, we need to consider following points and take appropriate measures to treat patient in right way –

1. Initial assessment – Previous nutrition status, allergy/ intolerance etc.
2. Try to start feeding within 24-48 hours of ICU admission
3. Avoid refeeding syndrome
4. Enteral Feeding
  - a. Use GUT if it is working
  - b. Start GUT feeding once the patient is hemodynamically stable
    - i. Gastric feeding – Bolus/ continuous
    - ii. Post pyloric feeding - Continuous
  - c. Stop unnecessary holding feeds
    - i. Monitor GRV in gastric feeding in rational way
    - ii. Monitor tolerance
  - d. Reduce chance of aspiration
    - i. Head of bed elevation
    - ii. Continuous feeding
5. If GUT is not working and it is anticipated that GUT cannot be used in next 5-7 days then Parenteral nutrition should be started
  - a. Optimum nutrition delivery
  - b. Measures to reduce infection

- c. Wean off protocol – avoid rebound hypoglycemia
6. Monitoring
- a. Blood parameters – Electrolytes, Renal parameters, Liver parameters
  - b. Bowel status
  - c. Nausea/ vomiting/ aspiration
  - d. Abdominal distention
  - e. Urine output
  - f. Drain output if any
  - g. Others

Nutrition management of critically ill patient is very challenging yet rewarding job for any Clinical Nutritionist. And this is not a one man's job it's a team effort of ICU nursing, treating team, intensivists, nutritionist, bio medical engineering team, housekeeping, pharmacy, food service along with patient and patients' family member. In absence of one of them nutrition management is not going to be completed.



# Early Ambulation And Edema Management In Critically Ill Patients

Speaker-Sayantana Chattopadhyay

Senior Physical therapist  
Tata Medical Center

## Effects of Early Mobilization

Early mobilization consist of few terms describes by Ross and Dean 1989

- **Positioning** refers to the application of body positioning to optimize oxygen transport, primarily by manipulating the effect of gravity on cardiopulmonary and cardiovascular function.
- **Mobilization and exercise** refers to the application of progressive exercise to elicit acute cardiopulmonary and cardiovascular responses to enhance oxygen transport.

### Effect of prolonged hospital stay with or without mechanical ventilation :

- Increase morbidity/mortality
- Respiratory muscles weakness and increase duration of ventilation.
- Increase length of stay
- Increase cost of stay
- Sleep deprivation
- Lack of social interaction
- Prolonged sedation
- Delirium / ICU Psychosis

### Impairments seen with prolonged bed rest :

- Increase respiratory dysfunction
- Impair strength
- Psychological impairments
- Increase risk of skin breakdown
- Decrease quality of life

### Benefits of early mobilization :

- Improves respiratory functions
- Reduces adverse effect of immobility
- Increases levels of consciousness
- Increases functional independence
- Improves cardiovascular fitness
- Increases psychological well being
- Reduces the risk of ICU psychosis

### Methods of Positioning :

Upright , Supine , Prone , High sidelying , Bedside sitting , Standing and Ambulation

### When an early mobilization to be stopped :

- HR < 40 or > 140 bpm
- RR < 5 or > 35 bpm
- SpO<sub>2</sub> < 88% and gradually down for > 1 min
- SBP < 90 mm Hg or > 180 mm Hg
- Elevated ICPs
- Changes in patients presentation occurs
- New medical finding occur

## **Oedema**

Accumulation of fluid in the interstitial tissue is caused by insufficient return to venous blood, also known as venous pooling.

### **Types of oedema**

- ▶ Localised –
  - Inflammatory oedema
  - Allergic oedema
  - Dependent oedema
- ▶ Generalised –
  - Renal oedema
  - Cardiac oedema
  - Nutritional oedema

### **Causes of oedema**

- ▶ **Increased hydrostatic pressure**
  - Impaired venous return
  - Congestive Cardiac failure
  - Ascites
  - Venous obstruction/compression
    - Thrombosis
    - External pressure ( eg mass)
    - Extremity inactivity due to prolonged dependency
- ▶ **Reduced plasma osmotic pressure**
  - Hypoalbuminaemia
- ▶ **Sodium retention**
  - Excessive salt intake with renal insufficiency
  - Increased tubular reabsorption of sodium
- ▶ **Inflammation**
  - Acute inflammation
  - Chronic inflammation

### **Effect of oedema**

- ▶ Painful limb
- ▶ Stiff joint
- ▶ Functional loss of limb
- ▶ Difficulties in movement and ambulation
- ▶ Skin infection
- ▶ Increases chances of pressure ulcer

### **Management of oedema**

- ▶ Medical management of the cause
- ▶ Salt restricted diet
- ▶ Early mobilization and active limb movements
- ▶ Elevation of the limb 3-4 times/day for 30 mins
- ▶ Crepe bandaging
- ▶ Use of Pressure garments
- ▶ Magnesium sulfate dressing

### **Management of Lymphoedema**

- ▶ Skin Care
- ▶ Elevation of the limb
- ▶ Complete Decongestive Therapy ( CDT)
  - Decongestive Exercise
  - Compression garments/ Multi Layer Bandaging

- Manual Lymphatic Drainage ( MLD)
- ▶ Maintain mobility

## **EFFECT OF EARLY MOBILIZATION**

Early mobilization consist of few terms describes by Ross and Dean 1989

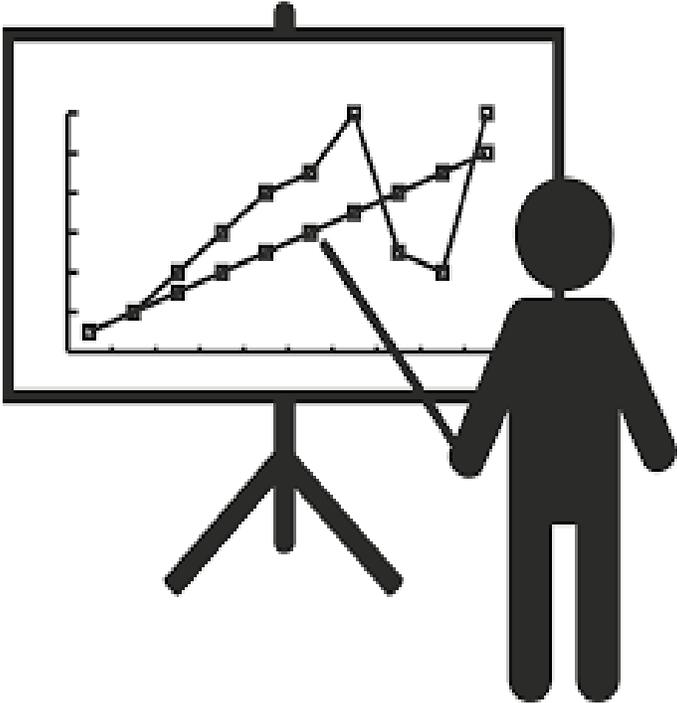
- **Positioning** refers to the application of body positioning to optimize oxygen transport, primarily by manipulating the effect of gravity on cardiopulmonary and cardiovascular function.
- **Mobilization and exercise** refers to the application of progressive exercise to elicit acute cardiopulmonary and cardiovascular responses to enhance oxygen transport.

In the context of cardiopulmonary physiotherapy , ‘ mobilization’ refers to low – intensity exercise for typically acutely ill patients or those with severely compromised functional workcapacity.

The initiation of mobility by sitting and standing out of the bed when a patient is minimally able to participate , presence with hemodynamic stability and the patient receives acceptable levels of oxygen.



**ABSTRACT FOR PAPER PRESENTATION**



# **A Comparative Study to Assess the Effect of Aerobic Exercise on Fatigue in Patients Receiving Radiation Therapy in a Selected Hospital of Kolkata, West Bengal .**

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**( A unit of Bell Vue clinic )**

**Background:** Radiotherapy is one of the treatment options of cancer. Radiotherapy can results in many side-effects among them fatigue is one of the most prevalent and distressing symptoms reported by cancer patients. This study is assessing the effect of aerobic exercise on fatigue in patients receiving radiation therapy.

**Material and Method:** A quasi experimental, pre and post-test control group research design was used on patients, receiving radiation therapy on outpatient basis at Tata Medical center, Kolkata. A total of 60 patients were selected by non-probability purposive sampling technique, out of which 30 were in experimental group and 30 were in control group. The background information of the sample were collected by using Semi-structured demographic questionnaire and Fatigue level of the patients was assessed twice by using a Standardized Structured Questionnaire named as FACIT-F. Aerobic exercise was implemented for 10 minutes for 7 days before entering to radiation therapy for experimental group.

**Results:** The result revealed that among the control group, mean pre fatigue score was 41.4 and post mean fatigue score was 37 and among the experimental group mean fatigue score was 40.4 and post mean fatigue score was 46.7. As per FACIT-F, higher the fatigue score lesser the fatigue level. So mean scores of experimental group suggested that there was less fatigue at post test due to aerobic exercise. To find out the effect of aerobic exercise, un-paired 't' test was done and it was seen that obtained 't' was 7.4 which was found significant at 0.05 level of significance. A significant association was found at 0.05 level of significance in between fatigue and diagnosis of the patient among control group. Otherwise, there was no significant association was found between fatigue and other demographic variables for both for experimental and control group.

**Conclusion:** The study represented that aerobic exercise significantly reduces the fatigue level of the patients receiving radiation therapy.

**Keywords:** Fatigue, Aerobic exercise and Radiation therapy.



**“A study to assess the effect of planned teaching programme on knowledge regarding prevention of colorectal cancer among adults in selected urban areas of Manipur.”**

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Colorectal cancer is the fourth most common cancer in the world and also a life threatening disease. If the disease is diagnosed at a time when the tumour has not spread through the bowel wall, then the cure rate is over 90 per cent. Health teaching is an integral part of nursing and emphasizes knowledge towards prevention of colorectal cancer among adults. Knowledge acquired will enable them in preventing from the occurrence of colorectal cancer.

The study was conducted to assess the effect of planned teaching programme on knowledge regarding prevention of colorectal cancer among adults in selected urban areas of Manipur.

Quasi experimental one group pre test post test study was used for this study. One hundred forty nine urban adults were selected by using probability cluster sampling technique. Data collected on demographic information through semi structured questionnaire. Pre test and post test knowledge score through structured knowledge questionnaires. The intervention was carried out for a duration of 20 minutes. Post test was carried out on seventh day.

**RESULT :** The study finding showed that the mean posttest knowledge score (19.06) was higher than the mean pre test knowledge score (10.9) of the urban adults and standard deviation of pre test and post test score was 4.25 and 2.78 respectively. The study represented that planned teaching programme regarding prevention of colorectal cancer was found to be effective to increase the knowledge level of urban adult where “t” value is 19.56, which is significant at 0.05 level of significance. Chi – square was computed for finding association of pre test knowledge score of the urban adults with the selected demographic variables. Only previous information about colorectal cancer was found to be significant at 0.05 level of significance.

The study findings concluded that the planned teaching programme regarding prevention of colorectal cancer improve the knowledge level of urban adult.



# **Effects of traditional method v/s video based teaching programme on knowledge and skill regarding neurological assessment among the staff nurses of selected hospitals of West Bengal.**

**Payel Mazumdar**  
**Shift in-charge**  
**Tata Medical Center**

**Introduction-** One of the problems and apprehensions in higher education is how to learn different fields and especially different practical skills. This problem is of great importance in the medical university, as knowing about new teaching methods, using educational accessories and getting rid of invaluable traditional methods will help both the professors and the students to use their opportunities more effectively and also able them to make changes in education

## **Purpose of the study**

To assess the knowledge and skill on neurological assessment before and after administration of video assisted teaching method and traditional teaching method.

To find out the effects of the video assisted teaching method v/s traditional teaching method in terms of difference in post test knowledge and skill score regarding neurological assessment among then staff nurses.

## **Material and Methods :**

This study was aimed to assess the knowledge skill regarding neurological assessment of the staff nurses . In this study research approach selected was the quasi experimental research approach.

Researcher adopted non randomized two group pretest post-test design and 50 staff nurses from two different hospitals by nonprobability convenience sampling techniques. Researcher adopted Leedwing Von Bertalanfy as a conceptual framework. Structured questionnaire and observational checklist was used to collect the data.

For study , Selected different group for both treatment each group 25 staffs are taken. Staff nurses from different ward mainly working in a medicine, surgery, neuro ward with one year of minimum experience and minimum qualification GNM ( Excluded Msc in nursing and trained on neurology) for the video based teaching method. Group A

Data collection was started by taking the pre skill test by observation checklist schedule then pretest was taken from 12 individual sample and also the video based teaching was administered on the same day by approaching individual staffs. Next day another 13 sample were arranged and similarly done the process. Samples are taken by Non probability sampling method.

Semi structured questionnaire schedule on independent research variables profile was filled up and pretest had been taken by administering and filling up of structured 28questionnaire schedule to assess the knowledge of the staff nurse regarding neurological assessment.

Traditional teaching (Group B) method given to another 25 staff nurses at Calcutta Medical College and Hospital. Same process like previous one . First day 12 staff were arranged then next samples were 13.

Post test was taken on day 7<sup>th</sup> day by same data collection schedule using the appropriate tools from the individual group.

## **Result :**

### **Related to effectiveness of planned teaching programmed**

In the present study the data showed that mean difference of pre test and post test knowledge score of the respondents on neurological assessment was statistically significant as evident from paired 't' value in both the administered teaching method (t=21.18 for df 24 at level of significance knowledge score and in skill score t=31 for df 24 at level of significance in case of video based teaching method, t=23.83 for df 24 at level of significance in skill score t=25.64 for df 24 at level of significance in case of traditional teaching method) this showed that the obtained mean difference between pretest and post test knowledge score was a true difference and not by chance. So data indicated that the planned teaching programme on neurological assessment in both cases video based and traditional teaching method significantly increased the knowledge and skill in post test.

### **Related to comparison**

Group B mean post test knowledge score was lower than mean post test knowledge score of group A with the mean difference 1.92 the mean difference was statistically significant as evidence from 't' value was 4.28 at df 48 at level .05. So videobased teaching method was more effective than traditional teaching in enhancing the knowledge of the staff nurses.

Following conclusion was drawn on the basis of the study Knowledge of staff nurse regarding neurological assessment was not adequate as determine by structured questionnaire on knowledge. Video base and traditional teaching method both are more effective on knowledge and skill of the staff nurse, but video based teaching method more effective than traditional teaching method in enhancing knowledge and skill.



# **Assess risk factors and risk status of cervical carcinoma among women attending O.P.D. in a selected Govt. Hospital of Kolkata**

**Rimpa Saha<sup>1\*</sup> & Prof. Purnima Kundu<sup>2</sup>**

**<sup>1</sup>Staff Nurse, AIIH&PH, Kolkata. \* Corresponding author**

**<sup>2</sup>Acting Principal, College Of Nursing, Bankura Sammilani Medical College, Bankura, West Bengal.**

A case control study was conducted to assess risk factors and risk status of cervical cancer among the women attending OPD of selected Govt. hospital. Case and control group were selected by using total enumerative and purposive sampling and online risk assessment tool named YOUR DISEASE RISK and pap smear test was used as a tool to assess risk factors and risk status beside semi structured interview schedule and record analysis proforma. According to the study findings avoidance of barrier method seems to be the more prevalent risk factor followed by multiple full term pregnancy and early sexual exposure. 4% controls are found to have HSIL & 12% are LSIL. Other hand maximum percentages of cases belong to above (37%) and much above average (36%) risk group whereas among controls maximum (34%) belong to bellow average risk group. Significant difference regarding risk factors was found between case and control group ( $t= 13.4$ ). There is also significant relationship is present between risk status and risk factors for both group ( $r=0.76$  for controls &  $r=0.8$  for cases). So it can be concluded that risk factors assessment is important to reduce numbers of affected.

Key wards: Risk factors, Risk status, Ca cervix, Women



## **A study to assess the risk status of cervical cancer among women in a selected community of Kolkata West Bengal.**

**Susmita Ghatak**  
**Senior sister tutor**  
**Gouri Devi Nursing Academy**

Lack of awareness of risk factors and symptoms for cancer may lead to late diagnosis and poor prognosis. I assessed community awareness about risk status of cervical cancer in order to contribute data to inform interventions to improve cervical cancer survival. A Descriptive research design was adopted for this study. The data were collected from 150 women of village samali nahazari block. The data were collected by convenience sampling technique. The Tool I demographic proforma, Tool II checklist were used to assess the risk status of cervical cancer. The result shows, Majority (100%) had no habit of smoking. According to data only 13.33% are taking alcohol and 130 people that is 86.66% women are non alcoholic. Out of 150 women 40 are used to take steroid therapy that is 26.66 and 73.33% women were not taking steroid therapy as well. 20 women having hormonal therapy (13.33%), and 130 women are not taking any hormonal treatment out of 150. There were 70 people (46.66%) take soda and 80(53.33%) not taking soda. The data also describing that, fruits and vegetables are taken by 80 peoples (53.33%) and 70 women are not taking the fruits and vegetables. Data presented that out of 150 women 50 have irregular menstruation (33.33%) and 100 are not suffering from it(66.66%). It is explained by the data that, out of 150 women 60 had experienced bleeding between two menstrual cycle (40%) and 90 didn't suffered from it (60%). The table presenting the data that out of 150 sample 20 have history of leucorrhoea (13.33%), and the 130 samples answered that they don't have history of leucorrhoea (86.66%). Only 10 sample (6.66%) explained post coital bleeding and 140(93.33%) had no such experience respectively. 30 samples out of 150 (20%) had pain during intercourse and 120 peoples had no such problem (80%). 60 women (40%) using contraceptive pills and 90 (60%) not having contraceptive pills. 30 samples (20%) had genitor-urinary tract infection and 120 (80%) sample had no such infection according to data. Out of 150 samples 20 had offensive vaginal smell (13.33%) and 130 (86.66%) had no vaginal smell. 150 (100%) samples washes vagina after urination. According to that table out of 15 samples 130 using pad during menstruation (86.66%) and 20 people using other methods(13.33%). 100samples(66.66%) out of 150 dried their inner wear at sunlight and 50 (33.33%) dries under shadow place of home. 150(100%) samples wash their inner wear everyday. There is 0% of having multiple sexual partner. out of 150 women 23 (15.33%) are obese and 127(84.66%) not obese. Recognition of cervical cancer risk status and was among study participants, out of 150 women, 52 (34.66%) had high risk of developing cervical cancer and 98 (65.33%) had no risk of cervical cancer. The present study had several implications in several areas of nursing such as nursing practice, nursing education, nursing administration and research for further study.



# Effect Of Application Of Honey On Radiation Induced Oral Mucositis – A Quasi Experimental Study

Deblina Ganguly  
Senior sister tutor  
Gouri Devi Nursing Academy

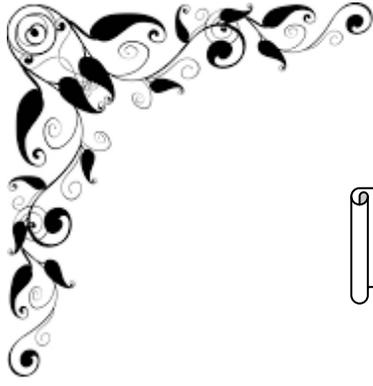
**Introduction:** Head and neck cancer are the common carcinoma of the oral cavity, and radiation therapy is an important treatment modality. Oral mucositis is an important complication of radiation therapy. This study was adopted to find out the effect of honey on radiation induced oral mucositis among patients undergoing radiation therapy in selected Hospital, Kolkata.

**Materials and Methods:** This was a quasi experimental study among 60 patients, (experimental group 30, control group 30) who had undergone radiation therapy related head and neck cancer. A semi structured interview schedule and WHO oral mucositis scale were used to collect data.

**Results:** The study findings showed that most of the participants in experimental group (46.6%) and control group (53.3%) had grade 1 oral mucositis before intervention. After intervention, majority of participants (43.3%) in experimental group had no oral mucositis. Where as (40%) participants in control group had developed grade 2 oral mucositis. The findings also showed that the application of honey was effective in reducing radiation induced oral mucositis in experimental group as evident from 't' value of 3.16 [ 't' df(29) =2.76 ] at 0.01 level of significance.

**Conclusion:** The study showed the effect of honey on radiation induced oral mucositis is effective.





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