

Lecture:

Introduction to the course and its objectives
Introduction to Pharmaceutical Care

23. 9. 2019

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FAFP1 Pharmaceutical Care I.

- 4rd year of study
- Before enrolling this course, you should preferably pass course **FAFT1 Pharmacology I.**
- This course is building on your knowledge from:
 - pharmacology, physiology, pathophysiology, biochemistry, pathobiochemistry
 - if you do not have sufficient knowledge, you are strongly advised to study at home before coming to the lecture and seminar
- Statut: compulsory course
- Weekly subsidy of hours: 1 lecture / 1 seminar
- Form of ending: credit
- Number of credits: 1 credit

Time schedule of course:

Monday (once a 2 weeks - every odd calendar week):

13.30 – 15.00 **lecture**

15.00 – 16.30 **seminar**

Place: building No 45 (Pavilon of Pharmacy II.), seminar room **No 224**

Conditions for passing a course:

1. 100% participation in seminars

- in the case of non-attended seminars is necessary:

- send written excuse to coordinator of course (mazankovad@vfu.cz), and its substitution, at last in the last seminar: 2. 12. 2019 (necessary before writing a credit test)

2. Presentation of a seminar work

3. Successfull passing a half-semester test

- term of a half-semester test: in the beginning of seminar: 4. 11. 2019

4. Successfull passing a credit test

- term of a credit test: in the last seminar: 2. 12. 2019

All relevant information about this course you can find in Moodle course:

FAFP1 Pharmaceutical Care I.

Syllabus of lectures and seminars - winter semestr 2019-2020

Date of lecture and seminar	<u>Lecture</u> (learning outcome)	<u>Seminar</u> (structure of seminar)	Lector
23. 9. 2019	Introduction to Pharmaceutical care	DRPs and its classification, Dispensing minimum. Setting of seminar works.	PharmDr. Bc. Dana Mazánková, Ph.D.
7. 10. 2019	Gastrointestinal diseases I.	Gastrointestinal diseases I. - case studies	PharmDr. Bc. Dana Mazánková, Ph.D.
21. 10. 2019	Respiratory diseases	Respiratory diseases - case studies	PharmDr. Bc. Dana Mazánková, Ph.D.
4. 11. 2019	Dermatologic treatment	Half-semester test Antibiotic therapy, Infectious diseases - case studies	PharmDr. Bc. Dana Mazánková, Ph.D. PharmDr. Marek Lžičař PharmDr. Martin Šimíček
18. 11. 2019	Analgetics, pain treatment and its management	Analgetics, pain treatment and its management - case studies	PharmDr. Martin Šimíček
2. 12. 2019	Gastrointestinal diseases II. Consultations for credit test	Substitution of non-attended seminars Evaluation of the course - credit test	PharmDr. Bc. Dana Mazánková, Ph.D.

Structure of worked-out seminar work:

- chosen topic from the list
- worked-out in **Word format** (maximum of 3 pages range)
- present in seminar in **Power Point format** (maximum 10 slides, 5-7 min.)
 - at the end of seminar work: list of used literature sources (references)
- both versions of seminar work (Word, PP) send in electronic version minimum 1 day before its presenting to: mazankovad@vfu.cz

No of seminar	Date of seminar presentation	<u>FAFP1 Pharmaceutical Care I (academic year 2019-2020)</u> <u>Topics of seminar works</u>	Name of student e-mail contact to student
2.	7. 10. 2019	Topic 1: Regimen intervention in patients with diarrhea and constipation	Student: e-mail:
		Topic 2: Proton pump inhibitors (PPI) - mechanismus of action, indication, dosage, side effects, drug interactions, risks	Student 1: e-mail: Student 2: e-mail:
3.	21.10. 2019	Topic 3: Flu vaccination – indication, risks, benefits, dosage forms	Student 1: e-mail: Student 2: e-mail:
		Topic 4: Paracetamolium - mechanismus of action, indication, contraindications, dosage, side effects	Student: e-mail:
4.	4. 11. 2019	Topic 5: Herpes simplex – treatment, regimen intervention	Student: e-mail:
		Topic 6: Drug interactions of antibiotics	Student: e-mail:
5.	18.11. 2019	Topic 7: Nonsteroidal Anti-inflammatory Drugs (NSAIDs) – mechanismus of action, indication, dosage	Student 1: e-mail: Student 2: e-mail:
		Topic 8: Nonsteroidal Anti-inflammatory Drugs (NSAIDs) – side effects, contraindications, risks	Student: e-mail:

Three levels of care of patients

1. Health Care

= care provided by all health care professionals

(physicians, pharmacists, nurses, clinical psychologists, clinical logopedes, ...)

2. Pharmacy Care

= care provided by pharmacists in pharmacy

3. Pharmaceutical Care

= care provided by pharmacists in pharmacy, with added aspects

Pharmacy care

Definition of Pharmacy care

- defined by the *Act No. 20/1996 Coll. On care of public health*
- by Pharmacy Care we especially understand:
 - **ordering, preparation, control, storing and dispensing medicines and medical devices**

AS WELL AS **providing professional information to patients**

Provision of Pharmacy care

- linked to:
 - place
 - **pharmacy**
 - **medical devices shop**
 - qualified person
 - **pharmacist**
 - **pharmacy technician**

Special aspects of Pharmacy care:

1. Medicines are specific goods which requires special manipulation
2. Special undergraduate and postgraduate education
3. Control of the level of provided care

Definition of Pharmaceutical care

In 1990 Hepler and Strand defined Pharmaceutical care as:

The responsible provision of drug therapy with the purpose to **achieve defined outcomes** that improve patient's quality of life.

In 2004 in Spain Berenguer et al defined Pharmaceutical care as:

Responsible provision of pharmacotherapy for the purpose of **achieving definite outcomes** that **improve or maintain a patient's quality of life**.

- collaborative process (with patients, physicians) that aims to prevent or identify and solve medicinal product and health related problems
- continuous quality improvement process for the use of medicinal products

Pharmaceutical care

- Care which pharmacist provides to patient in order to reach **optimal pharmacotherapy**:
 - **1. quality**
 - **2. safe**
 - **3. effective**
 - **4. timely**
 - **5. monitored**



Why do we need Pharmaceutical care?

Patients desire **more information about medicines and food supplements**

- ... role of pharmacist

Doctors don't have enough time to talk with patients about medicines use and all food supplements

- ... role of pharmacist

It is **economic saving for patient** as well as the **health care system**

- ... role of pharmacist

Pharmaceutical care principles

- I. **Patient's benefit**
- II. ensure patient gets **high quality medicines** and appropriate information
- III. Pharmacist should contribute to **rational prescribing**

Provision of Pharmaceutical care – examples of individual consultations

- Patients are seeking for information about smoking cessation in pharmacies
- Loosing weight management
- Self-medication counselling
- Blood pressure / cholesterol level / glucose level self-monitoring



Pharmaceutical Care Network Europe - PCNE

- Established in 1994
- 18 members including Czech Republic



Drug-related Problems (DRPs)

- indicating some problem in the pharmacotherapy of the patients

DRPs are defined as:

- problems in the pharmacotherapy of the individual patient interfere with desired health outcomes
(definition PCNE 1999)
- event or circumstance involving drug therapy that actually or potentially interferes with desired health outcomes



Drug-related Problems (DRPs)

Pharmaceutical care focus on:

- (1) identification
 - (2) solving
 - (3) prevention of drug related problems
- before DRPs result in drug related **morbidity and mortality**

The effect of DRP:

- **non-effective therapy**
- **large economical losts**



Drug related problems

*Cause of
DRPs:*

*Level of
appearance:*

*Risk of
appearance:*

Predictability:

Categories of DRP

- Nontreated indication
- Useless therapy
- Inappropriate dosage
- Medicine duplication
- Drug interactions
- Treatment failure
- Adverse drug reaction (ADR), allergic reaction
- Non-compliance
- Prescription error



The PCNE Classification V 8.02

Classification for Drug Related Problems

- **Problems (P)**
- **Causes (C)**
- **Interventions (I)**

Thank you for attention!