Mediversal

Critical Care

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Critical Care

Overview

Critical Care involves caring for clients with life-threatening injuries and ill-nesses. Critical care nurses may provide care for a specific population, such as neonates, or specific body systems, such as clients experiencing severe cardiac concerns.

As critical care involves caring for those with complex medical needs in high acuity situations, a solid grasp of anatomy and physiology, as well as pharmacology, is required to ensure comprehension and application of advanced topics such as electrocardiogram and arterial blood gas interpretation.

As there is the potential to encounter critically ill and injured clients in every branch of nursing, knowledge of critical care basics is beneficial for all prospective nurses, not just those wanting to work in specific critical care environments.

Topics

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Acute Coronary Syndrom

- Myocardial Infarction (MI): Pathophysiology
- Myocardial Infarction (MI): STEMI vs. NSTEMI
- Myocardial Infarction (MI): In a Nutshell
- Cardiac Biomarker Tests for Acute Coronary Syndrome
- General Lab Tests for Acute Coronary Syndrome
- Non-labwork Tests for Acute Coronary Syndrome
- Lab Values and Diagnostic Tests for Acute Coronary Syndrome: In a Nutshell
- Cardiac Chest Pain: Ischemia and Infarction
- Angina Pectoris: Blood Vessel Changes in Heart Disease – Atherosclerosis
- Unstable Angina
- Unstable Angina: STEMI vs. NSTEMI
- Acute Coronary Syndrome: In a Nutshell
- Review of the Healthy Heart
- Post-myocardial Infarction
- Post-myocardial Infarction: In a Nutshell

Acute Respiratory Distress Syndrome (ARDS)

- Review of PaO_2 (Nursing)
- FiO_2 (Nursing)
- Normal Range Ratio PaO_2/FiO_2
- Acute Respiratory Distress Syndrome (ARDS): Overview
- Ratio PaO_2/FiO_2: In a Nutshell
- Review of the Anatomy and Physiology of Gas Exchange
- Review of the Alveolar Wall and Pulmonary Surfactant

- Alveolar Conditions
- Review of Gas Exchange: In a Nutshell
- Introduction to Surface Tension and Surfactant
- Review of Alveolar Surface Tension and Surfactant
- Surface Tension and Surfactant: In a Nutshell
- Acute Respiratory Distress Syndrome (ARDS): Introduction
- ARDS: Berlin Definition
- ARDS: Causes
- ARDS: Phases
- Initial Injury and Inflammation – Exudative Phase
- Changes in the Alveoli – Exudative Phase
- Polymorphic Neutrophils Activated (PMN) – Changes in the Exudative Phase
- Inflammatory Response – Changes in the Exudative Phase
- Hyaline Membranes – Changes in the Exudative Phase
- Refractory Hypoxemia – Changes in the Exudative Phase
- Refractory Hypoxemia: Prone Positioning – Changes in the Exudative Phase
- Refractory Hypoxemia: ECMO – Changes in the Exudative Phase
- Reparative and Proliferative Phase
- Fibrotic Phase
- Acute Respiratory Distress Syndrome (ARDS): In a Nutshell

Brain Injuries

- Traumatic Brain Injury (TBI): Definition and Causes
- Brain Hypoxia and Brain Herniation
- Traumatic Brain Injury (TBI): Worst Case Scenarios
- Traumatic Brain Injury (TBI): In a Nutshell

- Types of Head Trauma
- Acceleration and Deceleration Injury
- Skull Fractures
- Basilar Skull Fracture and Cerebrospinal Fluid (CSF) Leaks
- Head Trauma: In a Nutshell

Chest Tube Management & Care

- Introduction to Chest Tubes and Drainage Systems
- Chest Tube System Setup
- Chest Tube Monitoring and Care
- Hands on: Wet and Dry Suction Chest Tube Drainage Systems
- Chest Tubes: Documentation and Special Considerations

Critical Care Environment (release in progress)

- Emergency Severity Index (ESI)
- Orientation to Tubes, Lines, and Drains in the Critical Care Patient
- Introduction to Intensive Care
- Interdisciplinary Teams in Intensive Care

Electrocardiogram (ECG) – Med-Surg Nursing

- The Basics of ECG Strips
- Analysis of Abnormal ECG Strips
- ECG Essentials: 5 and 12 Leads

Hemodynamics

- Hemodynamic Monitoring
- Hemodynamic Concepts and Values
- Hemodynamic Medications

Interpretation of Arterial Blood Gases (ABGs)

- Acid-base Homeostasis
- Acid-base Terminology
- Step 1: pH – ABG Interpretation
- Step 2: CO_2 – ABG Interpretation
- Step 3: HCO3- – ABG Interpretation
- Step 4: pH Match-up – ABG Interpretation
- Step 5: Acid-base Imbalance and Compensation – ABG Interpretation
- Step 6: O_2 – ABG Interpretation
- Respiratory Acidosis: Causes and Nursing Interventions
- Respiratory Alkalosis: Causes and Nursing Interventions
- Metabolic Acidosis: Causes and Nursing Interventions
- Metabolic Alkalosis: Causes and Nursing Interventions

Mechanical Ventilation

- Introduction to Mechanical Ventilation
- Clinical Applications of Mechanical Ventilators
- Interpretation of Ventilator Alarms
- Understanding Ventilator Settings
- Ventilator Modes and Monitoring

- Complications with Mechanical Ventilation
- Management of Mechanical Ventilators

PNS Drugs (Critical Care)

- Neuromuscular Blocking Drugs (NMBs)
- Neuromuscular Junction
- Neuromuscular Blocking Drugs (NMBs): In a Nutshell Paralysis with NMBs
- Repetition: Neuromuscular Blocking Drugs (NMBs)
- NMBs: Route of Administration and Effects
- Competitive vs. Depolarizing NMBs
- Competitive NMBs
- NCLEX Question on NMBs
- Competitive Neuromuscular Blockers: In a Nutshell
- Succinylcholine
- Succinylcholine: Adverse Effects
- Succinylcholine: Drug Interactions
- NCLEX Question on Succinylcholine
- Succinylcholine: In a Nutshell

Shock

- Hypovolemic Shock: Introduction
- Hypovolemic Shock: Stages and Assessment
- Hypovolemic Shock: Management
- Anaphylactic Shock: Introduction
- Anaphylactic Shock: Stages and Assessment
- Anaphylactic Shock: Management
- Neurogenic Shock: Introduction

- Neurogenic Shock: Stages and Assessment
- Neurogenic Shock: Management
- Cardiogenic Shock: Introduction
- Cardiogenic Shock: Stages and Assessment
- Cardiogenic Shock: Management
- Septic Shock: Introduction
- Septic Shock: Initial Stage and Assessment
- Septic Shock: Developing Stages
- Septic Shock: Management

Why Mediversal?

	Mediversal	
CPD hours/ Credit	110 hours/Credit	3—50 hours/Credit
NMC Guideline	Advantages in accordance with provision 1.4.2 of NMC regulations	Not all. (Very few)
Renowned International faculties	Yes	Only for few subjects
Faculty to learner ratio	1:10	1:50 or 1:75
Case based learning	Yes	No
AI supported learning	Yes	No
Live Interaction Sessions	Yes	No
Clinical Attachments	Yes (Case to Case basis)	Yes
Associated with Hospitals for Clinical Training	Yes	Yes
Books	Yes (Printable Pdf copy)	No
Complementary e-Learning Module & Certification	Yes	No
Learner Support	Yes	No
Community of Doctors for peer support (Medivarsal Alumni only)	Yes	No
Alumni Support	Yes	Only a few
e-Certification	Yes	Yes
Physical Certification	Yes	Only a few
Lifetime certificate validity	Yes	Yes
Digital Marketing and Business Support for your hospital/clinic	Yes	No
Admission process	Smooth, Transparent & all details provided	Spamming through multiple channels.
Data and privacy protection	Yes	No
CME access	Yes (Lifetime)	No
Medico Legal Session	Yes (Free. By renowned high court advocates)	No
National Level Felicitation Award (for Medivarsal Alumni)	Yes	No

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