



Rotation Manual
**** Pharm.D. in clinical pharmacy ****
2020-2021

Introduction

The clinical pharmacy internship takes place during the 6th year of pharmacy study (Pharm.D.) for a period of 8 months. This internship is mandatory for the Pharm.D. in clinical pharmacy degree. Its objective is to apply the theoretical pharmaceutical knowledge acquired in current practice and to become familiar with the medical process.

Rules to be observed during the internship

- Have a white coat and a badge.
- Have exemplary behaviour and attitude at work, in particular towards colleagues, professionals and patients.
- Respect the working hours.
- Respect the rules of ethics of the profession, in particular the confidentiality of the information collected.

Required documents during the internship

During this internship, some documents are necessary :

- Clinical Pharmacy and therapeutics - last edition.
- Applied therapeutics - therapeutics - last edition.
- Clinical drug data - last edition.
- Applied pharmacokinetics - last edition.
- The pharmacological basis of therapeutics.
- Pharmacotherapy - last edition.
- Guide des médicaments (DOROSZ, Vidal)
- The Pharmacological Basis of Therapeutics

The trainee must become familiar with the use of the following medical websites:

- www.sciencedirect.fr
- www.uptodate.com
- www.pubmed.com
- www.moph.gov.lb

Rotation services

Several rotation services are required during the 8-month internship:

- Four obligatory rotations:
 - Pediatrics
 - Cardiology
 - Internal medicine
 - Intensive care (ICU and CCU)
- An optional rotation, the choice of which is made according to the specialization of the hospital, e.g. nephrology, gynecology, oncology, psychiatry, burns service, etc.

Internship duration and attendance

- Duration of the internship is for 8 months from Monday to Thursday from 8 a.m. to 2 p.m.
- Students must perform 24 hours a week.
- Avoid absences during the week. Otherwise, make up on Saturdays.
- In case of impediment or absence from the internship, notify the administrative preceptor responsible at the hospital and the head of the clinical pharmacy department as soon as possible

Functions of the intern within the various services

During the internship, the intern must be able to:

- Ensure the therapeutic follow-up of a certain number of patients defined by the internship supervisor
- Work in close collaboration with the medical team and in particular medical interns with the aim of providing the best possible care for patients
- Validate and optimize the medication prescriptions of patients throughout their hospital stay.

Student activities

I. The different activities required from the clinical pharmacy intern

Pharmaceutical observation and medication history

On admission, ask the patient about the history of medication, his level of compliance, his self-medication. This is to detect non-compliance, drug iatrogenism or a risk of drug interactions. Present the results of this investigation to the doctor for better patient care.

Validation and optimization of drug prescription

- Check indications of the prescribed drugs.

The trainee must learn about service protocols, consult international recommendations (guidelines). If necessary, he should do a bibliographic search. He must always base his arguments on scientific grounds.

- Check prescribed dosage regimens and suggest, if necessary, dosage adjustments.

Prevention of drug iatrogenism

- Help the detection of adverse effects and learn how to transmit a pharmacovigilance notification
- Detect medication errors within the medication circuit
- Detect potential drug/drug or drug/food interactions
- Establish the intake plan for prescribed drugs
- Interpret and follow biological parameters for the monitoring of prescribed drugs

Participate in patient education

- Explain the therapeutic objective of the prescribed treatment
- Explain value of compliance
- Specify the intake plan (time of taking each drug) as well as the drug administration methods
- Indicate the special precautions to be observed in relation to the intake of certain drugs
- Explain the hygienic and dietetic rules to be observed
- Provide advice to discharged patients

II. Daily activities

Morning round

- The student must participate in physicians' rounds by asking questions, suggesting appropriate advice to the therapy in question, collecting notes for any new admissions or problems encountered in the service.
- The time and duration of each round varies depending on the activity of each service. This is very important and the student has to participate to it every day.

III. Weekly activities

Complete at least **4 clinical cases per month**. Each case study should contain:

a. The medication history

- Interview each patient after admission to obtain the necessary information on the history of his medications.
- Know how to ask the right questions for the collection of information concerning particularly the indication for which the drugs are prescribed, the dosage regimen and/or the route of administration of the drugs, any drug allergy, etc.

b. Patient monitoring

- Patient name, age, gender, height, weight, BMI
- Hospital admission date and date of discharge
- Admission chief complaints
- History of the disease
- Medical and surgical history
- Drug history and/or allergy
- Physical examination
- Impression / Plan / Diagnosis
- Lab results
- Progress notes
- Treatments adopted at the hospital (name of medication, start of administration, dosage regimen, intervals and route of administration, date of drug discontinuation)
- Evaluation of therapy: evaluation of drug choice, indication, mechanism of action, major side effects, parameters to monitor and precautions to be taken).
- See appendix

c. Discharge sheet

- Advise and educate the patient on his medication before his discharge, by communicating to him orally and in writing the necessary information.
- Advise the patient on new prescribed drugs in particular:
 - the importance and place of the drug for its treatment
 - name, dose and route of administration of the drug
 - precautions and possible side effects.
 - insist on adherence and respect for the intake schedules.
- See appendix.

IV. Clinical case study / Oral and written presentation

Each student must complete a certain number of information sheets (see appendix) for each rotation or care unit. These sheets allow a better evaluation and organization of work during this year of clinical pharmacy.

Preparation

- Only one clinical case must be typed and presented orally to the faculty on a specific date.
- Do not exceed 15 pages typed with a double interline space. Mention the title of the study on each page. Avoid errors and present the study properly.
- The student must provide the reference lists used in his case study.
- The study report must be approved by the preceptor prior to its presentation.

Case presentation

The case presentation should contain the following parts.

- *Patient identification*
 - Initials, age, gender, date of admission, weight, height, etc.
- *Chief complaints*
- *History*
 - Medical history
 - Drug history
- *Physical and general examination*
 - Symptoms at admission
 - Results of radiological examinations (*e.g.*, ECG, echo, etc.)
- *Plan, impressions and diagnosis*
- *Clinical and therapeutic follow-up*
 - Laboratory tests (list of abnormal values only)
 - Summarize the patient's treatment by indicating the pharmacotherapeutic concepts of significant interest for the patient, with the patient's progress according to the treatment.
 - Plasma drug concentration and impact on pharmacotherapeutic response in patients
- *Patient discharge*
 - Advice about medications
 - Final diagnosis
 - Patient orientation (total recovery, home discharge or home hospitalization, etc.)
- *Your assessment based on the literature*
 - General information related directly to the patient's illness
 - Arguments justifying the adequacy between prescribed treatment and diagnosis made by the physician (pharmacokinetics, dose, interval, dosage form, side effects, drug interactions and contraindications, alternative treatments and therapeutic follow-up)
 - Patient's prognosis at the time of discharge according to the physician
 - Risk of immediate re-hospitalization in case of non-adherence.

V. Other activities

Pharmaceutical interventions

- The trainee should be able to formulate pharmaceutical interventions. A pharmaceutical intervention is any proposal to modify drug therapy initiated by the pharmacist or any activity undertaken by the pharmacist which benefits to the patient.
- These interventions must be fair, based on scientific references and at the appropriate time.
- The pharmaceutical intervention sheet (according to the *Société Française de Pharmacie Clinique*) is attached.

Adverse reaction investigation sheet (ADR)

- Note, monitor and document any adverse reactions occurring in a patient by completing the form required for this purpose.
- The file contains patient's name, the hospital, etc. (ID, unit, student's name, etc.).
- Consult the explanatory sheet of adverse reactions in the appendix.

Meeting and conferences

- Participate to meetings and conferences held in the department by carrying out research presented orally for the medical staff.
- Before each presentation, use press releases bearing the references, the name of the speaker and the date of presentation, to facilitate the communication.
- The subject chosen to be presented must be approved in advance by the supervisor.

PATIENT MONITORING AND EVALUATION SHEET (N° __)

Date of admission:.....

Patient ID:.....Age :.....Gender:.....

Height.....Body weight.....BMI:.....

Chief complaint(s):.....

.....

.....

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Diagnosis.....

Current history of the disease:

Medical and medication history:

Disease	Drug	Dosage regimen

*Did you sometimes forget taking some medications? Yes No

If yes, at which frequency?.....

*Did you stop taking some medications during the 15 previous days?

Yes No

If yes, for which reasons?

*Do you take medications outside your prescription?

Yes No Why?

*Drug allergy?

Other types of allergy? If yes, precise.....

*Do you smoke cigarettes? Yes No previous smoker

If yes, number of cigarettes/day: ; duration:

*Do you smoke narguileh? Yes No previous smoker

If yes, number/day: ; duration:

*Do you drink alcohol? Yes No previous alcoholic

If yes, quantity: ; duration:

*How many cups do you consume per day regarding the following:

Tea quantity.....

Coffee quantity.....

Soft drinks quantity.....

*Did you feel any adverse effect following drug intake? Yes No

If yes, precise:

Physical examination:

Date									
BP									
T°C									
HR									
RR									

Laboratory tests:

Date										
Serum creatinine										
BUN										
Creatinine clearance										
Na ⁺										
K ⁺										
Cl ⁻										
CO ₂										
Glu (FBS)										
HbA1c										
Albumin										
LDH										
SGOT/ASAT										
SGPT/ALAT										
Total cholest.										
HDL										
LDL										
TG										
RBC										
Hemoglobin										
Hematocrit										
Platelets										
WBC										
Neutroph.										
Lymphocytes										
Monocytes										
Eosinophils										
CRP										
Remarks:										

Complementary tests:

Date										

Results of radiological examinations (ECG, echography,...)

Impression / Plan / Diagnosis:

I:
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P:
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D:
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Progress notes:

Date :
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Date :
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DISCHARGE SHEET AND ADVICE

Date of discharge:

Final diagnosis:

Patient's orientation (total recovery, home discharge, hospitalization at home, death, etc.):

Medications prescribed at home:

Drugs	Dosage regimen

Advice and recommendations:

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TAMPON :	Fiche Intervention Pharmaceutique	
	Démarche assurance qualité	Page 1/3

*Le N° d'enregistrement est indispensable pour l'externalisation des données patient et médecin (confidentialité)

Numéro d'enregistrement *	NOM	PRENOM			
Date :	Code CIP du médicament	N° Facture :	Age : ans ou mois	Sexe : <input type="checkbox"/> M <input type="checkbox"/> F	
1 - PROBLEME (1 choix) : 1.1 <input type="checkbox"/> Contre-indication / Non conformité aux référentiels 1.2 <input type="checkbox"/> Problème de posologie 1.3 <input type="checkbox"/> Interaction médicamenteuse <input type="radio"/> A prendre en compte <input type="radio"/> Précaution d'emploi <input type="radio"/> Association déconseillée <input type="radio"/> Association contre-indiquée <input type="radio"/> Publiée 1.4 <input type="checkbox"/> Effet indésirable 1.5 <input type="checkbox"/> Oubli de prescription 1.6 <input type="checkbox"/> Médicament ou dispositif non reçu par le patient <input type="radio"/> Indisponibilité <input type="radio"/> Inobservance <input type="radio"/> Incompatibilité physico-chimique 1.7 <input type="checkbox"/> Prescription d'un médicament non justifié 1.8 <input type="checkbox"/> Redondance 1.9 <input type="checkbox"/> Prescription non conforme <input type="radio"/> Support ou prescripteur <input type="radio"/> Manque d'information, de clarté <input type="radio"/> Voie d'administration inappropriée 1.10 <input type="checkbox"/> Pharmacodépendance 1.11 <input type="checkbox"/> Monitoring à suivre		2 - PRESCRIPTEUR : Nom Prénom :		5 - ORDONNANCE : 5.1 <input type="checkbox"/> Classée 5.2 <input type="checkbox"/> Transmise au prescripteur	
		2.1 <input type="checkbox"/> Médecin généraliste 2.2 <input type="checkbox"/> Médecin spécialiste 2.3 <input type="checkbox"/> Médecin hospitalier		2.4 <input type="checkbox"/> Sage-femme, 2.5 <input type="checkbox"/> Dentiste, 2.6 <input type="checkbox"/> Infirmier	
		3 - INTERVENTION (1 choix) 3.1 <input type="checkbox"/> Adaptation posologique 3.2 <input type="checkbox"/> Choix de la voie d'administration 3.3 <input type="checkbox"/> Améliorer les méthodes de dispensation /d'administration 3.4 <input type="checkbox"/> Suivi thérapeutique 3.5 <input type="checkbox"/> Ajout (prescription nouvelle) 3.6 <input type="checkbox"/> Changement de médicament 3.7 <input type="checkbox"/> Arrêt ou refus de délivrer		4 - DEVENIR DE L'INTERVENTION 4.1 <input type="checkbox"/> Acceptée par le prescripteur 4.2 <input type="checkbox"/> Non acceptée par le prescripteur sans motif 4.3 <input type="checkbox"/> Non acceptée par le prescripteur avec motif 4.4 <input type="checkbox"/> Refus de délivrance avec appel prescripteur 4.5 <input type="checkbox"/> Refus de délivrance sans appel prescripteur 4.6 <input type="checkbox"/> Acceptation du patient (information du patient et prescripteur non contacté) 4.7 <input type="checkbox"/> Non acceptation par le patient	

DETAILS POUR ANALYSE DE L'INTERVENTION PHARMACEUTIQUE préciser : DCI, Dosage, posologie, rythme d'administration des médicaments ; Éléments pertinents en relation avec le problème dépisté ; Constantes biologiques perturbées ou concentration d'un médicament dans liquides biologiques (+ normales du laboratoire) ; Décrire précisément l'intervention pharmaceutique.

Contexte de l'intervention

Problème

Intervention