



Clinical Pharmacy Training Manual

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Introduction to clinical Training:

The main goal of the clinical training is to equip PharmD students the required clinical skills for patient directed services, such as detection and management of drug-therapy problems. It also aims to equip and assist PharmD students with the necessary skills to apply knowledge they have acquired for promotion of rational drug use in order to improve patients' health outcomes. This clinical training is designed to provide our students with supervised clinical experiences which will equip them with the substantial clinical skills that needed for providing high-efficacy treatment plan with less adverse effect of drugs.

clinical training experience is different learning experience from that you have learned in your class. There are several opportunities to achieve understanding and an appreciation of the concept of therapeutics care and apply the skills with the utmost responsibility to enhance the outcomes. All forms and helpful materials that you need during the clinical training are available in the following pages.



Description of activities during clinical training

During clinical training, each PharmD student will be randomly assigned to a clinical preceptor in a monthly basis. It is expected that the trainee is going to be an active member during clinical training. During each clinical training period, students are demanded to participate actively in-patient care services as the following:

- 1- Timely attend the assigned rotation as determined by the preceptor.
- 2- Monitor and follow up the patients who assigned to you by the preceptor. Regarding this, each student will be required to fill informal case form, including patient information, monitoring parameters, drug-related problems, and recommendations.
- 3- Meet with preceptor for daily discussion which may include:
 - a. Giving oral presentation of the assigned patients to preceptor and your group when requested.
 - b. Provide daily follow-up on your patients to the preceptor and your groups
 - c. Discusses with your group and preceptor the assignment and reading material that assigned to you.
- 4- perform two patients interview as a minimum to obtain medication histories as requested by your preceptor
- 5- Ask the staff of hospital pharmacy for trade name and the cost of medications
- 6- Conduct a patient drug counselling for high alert medication e.g: insulin, warfarin, bisphosphonate, and other highly alert medications...) when requested.
- 7- summarize and criticize one published paper when requested by the preceptor.
- 8- Attend early morning medical meetings and other medical activities after preparing by your preceptor
- 9- Be ready for weekly quiz after scheduling with your preceptor
- 10- be ready for weekly a formal case presentation and a topic discussion.
- 11- Attend final clinical training examination as scheduled by your preceptor.



General clinical training Goals

all objectives of each rotation will be provided by the preceptor during the first day of clinical training (clinical orientation). The following are the general goals and objectives of clinical training:

Goal of clinical training:

Clinical training courses aim to:

1. Develop the skills to efficiently consolidate information from the basic pharmaceutical and medical sciences into direct patient care.
2. acquire experience to identify, optimize and monitor patient-specific medication related problems.
3. improve the communication skills necessary to effectively and professionally interact with patients and other healthcare professionals.
4. Foster life-long learning via a self-directed educational process during hospital training.

Objectives of clinical training:

PharmD student will be able to:

1. Apply academic knowledge and problem-solving skills to make intervention about the effective use of medication.
2. Conduct therapeutic plan for patient based on the recommended treatment strategies and contribute to improve patient's outcome by providing medical intervention to the assigned preceptor
3. Apply appropriate therapeutic plan based on the site of infection and risk of bacterial resistance.
4. Implement self-patient monitoring plan to achieve the goal of treatment without medication problems.
5. Practice evidence-based treatment strategies and recommendations that improve patient's outcome.
6. Perform appropriate advice for the patients and other health care providers on the safe and effective use of medicines, and implements efficient plan for therapeutic drug monitoring.



Patient Monitoring

PharmD student should have the ability to:

- Daily monitor the progress in the patient's health status utilizing laboratory investigations, patient's clinical picture, and discussion with the medical team.
- Identify drug therapy problems, such as potential adverse reactions or treatment failure, and provide assessment for such problem and come up with alternative therapeutic modality.
- Utilize the drug history, patient's medical record and other resources to timely detect medication related problems, such as drug incompatibilities, drug interactions, drug duplication, and to discuss the effective solutions.
- Apply the concept of pharmacokinetic for the drugs with narrow therapeutic window and provide recommendation accordingly.

Patient Medical file

PharmD student should have the ability to:

- Demonstrate the capability of retrieving patient's information available in the patient medical files and assess this information to provide recommendation and clinical services. for this purpose, , the student should be familiarized with:
 - patient medical file arrangement.
 - Specific types of patient information contained in patient medical file. For instance, chief complain, admission note, past medical history, physician assessment and order, laboratory investigations, progress notes, and nurse sheet
 - Medication sheet, diabetic management sheet, protocols for GE, hyperkalemia, antibiotics policies for infectious diseases (e.g: sepsis, pneumonia, meningitis, and Urinary Tract Infection).
 - Medical abbreviations that commonly used, such as PMH, CC, GE, PTA, RTA... etc

Laboratory investigations:

- Recognize normal and abnormal laboratory investigations and imaging reports.
- Interpret laboratory investigations properly in accordance with the disease status and the proposed therapeutic plan.
- Ensure the consistence of laboratory investigation with patient subjective data before designing the treatment plan.

Medication History

- for each clinical training, a student has several opportunities to interview patients to gain trust while communicating with patient. All patient interview needs to be approved by the clinical preceptor. The student needs to be prepared before patient interview and to ensure the right time for the patient. The student should realize that some patients are not candidates for interviewing.
- through direct interview, PharmD student needs to has the capability of obtain medication history in order to identify the prescribed and OTC drug used, self-medications practice, compliance with the prescribed drug, procurement sources of the drug, , previous adverse drug reactions, family history, allergy to certain medications, and social history.



Drug Information

PharmD student should have the ability to:

- Apply the medical literature related skills to answer drug-related inquiry.
- Demonstrate the capability of retrieving, critically evaluating and utilizing the resources of information resources when providing answer to a medication-related inquiry.
- Respond appropriately and efficiently to all drug information requests
- Communicate drug related information verbally or in specific form.

Discharge Medication Counseling

- Student will practice and later supervised on how to provide organized and individualized drug- and disease -related instructions to patient before discharge, with assuring the patient's appreciation and readiness to follow the proper treatment.
- Student will be able to provide instructions to the patients on the proper use of prescribed and non-prescribed drugs in order to decrease drug related problems.

Assessment methods:

	Assessment Tasks	Mark	Weight
1	Rotation attendance	10	10%
2	Daily evaluation	15	15%
3	Weekly quiz	10	10%
4	Formal case presentation	20	20%
5	In-service (assignment)	5	5%
6	Final term examination	40	40%
	Total	100	100%

Important Notes

- 1- Students must have the grade that enable him to pass each clinical training. Otherwise, he needs to take the exam again.
- 2- student's unexcused absence will decrease the total grade as shown in assessment method
- 3- the absence needs to be excused by providing a written proof that he/she was absent owing to emergency medical care. Such proof must have authorized signatures from medial complex and approved by medical committee at UST. The missed work must be made up before the final exam. If the absence was unexcused the student will receive absent from final in his/her record according to faculty policy.
- 4- Students are allowed to miss up to 15% of each rotation without excuse and up to 25% with excuse
- 5- A student who exceeds the maximum allowed of absence needs to retake the clinical training again with the next batch.
- 6- A student who does not achieve 50% of the clinical training is not allowed to attend final exam



Confidentiality while Working with Patient's medical files:

- The medical file is considered a personal file which has to be respected proficiently at all time.
- Under no circumstances should the patient's information be reviewed outside hospital setting with anyone other than health care providers.
- Medical files of patients are to be explored in a specific area, such as nursing counter.
- When utilizing patient's file please return the file and Cardex (medication sheet) back to their proper storage area.
- All medical file is needed to be sent from the nursing unit to the department of medical records after discharge. If a medical file is required for review at the time of discharge, your preceptor has the authority to arrange if possible.
- The patient files are very often used physician and nurse and must be handed to them when needed as a top priority, e.g. when the patient is going for x-ray his file must accompany him.
- Please do not write or take photo at any section of the file.

Courtesy

- courtesy rules should be shown while dealing with the staff of the hospital. This includes taking consideration when interact with physicians, nurses, receptionists, housekeepers, and other employee in the hospital.
- patient file reviewing should not hinder the normal follow of patient care and work-up scheduled for any reason.

Answering Questions:

- identify yourself as PharmD student enrolled in the clinical training when you interact with other health care providers or patients,
- Recognize your limitations as PharmD trainee; don't provide drug-related information unless there is absolute certainty.
- Don't panic and offer misleading answer. Simply explain that you are not sure, but you will search about it. Call your preceptor if the question needs urgent response
- Utilized reliable resources to follow-up on it if the inquiry is not urgent. In all cases, you need to check with your preceptor.



Data collection During the Medication History:

During the clinical training, each PharmD student will be expected to finish two informal cases based on the daily admission. Patients will be randomly assigned to each student by the preceptor. the following information is needed to be obtained during clinical training.:

1. Patient Demographic data
 - a. Name
 - b. Age
 - c. gender
 - d. room Number
 - e. patient file
2. medication Allergies
 - a. Type of allergy
 - b. When allergy occurred
 - c. How allergy was managed
3. Adverse Drug Reactions
4. weight and height
5. Source of information
 - a. Patient, family member
 - b. pharmacy
6. Medications (dose/route of administration/regimen/last dose taken)
 - a. Prescription only
 - b. OTC
7. Proper use of medications
8. Social/Substance Use History
 - a. Exercise
 - b. Tobacco
 - c. Khat
 - d. Shamma
9. Recommendations or plan based on assessment



Forms used in clinical training:

- 1- Daily evaluation form (page 10): this form is used by the clinical training preceptor to evaluate the daily performance of students during clinical training .
- 2- Criteria for Evaluation of journal article presentation [page 11]: This form is used to evaluate the student preparation and performance during journal club depending on several criteria, including study design, objective, type of statistical analysis, finding and conclusion.
- 3- Patient counseling form for the patient (page 12): students during the clinical training will be involved in supervised patient counseling, so this form is used for this purpose.
- 4- Clinical training report [page 13-16]: This is student training report which will be used by students to collect patients' medical data in a daily.
- 5- Formal case presentation criteria (page17): These are the criteria that the trainee will depend on during preparation of formal case presentations.
- 6- Formal case evaluation form (page18) : This Form is used by the preceptors to evaluate the performance of the trainee during formal case presentation.
- 7- Clinical pharmacist intervention notes in patient file (page 19): students are required to provide commendation and intervention to their preceptor during clinical training then the preceptor will assess the appropriateness of the provided recommendation before writing it in patients file.
- 8- Attendance form (page20): students are required to attend 8 hours daily throughout the one-month training period.