

**MINISTRY OF SCIENCE AND HIGHER EDUCATION
RUSSIAN FEDERATION**

**FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF
HIGHER EDUCATION
NORTH-CAUCASUS FEDERAL UNIVERSITY**

Methodological Guidelines
for Students on arranging and performing independent work
in the Discipline of "Emergency Condition"
for Students majoring (Specialty) in 31.05.01 General Medicine

introduction

The aim of studying the discipline is the study by students of the diagnosis and emergency care in critical conditions encountered in the work of a general practitioner, the formation of a stable algorithm for performing a complex of cardiopulmonary resuscitation, the diagnosis and provision of emergency care in critical conditions in patients of various age groups, the formation of skills for independently determining the necessary scope and performing the algorithm of therapeutic and diagnostic measures in critical conditions, the formation of responsibility and the acquisition of professional and ethical-deontological principles of teamwork.

Objectives of the discipline:

- To examine at the modern level the diagnosis and scope of emergency care in critical situations encountered in the work of a general practitioner;
- To train students in algorithms for diagnosing terminal states, restoring airway patency, and conducting a basic and extended complex of resuscitation measures;
- To practice algorithms for providing emergency medical care in acute respiratory failure, acute circulatory failure, acute renal and hepatic failure, disorders of homeostasis and metabolism, and in common acute poisonings;
- To familiarize students with the necessary volume of theoretical knowledge on the legal and ethical-deontological foundations in the field of intensive care and resuscitation.

Methodological Recommendations for Studying Theoretical Material

When performing the independent study of theoretical material, the student must follow the rules as set below. The working curriculum of the respective academic discipline shall be recommended to be used as the basis for such activity. According to the schedule of classroom lessons and independent work, a different number of hours is to be allocated for studying individual topics. A significant portion of the student's independent work should be allocated to mastering the material on the covered topic, writing a summary (notes) on the specified theoretical blocks, and searching for additional literature based on the NCFU library and via the Internet system. The lecture material shall not cover all theoretical material; the greater part of it must be mastered through independent work. Given the above, working with the recommended literature is mandatory. Special attention must be paid to the content of the main provisions and conclusions, the explanation of phenomena and facts, and the understanding of the practical application of the theoretical issues under consideration. In the process of this work, the student should strive to understand and memorize the main provisions of the material being considered, the examples illustrating it, as well as to understand the illustrative material. Preparation should be completed by drawing up a plan (summary/notes) on the material (issue) being studied. This allows for the creation of a concentrated, concise representation of the issues being studied. First, studying the recommended literature is to be done. Special attention must be paid to the content of the main provisions and conclusions, the explanation of phenomena and facts, and the understanding of the practical application of the theoretical issues under consideration.

During this work, the student should strive to understand and memorize the main provisions of the material being considered, the examples illustrating it, as well as to understand the illustrative material. Preparation should be completed by drawing up a plan (summary/notes) on the material (issue) being studied. This allows for the creation of a concentrated, concise representation of the issues being studied. If necessary, one should seek (advice) consultation from the instructor. When going to a consultation, it is necessary to thoroughly think through the questions that require clarification. Keeping records contributes to turning reading into an active process, mobilizing motor memory along with visual memory. The following should be born in mind: a student who systematically keeps records creates their own individual stock of auxiliary materials for a quick review of what has been read and for the mobilization of accumulated knowledge. Records are especially important and useful when they reflect the thoughts that arose during independent work.

It is important to develop the students' capacity to compare sources and to think through the material being studied.

Improving note-taking skills among students is of great importance.

The instructor may recommend the following main forms of recording to students: a plan (simple and detailed), excerpts, and theses (abstracts).

The results of note-taking can be presented in various forms.

1. A plan is an outline of the read material, a brief (or detailed) list of questions reflecting the structure and sequence of the material.
2. A detailed plan fully replaces a summary.
3. A summary (notes) is a systematized, logical presentation of the source material. Four types of summaries are distinguished:
4. Outline-summary (Plan-notes) – this is an expanded, detailed plan in which sufficiently detailed records are provided for those points of the plan that need explanation.
5. Textual summary – this is the reproduction of the most important provisions and facts of the source.
6. Free summary – these are clearly and briefly formulated (stated) main provisions resulting from a deep understanding of the material. It may contain excerpts, quotations, and theses; part of the material may be represented by a plan.
7. Theme-based summary – this is compiled on the basis of studying a number of sources and gives a more or less exhaustive answer according to a certain scheme (issue).

Methodological Guidelines for the Preparation for Practical Activities

When preparing for practical activities, the recommendation implies studying the control questions for the given lesson and the theoretical material from one's own notes.

The main form of work during the lessons is an interview (discussion). Each student must be ready to speak on all issues raised in the plan and demonstrate maximum activity during their consideration.

The speech must be constructed freely, convincingly, and with arguments. The instructor ensures that the speech is not reduced to a reproductive level (simple reproduction of the text); simple reading of the summary is also not allowed.

It is necessary for the speaker to show their own attitude towards what they are talking about, express their personal opinion and understanding, substantiate it, and be able to draw the correct conclusions from what has been said. In doing so, the student may refer to the entries in the summary, directly to the primary sources, use knowledge of previously studied disciplines, etc. In addition, to obtain a grade at an advanced level, students solve situational tasks based on the results of the mastered topics.

During the execution of practical works, a defense of practical skills is provided, the full list of which is specified in the fund of assessment tools.

Methodological Recommendations for the Preparation of Presentations and Reports

The report must contain elements of novelty; along with the fundamental aspect, an analysis of the current state of the problem under study must be carried out, as well as inclusion in regional issues. The report must include an introduction, a theoretical part, a conclusion, a list of literature, and a presentation that reveals the essence of the topic in graphs, pictures, diagrams, and formulas.

The report is recommended to be submitted on 1 printed sheet. The text of the work must be printed with 1.5 line spacing on one side of a standard sheet (A4) of white paper.

The text and other printed elements of the work must be black, and the contours of letters and signs must be clear, without halos and shading. The font must be Times New Roman, size 14. The titles of chapters and paragraphs are highlighted in bold. The sheet with text must have margins: left – 30 mm, right – 10 mm, top – 20 mm, bottom – 20 mm.

Page numbering of the text is done in the lower right corner of the sheet. It is necessary to number pages starting from the page where the Introduction is printed, on which the number 3 is placed. After that, all pages, including appendices, are numbered.

A space equal to two intervals is placed between the title of the chapter and the title of the paragraph of this chapter, and the title of the paragraph must not be separated from the text of this paragraph by a space. The titles of paragraphs shall be separated from the text of the previous paragraph by a space equal to two intervals. Each chapter, as well as the introduction, conclusions, appendices, and the list of used literature, begin on a new page. The word Chapter is not to be written. Chapters have ordinal numbers within the entire work, designated by Arabic numerals (for example: 1, 2, 3), followed by a period.

The word **PARAGRAPH** or the paragraph symbol (§) is not placed in the title. Paragraphs have ordinal numbers within the chapters, designated by Arabic numerals (for example: 1.1. and 1.2.).

Headings of chapters and paragraphs in the text must be centered; a period shall not be placed at the end of the title of the chapter and paragraph. It is not allowed to hyphenate (transfer) a part of a word in a heading. 4.5. The numbering of tables and figures can be running (continuous) or relate to the number of the chapter and paragraph. For example, if a table or a figure is included in the text of the first paragraph of the second chapter, the numbering is as follows: Table 2.1.1., Fig. 2.1.1.

The last digit means the ordinal number of the table (or figure) in this paragraph.

The table is to be placed as the next page after the first mention of it in the text.

Recommended literature.

Main literature:

1. Nikulina, S. Yu., Gazenkampf, A. A., Demko, I. V. et al. (2019). Emergency Conditions in Therapy [Electronic resource]: textbook. S. Yu. Nikulina (Ed.). Krasnoyarsk: Prof. V.F. Voino-Yasenetsky Krasnoyarsk State Medical University. 188 p. Available at: <https://e.lanbook.com/book/131414>
2. Kharrasov, A. F. (Comp.). (2019). First Medical Aid in Emergency Conditions [Electronic resource]: study guide. Kyzyl: Tuvan State University. 62 p. Available at: <https://e.lanbook.com/book/156195>
3. Fishkin, A. V. (2019). Handbook. Emergency Care [Electronic resource]. Saratov: Nauchnaya Kniga. 351 p. ISBN 978-5-9758-1874-4. Available at: <https://www.iprbookshop.ru/80173.html>

Additional literature:

1. Ievleva, A. A., Plisov, V. A., & Khramova, E. Yu. (2012). Handbook of Emergency Care [Electronic resource]. Moscow: RIPOL Classic. 640 p. ISBN 978-5-386-05098-6. Available at: <https://www.iprbookshop.ru/55422.html>
2. Dvornikov, V. E., Ivanov, G. G., Kisly, N. D. et al. (2013). Emergency Conditions in the Clinic of Internal Diseases [Electronic resource]: textbook. P. P. Ogurtsov & V. E. Dvornikov (Eds.). Moscow: Peoples' Friendship University of Russia. 572 p. ISBN 978-5-209-04270-9. Available at: <https://www.iprbookshop.ru/22195.html>
3. Kallaur, E. G., Kolb, L. I., Yaromich, I. V., & Bogdan, E. A. (2013). Emergency and Urgent Medical Care [Electronic resource]: textbook. I. V. Yaromich (Ed.). Minsk: Vysheyschaya Shkola. 207 p. ISBN 978-985-06-2233-4. Available at: <https://www.iprbookshop.ru/20275.html>
4. Tkachenok, V. S. (2013). Emergency and Urgent Medical Care [Electronic resource]: practical course. Textbook. Minsk: Vysheyschaya Shkola. 303 p. ISBN 978-985-06-2250-1. Available at: <https://www.iprbookshop.ru/20561.html>
5. Chernov, B. (2021). Pharmacotherapy of Emergency Conditions [Electronic resource]: handbook. M. K. Kevra & Yu. V. Alekseenko (Eds.). Transl. by Yu. V. Alekseenko et al.

Moscow: Meditsinskaya Literatura. 363 p. ISBN 978-5-89677-001-5. Available at:
<https://www.iprbookshop.ru/108387.html>

Online resources:

1. <http://rudoctor.net> - Medical Portal
2. <http://www.e-reading.club> / - Great Online Library
3. <https://dic.academic.ru> / - Dictionaries and Encyclopedias
4. <https://roszdravnadzor.gov.ru> / - Federal Service for Supervision of Healthcare
5. <https://www.rmj.ru> / - Russian Medical Journal

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Control questions:

1. Algorithm of basic CPR in an adult patient.
2. Algorithm of basic CPR in children.
3. Algorithm of advanced CPR in asystole.
4. Algorithm of advanced CPR in ventricular fibrillation.
5. Algorithm of advanced CPR in EMD.
6. Algorithm of assistance in collapse.
7. Algorithm of assistance in syncope.
8. Massive bleeding from peripheral vessels. Algorithm of assistance.
9. Foreign body in the upper respiratory tract in an adult. Algorithm of assistance.
10. Non-cardiogenic pulmonary edema. Algorithm of assistance.
11. Mild attack of bronchial asthma. Emergency care.
12. Moderate attack of bronchial asthma. Emergency care.
13. Severe attack of bronchial asthma. Emergency care.
14. Broncho-obstructive syndrome. Algorithm of assistance.
15. Arterial hypertension. Emergency care.
16. Anaphylactic shock. Emergency care.
17. Emergency care in acute drug poisoning.
18. ACS. Cardiogenic shock.
19. ACS. Pulmonary edema.
20. ACVA. Hemorrhagic stroke. Algorithm of assistance.
21. Dissection of aortic aneurysm. Algorithm of assistance.
22. PE. Algorithm of assistance.
23. Internal bleeding. Algorithm of assistance.
24. Hypoglycemia. Algorithm of assistance.
25. Hyperglycemia. Algorithm of assistance.
26. Hypertensive crisis. Clinic, pathogenesis, differential diagnosis, emergency care.
27. Chest trauma. Pneumothorax. Hemothorax. Diagnosis and emergency care at the pre-hospital stage.
28. Hemorrhagic shock. Pathogenesis, diagnosis, intensive care at the pre-hospital stage.
29. Traumatic shock. Pathogenesis, diagnosis, intensive care at the pre-hospital stage.

30. Comas. Clinic, assessment of coma depth, differential diagnosis, tactics and intensive care at the pre-hospital stage.
31. Status asthmaticus. Clinic, diagnosis, intensive care.
32. Burn shock. Degrees of severity. Clinic, emergency care at the scene and during transportation.
33. Basic principles of intensive care and resuscitation in acute exogenous poisonings.
34. Prolonged compression syndrome. Clinic and basic principles of emergency care.
35. Poisoning with sleeping pills, narcotic, hallucinogenic and psychotropic drugs. Clinic and emergency care.
36. Gastrointestinal bleeding. Clinic, differential diagnosis, intensive care.
37. Convulsive syndrome. Clinic, differential diagnosis, intensive care.

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5. <https://www.rmj.ru/> - Russian Medical Journal