

CLINICAL NURSING II – NEPHROLOGICAL NURSING

PLACEMENT: 2ND YEAR

HOURS OF INSTRUCTION: Theory 150 hours + Practical 800 hours = 950 hours

PURPOSE: Develop in depth understanding and competency in the care of patients with problems of nephrological system.

SPECIFIC OBJECTIVES:

At the end of the course the students will be able to:

1. Discuss anatomy and physiology of Kidney and urinary system.
2. Describe physiological and pathological responses relating to nephrological diseases
3. Describe nephrological diseases and their management
4. Discuss various diagnostic tests performed for patients with nephrological and disorders
5. Use nursing process in providing comprehensive nursing care to patients with nephrological disorders.
6. Demonstrate skill in handling different equipment used for management of patients with nephrological disorders.
7. Demonstrate competency in handling emergencies relating to nephrological disorders.
8. Describe various drugs used in treating patients with renal diseases
9. Participate in prevention and control of nephrological diseases.
10. Participate in rehabilitating patients recovering from renal disorders.
11. Appreciate the role of alternative therapies in the management of patients with nephrological disorders
12. Practice as advance practitioner in nephrological nursing
13. Participate in planning and designing dialysis and acute care units
14. Discuss the ethical and legal issues related to caring for patients with renal diseases.
15. Conduct clinical research studies in nephrological nursing.
16. Develop standards of nephrological nursing practice
17. Plan and conduct in service education program in nephrological nursing

CONTENT OUTLINE

Unit I Introduction:

- Historical perspective
- Epidemiological transitions in the world and in India
- Future challenges

Unit II Review of anatomy and physiology of nephrological system

- Normal anatomy and physiology and embryology of the kidney
- Renal circulation
- Glomerular filtration
- Normal control of Renal functions and extra cellular fluid volume
- General principles of renal tubular transport
- Renal handling of organic compounds, renal excretion of Urea, Uric acid, Organic acids & base, Proteins & peptides
- Urinary concentration & dilution
- Physiology of Ureter, Bladder & urethra
- Hyponatremia and hypernatremia
- Hypokalemia and hyperkalemia

UNIT III Assessment of clients with Nephrological disorders

- History taking and physical examination
- Cardinal Manifestations of Renal disorders: Oliguria and anuria, Polyuria & Nocturia, Dysuria and frequency, Hematuria and pigmenturia, Renal colic and flank pain, Renal mass, edema, proteinuria, Hypertension, uremia etc.

UNIT IV Renal immunopathy/Immunopathology

- General concept of Immunopathology immune mechanism of Glomerular Vascular Disease
- Role of Mediator systems in Glomerular vascular disease

UNIT V Diagnostic and therapeutic procedures done for Renal patients: Indications, Preparation of patients, post procedures complications and their management:

- IVP, MCU, renal angiography, CT, cystourethrography, Ultrasound, urodynamic studies, cystoscopy, ureteroscopy, nephroscopy, renal biopsy
- Urinary catheterization, routine catheter care, removal of self retaining catheter, bladder irrigation, CAPD catheter care and management of complications, continuous renal replacement therapy, plasmapheresis, renal diets, vascular access care and fistula cannulation
- Assisting with procedures like fistula, AV shunt, dialysis catheter

UNIT VI Management of patient with nephrological diseases – causes, pathophysiology, clinical features, diagnosis and management of:

- Disorders of the ureters, bladder, and urethra
- UTI and Cystitis
- Urinary incontinence
- Urinary Retention
- Urinary Reflux
- Bladder-disorders: Bladder Neoplasms, urinary Bladder Calculi, neurogenic Bladder, Bladder Trauma, Congenital abnormalities of bladder

- BPH
- Urethral disorders: Urethral tumors, trauma, Congenital anomalies of urethra
- Ureteral disorders: Ureteritis, Ureteral calculi, Ureteral trauma, Congenital anomalies of ureters

UNIT VII Management of patient with renal diseases – causes, pathophysiology, clinical features, diagnosis and management of:

- Acquired renal disorders: Pyelonephritis, Acute glomerulonephritis, interstitial nephritis, Membranoproliferative glomerulonephritis,
- Nephrotic syndrome, Hydronephrosis, Uremic syndrome, Acute Renal failure, Chronic Renal failure, Renal cancer, Renal abscess, Renal trauma, Renal vascular abnormalities: Renal hypertension, Renal arteries disease, Renal vein disease, genitourinary tuberculosis
- Congenital disorders of Kidney number and position, kidney form and size, and cystic disorders
- Hereditary Renal disorders

UNIT VIII Dialysis

- Historical review of dialysis
- Types of dialysis
- Goals of dialysis
- Hemodialysis & Peritoneal dialysis
- Dialysis procedure
- Complications of dialysis
- Role of nurse

UNIT IX Nursing management of a patient with Kidney transplantations (KTP)

- Kidney transplantations-a historical review
- Immunology of graft Rejections
- The recipient of a Renal transplant
- Renal preservation
- HLA typing Matching and cross matching in renal transplantation
- Surgical techniques of Renal transplantations
- Early course of patient with a Renal transplantations
- Chronic renal transplant rejection
- Complication after KTP: Vascular & lymphatic, Urological, Cardio vascular, Liver & Neurological, Infectious complication
- KTP in children and Management of Pediatric patient with KTP
- KTP in developing countries
- Results of KTP
- Work up of donor and recipient for renal transplant
- Psychological aspect of KTP & organ donations

- Ethics in transplants,
- Cadaveric transplantation

Unit X Management of renal emergencies**Unit XI** Rehabilitation of patient with nephrological problems:

- Risk factors and prevention
- Rehabilitation of patients on dialysis and after kidney transplant
- Rehabilitation of patients after urinary diversions
- Family and patient teaching

Unit XII Drugs used in nephrological disorders**Unit XIII** Critical care units – dialysis, KTP unit:

- Philosophy, aims and objectives,
- Policies, staffing pattern, design and physical plan of. Dialysis & KTP units
- Team approach, functions
- Psychosocial aspects in relation to staff and clients of ICU.
- In service education
- Ethical and legal issues

Unit XIV Quality assurance in nephrological nursing practice

- Role of advance practitioner in nephrological nursing
- Professional practice standards
- Quality control in nephrological nursing
- Nursing audit

CLINICAL NURSING I - PEDIATRIC NURSING

PLACEMENT: 1ST YEAR

HOURS OF INSTRUCTION: Theory 150 hours + Practical 600 hours = 750 hours

PURPOSE: This course is designed for an advanced course of study for developing expertise and in depth understanding in the field of Pediatric Nursing. It will help students develop an understanding of child as a holistic individual and skill to function as a neonatal & pediatric nurse, educator, manager, and researcher as relevant to Indian culture.

SPECIFIC OBJECTIVES:

At the end of the course the students will be able to:

1. Appreciate the history and developments in the field of pediatrics and pediatric nursing as a specialty
2. Apply the concepts of growth and development in providing care to the pediatric clients and their families.