

SEMESTER – II

M. Pharm (Pharmacy Practice)

MPY 201 PP : Clinical Pharmacy Practice

1. Definitions development and scope of clinical Pharmacy

2. Clinical Pharmacy Services

- Ward round participation
- Drug therapy review (Drug therapy monitoring including medication order review, chart endorsement, clinical review and pharmacist interventions)
- Patient medication history interview
- Basic concept of medicine and poison information services
- Basic concept of pharmacovigilance
- Patient medication counselling
- Drug utilisation evaluation
- Quality assurance of clinical pharmacy services.

3. Patient data analysis

- Patient's case history - its structure and significances in drug therapy management .
- Common medical abbreviations and terminologies used in clinical practice.
- Communication skills: Verbal and non-verbal communications, its applications in patient care services.

4. Clinical laboratory tests used in the evaluation of disease states, interpretation of test results.

- Haematological, liver function, renal function, thyroid function tests.
- Tests associated with cardiac disorders.
- Fluid and electrolyte balance.
- Microbiological culture sensitivity tests.
- Pulmonary function tests.

5. Drug and Poison information

- Definition, need for and medicine information resources
- Systematic approach in answering DI queries
- Critical evaluation of drug information and literature
- Preparation of written and verbal reports
- Establishing a drug information centre
- Poisons information – organization and information resources, setting up of PIC

6. Introduction to rational drug use

- Definition
- Essential drug concept
- Rational drug formulations
- Role of pharmacist in rational drug use

7. General prescribing guidelines for

- Paediatric patients
- Geriatric patients
- Pregnancy and breast feeding

Reference Books

1. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication
2. Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton & Lange
3. Pathologic basis of disease - Robins SL, W.B.Saunders publication
4. Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice - Green and Harris, Chapman and Hall publication
5. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication
6. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.
7. Clinical Pharmacokinetics - Rowland and Tozer, Williams and Wilkins Publication.
8. Biopharmaceutics and Applied Pharmacokinetics - Leon Shargel, Prentice Hall publication

MPY 202 PP : Pharmacotherapeutics – I

Pathophysiology and pharmacotherapy of diseases associated with following systems/diseases

1. Cardiovascular system

Hypertension, congestive cardiac failure, ischemic heart disease, myocardial infarction, arrhythmias, hyperlipidaemias

2. Respiratory system

Asthma, chronic obstructive airways disease, drug induced pulmonary diseases

3. Haematological diseases

Anemia, deep vein thrombosis, drug induced haematological disorders

4. Renal System

Diuretic therapy, Potassium depletion, Hyperkalemia, Alkalosis, Acute renal failure, Chronic renal failure, Dialysis, Renal replacement therapy, End-stage renal disease, Drug induced renal diseases

5. Pathophysiology and pharmacotherapy of endocrine system

Diabetes, thyroid disease, oral contraceptives, hormone replacement, osteoporosis

6. Pathophysiology and pharmacotherapy of rheumatic diseases

Rheumatoid arthritis, osteoarthritis, gout, systemic lupus erythematosus

7. Gastrointestinal system

Ulcer diseases, reflux oesophagitis, inflammatory bowel diseases, Hepatitis, Jaundice, Cirrhosis, Diarrhea and constipation. Drug induced liver disease.

Reference Books

1. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication
2. Pharmacotherapy: A Pathophysiologic approach-Joseph T. DiPiro et al. Appleton & Lange
3. Pathologic basis of disease - Robins SL, W.B. Saunders publication
4. Clinical Pharmacy and Therapeutics- Eric T. Herfindal, Williams and Wilkins Publication
5. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA
6. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.

MPY 203 PP : Pharmacotherapeutics – II

Pathophysiology and pharmacotherapy of diseases associated with following systems/diseases

1. Nervous system

Epilepsy, Parkinson's disease, stroke and transient ischemic attack, head ache

2. Psychiatric Disorders

Schizophrenia, depression, anxiety and sleep disorders, drug induced psychosis

3. Infectious Diseases

General guidelines for the rational user of antibiotics. Pharmacotherapy of meningitis, respiratory track infections, gastroenteritis bacterial endocarditic, septicemia, otitis media, UTI Pharmacotherapy of tuberculosis, leprosy, malaria, helminthiasis, HIV & opportunistic infections, fungal infections, rheumatic fever.

4. Immunology

Immune disease – pathogenesis, mechanism of action of immunosuppressive agents

5. Oncology

General principles of cancer chemotherapy commonly used cytotoxic drugs, chemotherapy of lung cancer, hematological malignancies management of nausea and vomiting.

6. Pain management.

Pathophysiology of inflammation and repair, Pain pathways, Analgesics and NSAIDs, Opiates, Local anaesthetics, Neuralgia, muscle relaxants.

7 Endocrine system.

Diabetes, Thyroid diseases, Oral contraceptives, Hormone replacement therapy, Osteoporosis.`

Reference Books

1. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication
2. Pharmacotherapy:A Pathophysiologic approach-Joseph T. Dipiro et al. Appleton & Lange
3. Pathologic basis of disease - Robins SL, W.B.Saunders publication
4. Clinical Pharmacy and Therapeutics- Eric T. Herfindal, Williams and Wilkins Publication
5. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA
6. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.

MPY 204 PP : HOSPITAL and COMMUNITY PHARMACY

1. Role of hospital pharmacy department and its relationship with the other departments and staff

2. Hospital pharmacy

Objectives and functions, location, organizational structure

3. Hospital drug policy

Drug committees, formulary and guidelines, other hospital committees such as infection control and research and ethics committee

4. Hospital Pharmacy management

Staff (professional and non-professional), materials (drugs, non-drugs, consumables) financial (Drug budget, cost centers, sources of revenue and, revenue collection) policy & planning, infrastructure requirements (building, furniture and fittings, Specialized equipment, maintenance and repairs), work load statistics.

5. Organization of hospital pharmacy services

5.1. Drug Distribution

Purchasing, warehousing (storage conditions, expiry date control, recycling of drugs, stock taking, drug recalls), drug distribution methods (ward stock, individual patient dispensing, unit dose), specific requirements for inpatients, out patients, casualty\ emergency, operation theaters, ICU, ICCU, Drugs of dependence, hospital waste management. Central sterile supply services.

5.2 Manufacturing

Sterile and non-sterile production, including total parental nutrition.

5.3 Radio pharmaceuticals

Cytotoxics, Radio pharmaceuticals preparation and quality control, Dispensing IV additive service, prepackaging and labeling, quality control.

6. Training of technical staff, Training and continuing education for pharmacist, Pharmacy students, medical staff and students, nursing staff and students, formal and informal meeting and lectures, drug and therapeutics news letter.

7. Introduction to community pharmacy

- Community pharmacy practice-definition
- The role of the community pharmacy and its relationship to other local health care providers and services to nursing homes and clinics
- Professional responsibilities of community pharmacy(FIP AND WHO model)
- Prescribed medication order-interpretation and legal requirements

8. Communication skills - communication with prescribers and patients

9. Over –the-counter (OTC) sales

Rational use of common OTC medication (vitamins and tonics, iron preparations, analgesics, NSAIDS, cough mixtures, anti-diahorreal preparations)

10. Primary health care in community pharmacy

Family planning, first aid, participation in primary health programmes, smoking cessation, screening programmes, nutrition, responding to common ailments

11. Community pharmacy management

Financial, materials, staff, infrastructure requirements, drug information resources in community pharmacies, computer applications in community pharmacy, education and training.

Reference Books

1. Hospital Pharmacy – Hassan WE. Lec And Febiger publication .
2. Text Book of Hospital Pharmacy-Allwood MC and Blackwell.
3. Avers Drug treatments, 4th Edn, 1997, adis international Ltd
4. Remington Pharmaceutical Sciences.
5. Textbook of drug store and business management by jyothi and ali
6. Textbook of pharmacy practice by leon shargel