Neuro ICU Content Outline

Exam Objective: To measure the overall level of clinical knowledge of the Registered Nurse in the area of Neuro Intensive Care Unit.

Knowledge Domains - Neuro ICU RN

- Cardiovascular: 20%
- Endocrine: 5%
- General Knowledge: 18%
- Multisystem: 12%
- Neuro ICU Pharmacology: 5%
- Neurology: 20%
- Pulmonary: 5%
I. Cardiovascular
   A. Knowledge of anatomy and physiology of cardiovascular system:
      1. Electrical conduction
   B. Knowledge of pathophysiology and disease processes related to the Cardiovascular System.
   C. Knowledge of current ACLS guidelines:
      1. Treatment protocols
      2. Defibrillation guidelines
   D. Knowledge of rhythm characteristics:
      1. Lethal Arrhythmias
      2. EKG changes with electrolyte imbalances
   E. Knowledge and recognition of different types of shock:
      1. Cardiogenic
      2. Hypovolemic
   F. Knowledge of preload, afterload, and mechanism of contractility.
   G. Knowledge of External Cardiac Pacemakers
   H. Knowledge of AHA guidelines for PTCA (Percutaneous Transluminal Coronary Angioplasty).
   I. Knowledge of invasive hemodynamic monitoring.
   J. General knowledge of CVP, PA systolic, diastolic, and PCWP.
   K. Knowledge of common etiology of CHF in the elderly population.
   L. Knowledge of physiological effects elevated digoxin levels.

II. Endocrine
   A. Knowledge of pathophysiology and disease processes related to Endocrine System:
      1. Diabetes Mellitus (Type I and Type II)
      2. DKA
      3. Diabetes Insipidus
      4. SIADH
III. Gastrointestinal
   A. Knowledge of anatomy and physiology of GI system.
   B. Knowledge of NG Tube including proper NG Tube placement.

IV. General Knowledge
   A. Knowledge of disease processes common in the Neuro ICU.
   B. Knowledge of appropriate phlebotomy technique.
   C. Knowledge of intravenous procedures and complications to IV Therapy.
   D. Knowledge of administration protocols for IV Push medications.
   E. Knowledge of blood and blood product administration.
   F. Knowledge of patient education for radiological procedures.
   G. Knowledge of nursing interventions for patients with altered nutritional intake:
      1. Lipid administration
      2. TPN administration
   H. Knowledge of management and complications of IV lines:
      1. Central lines
      2. PICC lines
   I. Knowledge of appropriate nursing interventions for multiple trauma injury:
      1. Seat belt type injuries

V. Multisystem
   A. Knowledge of criteria for placement of IVC filter.
   B. Knowledge and recognition of different types of shock:
      1. Neurogenic Shock
      2. Septic Shock
   C. Knowledge of assessment of post-traumatic injury patient:
      1. Effects of hypothermia on Endocrine System
VI. Neuro ICU Pharmacology
   A. Knowledge of medication administration and their effects on patients.
   B. Knowledge of ACLS medications including indications and dosages.
   C. Knowledge of medications used for conscious sedation.
   D. Knowledge of medications used as paralytics.
   E. Knowledge of medications commonly used in the Neuro ICU setting.
   F. Knowledge of pharmacological treatment for electrolyte imbalance.
   G. Knowledge of thrombolytic agents:
      1. Glycoprotein IIa/IIb Inhibitors

VII. Neurology
   A. Knowledge of pathophysiology and disease processes related to the Neurological System.
   B. Knowledge of performing a comprehensive neurological assessment.
   C. Knowledge of nursing considerations for the neuro patient:
      1. Halo vest
      2. Post-craniotomy
   D. Knowledge of diagnostic procedures related to neurological events.
   E. Knowledge of ICP/CPP monitoring:
   F. Knowledge of physiologic response to pain.
   G. Knowledge and treatment of Neurogenic Shock.
   H. Knowledge of assessment and management of ventriculostomy.

VIII. Pulmonary
   A. Knowledge of pathophysiology and disease processes related to the pulmonary system.
   B. Knowledge of mechanical ventilation and settings.

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C. Knowledge and interpretation of ABG’s:
   1. Respiratory Acidosis
   2. Respiratory Alkalosis
   3. Metabolic Acidosis
   4. Metabolic Alkalosis

D. Knowledge of emergency intubation:
   1. Confirmation of correct placement

E. Knowledge of oxygen administration.

IX. Renal
   A. Knowledge of anatomy and physiology of GI system.
   B. Knowledge of NG Tube including proper NG Tube placement.