

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Medical Faculty
Department of Internal Medicine #2 with postgraduate training

APPROVED
Vice-rector for scientific and pedagogical work
Eduard BURIACHKIVSKYI
« _____ » September 2024



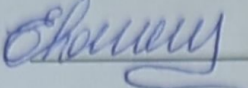
METHODICAL GUIDE
for independent applicant's work (IAW) in educational discipline

International Faculty, V-th course

Educational discipline: **Practical Outpatient Medical Training «Internal Medicine»**

Approved

At the meeting of the Department of Internal Medicine #2 with postgraduate training
Protocol № 1 dated «02» September 2024

Head of the Department  Olena VOLOSHYNA

Developed by:

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Theme 1: Preparation for practical lessons 1-4. Organization of planned and emergency therapeutic care at primary and secondary levels, number of hours - 6.

Goals: to deepen and consolidate the theoretical knowledge acquired by applicants in the process of studying theoretical disciplines, improvement and consolidation of practical skills and abilities to manage patients with diseases of the internal organs in an outpatient setting.

Basic definitions:

№	Term	Definition
1.	Medical care at the primary level	Medical care, which is provided on an outpatient basis or according to the patient's place of residence by a general practitioner (family doctor) and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
2.	Medical care at the secondary level	Medical care, which is provided on an outpatient or in an inpatient setting by doctors of the relevant specialty in planned or emergency care and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
3.	Emergency medical care	Medical care, which is provided in case of sudden acute diseases, conditions, exacerbations of chronic diseases that threaten the patient's life.
4.	Planned medical care	Medical care, which is provided during preventive measures, for diseases and conditions that do not threaten the patient's life, do not require emergency and urgent medical care.

Equipment: training room, cardiac patient examination simulator Harvey, 6-channel electrocardiograph CARDIOLINE, Echocardiography machine, ultrasound diagnostic system Mylab Six CristaLine, defibrillator / PRIMIDEC DefiMonitor XD (M 280).

Plan

I. Theoretical questions for the lesson: (the list of situational tasks and list of practical skills are attached – Appendix 1,2).

The content of the topic

Each applicant during the Practical Outpatient Medical Training «Internal Medicine» together with a general practitioner - family medicine or a specialist in therapeutic profile outpatient reception of patients. During this reception, the applicant conducts / participates in the survey and physical examination of patients, establishing a preliminary diagnosis, prescribing treatment, determining the need for patient consultation with specialists and preparation of medical records. In case of necessary additional examinations of the patient in the offices of functional diagnostics, consultations of related specialists, the applicant accompanies the patient and takes an active part in conducting a certain study.

The questions for the self-control: (the list of situational tasks is attached – Appendix 1).

Indicative tasks for the study of theoretical material

Task for independent work for the section: «Organization of planned and emergency therapeutic care at primary and secondary levels»

Main tasks	Instructions	Answers
1. Structure and organization of the primary health care center and consultative diagnostic center.	To study: - Scope and forms of work of the work of a family doctor, therapeutic specialist. Methods of encryption of diagnoses. Electronic document management system in the practice of a family doctor.	
2. Basic documentation in the work of a family doctor, therapeutic specialist.	To study: - Principles and organization of examination of temporary and permanent disability. Indications, rules of registration and issuance of sick leave (including electronic), the average period of stay on sick leave for the most common diseases of internal organs; - Rules for issuing emergency notifications about infectious patients, the list of infectious diseases for which emergency notifications are issued. Rules for filling out and issuing a medical death certificate; - Rules of registration of a referral for sanatorium treatment, familiarization with the list of documents and the scope of necessary examinations for registration of a sanatorium card.	
3. Methods of patient examination.	To study: -Recommendations on technology measurement of blood pressure by the method of Korotkov (according to the Order of the Ministry of Health of Ukraine №384 from 24.05.2012 and European recommendations in 2018). Methods of home monitoring of blood pressure. Daily outpatient monitoring of blood pressure; - Recommendations on technology recording and analysis of ECG.	

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Orientation card for self-preparation of a applicant: the Diary of Practical Outpatient Medical Training from «Internal Medicine»,

2. Practical work (tasks) that will be performed in class:

Applicant's itinerary for mastering / practicing skills in patient management, conducting and interpretation of diagnostic procedures data using the capabilities of the Center for Reconstructive and Restorative Medicine "University Clinic", ONMedU (CRRM "UC") is attached – Appendix 2a.

Be able to:

- Have the skills of communication and clinical examination of a patient with diseases of the internal organs in an outpatient setting - to collect data on patient complaints, medical history, life history.
- Evaluate information on the diagnosis of major diseases of the internal organs, using a standard procedure, based on the results of laboratory and instrumental studies. Determine the list of necessary clinical, laboratory and instrumental studies and evaluate their results at the outpatient stage of patient management.
- Identify the leading clinical symptom or syndrome in major diseases of the internal organs. Establish a preliminary diagnosis, make a differential diagnosis and determine the clinical diagnosis of the disease.
- To determine the principles of treatment of major diseases of internal organs in an outpatient setting, the required mode of work and rest, the nature of nutrition.
- Perform medical manipulations (Appendix 2).
- Plan and implement sanitary and hygienic and preventive measures
- To determine the tactics of management of persons subject to dispensary supervision
- To carry out examination of working capacity at the basic diseases of internals.
- Maintain medical records.

3. Test tasks for self-control

Control materials for the final stage of the lesson (samples of basic medical documentation and protocols of practical skills are attached – Appendix 3).

4. Individual tasks for applicants on the topic of classes are not provided by the curriculum

5. Recommended literature.

Basic literature:

1.Hutchison's Clinical Methods, 24th ed. Editors: Glynn M., Drake M.W. - Elsevier, 2018. – 465 p.

2.Davidson's Principles and Practice of Medicine 23rd Edition. Editors: Stuart Ralston, Ian Penman, Mark Strachan Richard Hobson. Elsevier. - 2018. – 1440 p.

3. Handbook of Liver Disease, 4th ed. Editors: Friedman L.S., Martin P. - Elsevier, 2018. – 512 p.

4. From the Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2020. Available from: goldcopd.org.

5. GINA report, global strategy for asthma management and prevention. Updated 2020. <http://www.ginasthma.org/documents/4>

6. 2018 ESC Guidelines for the diagnosis and management of syncope // *European Heart Journal*. – 2018. Vol. 39, Issue 21. – P.1883–1948.

7. 2018 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death DOI: <http://dx.doi.org/10.1093/eurheartj/ehv316>

8. ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation: The Task Force for the management of acute myocardial infarction in patients presenting with ST-segment elevation of the European Society of Cardiology // *European Heart Journal*. – 2018. Vol. 39, Issue 2. – P.119-177.

9. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure // *European Heart Journal*. – 2018. Vol. 39, Issue 27. – P. 2129–2200.

10. 2020 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Additional literature:

1. ЕКГ у практиці=The ECG in Practice=ЭКГ в практике: Навч. посіб. для мед. ун-тів, інст., акад. Рекомендовано Вченою радою ІваноФранківського НМУ / Джон Р. Хемптон; за участю Девіда Едлема. — К., 2018. — 560 с., кольор. вид. (англ., укр.)

2. Order of the Ministry of Health of Ukraine from №1269 from 05.06.2019 "On approval and implementation of medical and technological documents for standardization of emergency medical care", "EMERGENCY MEDICAL CARE: PREHOSPITAL STAGE. NEW CLINICAL PROTOCOL".

3. Order of the Ministry of Health of Ukraine dated 05.06.2020 № 1311 "On approval of the Model table of equipment of structural units of the emergency medical care system".

ELECTRONIC INFORMATION RECOURSES

1. <https://www.aasld.org> – American Association of Study Liver Diseases
2. <http://www.eagen.org/> - European Association for Gastroenterology, Endoscopy and Nutrition
3. <http://www.ers-education.org/guidelines.aspx> - European Respiratory Society
4. <http://www.gastro.org/> - American Gastroenterological Association (AGA)
5. www.ginasthma.org – Global Initiative for Asthma
6. <http://goldcopd.org>. – Global Initiative for COPD
7. www.ama-assn.org – [American Medical Association](http://www.ama-assn.org)
8. www.who.int – [World Health Organization](http://www.who.int)

9. <http://bma.org.uk> – British Medical Association

Theme 2: Preparation for practical lessons 5-9. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine, number of hours - 4.

Goals: to deepen and consolidate the theoretical knowledge acquired by applicants in the process of studying theoretical disciplines, improvement and consolidation of practical skills and abilities to manage patients with diseases of the internal organs in an outpatient setting.

Basic definitions:

№	Term	Definition
1.	Medical care at the primary level	Medical care, which is provided on an outpatient basis or according to the patient's place of residence by a general practitioner (family doctor) and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
2.	Medical care at the secondary level	Medical care, which is provided on an outpatient or in an inpatient setting by doctors of the relevant specialty in planned or emergency care and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
3.	Emergency medical care	Medical care, which is provided in case of sudden acute diseases, conditions, exacerbations of chronic diseases that threaten the patient's life.

Equipment: training room, cardiac patient examination simulator Harvey, 6-channel electrocardiograph CARDIOLINE, Echocardiography machine, ultrasound diagnostic system Mylab Six CristaLine, defibrillator / PRIMIDEC DefiMonitor XD (M 280).

Plan

I. Theoretical questions for the lesson: (the list of situational tasks and list of practical skills are attached – Appendix 1,2).

The content of the topic

Each applicant during the Practical Outpatient Medical Training «Internal Medicine» together with a general practitioner - family medicine or a specialist in therapeutic profile outpatient reception of patients. During this reception, the applicant conducts / participates in the survey and physical examination of patients, establishing a preliminary diagnosis, prescribing treatment, determining the need for patient consultation with specialists and preparation of medical records. In case of necessary additional examinations of the patient in the offices of functional diagnostics, consultations of related specialists, the applicant accompanies the patient and takes an active part in conducting a certain study.

The questions for the self-control: (the list of situational tasks is attached –

Appendix 1).

Indicative tasks for the study of theoretical material

Task for independent work in preparation for the section: «Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine».

Main tasks	Instructions	Answers
1. Diagnosis of emergency conditions in the ambulatory phase of medical care.	To study the algorithms for diagnosing emergency conditions (the list of situational tasks is attached – Appendix 1).	
2. Providing emergency care to patients in the ambulatory phase of medical care in the work of a family doctor, therapeutic specialist.	To study the algorithms for providing emergency care (the list of situational tasks is attached – Appendix 1).	
3. Methods of patient examination.	To study: -Recommendations on technology measurement of blood pressure by the method of Korotkov (according to the Order of the Ministry of Health of Ukraine №384 from 24.05.2012 and European recommendations in 2018). Methods of home monitoring of blood pressure. Daily outpatient monitoring of blood pressure; - Recommendations on technology recording and analysis of ECG.	

Orientation card for self-preparation: the Diary of Practical Outpatient Medical Training from «Internal Medicine»/

2. Practical work (tasks) that will be performed in class:

Applicant’s itinerary for mastering / practicing skills in patient management, conducting and interpretation of diagnostic procedures data using the capabilities of the Center for Reconstructive and Restorative Medicine “University Clinic”, ONMedU (CRRM “UC”) is attached – Appendix 2a.

Be able to:

- Diagnose emergencies in the outpatient setting of medical care (Appendix 1).
- Define tactics and provide emergency medical care to patients with major internal diseases
- To plan and carry out medical and evacuation measures among the population and servicemen taking into account the existing system of medical and evacuation support.
- Perform medical manipulations (Appendix 2).
- Maintain medical records.

3. Test tasks for self-control

Control materials for the final stage of the lesson (samples of basic medical documentation and protocols of practical skills are attached – Appendix 3).

4. Individual tasks for applicants on the topic of classes are not provided by the curriculum

5. Recommended literature.

Basic literature:

- 1.Hutchison's Clinical Methods, 24th ed. Editors: Glynn M., Drake M.W. - Elsevier, 2018. – 465 p.
- 2.Davidson's Principles and Practice of Medicine 23rd Edition. Editors: Stuart Ralston, Ian Penman, Mark Strachan Richard Hobson. Elsevier. - 2018. – 1440 p.
- 3.Handbook of Liver Disease, 4th ed. Editors: Friedman L.S., Martin P. - Elsevier, 2018. – 512 p.
- 4.From the Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2020. Available from: goldcopd.org.
- 5.GINA report, global strategy for asthma management and prevention. Updated 2020. <http://www.ginasthma.org/documents/4>
- 6.2018 ESC Guidelines for the diagnosis and management of syncope // *European Heart Journal*. – 2018. Vol. 39, Issue 21. – P.1883–1948.
- 7.2018 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death DOI: <http://dx.doi.org/10.1093/eurheartj/ehv316>
- 8.ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation: The Task Force for the management of acute myocardial infarction in patients presenting with ST-segment elevation of the European Society of Cardiology // *European Heart Journal*. – 2018. Vol. 39, Issue 2. – P.119-177.
- 9.ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure // *European Heart Journal*. – 2018. Vol. 37, Issue 27. – P. 2129–2200.
- 10.2020 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

Additional literature:

1. ЕКГ у практиці=The ECG in Practice=ЭКГ в практике: Навч. посіб. для мед. ун-тів, інст., акад. Рекомендовано Вченою радою ІваноФранківського

НМУ / Джон Р. Хемптон; за участю Девіда Едлема. — К., 2018. — 560 с., кольор. вид. (англ., укр.)

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ELECTRONIC INFORMATION RECOURSES

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4. <http://www.gastro.org/> - American Gastroenterological Association (AGA)
5. www.ginasthma.org – Global Initiative for Asthma
6. <http://goldcopd.org>. – Global Initiative for COPD
7. www.ama-assn.org – [American Medical Association](http://www.ama-assn.org)
8. www.who.int – [World Health Organization](http://www.who.int)
9. <http://bma.org.uk> – British Medical Association

Theme 3: Preparation for CPE, number of hours - 2.

Goals: mastering by the applicant of higher education the practical skills acquired in the study of basic clinical and theoretical disciplines and their further deepening and improvement during work in health care facilities, as well as familiarization with the work of medical personnel of all levels in the conditions of future activities at the bases of health care facilities.

Basic definitions:

№	Term	Definition
1.	Medical care at the primary level	Medical care, which is provided on an outpatient basis or according to the patient's place of residence by a general practitioner (family doctor) and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
2.	Medical care at the secondary level	Medical care, which is provided on an outpatient or in an inpatient setting by doctors of the relevant specialty in planned or emergency care and provides for consultation, diagnosis, treatment, rehabilitation and prevention of internal diseases.
3.	Emergency medical care	Medical care, which is provided in case of sudden acute diseases, conditions, exacerbations of chronic diseases that threaten the patient's life.
4.	Planned medical care	Medical care, which is provided during preventive measures, for diseases and conditions that do not threaten

		the patient's life, do not require emergency and urgent medical care.
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Equipment: training room, cardiac patient examination simulator Harvey, 6-channel electrocardiograph CARDIOLINE, Echocardiography machine, ultrasound diagnostic system Mylab Six CristaLine, defibrillator / PRIMIDEC DefiMonitor XD (M 280).

Plan

I. Theoretical questions for the lesson: (the list of practical skills for CPE is attached – Appendix 26).

The content of the topic

Each applicant during the Practical Outpatient Medical Training «Internal Medicine» together with a general practitioner - family medicine or a specialist in therapeutic profile outpatient reception of patients. During this reception, the applicant conducts / participates in the survey and physical examination of patients, establishing a preliminary diagnosis, prescribing treatment, determining the need for patient consultation with specialists and preparation of medical records. In case of necessary additional examinations of the patient in the offices of functional diagnostics, consultations of related specialists, the applicant accompanies the patient and takes an active part in conducting a certain study.

The questions for the self-control: (the list of practical skills for CPE is attached – Appendix 26).

Indicative tasks for the study of theoretical material

Task for independent work in preparation for the section: «Preparation for CPE».

Main tasks	Instructions	Answers
1. Diagnosis of emergency conditions in the ambulatory phase of medical care.	To study the algorithms for diagnosing emergency conditions (the list of practical skills for CPE is attached – Appendix 26).	
2. Providing emergency care to patients in the ambulatory phase of medical care in the work of a family doctor, therapeutic specialist.	To study the algorithms for providing emergency care (the list of practical skills for CPE is attached – Appendix 26).	
3. Methods of patient examination.	To study: -Recommendations on technology measurement of blood pressure by the method of Korotkov (according to the Order of the Ministry of Health of Ukraine №384	

	<p>from 24.05.2012 and European recommendations in 2018). Methods of home monitoring of blood pressure. Daily outpatient monitoring of blood pressure;</p> <ul style="list-style-type: none"> - Recommendations on technology recording and analysis of ECG; - implementation and analysis of pulse oximetry; - performance and analysis of peak fluometry 	
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Orientation card for self-preparation of a applicant: the Diary of Practical Outpatient Medical Training from «Internal Medicine».

2. Practical work (tasks) that will be performed in class:

Applicant’s itinerary for mastering / practicing skills in patient management, conducting and interpretation of diagnostic procedures data using the capabilities of the Center for Reconstructive and Restorative Medicine “University Clinic”, ONMedU (CRRM “UC”) is attached – Appendix 2a.

Be able to:

- Diagnose emergencies in the outpatient setting of medical care (Appendix 1).
- Define tactics and provide emergency medical care to patients with major internal diseases
- To plan and carry out medical and evacuation measures among the population and servicemen taking into account the existing system of medical and evacuation support.
- Perform medical manipulations (Appendix 2).
- Maintain medical records.

3. Test tasks for self-control

Control materials for the final stage of the lesson (samples of basic medical documentation and protocols of practical skills are attached – Appendix 3).

4. Individual tasks for applicants on the topic of classes are not provided by the curriculum

5. Recommended literature.

Basic literature:

- 1.Hutchison’s Clinical Methods, 24th ed. Editors: Glynn M., Drake M.W. - Elsevier, 2018. – 465 p.
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3. <http://www.ers-education.org/guidelines.aspx> - European Respiratory Society
4. <http://www.gastro.org/> - American Gastroenterological Association (AGA)
5. www.ginasthma.org – Global Initiative for Asthma
6. <http://goldcopd.org>. – Global Initiative for COPD
7. www.ama-assn.org – [American Medical Association](http://www.ama-assn.org)
8. www.who.int – [World Health Organization](http://www.who.int)
9. <http://bma.org.uk> – [British Medical Association](http://bma.org.uk)

List of of situational tasks

1. Indications and contraindications to the issuance of a letter of incapacity for work as a document of medical, financial, legal, social. Work incapacity e-form.
2. Who has the right to issue a form of work incapacity? The degree of responsibility of the doctor who issues the work incapacity form.
3. Functional responsibilities of a family doctor.
4. The order of recording in the outpatient medical card the results of the initial examination of the patient.
5. The order of recording in the outpatient medical card the results of follow-up examination of the patient.
6. Purpose of a letter to MSEC. In which cases the letter to MSEC is filled in?
7. Which main specialists is involved in filling out the letter to MSEC?
8. Criteria for establishing the first, second and third disability groups.
9. The value of "Emergency notification of an infectious disease, food, acute occupational poisoning, an unusual reaction to vaccination" (f.0.58/a). List of infectious diseases for which emergency notifications are issued.
10. Who should report the detection of an infectious patient?
11. Measures to be taken after notification of an infectious patient? Tactics of the doctor who detected the infectious patient.
12. Appointment of the sanatorium-resort card of the patient at the direction of the patient on treatment in sanatorium. The list of necessary documents for sanatorium card registration.
13. The list of obligatory inspections for registration of the sanatorium card.
14. Contraindications for treatment in the sanatorium and resort.
15. Method of ECG recording in cardiac arrhythmias and conduction disturbance.
16. Clinical indications for electrocardiographic examination.
17. Rules and techniques of ECG registration. Types of electrocardiographs.
18. Protocol for recording the results of the patient's ECG examination.
19. Indications for measuring the patient's blood pressure (BP). Technique of blood pressure measurement by Korotkov's method. Types of devices for BP measuring.
20. Assessment of blood pressure levels and clinical interpretation.
21. Indications for echocardiographic examination of the patient. Basic echocardiographic parameters of heart structure and function.
22. Hemoptysis syndrome, causes. Tactics of managing a patient with hemoptysis syndrome in an outpatient setting.

23. Respiratory failure. Algorithm for diagnosis and emergency care in acute respiratory failure in an outpatient setting.
24. Pulmonary artery thromboembolism (PE). Risk groups for PE and prevention. Algorithm for diagnosis and emergency care in case of suspected pulmonary embolism in an outpatient setting.
25. Bronchospasm, exacerbation of bronchial asthma (BS). Algorithms for diagnosis and first aid for bronchospasm, exacerbation of asthma in an outpatient setting.
25. Renal colic. Algorithm for diagnosis and first aid for renal colic in an outpatient setting.
26. Acute kidney injury, acute renal failure. Risk factors, prevention. Algorithm for diagnosis and emergency care in acute renal failure in an outpatient setting.
27. Acute adrenal insufficiency. Algorithm for diagnosis and emergency care in acute adrenal insufficiency in an outpatient setting.
28. Acute liver failure. Algorithm for diagnosis and emergency care in acute liver failure in an outpatient setting.
29. Hepatic colic. Algorithm for diagnosis and emergency care of hepatic colic in an outpatient setting.
30. Gastrointestinal bleeding. Risk factors. Prevention. Algorithm for diagnosing and emergency care of gastrointestinal bleeding in an outpatient setting.
32. Acute heart failure. Classification. Algorithm for diagnosing and emergency care of acute heart failure in an outpatient setting.
33. Collapse, cardiac and respiratory arrest. Algorithm of cardiopulmonary resuscitation in an outpatient setting.
34. Comas. Algorithms for diagnosis and emergency care in an outpatient setting.
35. Hypertensive crises. Classification. Algorithms for diagnosis and emergency care of hypertensive crises in an outpatient setting. Prevention.
36. Paroxysmal heart rhythm and conduction disorders. Algorithms for diagnosing and emergency care for paroxysmal heart rhythm and conduction disorders (including MES syndrome) in an outpatient setting.
37. Cardiac pain syndrome. Algorithms for diagnosing and emergency care for heart pain syndrome at the stage of primary care.
38. Laryngeal oedema and Quincke's syndrome. Algorithms for diagnosing and emergency care for laryngeal edema and Quincke's syndrome.

LIST OF PRACTICAL SKILLS THAT THE APPLICANT MUST MASTER

1. Admit patients at the primary care center or in the counseling and diagnostic center, including visiting patients at home.
2. Be able to distribute the population by health groups.
3. Be able to formulate and encrypt diagnoses according to the ICPC-2 system.
4. Take part in examination of temporary and permanent disability, fill in the necessary documents for MAC, MSEC.
5. Fill in the medical card of an outpatient (f. 025 / o).
6. Fill in the sanatorium-resort card (f. 072 / o)
7. Fill in the medical certificate of death (f. 106 / o), know the rules for issuing a death certificate.
8. Be able to issue an emergency report of an infectious disease (f.058-o)
9. Perform blood pressure measurements according to the Korotkov method in accordance with current recommendations.
10. Record, analyze and interpret ECG
11. Provide emergency care in acute respiratory failure in an outpatient setting according to the current algorithm.
12. Provide emergency care for pulmonary embolism in an outpatient setting according to the current algorithm.
13. Provide emergency care for hemoptysis syndrome in an outpatient setting according to the current algorithm.
14. Provide emergency care for bronchospasm syndrome, exacerbation of bronchial asthma in an outpatient setting according to the current algorithm.
15. Provide emergency care for renal ring in an outpatient setting according to the current algorithm.
16. Provide emergency care in acute renal failure in an outpatient setting according to the current algorithm.
17. Provide emergency care in acute adrenal insufficiency in an outpatient setting according to the current algorithm.
18. Provide emergency care in acute liver failure in an outpatient setting according to the current algorithm.
19. Provide emergency care for hepatic ring in an outpatient setting according to the current algorithm.
20. Provide emergency care to a patient with gastrointestinal bleeding in an outpatient setting according to the current algorithm.
21. Provide emergency care in acute heart failure in an outpatient setting according to the current algorithm.
22. Provide emergency care in case of collapse, cessation of blood circulation and respiration in an outpatient setting according to the current algorithm.
23. Provide emergency care in case of coma in an outpatient setting according to current algorithms.
24. Provide emergency care for paroxysmal heart rhythm and conduction

disorders, including with MES syndrome, in an outpatient setting according to current algorithms.

25. Provide emergency care for pain in the heart at the stage of primary care according to the current algorithm.
26. Provide emergency care for laryngeal edema and Quincke's syndrome at the stage of primary care according to the current algorithm.
27. provide recommendations for lifestyle adjustments for disease prevention.

Appendix 2a

Applicant's itinerary for mastering / practicing skills in patient management, conducting and interpretation of diagnostic procedures data using the capabilities of the Center for Reconstructive and Restorative Medicine "University Clinic", ONMedU (CRRM "UC")

The name of the diagnostic	Skills and abilities,	ISW topics	Location on the basis of the
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procedure			Department
Spirography	Familiarization with the indications, protocol and procedure for spirographic examination and interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels.	1st floor of the diagnostic department CRRM (UC)
Performing and analyzing peak fluometry data	Familiarization with the indications, protocol and procedure , interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №3. Preparation for CPE.	Intensive Care Unit №6-7 Department of Internal Medicine
Performing and analyzing pulse oximetry data	Familiarization with the indications, protocol and procedure, interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine. Topic №3. Preparation for CPE.	Intensive Care Unit №6-7 Department of Internal Medicine
Interpretation of liver function tests	Familiarization with the indications, protocol and procedure	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №3. Preparation for CPE.	Intensive Care Unit №6-7 Department of Internal Medicine
Interpretation of general urine analysis	Familiarization with the indications, protocol and procedure	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №3. Preparation for CPE.	Intensive Care Unit №6-7 Department of Internal Medicine

Fibrogastroduodenoscopy (FGDS)	Acquaintance with indications, the protocol and procedure of carrying out FGDS and interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels.	1st floor of the diagnostic department CRRM (UC)
Fibrocolonoscopy (FCC)	Familiarization with the indications, protocol and procedure of the FCC and interpretation of the results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels.	1st floor of the diagnostic department CRRM (UC)
Computed radiography of the thoracic cavity	Acquaintance with demonstrations, procedure and interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels.	1st floor of the diagnostic department CRRM (UC)
Electrocardiography	Mastering the skills of ECG recording and interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine. Topic №3. Preparation for CPE.	1st floor of the diagnostic department CRRM (UC)
Blood pressure measurement	Machinery measurement of blood pressure by the method of Korotkov (according to the Order of the Ministry of Health of Ukraine №384	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine. Topic №3. Preparation for	Reception office, 1st floor CRRM (UC). Intensive Care Unit №6-7 Department of Internal Medicine, Resuscitation and Intensive Care

	from 24.05.2012 and European recommendations in 2018). Methods of home monitoring of blood pressure. Daily outpatient monitoring of blood pressure	CPE.	Unit, 1st floor of CRRM (UC).
Ultrasound of the abdominal cavity and kidneys	Acquaintance with the procedure and interpretation of results	Topic №1. Organization of planned and emergency therapeutic care at primary and secondary levels. Topic №2. Algorithms for providing emergency care in outpatient settings in the clinic of internal medicine.	1st floor of the diagnostic department CRRM (UC)

Appendix 2b

LIST OF PRACTICAL SKILLS FOR CPE

1. Interpretation of a standard 12-lead ECG.
2. Interpretation of liver function tests (total protein, total bilirubin and its fractions, aminotransferases, alkaline phosphatase).
3. Interpretation of general urine analysis.
4. Use of pulse oximetry.
5. Conducting peak-flow metry.
6. Emergency care at the primary level (outpatient): hypertensive crisis.
7. Emergency care at the primary level (outpatient): exacerbation of bronchial asthma.
8. Emergency care at the primary level (outpatient): acute heart failure.
9. Emergency care at the primary level (outpatient): acute coronary syndrome.

Samples of basic medical documentation and protocols of practical skills**Protocol №1. Filling the referral letter to MSEC (f 088/a)**

№	Steps / tasks
1.	Filling out patient passport data with indication the profession, position, place of work.
2.	History of the basic disease, specifying the disability period during the last 6 months.
3.	Required extract from history while staying in the hospital where reflected dynamics of clinical and biochemical laboratory tests and instrumental examinations (ECG, X-ray, etc.); BP dynamic (in a case of arterial hypertension). Epicrisis of hospital case history attach to a referral letter to MSEC.
4.	Formulate a complete clinical diagnosis of the disease with expert evaluation of the patient's ability to work.
5.	When making a referral to MSEC in the examination of the patient necessarily take part therapist, surgeon, neurologist, ophthalmologist, and, if indicated, other specialists.

6.	Oriented note provided MSEC solution: a) healthy to work, b) to continue treatment for several months, c) initial determination, confirmation or modification of disability on the following criteria set III, II or I of disability groups: III - partial disability, II - total disability, I-- full disability with loss of patient ability to self -service.
7.	Specify one of the listed below reasons for referral to MSEC: ending 4-5 month term insured patient on sick sheet, the adverse employment forecasts to end 4-month stay on sick leave for testimony on MSЭK, for the reduction or increase of disability; on the insistence of the patient.
8.	For a patient who works, to put an excerpt from the work book.
9.	The degree of responsibility and the doctor's rights who fills out a letter to MSEC: shall have the right to defend their point of view (p.6) in MSEC, demonstrated thus responsible for therefferal letter provided information about the patient, in cases of inaccuracies physician be disciplinary, sometimes criminally liable.
10.	Mandatory are all specialists signature that filled referral list, their personal stamp, Head of LCC signature, treatment facility stamp.

Protocol №2. Algorithm design of emergency reports about infectious patients
(f 058/a)

№	Steps / tasks
1.	In the form write name, age, home and work address, diagnosis.
2.	All the above named entered into the journal of emergency notifications.
3.	In a report lists all family members and staff who had contact with ill person.
4.	If the source was a poisoned product - specify the location of food intake.
5.	About rubeola, angina, hepatitis reported in the central control point (CUP) of regional infectious hospital.
6.	Report transmitted to the polyclinic's cabinet of infectious diseases.

Protocol №3. Methodic of ECG registration.

№	Steps / tasks
1.	ECG must be registered in the room with the presence of ground loop apparatus except types of devices that do not require grounding.
2.	Before recording ECG patient should rest at least 5 minutes, the skin at the electrodes placement on the limbs and chest should be degreased by spirit.
3.	Electrodes are placed on the limbs as follows: red - on the right wrist, yellow - to the left, green on the left leg, black - on the right. Rule "traffic light": in the direction of clockwise.

4.	<p>Precordial leads recorded with electrodes in the following points:</p> <p>V1-4th intercostal space at the right edge of the sternum;</p> <p>V2-4th intercostal space at the left edge of the sternum;</p> <p>V3-to mid-distance between V2 and V4 to the left of the sternum;</p> <p>V4-5th intercostal space in the left mid-clavicular line;</p> <p>V5-5th intercostal space on the left anterior axillary line;</p> <p>V6 - 5th intercostal space on the left the mid-axillary line.</p>
5.	Before registering check ECG machine set-up: one millivolts is equal to 1 cm, the speed tape drive mechanism 50 or 25 mm/ ec, pen recording regulated on the middle of tape
6.	Further by toggle switch leads are recorded sequentially 12 leads, or in automatic program mode singly, 3 and 6 leads.
7.	Sign (if no automatic recording) the date, time, ECG, name, age of the patient.
8.	Interpretation of ECG (after validation technique ECG recording - <i>availability of correct millivolts, the presence of minimum 3 cardiocycles in each of leads, clear baseline</i>).
8.1	Identify rhythm (sinus or not sinus) – according to the characteristics of P wave.
8.2	Assess regularity of rhythm – according to the RR intervals
8.3	Calculate heart rate (unless the automatic counting).
8.4.	Assess heart axis (preferably calculate α) or in the direction of the leading waves in leads I, III, AVL and AVF.
8.5	Calculate all intervals: RR (PQ), QRS, QT and evaluate wave amplitude of QRS complex.
8.6	Assess P wave characteristics (amplitude, duration).
8.7	Assess repolarization phase (depression (its type) or elevation of ST segment, T wave changes).
8.8	Interpretation of the received data, for example: <i>sinus rhythm, heart rate 89 beats / min., left axis deviation, PR = 0, 24 s- av- block first degree, QRS = 0,128 s - violation of introventricular conductivity - left bundle branch block; QT = 0,388 s, P = 0.12 s - overload of left atrium, ECG - signs of left ventricular hypertrophy (Layon- Sokolov index = 38mm).</i>

Protocol №4. Office BP measurement (according to the Order of Ministry of Health of Ukraine № 384, 2012)

№	Steps / tasks
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1.	Measurement of blood pressure should be conducted in a quiet environment after a 5-min rest. Within 30 min to measure patient should not smoke or drink coffee.
2.	The cuff should cover at least 80% of the circumference of the upper arm and cover 2/3 of its length. Using too narrow or short cuff leads to increased BP level, too broad - to BP level understatement (decreased). The standard cuff (12-13cm in width and 35cm in length) is used in patients with normal and thin hands. In persons with muscular or thick hands should apply cuff 42cm in length, in children under five years old - 12 cm in length.
3.	Placed cuff in the middle of the arm at heart level, its lower edge is 2-2.5 cm above the antecubital fossa, and between the cuff and the surface of the shoulder should held a finger.
4.	First, determine the level of SAP by palpation method. It is necessary to determine the pulse on a. radialis and then quickly pump air into the cuff to 70 mmHg. Next, you need to pump up to 10 mmHg to the value at which the pulse disappears. That assess at which it reappears during deflation - corresponds SAP. This palpation method helps avoid errors related to "auscultatory failure" (disappearance of Korotkoff sounds immediately after their first appearance). Re-air pumped by 20 - 30 cm above the SAP values that were identified by palpation.
5.	Take off air slowly - 2 mm per second and determine the phase I Korotkoff sounds (appearance) and phase V (disappearance) relevant SAP and DAP. When listening to Korotkoff sounds to very low values or to 0 for DAP consider blood pressure, which is fixed at the beginning of the V phase. The value of AP rounded to the nearest 2 mm.
6.	Measurements should be made at least twice at intervals of 2 - 3 minutes. When divergence results by more than 5 mm Hg, additional measurements should be done in a few minutes.
7.	The first measurement of arterial pressure should be determined on both hands, and in sitting, standing and lying down position. Taken into account the higher values that more accurately meet intraarterial AP.
8.	Measuring AP at the first and fifth minutes after transferring to orthostasis must necessarily hold in elderly patients and in patients with diabetes and in all cases the presence of orthostatic hypotension or suspected it.

In the last years, automatic devices for measuring AP, that the accuracy does not differ from the results obtained by the traditional method of Korotkov, who have passed the international certification and can be used for professional (doctor or nurse) AP measurement. Such instruments for professionals to be distinguished from devices for home AP measurement (patients). International list of all types of devices for AP measuring with their characteristics and information about certification, accuracy, as well as recommendations for use (professional, home, daily measurement) can be found on the independent website www.dableducational.org

Comment: It's necessary to add "AP measurement in patients with rhythm disturbances, particularly in atrial fibrillation" because in that case recommended tensiometry using Korotkoff auscultative method. The use of automated devices in the pathology - especially in self-measuring patient at home, can not reliably estimate the level of AP".