Pharm.D - Year 2

Pharmacotherapeutics I

Complete subject manual: 6 practicals and activities. Each chapter includes a student observation or work record.

Use the PDF bookmarks to navigate. The table gives each practical's content-page count; the combined manual has continuous page numbers.

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Ward-round Preparation and Participation

Experiment 1 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To prepare and contribute a concise pharmacy assessment during the allocated ward round.

Principle

A prepared medicine list and problem-focused assessment allow a student to identify relevant questions before the team makes treatment decisions.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm presenting problem and diagnosis; current medicine orders and actual administration; allergies and organ-function context; latest relevant observations. Note missing information explicitly.

3. Develop the pharmacy assessment

Before the round, list current issues and a specific pharmacy question. During the round, communicate the issue, supporting observation and proposed next step. After the round, document the team decision and the action owner.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. What should be prepared before the round?

A verified medicine list, key patient findings and prioritised medicine-related questions.

2. What belongs in the follow-up record?

The agreed action, responsible person, planned review and observed outcome.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
Endocrine	Diabetes, thyroid disease, contraception, hormone replacement and osteoporosis.	Relevant laboratory trend, comorbidities, patient-specific risks and correct medicine/device use.
Special populations	Paediatrics, geriatrics, pregnancy and breastfeeding.	Age/weight where required, organ function, pregnancy/lactation context and authorised patient-specific information.
Ophthalmology	Glaucoma and viral/bacterial conjunctivitis.	Diagnosis, correct eye-product technique, contamination prevention and specialist follow-up.

Structured Clinical Case Assessment

Experiment 2 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To organise patient information into a problem-oriented pharmacy case record.

Principle

A SOAP record separates subjective information, objective findings, assessment and a proposed plan. Clinical conclusions must be supported by the recorded case evidence.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm history and symptoms; objective findings and dates; confirmed diagnoses and differential questions; current and previous treatment. Note missing information explicitly.

3. Develop the pharmacy assessment

Record S: the reported symptoms/history; O: examination and test findings; A: a prioritised problem assessment; P: proposed actions and monitoring for supervisor review. Link each medicine to an indication and identify missing information.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. What is the difference between S and O?

S records reported information; O records observed or measured findings.

2. Why link a medicine to an indication?

It helps detect omission, duplication and treatment without a clear purpose.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
Endocrine	Diabetes, thyroid disease, contraception, hormone replacement and osteoporosis.	Relevant laboratory trend, comorbidities, patient-specific risks and correct medicine/device use.
Special populations	Paediatrics, geriatrics, pregnancy and breastfeeding.	Age/weight where required, organ function, pregnancy/lactation context and authorised patient-specific information.
Ophthalmology	Glaucoma and viral/bacterial conjunctivitis.	Diagnosis, correct eye-product technique, contamination prevention and specialist follow-up.

Individual Therapeutic-plan Discussion

Experiment 3 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To compare treatment options and justify a proposed patient-specific plan.

Principle

An appropriate plan considers indication, evidence, patient factors, feasibility and monitoring rather than choosing a medicine solely from a disease name.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm therapeutic objective; allergies and contraindication questions; renal/hepatic function and interactions; available local guideline and patient preference. Note missing information explicitly.

3. Develop the pharmacy assessment

Create an option table with expected benefit, relevant risk, feasibility and monitoring. State why an option is proposed and what information must be confirmed. Present dose/route/duration checks from the current approved patient-specific method to the treating team; do not implement an unapproved student plan.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. What makes a plan individualised?

It uses the patient-specific goal, risks, treatment context and follow-up requirements.

2. What if a key clinical fact is missing?

State the uncertainty and obtain it before recommending a dependent action.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
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Therapy Monitoring and Follow-up

Experiment 4 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To evaluate response, adverse effects and changes in an allocated case.

Principle

Monitoring compares time-linked findings with a predefined goal and identifies whether the treatment remains appropriate.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm baseline and later findings with dates; medicine changes and their reasons; response endpoint; adverse-effect and adherence information. Note missing information explicitly.

3. Develop the pharmacy assessment

Choose a response endpoint and a safety endpoint relevant to the case. Build a dated trend table, relate changes to treatment and other clinical events, and state whether further assessment or escalation is needed. Record actual outcomes rather than expected ones.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. Why record measurement dates?

Timing determines whether a finding precedes or follows a treatment change.

2. Does a change after treatment prove causation?

No. Other events and the clinical context must be considered.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
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Special populations	Paediatrics, geriatrics, pregnancy and breastfeeding.	Age/weight where required, organ function, pregnancy/lactation context and authorised patient-specific information.
Ophthalmology	Glaucoma and viral/bacterial conjunctivitis.	Diagnosis, correct eye-product technique, contamination prevention and specialist follow-up.

Discharge Case Presentation and Counselling

Experiment 5 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To present an allocated completed case and review the discharge medicine plan.

Principle

A discharge presentation explains the clinical course and pharmacy contribution. A reconciled plan and patient understanding support continuity of care.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm admission-to-discharge medicine changes; discharge orders and intended durations; follow-up appointment/monitoring; patient understanding and practical barriers. Note missing information explicitly.

3. Develop the pharmacy assessment

Present the initial problem, major findings, treatment course, pharmacy issues and outcome. Compare pre-admission, inpatient and discharge lists. Explain the authorised discharge medicines in plain language and ask the patient to explain the plan back. Document unresolved discrepancies and the follow-up owner.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. Why reconcile at discharge?

Intentional changes must be distinguished from unintended omissions or duplications.

2. What is teach-back?

Asking the patient to explain the plan in their own words so the explanation can be improved if needed.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
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Special populations	Paediatrics, geriatrics, pregnancy and breastfeeding.	Age/weight where required, organ function, pregnancy/lactation context and authorised patient-specific information.
Ophthalmology	Glaucoma and viral/bacterial conjunctivitis.	Diagnosis, correct eye-product technique, contamination prevention and specialist follow-up.

Case Portfolio and Written Assignment

Experiment 6 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To maintain a complete case portfolio and plan the required therapeutic assignments.

Principle

A portfolio records actual observed cases and demonstrates assessment, follow-up and reflection. A written assignment evaluates a focused therapeutic question using current evidence.

Requirements

- Allocated clinical notes or fictional case, current approved medicine information and local clinical policy.
- Case-record form, calculator where needed and supervising pharmacist.

Procedure

1. Prepare the case

Use the allocated clinical record or a fictional teaching case. Record a case code, setting and date; exclude names and personal identifiers.

2. Assess the required information

Confirm number and variety of completed cases; dated ward activity and supervisor review; assigned therapeutic question; required length and presentation format. Note missing information explicitly.

3. Develop the pharmacy assessment

Maintain a coded case index with topic, dates, pharmacy issue, follow-up and supervisor status. For each assignment, define the question, compare current evidence and discuss practical implications and limitations. Record the information used in the college-required academic format and prepare the assigned oral presentation.

4. Discuss and document

Present the assessment to the supervising pharmacist or treating team. Record the accepted action, responsible person and intended follow-up.

5. Evaluate the outcome

Review the agreed clinical or process endpoint. Record what changed, what remained unresolved and the next step.

Observations and Record

Record component	Student entry
Coded case and date	_____
Presenting problem and diagnosis	_____
Allergies / previous medicines	_____
Relevant clinical and laboratory findings	_____
Pharmacy problem and priority	_____
Proposed plan and monitoring	_____
Supervisor decision and follow-up	_____

Result

Assessment: ____. Proposed action: ____. Supervisor decision: ____. Follow-up outcome: ____.

Precautions

- Use the treating team and current patient-specific information for all actual medicine decisions.
- Maintain confidentiality and confirm allergy, medicine and timing information.
- Do not invent patient observations, acceptance of an intervention or follow-up outcomes.

Viva Questions and Answers

1. Can an illustrative case count as an observed clinical case?

No. Only work actually completed and verified in the approved setting is entered as observed training.

2. What makes a useful assignment question?

It is focused enough to assess evidence and relate it to a specific therapeutic decision.

Disease-area Checklist

Area	Topics	Assessment focus
Cardiovascular	Hypertension, heart failure, angina, myocardial infarction, hyperlipidaemia and arrhythmias.	Indication, vital-sign trend, volume status where relevant, ECG/laboratory context, adverse effects and monitoring.
Respiratory	Pulmonary-function interpretation, asthma, COPD and drug-induced pulmonary disease.	Symptoms, exacerbations, device technique, adherence and response/adverse-effect monitoring.
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Special populations	Paediatrics, geriatrics, pregnancy and breastfeeding.	Age/weight where required, organ function, pregnancy/lactation context and authorised patient-specific information.
Ophthalmology	Glaucoma and viral/bacterial conjunctivitis.	Diagnosis, correct eye-product technique, contamination prevention and specialist follow-up.

Portfolio Requirements

Maintain at least 20 presented and recorded cases and three written assignments of 1500–2000 words each. Use the institution-approved schedule and submission format.

Case / assignment	Topic	Completion and supervisor status
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____
11	_____	_____
12	_____	_____
13	_____	_____
14	_____	_____
15	_____	_____
16	_____	_____
17	_____	_____
18	_____	_____
19	_____	_____
20	_____	_____

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