

Hospital and Clinical Pharmacy

Practical Notebook Course Code ER20-25P

for Second Year Diploma in Pharmacy

has been written and designed as per the Pharmacy Council of India's Education Regulation, 2020, for Diploma in Pharmacy course.

This course Hospital and Clinical Pharmacy Practical (Course code ER20-25P) for second year diploma students is designed to train the students and to assist other healthcare providers in basic services related to drug distribution, drug procurement, and inventory in hospital and clinical pharmacy.

Upon completion of this course, the students will be able to fulfil the course objectives and course outcomes in respect of the following competencies:

- Handle and answer the drug information queries.
- Interpret the common laboratory reports.
- ADR reporting using standard procedures.
- Understand the uses and methods of handling various medical/surgical aids and devices.
- Interpret and report the drug-drug interactions in common diseases for optimizing the drug therapy.

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Sharma | Pandey



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Certificate

Student's Name: _____

Class: _____ Roll No. _____

Subject: _____

This is to certify that experiments, written in the index, have been performed by the student, are satisfactory.

Grade

Name and signature of lab in-charge

College stamp



Date

Instructions

1. Always put on neat and clean white apron whenever you are working in the laboratory.
2. Bring always practical notebook for viva and evaluation.
3. Thoroughly clean the apparatus required in the practical work.
4. The practical notebook should be completed in every respect and should be submitted on the same day to the teacher concerned for marking and signature.
5. Never throw waste papers and burnt matchsticks in the sink, this will block the sink which may lead to overflowing. Put the waste materials in the dustbin only.
6. Keep your working place neat and clean. After the work is finished, the student should clean the apparatus and the other articles.
7. The water taps and gas taps should be tightly closed after the work is completed.
8. Never take and use any chemical or reagent prior taking permission from the teacher or the lab technician.
9. Always be in college uniform and maintain strict discipline.
10. Electrical switches should be put off before leaving the laboratory.
11. Actual observations and readings should be recorded in practical notebook, calculations and conclusions should be based on actual observations.
12. Practical must be performed individually.
13. Safety rules must be followed strictly and the student must know the emergency treatment for the accidents and laboratory infections.

Syllabus

Hospital and Clinical Pharmacy—Practical

Course Code: ER20-25P

25 Hours (1 Hour/Week)

Scope: This course is designed to train the students to assist other healthcare providers in the basic services of hospital and clinical pharmacy.

Course Objectives: This course will train the students with hands-on experiences, simulated clinical case studies in the following:

1. Methods to systematically approach and respond to drug information queries.
2. How to interpret common laboratory reports to understand the need for optimizing dosage regimens.
3. How to report suspected adverse drug reactions to the concerned authorities.
4. Uses and methods of handling of various medical/surgical aids and devices.
5. How to interpret drug–drug interactions in the treatment of common diseases.

Course Outcomes: Upon completion of the course, the students will be able to:

1. Professionally handle and answer the drug information queries.
2. Interpret the common laboratory reports.
3. Report suspected adverse drug reactions using standard procedures.
4. Understand the uses and methods of handling various medical/surgical aids and devices.
5. Interpret and report the drug–drug interactions in common diseases for optimizing the drug therapy.

Note: Few of the experiments of hospital and clinical pharmacy practical course listed here require adequate numbers of desktop computers with internet connectivity, adequate drug information resources including reference books, different types of surgical dressings and other medical devices and accessories. Various charts, models, exhibits pertaining to the experiments shall also be displayed in the laboratory.

Practicals

1. Systematic approach to drug information queries using primary/secondary/tertiary resources of information (2 cases).
2. Interpretation of laboratory reports to optimize the drug therapy in a given clinical case (2 cases).
3. Filling up IPC's ADR Reporting Form and perform causality assessments using various scales (2 cases).
4. Demonstration/simulated/hands-on experience on the identification, types, use/application/administration of:
 - Orthopaedic and surgical aids such as knee cap, LS belts, abdominal belt, walker, walking sticks, etc.
 - Different types of bandages such as sterile gauze, cotton, crepe bandages, etc.
 - Needles, syringes, catheters, IV set, urine bag, Ryle's tube, urine pots, colostomy bags, oxygen masks, etc.
5. Case studies on drug–drug interactions (any 2 cases).
6. Wound dressing (simulated cases and role play—minimum 2 cases).
7. Vaccination and injection techniques (IV, IM, SC) using mannequins (5 activities).
8. Use of hospital pharmacy software and various digital health tools.

Assignments

The students shall be asked to submit written assignments on the following topics (one assignment per student per sessional period, i.e. a minimum of three assignments per student).

1. Typical profile of a drug to be included in the hospital formulary.
2. Brief layout and various services of the Central Sterile Supplies Department (CSSD).
3. Various types of sterilizers and sterilization techniques used in hospitals.
4. Fumigation and pesticide control in hospitals.
5. Role of pharmacists in transition of care: Discharge cards, post-hospitalization care, medicine reconciliation activities in developed countries.
6. Total parenteral nutrition and IV admixtures and their compatibility issues.
7. Concept of electronic health records.
8. Invasive and non-invasive diagnostic tests—HRCT, MRI, sonography, 2D ECHO, X-rays, mammography, ECG, EMG, EEG.
9. Home diagnostic kits—pregnancy test, COVID testing, etc.
10. Measures to be taken in hospitals to minimize antimicrobial resistance.
11. Role and responsibilities of a pharmacist in public hospital in rural parts of the country.
12. Safe waste disposal of hospital waste.

Field Visit

The students shall be taken in groups to visit a Government/private healthcare facility to understand and witness the various hospital and clinical pharmacy services provided. Individual reports from each student on their learning experience from the field visit shall be submitted.

Preface

The Pharmacy Council of India made regulations under Section 10 of Pharmacy Act, 1948, called “The Education Regulation, 2020, for diploma course in pharmacy.” It was approved by Government of India, Ministry of Health and Family Welfare which was notified in October, 2020, implemented in the year 2021, for diploma in pharmacy students. The subject “Hospital and Clinical Pharmacy Practical” in ER-20 will bring about revolutionary.

Changes that will uplift the knowledge and skills of the students on par with the contemporary and future professional demands in the field of pharmaceutical care services which will certainly redefine the roles of the diploma holder qualified pharmacists in both community and hospital settings. The curriculum of hospital and CP PR (ER-91) was revised in ER-20 as per present and future needs of the society expectations of the healthcare team and other stakeholders, keeping all feedback from the experts in the pharmacy and other healthcare professions.

It is the era of digital India, so it becomes essential to keep the practice of pharmacy profession up-to-date as per global demand and the latest hospital pharmacy software solutions being equipped and implemented with modern digital health tools. This course is designed to train the students and to assist other healthcare providers in basic services related to drug distribution, drug procurement, inventory in hospital and clinical pharmacy.

This practical notebook contains 23 experiments as per guidelines of ER-2020.

The left blank page is provided for making observations and calculations wherever applicable. We shall be gratefully acknowledged the comments, suggestions and criticism by respected teachers and students for improvement of future edition. We express sincere thanks to Mr Satish Kumar Jain and Mr YN Arjuna, M/s CBS Publishers & Distributors Pvt Ltd, for their cooperation, encouragement and assistance in bringing out this practical notebook. Finally, our greatest gratitude is to our colleagues for their inspiration and motivation.

Varun Dutt Sharma
SK Pandey

Contents

<i>Preface</i>	<i>ix</i>
1. Systematic Approach to Drug Information Queries	1
Experiment 1: Mr XFX, a 50-year-old male with past medical history of hypertension. Current medication: Lisinopril 10 mg, daily. Presenting complaint: Has developed a dry cough. 3	
Experiment 2: Mr XYZ, a 55-year-old male is suffering with productive cough. Current medication: Cough syrup containing terbutaline. Presenting complaint: Has developed palpitation. 5	
2. Interpretation of Laboratory Reports	9
Experiment 3: Interpretation of laboratory report to optimize the drug therapy in a given case of diabetic patient of your family/locality/friend/relative/college staff. 9	
Experiment 4: Interpretation of laboratory report to optimize the drug therapy in a given case of hypertension patient of your family/locality/friend/relative/college staff. 13	
3. Filling-up IPC's ADR Reporting Form and Perform Causality Assessments Using Various Scales (2 Cases)	19
Experiment 5: To carry out survey about ADR of given drug/drugs to nearby CHC/PHC/district hospital/private clinics/nursing home and submit the report. 29	
Experiment 6: To carry out survey about ADR of given drug/drugs to nearby CHC/PHC/district hospital/private clinics/nursing home and submit the report. 31	
Experiment 7: To prepare ADR report on IPC (Indian Pharmacopoeia Commission) Form. 33	
4. Demonstration/Simulated/Hands-on Experience on the Identification, Types, Use, Application/Administration	37
Experiment 8: To carry out hands-on experience on the identification, types, use, application/administration of orthopaedic and surgical aids such as kneecap, LS belt, abdominal belt, walker, walking sticks, etc. 37	
Experiment 9: To carry out hands-on experience on the identification, types, use, application/administration of different types of bandages, such as sterile gauze, cotton, crepe bandages, etc. 41	
Experiment 10: To carry out hands-on experience on the identification, types, use, application/administration of different types of needles, syringes, catheters, IV set, urine bag, Ryle's tube, urine pots, colostomy bag, oxygen mask, etc. 43	
5. Case Studies on Drug-drug Interactions (Any 2 Cases)	55
Experiment 11: Mrs 'A' is a 60 years old woman with a history of hypertension, atrial fibrillation and type-2 diabetes. She is non-smoker and obese. 61	
Experiment 12: A 48 years old man with a history of epilepsy is admitted to hospital with tremor, ataxia, headache, and increased partial seizure activity. His prescribed medicines are phenytoin 300 mg daily, clonazepam 6 mg daily and fluoxetine 20 mg daily. Fluoxetine therapy had been initiated 2 weeks, previously. The patient's phenytoin level is found to be 35 mg/L at the last outpatient clinic visit, 4 months ago it was 18 mg/L. 63	

Experiment 13: Visit a nearby CHC/PHC/nursing home/clinic, consult to physician/pharmacist/nursing staff regarding real case study about drug–drug interaction and submit the report regarding type of drug interactions, advice given to the patient and step taken to prevent the drug interactions. 65

6. Wound Dressing (Simulated Cases and Role Play—Minimum 2 Cases) 69

Experiment 14: To carry out dressing of wound caused mechanically, chemically (acid contact) or thermally in laboratory. 75

Experiment 15: To carry out dressing of wound of injured student(s) of your institute campus, caused during various game/sport events. 77

7. Vaccination and Injection Techniques (SC, IM, IV) 83

Experiment 16: Vaccination of a child—Mr X for pneumococcal conjugate vaccine (PCV)—1st dose 95

Experiment 17: Vaccination of a child—baby Y for measles-rubella (MR)—1st dose 97

Experiment 18: Submit the vaccination report of a child of your family/relative/friend/locality for BCG (Bacillus Calmette-Guérin). 99

Experiment 19: Submit the vaccination report of a child of your family/relative/friend/locality for hepatitis B. 101

Experiment 20: Submit the vaccination report of a child of your family/relative/friend/locality for typhoid. 103

Experiment 21: Submit the vaccination report of a child of your family/relative/friend/locality for IVP. 105

Experiment 22: Submit the vaccination/injection report of a child of your family/relative/friend/locality for _____. 107

8. Use of Hospital Pharmacy Software and Various Digital Health Tools 111

Experiment 23: To visit a nearby digitally equipped multispeciality hospital and submit the report regarding all healthcare and medical-related software solutions. 115

