

Добры дзень!
ЗК - К.М.М.Ф.М.У.

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational institution
BELARUSIAN STATE MEDICAL UNIVERSITY

Контрольный
экземпляр

APPROVED

by First Vice-Rector, Professor

S.V. Gubkin

Reg. № MD-L.79-1-023-2/118/D



CURRICULUM
IN PHARMACOLOGICAL WORK PRACTICE
for the specialty:

1-79 01 08 «Pharmacy»

COMPILER:

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RECOMMENDED FOR APPROVAL:

By the Clinical Pharmacology Department of the Educational Institution "Belarusian State Medical University"

(protocol № 8 of 29.11.2018);

By the Methodological Commission of Pharmaceutical Disciplines of the Educational Institution "Belarusian State Medical University"

(protocol № 6 of 28.11.2018);

EXPLANATORY NOTE

The organization and the procedure for the work practice are established by the Resolution of the Council of Ministers of the Republic of Belarus of 03.06.2010, No. 860 "On the approval of the provision on the practice of students, cadets, listeners" (as amended by the Resolution of the Council of Ministers No. 1049 of 04.08.2011, No. 1663 of 09.12.2011, from 11/09/2012, No. 844, No. 356 of 08/05/2013, No. 736 of 08.08.2013) and the Regulation "On the Practice of Students of the Educational Institution" Belarusian State Medical University "No. 88 of January 29, 2014.

The aim of pharmacological work practice is to consolidate the acquired knowledge and acquire the skills that constitute the content of the professional activities of the pharmacist, the formation of ethical-deontological principles, as well as the preparation of students for real work.

Purpose of pharmacological work practice:

acquaintance with the structure of the pharmacy and the organization of work of its personnel;

consolidation of the acquired skills in providing first-aid for patients in the pharmacy;

formation of social and personal competence by developing students' interpersonal skills in communication with the pharmacy staff and patients;

the formation of the professional competence based on the skills and practical knowledge obtained in the study of the academic discipline "Clinical Pharmacology, Pharmacological Therapy."

The pharmacological work practice of students is carried out in the position of pharmacist.

During the pharmacological work practice, students obey the internal labor rules of pharmacy organizations. The student is allowed to undergo pharmacological work with a certificate of health and after briefing on safe working conditions at the workplace.

At the end of the production pharmacological practice, the student must

know:

- state, sectoral and local regulatory framework;
- organization and economy of the pharmacy organization;
- normative and methodological documents on the technology of manufacturing and quality control of medicinal products;
- marketing of medicines and medical products;
- the fundamentals of the organization of medicinal provision of the population and public health institutions;
- the main groups of medicines dispensed by prescription and without prescription;

principles determining the dispensing of medicinal products (by prescription and without prescription);

- criteria for evaluating the effectiveness and safety of medicines;

- the main side effects of medicines dispensed both by prescription and without prescription;
- methods of correction and prevention of side effects of medicines;
- rules for the prescribing and processing of all types of prescriptions for all dosage forms;
- features of age restrictions on the use of over-the-counter medicines.

Students must be able to:

- provide first aid for the patient in the pharmacy under emergency conditions:
 - fever;
 - an attack of bronchial asthma;
 - pain in the heart;
 - headache;
 - fainting, hypertensive crisis;
 - heartburn, nausea, vomiting and diarrhea;
 - anaphylactic shock;
 - hypoglycemia;
- Classify medicinal products on the basis of chemical structure, pharmacological properties, pharmacotherapeutic applications;
- address the issues of compatibility and incompatibility of medicines reciprocally and components of food;
- determine the group of medicines for pre-hospital care;
- to replace one generic medicine with another, corresponding to the clinical and pharmacological characteristics;
- manage the side effects of medicines released to the patient;
- to carry out examination of all types of prescriptions for all dosage forms;
- be able to identify signs of substandard medicines;
- use reference literature;
- apply ethical-deontological methods of working with the population.

Students must master:

- the skills to fill out the notification of a suspected (identified) adverse reaction to medicines;
- the skills of counseling a patient on the use over-the-counter medicines in the age and gender aspects, as well as in pregnant women;
- the skills of informing the patient about the safety of using over-the-counter medicines;
- the skills to determine the symptoms of the disease, which require compulsory medical consultation;
- the skills of informing the patient about taking medicines depending on the intake of food, other medicines and time of day;

The pharmacological work practice lasts 216 academic hours during 4 weeks after the 10th semester in institutions approved by the order of the Ministry of Health of the Republic of Belarus as the bases of pharmacological work practice.

The current assessment is conducted in accordance with the specialty curriculum in the form of a graded credit (semester 10)

The current assessment is carried out according to the diary submitted by the student, the report on the implementation of the program of pharmacological work practice and a written description of the supervisor of practice from the basic institution.

CONTENT OF THE TRAINING PROGRAM OF PRODUCTION PRACTICES ON CLINICAL PHARMACOLOGY

1. State, sectoral and local regulatory framework

1.1. Law of the Republic of Belarus No. 297-3 of July 15, 2015 "On Ratification of the Agreement on Common Principles and Rules for the circulation of medicinal products within the framework of the Eurasian Economic Union";

1.2. Decree of the Ministry of Health of the Republic of Belarus from December 27, 2006 No. 120 "On approval of proper pharmacy practice"

(in the edition of decrees of the Ministry of Health No. 99 of October 31, 2007, No. 181 of October 31, 2008,

from 10/14/2012 N 10, from March 21, 2014 N 17, from 09.09.2014 N 66, from 20.05.2015 N 73, from 04.02.2016 N 9);

1.3. Law of the Republic of Belarus No. 161-3 of July 20, 2006 On Medicines (In the version of the Laws of the Republic of Belarus No. 428-3 of 05.08.2008, No. 27-3 of June 15, 2009, No. 326- 3, 17.11.2014 r. №203-3, 29.06.2016 №386-3);

1.4. Decree of the Ministry of Health of the Republic of Belarus from 17.04.2015 № 49 "On approval of the Instruction on the procedure and conditions for quality control of medicines manufactured in pharmacies";

1.5. The Republican form of medicines approved by the Decree of the Ministry of Health of the Republic of Belarus of 26.06.2017 No. 67;

1.6. Decree of the Ministry of Health of the Republic of Belarus from October 31, 2007 No. 99 (Edited on January 16, 2016 No. 1) "On approval of the Instruction on the procedure for issuing a doctor's prescription and on introducing changes and additions to Decree No. 120 of the Ministry of Health of the Republic of Belarus of December 27, 2006";

1.7. Instructions on the procedure for submitting information on identified adverse drug reactions, approved

Decree of the Ministry of Health of the Republic of Belarus of 17.04.2015 N 48

1.8. Decrees of the Ministry of Health of the Republic of Belarus No. 51 of December 28, 2004 "On approval of the Instruction on the procedure for the acquisition, storage, sale and use of narcotic drugs and psychotropic substances for medical purposes"

2. Equipment

Pharmacies have all the necessary equipment and equipment in accordance with the regulatory documents governing their activities.

Conditions for safe work:

fire safety rules,

rules of asepsis and antiseptics,

method of processing and protecting the hands of medical personnel,

sanitary and anti-epidemic regime, approved by the Decree of the Ministry of Health of the Republic of Belarus of 01.10.2012, No. 154 "On the Approval of Sanitary Norms and Regulations. Sanitary and epidemiological requirements for pharmacies»

3. Professional methods and methods of work

in accordance with the minimum content of the type of industrial practice provided for by the educational standard of the specialty (in the amount of 50% of the qualification requirements for the post of pharmacist who do not have a qualification category).

3.1. Work in the pharmacy:

Pharmaceutical examination of the prescription as a legal, financial, technological and medical document. Examination of all types of prescriptions for all dosage forms. Replacement of one generic medicine with another, corresponding to the clinical and pharmacological characteristics. Prevention of use that does not meet the indications of medicines. Selection of patients in need of medical care.

Promoting the rational use of medicines: the choice of the optimal dosage form and route of administration; rules for the use of a variety of dosage forms; features of individual dosing; features of pharmacodynamic interaction of drugs; peculiarities of interaction of drugs with food, alcohol and nicotine; the time of day, optimal for taking this medication; an explanation of the risk of undesirable side effects of medicines.

INFORMATION-METHODICAL PART CALENDAR-THEMATIC PLAN FOR THE PRACTICE

| Section title | Number of hours |
|---|-----------------|
| 1. Study of information about medicines in the reference literature, instructions for medical use, on primary and secondary packaging. | 20 |
| 2. Familiarity with the location of medicines according to the ATC classification in the conditions of practice base. Acquaintance with the work of the formulary committee of the organization of public health services and normative documents regulating its work. | 15 |
| 3. Study of the list of medicines sold without prescription, the list of essential medicines, the Republican formulary and normative documents on their formation and use. | 5 |
| 4. Study of the ways of interaction of drugs, criteria for selection of rational pharmacotherapy combination. Adverse reactions of medicinal products: familiarity with the procedure for registration of the notification of an undesirable drug reaction, acquaintance with sources of information about important changes in the safety profile of medicines, new safety warnings, and recommendations for preventing complications of pharmacotherapy. Quality control of | 30 |

| | |
|--|------------|
| medicines. The procedure for the rejection of medicines and the return of medicines to the pharmacy warehouse. | |
| 5. Pharmaceutical counseling for patients of prescription and non-prescription drugs, as well as informing the patient about medication intake depending on food intake, other drugs, time of day, age, pregnancy and lactation. Rational replacement of absent medicinal product with generic one. Acquaintance with the circulation of narcotic drugs, psychotropic substances and drugs of the list A. Introduction to the procedure for the formation of applications for the purchase of medicines under the conditions of a centralized tender and domestic medicines. | 30 |
| 6. Consultative assistance in preventing and correction of undesirable side effects of medicines. | 15 |
| 7. Work with medical equipment: the skill of measuring blood pressure, heart rate (working with mechanical, semi-automatic and automatic devices for measuring blood pressure), explanation of use and differences in models of nebulizers . | 5 |
| 8. Revision of the basics of providing first aid in a pharmacy with the definition of the necessary group of medicines. | 10 |
| 9. Placement of medicines in show-windows according to pharmacotherapeutic groups | 10 |
| 10. Propagation of a healthy way of life and preventive maintenance of diseases in the pharmacy. | 4 |
| IN ALL: | 144 |

GUIDELINES FOR PRACTICE SUPERVISORS AND STUDENTS

Teaching-methodical and organizational management of pharmacological work practice is carried out by teachers of the Department of Clinical Pharmacology.

Direct management of the practice in the pharmacy is carried out by the pharmacy employee (s) appointed by the management of the basic institution (hereinafter referred to as the practice supervisor), who weekly (Annex 2) certify with their signature in the diary (Appendix 1) the student's attendance and character of their work on this day.

The teacher of the Department of Clinical Pharmacology and the head of practice are the responsible of the quality of manufacturing pharmacological practice.

The teacher of the Department of Clinical Pharmacology is obliged to:

- monitor the organization and course of the practice;
- monitor the implementation of the practice curriculum;
- provide students with organizational and methodological assistance during the practice;
- check the diaries and records of students;
- Take differentiated credit in the work practice site or in the classrooms of the department.

The supervisor of pharmacological work practice is obliged:

- to instruct students on occupational safety and health;
- create the necessary conditions for students to fulfil the program;
- give a characteristic to each student at the end of the practice (Appendix 4).

RESPONSIBILITIES OF THE STUDENT DURING THE PRACTICE

During the practice, the student must keep a "Diary of manufacturing pharmacological practice" (Appendix 1).

The diary is a document that fixes the implementation of the program of pharmacological work practice, in which all the manipulations performed during the working day are reflected in detail.

A student must keep a daily diary of their work in the following form:

1. Daily report. The student records daily the main points of his familiarization and practical activities in the pharmacy, indicating what he performed independently and what under the supervision of the pharmacy staff.

2. Final report (Appendix 3) is made up at the end of pharmacological work practice. It should contain a list of works in the pharmacy, in which the student was present; a list of procedures (indicating their type and quantity), which the student performed independently under the supervision of the staff.

Upon completion of the practice, the diary is certified with the seal of the basic pharmacy organization and the signature of the pharmacy manager.

Upon completion of the pharmaceutical work practice, students pass a differentiated test.

The result of the test, signed by the teacher - the supervisor of the practice, is added to the examination sheet, the student's record book and the teacher's record book.

In assessing the student's work, his knowledge, skills, completeness and quality of program performance, discipline, participation in public, organizational and sanitary education work are assessed in accordance with evaluation criteria.

After the completion of the pharmaceutical work practice, the organization of practice, its positives and negatives, remarks and wishes are discussed, both on the part of teachers and supervisors, and students.

QUESTIONS FOR DIFFERENTIATED CREDIT

1. Information and consulting activities of the pharmacist
2. New drugs recommended for use in the treatment of socially significant diseases (atherosclerosis, acute respiratory infections, viral diseases, pathologies of the gastrointestinal tract)
3. Drug addiction, tolerance, habituation, carcinogenicity, teratogenicity and embryotoxicity.
4. Types of drug interactions (pharmaceutical, pharmacodynamic, pharmacokinetic).
5. Undesirable (adverse) reactions of drugs. 4 types of adverse reactions.
6. Nomenclature of medicinal products (chemical name, INN, original and generic medicinal product, biotechnological, immunobiological, target (orphan), homeopathic medicinal products, dietary supplements).
7. General principles of treatment of hypertensive crisis.
8. General information about etiopathogenesis and clinical manifestations of diseases of the digestive system (gastroesophageal reflux disease, gastritis, stomach ulcer and duodenal ulcer).
9. Features of the use of drugs in elderly patients (comorbidity, polytherapy).
10. Approaches to manage a bronchial asthma attack. Instruction of patients on the pharmacy by the method of using inhalers, diskhalers, turbuhalers, spacers.
11. WHO principles of rational pharmacotherapy. The main types of pharmacotherapy: etiotropic, pathogenetic, symptomatic.
12. Principles of treatment of hypotonic conditions
13. Principles of treatment of renal and hepatic colic.
14. Principles of treatment of chronic obstructive pulmonary disease.
15. Principles of treatment of chronic constipation.
16. Principles of treatment of allergic dermatitis
17. Principles of treatment of allergic rhinitis.
18. Principles of treatment of arterial hypertension.
19. Principles of treatment of hyperthermia
20. Principles of treatment of diarrheal syndrome.
21. Principles of heartburn treatment
22. Principles of cough treatment in patients.
23. Principles of treating obesity
24. Principles of treatment of acute bronchitis, acute laryngotracheitis.
25. Principles of treatment of acute respiratory viral infections
26. Principles of assistance with fainting.
27. Principles of H. pylori eradication therapy.
28. Principles of pharmacotherapy of pain in the back and lower back.
29. Principles of treatment of acute viral rhinitis.
30. Principles of pharmacotherapy in sleep disorders.
31. Principles of pharmacotherapy in the syndrome of headache.
32. Prescription and non-prescription drugs. Rules for prescription of medicines. Forms of doctor's prescriptions for medicines. The concept of responsible self-treatment.

33. The role of the pharmacist in counseling patients with complaints of psychoemotional disorders.
34. Comparative characteristics of new drugs based on pharmacotherapeutic properties and the likelihood of side effects. Information about new medicinal forms and perspectives of their application.

LIST OF PRACTICAL SKILLS, CONSOLIDATED DURING PRACTICE

1. Provision of the first pre-medical care to the patient with fever in pharmacy.
2. Provision of the first pre-medical care to the patient in the pharmacy during the attack of bronchial asthma.
3. Provision of the first pre-medical care to the patient at pains in the region of the heart in pharmacy.
4. Provision of the first pre-hospital care to the patient with headache in pharmacy.
5. Provision of the first pre-hospital care to the patient with anaphylactic shock in pharmacy.
6. Provision of the first pre-medical care to the patient with hypoglycemia in pharmacy.
7. Provision of the first pre-medical care to the patient with syncope in pharmacy.
8. Provision of the first pre-medical care to the patient with hypertensive crisis in pharmacy.
9. Provision of the first pre-medical care to the patient with heartburn, nausea, vomiting and diarrhea in pharmacy.
10. Provision of the first pre-medical care to the patient in the pharmacy.
11. Classification of drugs based on chemical structure, pharmacological properties and pharmacotherapeutic applications.
12. Determination of compatibility and incompatibility of medicinal products and components of food.
13. Determination of a group of medicines in the provision of pre-hospital care.
14. Determination of the substitutability of one generic drug to another, corresponding to the clinical and pharmacological characteristics.
15. Correction of the side effects of medicines released to the patient.
16. Expertise of all types of prescriptions for all dosage forms.
17. Skills to identify signs of substandard medicines.
18. Skills to use reference literature.
19. Skills to apply ethical-deontological methods of working with the population.
20. Filling of notifications about the revealed undesirable (secondary) reaction to medicines.
21. Advise a patient on over-the-counter drug use in age and gender aspects.
22. Counseling for pregnant women on over-the-counter drug use.
23. Informing the patient about the safety of using OTC medicines.
24. Definition of the symptoms of diseases in which mandatory doctor's consultation is necessary.

Appendix 1. Sample of registration of the title page of the diary

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational institution
BELARUSIAN STATE MEDICAL UNIVERSITY

DIARY
(type) of industrial practice

(Full Name)

Faculty _____

Year _____

Academic Group No _____

Practice base _____
(name of health care institution)

Supervisor of Practice _____
(Full Name)

Teacher of BSMU _____
(Full Name)

Minsk BSMU 20__

Appendix 2. The approximate form of a trainee's diary

| Date | Forms and types of work | Signature of responsible person |
|------|---|--|
| | <p><i>Only the types of work performed by the student with an indication of the degree of participation are listed (observed, assisted, performed independently). It is desirable to assess the student's own assessment of the working day, to analyze the current result of practical training when compared with credit standards.</i></p> | <p>Student's signature (daily)</p> <p>Date, signature of the supervisor (per week)</p> |
| | | |

Notes:

1. Records are made neatly, in a legible handwriting or printing. Corrections, additions after sighting records by the supervisor of practice are not allowed.

2. The registration of the diary, the characteristics is carried out on A4 format paper using the MS Word-2003 application (or later) and is carried out in accordance with the requirements of the state standard STB 6-38-2004 to the requisites, text, document design and data in the tables.

3. The signature of the supervisor in the practice diary is certified in accordance with the established procedure.

4. Diaries, reports, specifications, other documents for each type of industrial practice are stored in accordance with the nomenclature of cases of the departments of the BSMU responsible for the organization of industrial practice.

APPROVED
Head of
(name of the pharmacy organization)
Full Name
_____ 20__.

Student report _____
(Full Name)

on the work practice in clinical pharmacology based on

(name of the health care institution in accordance with the state register)

from _____ till _____

Student trainee _____
(Full Name)

Teacher of BSMU _____
(Full Name)

CHARACTERISTIC

of student-trainee _____

(Full Name)

(Full Name of student-trainee) passed (type) work practice on the basis of (name of the health care institution) from 00.00.20__ till 00.00.20__. The characteristics should reflect the business qualities of the student-trainee, the ability to acquire professional skills by position (to be specified). To indicate the presence and results of the development of personal qualities necessary for the profession of a provisor. Give an overall assessment of the results of the implementation of the training program of practice and the level of practical training achieved. Characterize the relationship with the team, knowledge and implementation of standards of medical ethics and deontology. In conclusion, recommendations should be made on the admission of the student to the current credit in the field of work practice, the proposals to improve the quality of theoretical preparation, preceding the direction of the student to the practice.

Head of the pharmacy (name of health organization)

(signature)

Full Name

_____ 20__ .

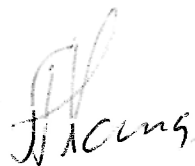
Acquainted with the characteristic

(date)_____
(signature of student trainee)_____
(Full Name)

Note. The volume of the characteristics is not more than 1 (one) page.

COMPILERS:

Head of the department of clinical
pharmacology of Belarusian State
Medical University, MD, PhD, professor



signature

A.V.Khapalyuk

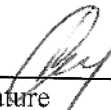
Associate professor of clinical
pharmacology department of Belarusian
State Medical University MD, PhD



signature

I.N.Kozhanova

Associate professor of clinical
pharmacology department of Belarusian
State Medical University MD, PhD



signature

I.S.Romanova

Program content, composition and accompanying documents comply with
established requirements.

Dean of the Medical Faculty of
International Students

22.03 2018



A. Gaiduk

Methodologist of Educational
Institution
"Belarusian State medical
University"

23.03 2018



O.R.Kachan

Head of the Foreign Languages
Department

21.03 2018



M.N.Petrova

Dean of the Faculty of Pharmacy

20.03 2018



N.S.Gurina


Head of Production Practice
"Belarusian State medical
University"


25.03 2018




L.I.Zilinskaya

Information about the authors (developers) of the practice program

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