

Pharmaceutical Care

Dr Salah AbuRuz, BPharm, PhD

**Associate Professor of Clinical Pharmacy and Pharmacotherapy
Director of Department Pharmaceutical Care / University of Jordan
Hospital**

Course Description

This course introduces you to your professional responsibilities as pharmacists. The course is intended to provide you with a systematic approach to patient-centered pharmaceutical care that will be applied and practiced throughout the curriculum.

Primary Course Outcomes

1. Identify the sources for and collect the essential elements of a pharmaceutical care database.
2. Apply the principles of patient -centered evidence-based medicine in the provision of pharmaceutical care.
3. Communicate effectively with patients, physicians, and other health care professionals. (This includes both oral and written communication).
4. Document recommendations in the form of a SOAP note.

Course Objectives

Based upon the principles and concepts presented in lectures, case-based discussions, assignments, recitations, and readings, you should be able to:

1. Demonstrate an understanding of the principles of pharmaceutical care
2. Collect information from appropriate sources in order to evaluate drug therapy, develop medical problem lists, assess medical problems, and select and recommend appropriate therapy.
3. Recognize and interpret symptoms (e.g., chief complain, ROS), and/or signs (e.g., physical exam findings, laboratory values) to aid in the identification and assessment of medical problems. Determine whether these findings warrant an intervention or require pharmacotherapy, alter the selection and/or dosing regimen of drugs, or may be caused by or worsened by pharmacotherapy.
4. Develop a complete medical problem list.
5. Assess medical problems, and evaluate the appropriateness of treatment of each problem.
 - A. Determine the etiology, status, status, and severity of the medical problem.
 - B. Assess the appropriateness of treatment of each medical problem (e.g., is treatment not being addressed (undertreatment), is the best drug being used based on the principles of evidence-based medicine, what are the risks vs. benefits of treatment of a particular medical problem, is the drug therapy causing harm).
6. Evaluate an individual's drug therapy regimen based on the principles of evidence-based medicine.
 - A. Consider such factors as efficacy and effectiveness, adverse effects, patient values, cost, and ability to adhere to recommendations.
 - B. Apply criteria for determining medication appropriateness.
 - C. Apply the criteria for identifying drug-related problems.
7. Select, recommend, and implement appropriate drug therapy and other nonpharmacologic modes of therapy (e.g., diet, exercise) to prevent and treat medical problems, and provide a rationale/justification for your recommendations.
 - A. Discuss efficacy (best research evidence) and adverse effects of the recommended drug therapy; select the most appropriate therapy based on the principles of evidence-based medicine (i.e., best research evidence, clinical expertise, patient values).
 - B. Recognize whether the choice or dose of drug will be affected by other patient diseases or problems.
 - C. Determine whether any clinically significant drug interactions are likely to occur during therapy for multiple problems.

- D. Consider pharmacokinetic and pharmacodynamic properties in selecting the most appropriate therapy for a particular patient.
 - E. Consider drug administration or select the next best alternative if therapy fails based on the therapeutic goal.
 - F. Always consider patient values, cost, and ability to adhere to recommendations.
8. Monitor for both efficacy and adverse effects of drug therapy.
 - A. Determine an overall therapeutic goal when a particular problem is to be treated; establish a therapeutic goal for each form of therapy.
 - B. List monitoring parameters that will determine whether goals are being met.
 - C. Identify the common and/or significant adverse reactions for each drug selected, and identify the parameters necessary to monitor for drug toxicity.
 9. Continually evaluate drug therapy and the outcomes of an implemented pharmacotherapeutic plan. Assess effectiveness, adverse effects, and benefits of drug therapy. Decide to discontinue, conclude, continue, or revise the pharmacotherapeutic plan.
 10. Communicate recommendations and plan to patients (and/or others involved in the care), physicians, and other members of the health care team.
 11. Document recommendations and interventions.

Teaching methods:

Teaching methods will include lectures, workshops, seminars, videos, software, and case studies

References

1. Pharmaceutical Care Practice: The Clinician's Guide (2nd edition) Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2004. www.accesspharmacy.com
2. Hepler CD and Strand LM. Opportunities and responsibilities in pharmaceutical care. American Journal of Hospital Pharmacy 1990; 47: 533–543
3. Other references as recommended

Lectures:

Lecture number	Date	Topic	Required readings
1, 2	Part 1	Introduction to pharmaceutical care	<ul style="list-style-type: none"> • Opportunities and responsibilities in pharmaceutical care
3		Review of the pharmaceutical care process	<ul style="list-style-type: none"> • Chapter 1 • ASHP statement on pharmaceutical care • ASHP guidelines on a standardized method for pharmaceutical care • Clinical Pharmacy Defined
4		The need for Pharmaceutical care: Drug related morbidity and mortality, results from Jordan and around the world	Chapter 2
		Pharmacists can make a difference	
		Barriers to pharmaceutical care	
	Part 2	Becoming a Practitioner: The Tools You Will Need	Chapter 3
5		Pharmacology, Pharmacokinetics, Pharmacotherapy	Chapter 11
		Terminology	Appendix B
		Interpretation of Laboratory data	
6	Self reading	Introduction to medical terminology	Self reading two parts
7, 8, 9, 10,11		Introduction to Evidence based medicine	Chapter 1 contemporary drug information
12	Workshop 1	Evidence Based Pharmaceutical Care	Or Depiro chapter
13		Basic Communication Skills	Or Evidence-Based Pharmacotherapy:Ann Pharma
14		Patient Counseling (THE PAR and the RIM TECHNIQUE)	Chapter 12
15		Mid exam	Compliance-Adherence-Persistence (APHA)
	Self reading	The Pharmaceutical Care Case Presentation	Chapter 13

	Part 3	Pharmaceutical Care Process: Standards of Care	
16		Step 1 Collecting patient data base	Chapter 5 and 6
16		The patient medication experience	Chapter 4
17		Taking Patient History	
18	Workshop 2 and 3	Patient Counseling and Patient interview and Collecting Patient data base	
19, 20		Step 2 The Assessment of drug related needs	Chapter 5 and 6
21, 22		Step 3 Identification of Drug related Problems	Chapter 7
23	Workshop 3	Drug therapy problem classification and identification	
24		Averse drug reactions and drug interaction	
24		Medication adherence	
25		Case study	
25	Workshop 4	Drug-related needs and Drug related problems	
26		Step 4 Pharmacy Care Plan	Chapter 8
26		Step 5 Monitoring and follow up	Chapter 9
26		Documentation and Consult Notes	
27	Workshop 5	Pharmacy Care Plan and Consult Notes, monitoring and follow up	
	Part 4	Cases	See Case study on pharmacotherapy workup
28		Patient Case #1 Applying clinical skills in hospitals	15 marks
28		Patient Case #2 Applying clinical skills in community pharmacy	
28		Patient Case #3 Applying clinical skills in clinics	
29		Establishing a new pharmaceutical care practice	
29		Medication Therapy Management	