MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

Petro Mohyla Black Sea National University

Medical Institute

Department of Hygiene, Social Medicine, Public Health and Medical Informatics

"APPROVE "
The first vice-rector
Ishchenko NM
_____
" __ " _____ 2021 year

CURRICULUM WORK PROGRAM

" Emergency and urgent medical care"

Developer	Zuzin V.O.
Head of the Department of	Zuzin V.O.
Developer	
Guarantor of the educational program	Klymenko MO
Director of the Institute	Grishchenko GV
Chief of EMD	Shkirchak SI

Mykolaiv – 2021

Description of the discipline

Characteristic	Characteristics of the discipline	
Name of discipline	Emergency and urgent medical care	
Field of knowledge	22 “Health care”	
Specialty	222 “Medicine”	
Specialization (if any)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Course	5th	
Academic year	2021 - 2022	
Semester number	Full-time	Correspondence form
	10 th	
Total number of ECTS credits / hours	3 credits /90 hours	
Course structure:	Full-time	Correspondence form
- lectures - practical classes - hours of independent work of students	10 hours 20 hours 60 hours	
Percentage of classroom load	33%	
Language of instruction	English	
Form of final control		

2. Learning objectives, tasks and planned learning outcomes

Short annotation of the course, relevance. The subject of the program is emergency actions and managerial measures aimed to save and preserving victim's life of in an emergency and minimizing the impact of such a condition on person's health. The program is focused on gaining knowledge and developing practical skills and abilities to assess the condition of victims; ability to provide emergency medical care to victims in case of any emergencies.

Prerequisites. To successfully master the discipline the student needs knowledge gained in the study of the following disciplines of general training: basic knowledge of biology, human anatomy and physiology, pharmacology, hygiene, pathological anatomy, pathological physiology, emergency medicine, therapy, surgery, and other clinical disciplines; integrates with these disciplines.

The purpose of the course and its significance for professional activities. The purpose of the discipline is to form in future professionals the knowledge, skills, and competencies of diagnosing emergencies, carrying out medical and evacuation measures, determining the tactics of emergency medical care under any circumstances, with using knowledge about the person, his organs, and systems, adhering to ethical and legal norms, by making an informed decision, on the basis of the diagnosis of emergency under the pressure of time in accordance with certain tactics, using standard schemes, to provide emergency medical care.

Postrequisites. In the process of studying the discipline, student gain the knowledge necessary for successful mastering other disciplines, namely: internal medicine, surgery, pediatrics, traumatology and orthopedics, anesthesiology, critical care, military surgery, therapy and other clinical disciplines, which suppose the integration between these disciplines and further application of the mastersed knowledge, skills and abilities in the process of future training and in professional activity.

Learning outcomes. After successful study of the discipline the applicant will **be able:**

- to interpret urgent conditions that require emergency medical care, their etiology and pathogenesis;

- to select and use diagnostic and treatment equipment of the emergency medical care team and the emergency medical care department of a multidisciplinary hospital;

- to provide emergency medical care in mass casualty incident;

- to apply certain protocols for providing emergency medical care to victims (patients) at the pre-hospital and early hospital stages;

- to be situationally aware and identify hazards;

- to perform primary and secondary survey, and on the basis of the obtained data to establish the leading syndrome and apply an adequate protocol for emergency medicine, including in peace time emergencies;

- to verify and carry out anti-epidemic measures in war-time in case of use of bacteriological weapons.

According to the requirements of the educational and professional program, students must:

To have competencies:

• on the application of knowledge on emergency and urgent medical care to promote a healthy lifestyle;

• about the main perspective directions of development of emergency and urgent medical care.

The developed program corresponds to **the educational-professional program (OPP)** and is focused on **the formation of competencies:**

general (GC) - GC1-GC3 of OPP:

GC1. Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.

GC2. Ability to apply knowledge in practical situations.

GC3. Knowledge and understanding of the subject area and understanding of professional activity.

professional (PC) - PC1-9; PC11; PC18 of OPP:

PC1. Patient interviewing skills.

PC2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.

PC3. Ability to establish a preliminary and clinical diagnosis of the disease.

PC4. Ability to determine the required mode of work and rest in the treatment of diseases.

PC5. Ability to determine the nature of nutrition in the treatment of diseases.

PC6. Ability to determine the principles and nature of disease treatment.

PC7. Ability to diagnose emergencies.

PC8. Ability to determine the tactics of emergency medical care.

PC9. Ability to determine emergency care skills.

PC11. Skills to perform medical manipulations.

PC18. Ability to keep medical records.

program learning outcomes (PLO) -PLO11, PLO13-20, PLO22, PLO25, PLO28, PLO30, PLO32, PLO33, PLO35, PLO41 of OPP:

PLO11. Collect data on patient complaints, medical history, life history (including professional history), in a health care facility, its unit or at the patient's home, using the results of the interview with the patient, according to the standard scheme of the patient's survey. Under any circumstances (in the health care facility, its unit, at the patient's home, etc.), using knowledge about the person, his organs and systems.

PLO13. In the conditions of a health care institution, its subdivision and among the attached population: to be able to identify and record the leading clinical symptom or syndrome by making an informed decision, using preliminary data of the patient's history, data of physical examination of the patient, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.

PLO14. In the conditions of the health care institution, its subdivision: to appoint laboratory and / or instrumental examination of the patient by making a reasonable decision, on the basis of the most probable or syndromic diagnosis, according to

standard schemes, using knowledge about man, his organs and systems, adhering to the relevant ethical and legal norms. Carry out differential diagnosis of diseases by making an informed decision, according to a certain algorithm, using the most probable or syndrome diagnosis, data of laboratory and instrumental examination of the patient, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.

PLO15. To determine the necessary mode of work and rest in the treatment of the disease, in the conditions of the health care institution, at the patient's home and at the stages of medical evacuation, incl. in the field, on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO16. Determine the necessary medical nutrition in the treatment of the disease, in a health care facility, at home at the patient and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems , adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO17. Determine the nature of treatment (conservative, operative) disease, in a health care facility, at home at the patient and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PLO18. Establish a diagnosis by making an informed decision and assessing the human condition, under any circumstances (at home, on the street, health care facility, its units), including in an emergency, in the field, in lack of information and limited time,

using standard methods of physical examination and possible history, knowledge of the person, his organs and systems, adhering to the relevant ethical and legal norms.

PLO19. Determine the tactics of emergency medical care, under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency (list 3) for a limited time using standard schemes.

PLO20. Provide emergency medical care, under any circumstances, using knowledge of the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency (list 3) for a limited time according to certain tactics, using standard schemes.

PLO22. Perform medical manipulations in a medical institution, at home or at work on the basis of previous clinical diagnosis and / or indicators of the patient's condition, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms, by making informed decisions and using standard methods.

PLO25. To form, in the conditions of a health care institution, its division on production, using the generalized procedure of an estimation of a state of human health, knowledge of the person, its bodies and systems, adhering to the corresponding ethical and legal norms, by acceptance of the reasonable decision, among the fixed contingent of the population : dispensary groups of patients; groups of healthy people subject to dispensary supervision (newborns, children, adolescents, pregnant women, representatives of professions that must undergo a mandatory dispensary examination).

PLO28. Organize secondary and tertiary prevention measures among the assigned population, using a generalized procedure for assessing human health (screening, preventive medical examination, medical treatment), knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, in the conditions of the health care institution, in particular: to form

groups of dispensary supervision, to organize medical and health-improving measures differentiated from the group of medical examination.

PLO30. To be carried out in the conditions of a health care institution, its subdivision: detection and early diagnosis of infectious diseases; primary anti-epidemic measures in the center of an infectious disease.

PLO32. In a health care facility, or at the patient's home on the basis of the obtained data on the patient's health, using standard schemes, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms, by making an informed decision: tactics of examination and secondary prevention of patients subject to dispensary supervision; to determine the tactics of examination and primary prevention of healthy persons subject to dispensary supervision; calculate and prescribe the necessary food for children in the first year of life.

PLO33. Determine the presence and degree of limitations of life, type, degree and duration of disability with the issuance of relevant documents in a health care facility on the basis of data on the disease and its course, features of professional activity.

PLO35. On the territory of service according to standard methods of descriptive, analytical epidemiological and medical-statistical researches: to carry out screening concerning detection of the most important non-communicable diseases; to assess morbidity, including chronic non-communicable diseases, disability, mortality, and integrated health indicators in the dynamics and in comparison with average static data; identify risk factors for the occurrence and course of diseases; to form risk groups of the population.

PLO41. In the conditions of a health care institution or its subdivision according to standard methods: to carry out selection and use unified clinical protocols

on the provision of medical care, developed on the basis of evidence medicine; participate in the development of local protocols for medical care assistance; to control

the quality of medical care on the basis of statistical data, expert evaluation and sociological research data using indicators of structure, process and results of activities; identify factors that hinder the improvement of the quality and safety of medical care.

3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS).

The program of the discipline "Emergency and urgent medical care" is structured in one module.

The structure of the discipline

Name of the topics	Total hours	L.	Pr.	Ind. w.
1	2	3	4	5
Topic 1. Organization of emergency and emergency care in Ukraine.	9.0	1.0	2	6
Topic 2. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination.	9.0	1.0	2	6
Topic 3. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination.	11.0	1.0	2	8
Topic 4. Modern means of ensuring airway patency and artificial lung ventilation in adults.	13.0	1.0	4	8
Topic 5. Circulatory and respiratory arrest. Emergency medical	14.0	2.0	4	8

care technology.				
Topic 6. Emergency medical care for mass injuries.	12,0	2.0	2	8
Topic 7. Diagnosis and treatment of emergencies at the scene.	11.0	1.0	2	8
Topic 8. Emergency medical care for mechanical injuries.	11.0	1.0	2	8
TOTAL	**90**	**10**	**20**	**60**

4. The content of the discipline

4.1. Lecture plan

№ з.п.	TOPIC	Number Of hours
1.	**Topic 1 - 2.** Organization of emergency and emergency care in Ukraine. Definition and tasks of the emergency medical care system. Ensuring the functioning of the emergency medical care system. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. Deepening and consolidating students' theoretical knowledge and practical skills needed in providing emergency care in an emergency situation.	**2**
2.	**Topic 3 - 4.** The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination. Organizational aspects of the secondary examination of the victim. The sequence of emergency medical care in a peacetime emergency. Modern means of ensuring airway patency and artificial lung ventilation in adults. The causes of upper airway obstruction which are classified according to the level of their occurrence.	**2**
3.	**Topic 5.** Stopping blood circulation and respiration. Emergency medical care technology. Methods of providing emergency medical care, stages and stages of cardiopulmonary resuscitation.	**2**
4.	**Topic 6.** Emergency medical care for mass injuries. General provisions of medical sorting in the centers of mass lesions. Legal, organizational, medical and deontological features of emergency and emergency care with adaptation to modern clinical protocols.	**2**
5.	**Topic 7 - 8.**	**2**

	Diagnosis and treatment of emergencies at the scene. Recognition of emergencies in the work of a general practitioner - family medicine, clinic, hospital department (regardless of profile) and the sequence of medical care for emergencies at the scene according to approved protocols. Emergency medical care for mechanical injuries. Diagnosis and treatment at the prehospital stage of mechanical injuries of the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs.	
TOTAL		**10**

4.2. Plan of practical classes

№	TOPIC	Number Of hours
Topic 1.	**Organization of emergency and urgent care in Ukraine.** Definition and tasks of the emergency medical care system. Ensuring the functioning of the emergency medical care system. Center for emergency medical care and disaster medicine, structure and tasks. Ambulance station and its subdivisions. Actions of medical personnel of ambulance at liquidation of consequences of emergency situations. Department of emergency medical care of the hospital. Secondary medical care. Medical facilities that will be part of hospital districts. Organization of medical sorting after the reform of emergency medical care in emergencies. Features of the organization of medical care and sorting in case of mass casualties.	2
Topic 2.	**The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination.** Deepening and consolidating students' theoretical knowledge and practical skills needed in providing emergency care in an emergency situation. Recognizing of emergencies in the	2

	work of a general practitioner - family medicine, clinic, hospital department (regardless of profile); learning the organizational principles of emergency medical care and peacetime emergencies; to study the sequence of actions of emergency medical teams in case of mass casualties.	
Topic 3.	**The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination.** Organizational aspects of the secondary examination of the victim. The sequence of emergency medical care in a peacetime emergency. Be able to recognize emergencies in the work of a doctor (regardless of profile). Perform consistent, step-by-step actions of the emergency medical care team during the secondary examination according to the protocol №1. The examination is performed only after the stabilization of the victim's condition. Stages of the secondary examination. The procedure for providing assistance to several victims.	2
Topic 4.	**Modern means of ensuring airway patency and artificial lung ventilation in adults.** The causes of upper airway obstruction are classified by the level of their occurrence. Revision and rehabilitation of the oral cavity by manual and hardware methods. Use of oropharyngeal and nasopharengyal tube, use of a manual device for artificial lung ventilation (Ambu). Indications and technique of intubation of the victim, the use of alternative methods to ensure airway patency with a mask, laryngeal tube, combi tube. Symptoms of partial and complete airway obstruction, methods of its recovery. Indications and technique of conic puncture and conicotomy. Familiarity with a portable ventilator.	4
Topic 5.	**Circulatory and respiratory arrest. Emergency medical care technology.** Methods of providing emergency medical care, stages and stages of cardiopulmonary resuscitation. The algorithm of CPR and closed heart massage by one and two	

	resuscitators is worked out in detail on the mannequin. Legal, organizational, medical and deontological features of the emergency care provision with adaptation to modern clinical protocols. Protocols of the European Council of Resuscitation at different types of cardiac arrest (rhythms to defibrillation and rhythms not to defibrillation) using the necessary equipment and tools. Classic errors and complications that occur during cardiopulmonary resuscitation, legal and ethical aspects of cardiopulmonary resuscitation. Signs of clinical death and compliance with relevant clinical protocols. Mastering the equipment, tools and medicines that are involved in the performance of cardiopulmonary resuscitation.	4
Topic 6.	**Emergency medical care for mass injuries.** General provisions of medical sorting in the centers of mass lesions. Educational logistics and plan-scheme of the sorting site; imitation coupons and medical sorting cards. Interaction of ambulance crews with rescue services. The responsibility of each of them. Procedure (algorithm of work) of medical workers of ambulance crews, who were the first to arrive at the center of mass destruction. Carrying out medical sorting of the affected (imitation coupons) and filling in the medical sorting card. General requirements for medical sorting of victims and patients at the pre-hospital stage and in the reception departments (emergency departments) of health care facilities, including the hospitalization of victims after emergencies.	2
Topic 7.	**Diagnosis and treatment of emergencies at the scene.** Recognition of emergencies in the work of a general practitioner - family medicine, clinic, hospital department (regardless of profile) and the sequence of medical care in emergencies at the scene according to approved protocols. Anaphylactic shock, etiology, pathogenesis, clinic, diagnosis and emergency care at the prehospital stage. Poisoning by an unknown substance, etiology, pathogenesis, clinic, diagnosis and emergency care at the	2

	prehospital stage. General classification of poisons. Toxicological classification of poisons (by the nature of toxic action). Tactics of the doctor at acute poisonings by an unknown poison at a prehospital stage. Antidote detoxification. Classification of antidotes (by mechanism of therapeutic action). Methods of antidote detoxification. Criteria for the effectiveness of emergency care.	
Topic 8.	**Emergency medical care for mechanical injuries.** Diagnosis and treatment at the prehospital stage of mechanical injuries of the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs. Tactics of the ambulance crew in case of polytrauma, long-term compression and crushing syndrome, external and internal bleeding, traumatic and hemorrhagic shock, hemo- and pneumothorax. Algorithm for providing emergency medical care to road traffic victims and traffic accident. Techniques to stop external bleeding. Technique of transport immobilization of different bone segments at the prehospital stage. Chest puncture in severe pneumothorax. Occlusive dressing. Diagnostic and medical equipment of the emergency medical team; emergency department of a multidisciplinary hospital.	2
TOTAL		**20**

4.3. Tasks for independent work

For independent work of students there are the tasks of theoretical character which are insufficiently thoroughly considered within lectures and practical employments are taken out. The student must study literature sources and be ready to answer questions during practical classes and diff. offset. Tasks are of a practical nature.

№	TOPIC	Number Of hours
1.	Organization of the activity of the emergency medical care service of Ukraine (regulatory framework).	**6**
2.	Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in case of emergency situation.	**6**
3.	The procedure for providing emergency medical care to victims at the pre-hospital stage. Primary and secondary examination.	**6**
4.	Organizational structure, main tasks, functions and equipment of the department of emergency medical care of a multidisciplinary hospital.	**6**
5.	Purpose, ethical, deontological and legal aspects of emergency medical care for victims in the prehospital stage.	**6**
6.	Clinical pharmacology of drugs which are used in case of emergency situation.	**6**
7.	Thrombotic complications in surgery and internal medicine clinic.	**6**
8.	Inspection of the scene, ensuring the personal safety of medical staff, safety of witnesses and the victim, approaching the victim (patient).	**6**
9.	Emergency medical care for mechanical injuries at the scene.	**6**

10.	Emergency medical care for mass injuries.	**6**
TOTAL		**60**

Individual tasks

Selection and review of scientific literature on the subject of the program in anesthesiology and intensive care at the student's choice with the writing of an abstract and its public defense.

Selection and review of scientific literature on the subject of research work of the department with the preparation of a scientific report at a meeting of the SNT or at student conferences.

Scientific research on the subject of research work of the department with the publication of results in scientific journals.

Participation in the work of the student scientific circle and speeches at scientific forums.

Participation in the student Olympiad in the discipline.

Duty in the emergency department of the hospital. Participation in the work of field ambulance crews.

Typical situational tasks for solving in practical classes (examples)

Topic №8: "Emergency medical care for mass injuries"

Problem №1

In the epicenter of the earthquake, the patient was strangled by the wreckage of a destroyed house. Extracted after 12 hours. Objective: excited, poorly oriented in the environment. Pulse 88 beats per minute, on the outer surface of the thighs and lower legs spots of blue-purple color. Movements in the knee and ankle joints are absent.

Problem №2

During the earthquake, the patient fell and hit his head. He regained consciousness 2 hours after the injury. The patient complains of headache, dizziness. Objective: inhibited, general condition of moderate severity. Pulse 64 beats per minute. AT-135/90 mm Hg. Pupils are evenly narrowed, the reaction to light is alive. The horny reflex is preserved. Smoothing of the left nasolabial fold, deviation of the tongue to the left, nystagmus is determined.

Problem №3

An hour ago, the patient was injured by broken glass. Objective: general condition of moderate severity. The skin is pale. Pulse 80 beats per minute, satisfactory properties. AT - 115/70 mm Hg. On the anterior surface of the left leg in the middle third of the wound. He pulled his left thigh with a belt. At weakening of a belt bleeding amplifies.

Problem №4

In the epicenter of the earthquake patient was injured by broken glass. The condition is serious. The skin is pale. Drops of sweat on his face. Thirst. Yawn. Pulse 140 beats per minute, weak. AT-80/55 mm Hg. In the middle third of the left shoulder bleeding wound. Pulsation in the left radial artery is not detected. There is no pathological mobility in the left shoulder.

Problem №5

In the epicenter of the earthquake, the patient received a multiple penetrating injury to the left half of the chest. Objectively: severe condition, semi-sitting position, pale skin, severe cyanosis of the lips and hands. Breathing is frequent, difficult. Air is sucked into the wound. Pulse 130 beats per minute, weak filling and tension. Blood pressure - 70/45 mm Hg.

Problem №6

The patient was strangled by the ceiling of the building in the epicenter. Extracted from under the blockage. The right leg was under a concrete beam for 4 hours. Objective: pale skin. Pulse 84 beats per

minute. Blood pressure - 120/65 mm Hg. Moderate swelling of the right leg, scratches on the skin and some blue spots. The pulsation of the peripheral artery is weakened.

Problem №7

In the center of the disaster, the patient received a penetrating abdominal injury. Objective: the condition is serious. Pale, adynamic. In a wound loops of intestines are visible. The stomach is tense. Pulse 140 beats per minute, weak filling and tension. Blood pressure - 80/50 mm Hg.

Problem №8

During the earthquake he fell from a height of 7 meters. Objectively: the right lower limb is rotated outwards, shortened, angular deformation is visible in the middle third of the thigh. At a palpation pain and pathological mobility in an average third of a hip is defined. There are no active movements in the limb.

Problem №9

The patient was pulled out 4 hours later from under the rubble of the destroyed building. The left hand was suppressed by the floor slab. Objective: swelling of the left forearm and hand, scratches on the skin, some blue spots. The pulsation of the radial artery is weakened. Pulse 82 beats per minute. AT - 115/70 mm Hg.

Problem №10

In the center of the disaster, the patient was injured by an iron object. Objective: pale. Pulse 150 beats per minute, weak filling and tension. AT-75/55 mm Hg. In the area of the right buttock a wound with torn edges. The wound is filled with clots, moderate bleeding.

4.4. Ensuring the educational process

1. Multimedia projectors, computers, screens for multimedia presentations, lecture presentations.
2. Diagrams, tables, tests, video.
3. Technical teaching aids: simulator operating class.

4. Differential credit tickets.

5. Final control

List of final control issues

1. Organization of the emergency medical service of Ukraine (regulatory framework).

2. Organizational structure, main tasks and functions of the center of emergency medical care and disaster medicine.

3. The main tasks, functions, rights and responsibilities of the emergency (ambulance) team.

4. Table of equipment and personal safety equipment of the emergency (ambulance) team.

5. Organizational structure, main tasks, functions and equipment of the department of emergency (emergency) medical care of a multidisciplinary hospital.

6. Purpose, ethical, deontological and legal aspects of emergency medical care for victims at the pre-hospital stage.

6. Purpose, ethical, deontological and legal aspects of emergency medical care for victims at the pre-hospital stage.

7. Inspection of the scene, ensuring the personal safety of medical personnel, safety of witnesses of the event and the victim, approaching the victim (patient).

8. Ergonomic principles in the work of the field team EMC (when working indoors, outdoors), teamwork.

9. Initial Review (ABC). Tasks of the initial inspection. Technology of carrying out at the conscious and unconscious patient.

10. Provision of medical care during the initial examination. Determining further tactics at the scene.

11. Tasks of secondary inspection. Indications for a secondary inspection at the scene and on the way to evacuation. Technology of secondary (ABCDE) examination of the victim (patient).

12. Pathogenesis, clinic, diagnosis and treatment of airway obstruction in patients of different ages.

13. Ensuring airway patency by throwing the head back or removing the lower jaw (forward). Triple reception of Safar.

14. Ensuring airway patency in trauma of the cervical spine.

15. Revision and cleaning of the oral cavity by manual and hardware methods.

16. Using of oropharyngeal and nasopharyngeal tube.

17. Ventilation of the victim's lungs through a mask using a hand-held device for artificial lung ventilation (Ambu), oxygen supply.

18. Indications and technique of intubation of the victim.

19. Using of alternative methods to ensure airway patency with a laryngeal mask, laryngeal tube, combi tube.

20. Symptoms of partial and complete airway obstruction when a foreign body, methods of its recovery. Heimlich's method.

21. Indications and technique of conic puncture and conicotomy.

22. The concept of terminal states. Diagnosis of clinical death. Absolute and relative signs of biological death.

23. Causes of inefficient blood circulation. Diagnosis of sudden death.

24. Classification and assessment of heart rate in cardiac arrest.

25. Technology of cardiopulmonary resuscitation in ventricular fibrillation in adults.

26. Technology of cardiopulmonary resuscitation in ventricular tachycardia in adults.

27. Technology of cardiopulmonary resuscitation with pulseless electrical activity in adults.

28. Technology of cardiopulmonary resuscitation in asystole in adults.

29. Diagnosis of the causes of cardiac arrest, which can be eliminated during resuscitation - four "H": hypoxia, hypovolemia, hyper / hypokalemia, hypomagnesemia, acidosis, hypothermia;

30. Pharmacotherapy for cardiac arrest.

31. Technology of cardiopulmonary resuscitation in the presence of an automatic defibrillator.

32. Duration of cardiopulmonary resuscitation, signs that indicate its effectiveness and termination.

33. Diagnosis of the causes of cardiac arrest, which can be eliminated in the process of resuscitation of four "T": tension (tense) pneumothorax, cardiac tamponade, thromboembolism, toxic overdose.

34. Errors and complications that occur during cardiopulmonary resuscitation.

35. Legal and ethical aspects of cardiopulmonary resuscitation ..

36. Diagnosis and emergency medical care for acute coronary syndrome.

37. Diagnosis and emergency medical care for cardiogenic shock.

38. Diagnosis and emergency medical care in hypertensive crisis.

39. Diagnosis and emergency medical treatment for anaphylactic shock.

40. Diagnosis and emergency medical care for hypothermia.

41. Diagnosis and emergency medical care in case of drowning.

42. Diagnosis and emergency medical care in case of electric shock.

43. Diagnosis and emergency medical care for coma of unknown etiology.

44. Diagnosis and emergency medical care for insects associated with diabetes.

45. Diagnosis and emergency medical care in case of unknown gas poisoning.

46. Diagnosis and emergency medical care in case of poisoning by an unknown substance.

47. Diagnosis and emergency medical care for mechanical injuries of the skull.

48. Diagnosis and emergency medical care for mechanical spinal injuries.

49. Diagnosis and emergency medical care for mechanical injuries of the chest.

50. Diagnosis and emergency medical care for mechanical injuries of the abdominal cavity, pelvis and pelvic organs.

51. Diagnosis and emergency medical care for mechanical injuries of the extremities.

52. Diagnosis and emergency medical care for polytrauma.

53. Diagnosis and emergency medical care for long-term compression and crushing syndrome.

54. Diagnosis and emergency medical care for external and internal bleeding.

55. Diagnosis and emergency medical care for traumatic shock.

56. Diagnosis and emergency medical care for hemorrhagic shock.

57. Diagnosis and emergency medical care for hemo- and pneumothorax.

58. Algorithm of actions of the emergency medical care team in case of a traffic accident.

59. General principles of detoxification therapy at the prehospital stage. Andidot therapy.

60. Procedure of emergency medical care brigades in a safe center of mass destruction.

"0" version of the test

Petro Mohyla Black Sea National University

Educational qualification level - master

Area of knowledge: 22 Health

speciality 222 Medicine

Course - **Emergency and urgent medical care**

Variant «0»

1. Organization of the emergency medical service of Ukraine (regulatory framework) - **the maximum number of points - 20.**

2. Provision of medical care during the initial examination. Determining further tactics at the scene - **the maximum number of points - 20.**

3. Legal and ethical aspects of cardiopulmonary resuscitation **-the maximum number of points - 20**.

4. Diagnosis and emergency medical care for traumatic shock **- the maximum number of points - 20.**

Approved at the meeting of the Department of Therapeutic and Surgical Disciplines, minutes № ___ from "__" _____ 2021.

Head of the Department Doctor of Medical Sciences Zyuzin V.O.

examiner Alieksieieva T. G.

An example of the KKR task

Variant №0

I. Questions

a. Clinical manifestations of acute liver failure.

b. Electrical defibrillation technique.

II. Tests

1. What is the name of the disease in which there is air in the pleural cavity?

A. This is not a disease, but a normal condition of the pleural cavity

B. Pleurisy

C. Pneumopleurothorax

D. Pneumothorax

E. Pneumopulmothorax

2.Determine the characteristic clinical signs of open pneumothorax:

A. Severe general condition of the patient

B. Forced position

C. Subcutaneous emphysema

D. Isolation of air and blood bubbles from the wound with a characteristic sound during respiration

E. Chest pain

3. What is the main clinical sign of intestinal obstruction?

A. Growing abdominal pain

B. Sudden abdominal pain

C. Cramps in the abdomen

D. Constant abdominal pain

E. Slight abdominal pain

4.Patient E. aged 65 years complains of squeezing pain in the thoracic region. A pharmacist suspected a myocardial infarction. Which of the following research is the most optimal in this case?

A. Physical research

B. Instrumental research

C. Laboratory research

D. Thorakocentesis

E. Electrocardiography

5. What is the main symptom that develops when the hollow organ of the abdominal cavity is damaged?

A. Abdominal pain

B. The face of Hippocrates

C. Increase in leukocytosis in the blood

D. Schottkin-Blumberg symptom

E. Pasternatsky's symptom

6. Transportation of the victim with a fracture of the spine in the absence of a shield is carried out in the position:

A. Sitting.

B. On the abdomen

C. On the left side

D. On the right side

E. On the back

7. Pulse oximetry is a method for determining:

A. The number of heartbeats per 1 minute;

B. The amount of hemoglobin in red blood cells;

C. The amount of oxygen in the arterial blood;

D. The amount of hemoglobin in the venous blood;

E. The amount of oxygen in the arterial volume of hemoglobin in the blood.

8. What is the partial pressure of carbon dioxide in the arterial blood PCO2a causes hypercapnia:

A.> 44 mm Hg;

B.> 40 mm Hg;

C.> 35 mm Hg;

D.> 30 mm Hg;

E.> 25 mm Hg

9. About what classical assignment the "left hand the left foot" indicates:

A. 1;

B. II;

C. 111;

D. aVR;

E. aVL.

10. If the electrodes are placed on the right arm and left leg, then what lead should be called:

A. 1;

B. II;

C. 111;

D. IV;

E.V.

And so 15 variants.

6. Evaluation criteria and tools for diagnosing learning outcomes

Control methods

• Survey (testing of theoretical knowledge and practical skills).

• Test control.

• Writing a review of scientific literature (abstracts).

• Preparation of presentations.

Current control. Testing in practical classes of theoretical knowledge and the acquisition of practical skills, as well as the results of independent work of students. Supervised by teachers according to the specific purpose of the curriculum. Assessment of the level of students' preparation is carried out by: interviewing students, solving and analyzing situational tasks and test tasks, monitoring the acquisition of practical skills.

Intermediate control. Checking the possibility of using students for the practical application of theoretical knowledge and practical skills on all topics studied, as well as the results of independent work of students. Carried out in the last lesson on the topic by passing practical skills, testing.

Final control. Students who have attended all lectures, classroom classes, full-time independent work and scored at least 70 points per semester in the semester are allowed to take the final control (differential test).

Distribution of points received by students

The student can get a maximum of 120 points for current learning activities. Accordingly, a positive assessment in each seminar can be from 5.4 to 9.2 points. A score below 5.4 points means "unsatisfactory", the lesson is not credited and must be practiced in the prescribed manner.

In order to assess learning outcomes, the final control is in the form of diff. offset. On the diff. offset student can get a maximum of 80 points. Diff. offset is considered passed if the student received 50 points at least.

Assessment of student success

Tasks	Maximum number of points
practical class 1	12
practical class 2	12
practical class 3	12
practical class 4	12
practical class 4(2)	12
practical class 5	12
practical class 5(2)	12
practical class 6	12
practical class 7	12
practical class 8	12
Total	120
Diff. offset	80
Total with diff. offset	200

Criteria for knowledge assessing

10.5 - 12 points is rating for practical classes and 71 - 80 points for the test (**A** for the ECTS scale and **5** for the national scale) if the student was assessed as one who demonstrated the great knowledge and not a few inaccuracies.

8.4 - 10.4 points is rating for the practical lessons and 61 - 70 points for the test (**B** and **C** on the ECTS scale and **4** on the national scale) if the answer shows knowledge, ability to apply them in practice, but some fundamental inaccuracies are allowed.

6.4 - 8.3 points is rating for the practical lesson and 50 - 60 points in the test (**D** and **E** on the ECTS scale and **3** on the national scale) if the student's answer demonstrates that he knows the main theoretical principles and can use them in practice .

7.Recommended sources of information

7.1. Basic:

1.Educational and methodical materials of the department for students.
2.Швед М.І., Гудима А.А., ГерякС.М. та ін. Екстрена медична допомога: посібник – Тернопіль: ТДМУ, 2015 – 420 с.

3. Тарасюк В.С., Матвійчук М.В. Паламар М.В., Поляруш В.В., Корольова Н.Д., Подолян В.М. Малик С.Л., Кривецька Н.В. Перша медична (екстрена) допомога з елементами тактичної медицини на до госпітальному етапі в умовах надзвичайних ситуацій. – К.: Медицина, 2015.

4.Екстрена медична допомога : підручник / [М. І. Швед, А. А. Гудима, С. М. Геряк та ін.] ; за ред. М. І. Шведа. – Тернопіль : ТДМУ, 2015. – 420 с.

5.Домедична допомога (алгоритми, маніпуляції): Методичний посібник / В.О.Крилюк, В.Д.Юрченко, А.А.Гудима та ін. - К.: НВП "Інтерсервіс", 2014. - 84 с.

6. Тітов І.І., Волошинський О.В., Глушко Л.В., Дацюк О.І. Алгоритми надання невідкладної допомоги у критичних станах. — Вінниця: Нова книга, 2010.

7.2. Additional:

1. Довідник з медичної допомоги на догоспітальному етапі (за редакцією І. С. Зозулі). Київ, “Здоров’я”, 2004.
2. Жебель В.М., Шапринський В.О., Гуменюк А.Ф., Лозинський С.Е. Перша лікарська допомога при невідкладних станах. — Вінниця: Дело, 2005.
3. Невідкладні стани в медицині / За ред. професора В.П. Маленького. — Вінниця, 2000.
4. Невідкладна медична допомога. За ред. Ф.С. Глумчера, В.Ф. Москаленка К.: “Медицина” – 2006. – 632 с.

Informational resources:

1. Національна бібліотека ім. В.І.Вернадського – www.nbuv.gov.ua.
2. Державна служба України з надзвичайних ситуацій – www.dsns.gov.ua.
3. Міністерство охорони здоров’я України – http://www.moz.gov.ua.
4. dn_20190605_1269 (pdf, 99 Кб)
5. dn_20190605_1269_dod (pdf, 2 Мб)
6. https://moz.gov.ua/uploads/2/12737-dn_20190605_1269_dod.pdf
7. http://lib.sumdu.edu.ua/library/DocumentView?doc_id=717010
8. http://mtd.dec.gov.ua/images/dodatki/2015_916_MA/2015_916_YKPMD_MA.pdf