

# Contents

---

## **Section 1: Management of Shock/Unconsciousness**

<b>1. Introduction</b>	<b>3</b>
<i>Advanced Critical Care Nursing</i>	3
<i>Organization of Critical Care Area</i>	4
<i>Prehospital Care in Critically Ill Patient</i>	6
<i>Admission Criteria in Critical Care Area</i>	10
<b>2. Management of Client with Shock</b>	<b>12</b>
<i>Classification of Shock</i>	12
<i>Stages of Shock</i>	14
<i>Risk Factors</i>	14
<i>Clinical Manifestations</i>	14
<i>Diagnostic Assessment</i>	15
<i>Management</i>	15
<b>3. Therapeutic Management of Cardiovascular System</b>	<b>20</b>
<i>Nursing Assessment of Cardiac System</i>	20
<i>Coronary Artery Disease</i>	24
<i>Angina Pectoris</i>	25
<i>Acute Myocardial Infarction (Acute Coronary Syndrome)</i>	27
<i>Management of Patients with Cardiac Monitor</i>	31
<i>Cardiac Arrhythmias</i>	37
<i>Defibrillation</i>	41
<i>Nursing Care of the Patient with Central Venous Pressure</i>	45
<i>Hemodynamic Monitoring</i>	54
<b>4. Nursing Management of Unconscious Patient</b>	<b>60</b>
<i>Consciousness</i>	60
<i>Unconsciousness</i>	60
<b>5. Preparation of Drug Infusion</b>	<b>69</b>
<i>Preparation</i>	69
<i>Emergency/Crash Trolley and Drug Tray</i>	69
<i>Drug Infusion Guidelines</i>	70
<i>Replacement of Potassium</i>	79
<b>6. Therapeutic Management of Respiratory System</b>	<b>80</b>
<i>Acute Respiratory Distress Syndrome</i>	80
<i>Pulmonary Embolism</i>	81
<i>Pleurisy</i>	84
<i>Pleural Effusion</i>	84
<i>Emphysema</i>	85
<i>Oxygen Administration</i>	85

<i>Nursing Assessment of Respiratory System</i>	93
<i>Diagnostic Tests</i>	96
<i>Arterial Blood Gas Analysis</i>	97
<i>Pulmonary Function Test</i>	100
<i>Chest Drainage</i>	101
<i>Deep Vein Thrombosis and Thromboembolism Prophylaxis</i>	104
<i>Pneumothorax</i>	105
<i>Hemothorax</i>	107
<i>Tracheostomy</i>	108
<i>Endotracheal Intubation</i>	109
<b>7. Managing Diabetic Emergencies</b>	<b>118</b>
<i>Hypoglycemia</i>	118
<i>Diabetic Ketoacidosis (in Adult)</i>	119
<i>Non-ketotic Hyperosmolar Hyperglycemic Coma</i>	121
<i>Lactic Acidosis</i>	121
<i>Chronic Complications of Diabetes Mellitus</i>	122
<i>Management of Patient with Burns</i>	126
<b>8. Mechanical Ventilation</b>	<b>132</b>
<i>Terminology</i>	132
<i>Mechanical Ventilator</i>	132
<i>Method of Mechanical Ventilation</i>	132
<i>Indications</i>	133
<i>Criteria/Preparations for Using Ventilator</i>	133
<i>Classification</i>	134
<i>Modes of Ventilation</i>	135
<i>Setting of Mechanical Ventilation/Monitoring and Nursing Management</i>	136
<i>Weaning from Mechanical Ventilator</i>	137
<i>Ventilator Checklist</i>	138
<i>Nutritional Support of Patient on Ventilator</i>	139
<i>Cleaning and Asepsis of Ventilator</i>	140
<i>Change of Breathing Circuit of Ventilators</i>	140
<i>Change of Condenser Humidifier of Ventilator</i>	140
<i>Nursing Intervention for Patient on Mechanical Ventilation</i>	141
<b>9. Immediate Postoperative Care in Recovery Room or Postanesthesia Care Unit</b>	<b>143</b>
<i>Competency for PACU Nurses</i>	143
<i>Admission to Postanesthesia Care Unit</i>	143
<i>Postoperative Report and General Nursing Care for all Patients in Recovery Room</i>	144
<i>Postoperative Nursing</i>	147
<i>Discharge Criteria from Critical Care Area</i>	154
<i>Infection Control Procedure in Intensive Care Unit</i>	155
<i>Visitor Policy in Critical Care Area</i>	156
<i>Change of Patients' Position in Bed</i>	157

## **Section 2: Critical Care in Nephrology/Urology**

<b>10. Genitourinary Disorders and Nursing Management</b>	<b>161</b>
<i>Structure of the Kidney</i>	161
<i>Main Functions of the Kidneys</i>	162
<i>Renal System: Essential Concepts</i>	162
<i>Assessment and Diagnostic Measures</i>	164
<i>Urinary Tract Infection</i>	168
<i>Nephrotic Syndrome</i>	172
<i>Acute Poststreptococcal Glomerulonephritis</i>	173
<i>Wilms' Tumor</i>	174
<b>11. Urological Disorders and Nursing Management</b>	<b>176</b>
<i>Urinary Tract Infection</i>	176
<i>Nephrotic Syndrome</i>	180
<i>Acute Poststreptococcal Glomerulonephritis</i>	183
<i>Cryptorchidism (Undescended Testicle)</i>	185
<i>Hypospadias</i>	187
<i>Renal Calculus</i>	188
<i>Renal Failure</i>	190
<b>12. Dialysis</b>	<b>195</b>
<i>Principles of Dialysis</i>	195
<i>Indication for Dialysis</i>	196
<i>Vascular Access</i>	196
<i>Predialysis Assessment of Hemodialysis Patient</i>	197
<i>Priming of Hemodialysis Bloodlines and Dialyzer</i>	199
<i>Hemodialysis</i>	202
<i>Connecting a Patient with Arteriovenous</i>	
<i>Fistula to Hemodialysis Machine</i>	204
<i>Disconnecting a Patient with Arteriovenous</i>	
<i>Fistula from Hemodialysis Machine</i>	208
<i>Postdialysis Assessment of Hemodialysis Patient</i>	213
<i>Continuous Ambulatory Peritoneal Dialysis</i>	
<i>with Temporary Access to Hemodialysis Machine</i>	215
<i>Disconnecting a Patient with Temporary</i>	
<i>Access from Hemodialysis Machine</i>	217
<i>Preoperative and Postoperative</i>	
<i>Care of Arteriovenous Fistula</i>	224
<i>Management of Hypotension During Hemodialysis</i>	227
<i>Prevention and Management of Air Embolism</i>	227
<i>Hemodialysis Hazards</i>	230
<i>Disinfection, Cleaning, Decalcification and</i>	
<i>Maintenance of Hemodialysis Machine</i>	235
<i>Blood Transfusion During Hemodialysis</i>	237
<i>Hemodialysis Shunt Graft and Fistula Care</i>	240

<b>13. Peritoneal Dialysis</b>	<b>243</b>
<i>Continuous Ambulatory Peritoneal Dialysis</i>	243
<i>Plasmapheresis</i>	260
<i>Preoperative Preparation of Patient for Insertion of Tenckhoff Catheter</i>	263
<i>Postoperative Care of Patient with Tenckhoff Catheter</i>	264
<i>Continuous Venous Hemofiltration with Hemodialysis</i>	266
<b>14. Stress and Adaptation</b>	<b>268</b>
<i>Concept of Stress</i>	268
<i>Manifestation of Stress</i>	269
<i>Nursing Management of Stress</i>	271
<b>15. Defense Against Injury</b>	<b>275</b>
<i>Physical Barriers and the Immune System</i>	275
<b>16. Fluid, Electrolyte and Acid-Base Balance</b>	<b>278</b>
<i>Body Fluid Distribution</i>	278
<i>Fluid Imbalance: Dehydration</i>	282
<i>Electrolyte Imbalance</i>	285
<i>Nursing Process: Fluid and Electrolyte Imbalance</i>	290
<b>17. Management of Patients in Pain</b>	<b>295</b>
<i>Components of Pain</i>	295
<i>Types of Pain</i>	295
<i>Clinical Manifestation of Pain</i>	296
<i>Factors that Influence Responses to Pain</i>	297
<i>Guidelines for Assessment of the Patient in Pain</i>	297
<i>Nursing Diagnosis</i>	298

### **Section 3: Critical Care for Neonates and Children**

<b>18. Neonatal Critical Care</b>	<b>305</b>
<i>Terminologies</i>	303
<i>Organization of Neonatal Unit</i>	303
<i>Health Education</i>	304
<i>Breastfeeding</i>	304
<i>Provision of Infection Control</i>	305
<i>Aim and Objectives</i>	305
<i>Admission to Neonatal Care Unit</i>	305
<i>Child Morbidity and Mortality</i>	306
<i>Changing Trends in Hospital Care: Preventive, Promotive and Curative Aspects of Child Health</i>	308
<i>Child Health Assessment</i>	310
<i>Reflexes in the Neonate</i>	315
<b>19. High-risk Neonate</b>	<b>316</b>
<i>Hyaline Membrane Disease</i>	316
<i>Transient Tachypnea of the Newborn</i>	316
<i>Meconium Aspiration Syndrome</i>	317

<i>Sepsis</i>	317	
<i>Hyperbilirubinemia</i>	318	
<i>Isoimmune Hemolytic Disease of the Neonate</i>	319	
<i>Sexually Transmitted Disease</i>	320	
<i>Hydrocephaly</i>	321	
<i>Phenylketonuria</i>	321	
<i>Torch Syndrome</i>	322	
<i>Prematurity</i>	323	
<i>Postmaturity</i>	324	
<b>20. Nursing Care of Newborn</b>		<b>325</b>
<i>Preparing for Birth</i>	325	
<i>Admission Routine</i>	325	
<i>Observations</i>	325	
<i>Care</i>	326	
<b>21. Examination of the Newborn by the Pediatrician</b>		<b>331</b>
<i>History</i>	331	
<i>Formal Examination</i>	331	
<i>Observation</i>	333	
<b>22. Common Parental Questions/Concerns and its Answers</b>		<b>334</b>
<i>Fontanel</i>	334	
<i>Breasts</i>	334	
<i>Bumps and Bruises</i>	334	
<i>Birthmarks and Spots</i>	334	
<i>Jaundice</i>	334	
<i>Cradle Cap</i>	335	
<i>Eczema</i>	335	
<i>Bonding and Breastfeeding</i>	335	
<i>Bathing a Baby</i>	338	
<b>23. Neonatal Resuscitation</b>		<b>340</b>
<i>Immediate Newborn Conditions or Problems</i>	340	
<i>Management</i>	340	
<i>Resuscitation</i>	341	
<i>Technique of Artificial Ventilation</i>	345	
<i>Emergency Drugs</i>	347	
<b>24. Nursing Care in Different Conditions</b>		<b>349</b>
<i>Care of the Newborn Infant from HIV- or HBsAg-positive Mother</i>	349	
<i>Hypoglycemia in Newborn</i>	351	
<i>Convulsion in the Newborn</i>	352	
<i>Jaundice in the Newborn</i>	354	
<i>Nursing Management of a Low-birth-weight Baby</i>	356	
<i>Care of Baby in Incubator</i>	358	
<i>Respiratory System</i>	359	
<i>Assist in Exchange Transfusion</i>	373	

	<i>Guide to Some of the Conditions, Which may be Recognized</i>	377
	<i>Relief of Choking in Infants</i>	380
<b>25. Genetic Influences in Child Health</b>		<b>383</b>
	<i>Genetics</i>	383
	<i>Genes and Chromosomes</i>	383
	<i>Karyotype</i>	383
	<i>Cell Division and Reproduction</i>	384
	<i>Behavioral Genetics</i>	384
	<i>Genetic Abnormalities</i>	385
	<i>Prenatal Diagnosis</i>	387
	<i>Postnatal Diagnosis</i>	387
	<i>Therapeutic Management of Genetic Disease</i>	387
<b>26. Principles of Preoperative Care of Infants and Children</b>		<b>390</b>
	<i>Preoperative Nursing Management</i>	390
	<i>Differences between Children and Adults</i>	393
<b>27. Congenital Heart Disease</b>		<b>395</b>
	<i>Acyanotic Heart Defects</i>	395
	<i>Congestive Heart Failure</i>	400
	<i>Rheumatic Fever</i>	403
<b>28. Child with Special Needs</b>		<b>406</b>
	<i>Overview</i>	406
	<i>Trends in Health Care</i>	406
	<i>Mental Retardation</i>	407
	<i>Parents of a Child with Special Needs</i>	410
	<i>Behavioral Disorders in Children</i>	414
	<i>Socialization of Children</i>	414
	<i>Destructive Behaviors Disorders</i>	415
	<i>Anxiety Disorders</i>	417
	<i>Bed Wetting</i>	418
	<i>Anorexia Nervosa</i>	419
	<i>Physically Challenged Children</i>	420
	<i>Fractures (Orthopedics Disorders)</i>	421
	<i>Cancer in Children (Essential Concepts)</i>	424
	<i>Leukemia</i>	430
	<i>Psychosocial Care</i>	432
	<i>Lymphomas</i>	433
<b>29. Pediatric Emergencies</b>		<b>439</b>
	<i>Congenital Heart Disease</i>	439
	<i>Pediatric Asthma</i>	439
	<i>Croup</i>	440
	<i>Intestinal Obstruction</i>	441
	<i>Poisoning</i>	442
	<i>Burns</i>	444

<b>Appendices</b>	<b>451</b>
<i>Appendix I: Emergency Drugs Required</i>	
<i>During Resuscitation</i>	451
<i>Appendix II: Advantages of Breastfeeding vs Formula</i>	453
<i>Appendix III: Composition of Breast Milk</i>	454
<i>Appendix IV: Process of Breastfeeding</i>	456
<i>Appendix V: Common Problems Encountered</i>	
<i>During Breastfeeding and its Solutions</i>	458
<i>Appendix VI: Breastfeeding Policy</i>	460
<i>Appendix VII: Important Milestones</i>	461
<i>Appendix VIII: Problems of Immediate Newborn</i>	467
<i>Appendix IX: Signs and Symptoms in Abnormal Newborn</i>	468
<i>Appendix X: Developmental Examination</i>	469
<b>Index</b>	<b>471</b>