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## FORMATION OF COMPETENCES IN THE FIELD OF FIRST AID AMONG HEALTH CARE STUDENTS

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**Abstract:** Developing competence in the field of providing first aid is a key component in the preparation of health care students. The acquisition of practical skills and the building of confidence in their application in real-life situations seem to lead to higher quality of care and reduced patient safety. Purpose: This article examines the importance of early and systematic first aid training, the methods for acquiring knowledge and practical skills, the need to form competencies in the field of providing first aid among the public, as well as the inclusion of students as volunteers in the training of high school students to increase their knowledge and skills in dealing with emergency situations. Methodology: For the purposes of the study, a comprehensive approach was applied, including both theoretical and practical methods such as a questionnaire survey and sociological analysis. An anonymous survey was conducted among a total of 212 health care students from Burgas State University "Prof. Dr. Asen Zlatarov" and Plovdiv Medical University, covering the period 2024-25. Results: Results of observations and analyses are presented, which show that practical focus and repeated practice of specific scenarios lead to more effective acquisition of competencies. Conclusions: in conclusion, it is emphasized that targeted training in first aid is an essential part of the professional training of future healthcare professionals and a prerequisite for adequate response in emergency situations. Recommendations: emphasis is placed on the need to integrate modern pedagogical approaches that stimulate critical thinking, rapid decision-making and teamwork. Additional data: This article was developed within the framework of a research project under contract NIH-№507/2024. "Integrated activities of students and pupils for providing first aid", funded by the Bulgarian State University "Prof. Dr. Asen Zlatarov". The methodology within the project ensures integration between theory and practice, while also allowing to assess the effectiveness of the applied educational approaches for building key professional competencies.

**Keywords:** competencies, healthcare students, paramedical assistance, training

### 1. INTRODUCTION

First aid is one of the most important social and professional competences that health care professionals should have. In the conditions of a dynamically changing environment, growing societal pressure and increasing cases of emergencies, a quick and adequate response can be decisive for the life and health of the patient.

Problems in the provision of emergency care are a reality. Medical professionals working in these structures face a number of difficulties that require immediate and adequate measures - improved working conditions, introduction of standards, modern equipment, etc. Some groups of society do not show respect for doctors, there is a shortage of medical specialists, and a significant number are of retirement and pre-retirement age. All this reduces the quality of health activities (Todorova D, Andonova A., 2023: 5116-5119).

It is dangerous to act with erroneous knowledge than not to act at all, because wrong actions could make the situation worse (Van Der Velden P., Contino C., Akkermans A., Das M., 2020:1062–1066).

It is the effective training in first aid that is of key importance not only for the future professional realization of students, but also for improving the public health culture.

The World Health Organization recommends the '*Children Save Lives*' initiative, which highlights the key role of children in increasing the incidence of cardiopulmonary resuscitation (CPR) performed by non-medical professionals" (ERC, 2021).

The acquisition of the skills and competencies of the nurse to communicate at different levels is an important point in modern healthcare. The effective communication of the modern nurse with patients and their relatives requires knowledge of the basic terms such as culture, cultural values, cultural diversity of health care, types of communication (Perusanova L., 2022:18-21).

Modern requirements for medical professionals place an emphasis on the formation of practical skills, critical thinking and decision-making ability in stressful situations. Traditional forms of learning are increasingly complemented by simulation methods, interactive exercises and interpersonal communication, which facilitate the transfer of knowledge into real clinical practice.

In her study, M. Valcheva found that when assistance is provided in proven ways and is tailored to the needs of the victim, this not only helps to stabilize his condition, but also accelerates recovery and reduces the risk of complications (Valcheva M., 2024: 84-88).

In order to adapt education to the needs of the new information society, it is necessary to stimulate and support continuous learning, to promote such models, approaches and methods that show learners how to become architects of their own learning process and how to continue this process throughout their lives (Dragusheva S., Uchikov P., 2025: 1610–1617).

That is why a systematic approach to building competences in the field of first aid is becoming a priority of higher education in health care.

The professional competence of health professionals is expressed not only in the possession of knowledge, skills and habits for performing certain activities, but also in the possession of personal and professionally significant qualities for the profession. They must possess certain qualities and values, without which the exercise of the profession would not be adequate to the requirements of medical morality ( Dragusheva S., Mladenova E., 2021: 123-130).

In Bulgaria, the training of students in this field is realized through the inclusion of theoretical courses and practical classes in the curricula of higher education institutions.

The competencies and skills that students acquire are key educational resources that support the development of society and are fundamental to the effectiveness of the educational process. Through the content of educational, scientific, research and educational activities, medical professionals develop skills for critical thinking and ethical comprehension of reality. These skills should be aimed at meeting the needs of patients and the well-being of society as a whole (Dragusheva S., Petleshkova P., Stamova-Georgieva M., 2024:145-148).

In the preparation of future medics, it is necessary to focus on acquiring knowledge and practical skills for communication and dealing with aggressive patients.

Emergency medicine requires not only a high level of professional training, but also mental and physical preparation to work in high-risk, often aggressive behavior on the part of patients and their relatives, sometimes related to physical violence and verbal violence (Todorova D, Andonova A., 2025).

However, a number of studies indicate that knowledge and confidence in the application of first aid are often insufficient, highlighting the need for targeted improvement of training approaches.

The introduction of telemedicine into modern healthcare for the provision of virtual medical and healthcare (including telehealth and telemedicine) is growing rapidly and leads to a number of challenges. First of all, related to health policy, but also to the training of medical professionals to work with modern telemedicine systems and to have knowledge and practical skills for the implementation of quality pre-medical care and health care ( Todorova D G, A. Andonova., 2020).

This article is devoted to the study of the process of formation of competencies in the field of first aid among health care students. Emphasis is placed on the assessment of existing knowledge and skills, identification of training needs, as well as on the importance of integrating modern pedagogical methods to achieve higher efficiency in the preparation of future specialists.

## **2. MATERIALS AND METHODS**

For the purposes of the study, a comprehensive approach was applied to provide a comprehensive view of the process of formation of competencies in providing first aid among health care students. In the empirical part of the study, a survey and a sociological analysis were used. The survey was developed in order to establish the preliminary knowledge, attitudes and degree of confidence of students regarding first aid. and open-ended questions, which cover: basic knowledge of emergency conditions and first aid techniques; subjective self-assessment of the readiness to react in a real situation; attitudes about the need for additional training and simulation practices. The survey was conducted in the period 2024 – 2025 among 212 health care students from Burgas State University "Prof. Dr. Asen Zlatarov" and the Medical University - Plovdiv. The survey is anonymous, and participation is completely voluntary. The data obtained are processed through descriptive statistics, taking into account factors such as course of study, age, previous experience and motivation. The study was conducted in strict compliance with ethical standards for scientific research in the field of health care. The participants were informed in advance about the objectives of the survey and gave their voluntary consent to participate. Anonymity and confidentiality of the information provided is guaranteed, and all data are used solely for research purposes. The study is in line with the principles of the Declaration of Helsinki and was carried out within the framework of a research project under contract NIH-No. 507/2024. "Integrated Activities of Students and Pupils for First Aid".

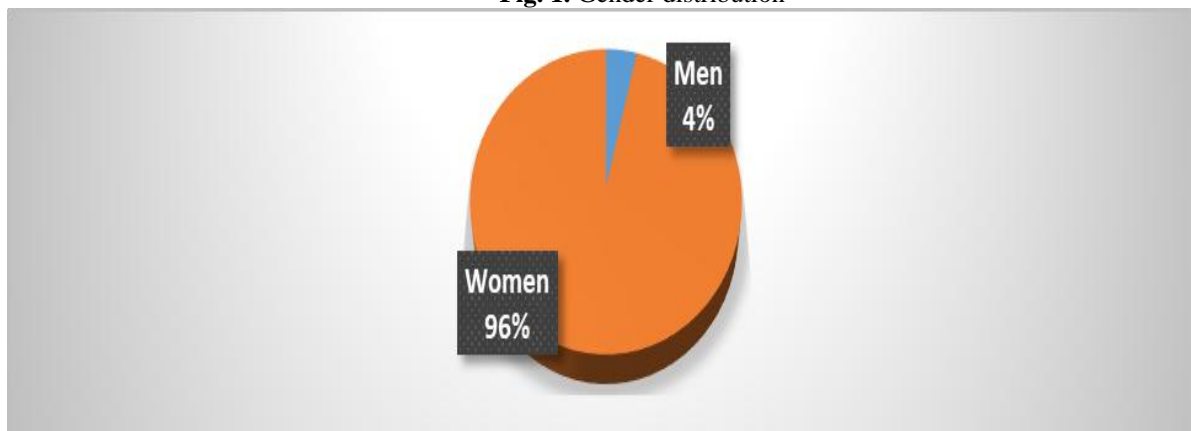
## **3. RESULTS**

The gender distribution among the participants in the survey demonstrates a clear imbalance – 96% of respondents are women, while men represent only 4%. This trend is in line with the established characteristics of the professional structure in the field of health care, traditionally dominated by women. The limited participation of men can be

interpreted both as a reflection of persistent societal stereotypes about the professional role of gender and as an indicator of the need for targeted policies and practices promoting greater gender diversity. Such a balance could contribute to the formation of a richer and more sustainable professional environment.

In addition, the results highlight the importance of first aid training as a key element in the professional development of health care students. Their participation in such training initiatives not only enriches academic preparation, but also helps build professional identity, confidence and social engagement. In the long term, this is essential both for the personal development of future professionals and for the strengthening of public health (Fig. 1):

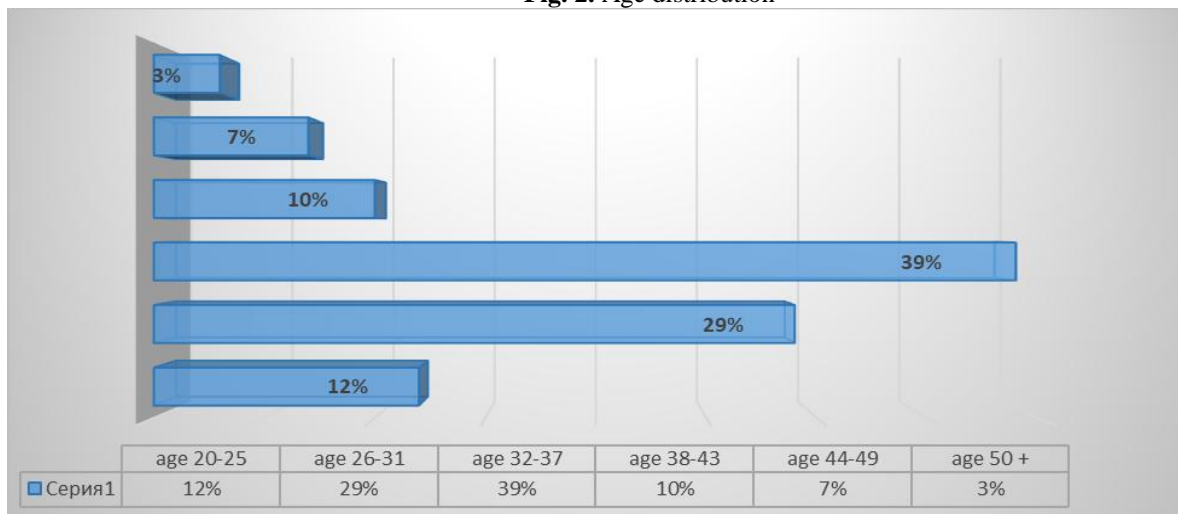
**Fig. 1.** Gender distribution



**Source:** autor's research

For the purposes of the study, an anonymous survey was conducted among **students** from the specialties "Nursing", "Midwifery" and "Physician Assistant", **studying** in the third and fourth year at the medical universities in the cities of Burgas and Plovdiv. The questionnaire contained thematically structured questions aimed at clarifying the level of knowledge and practical skills of students in responding to various emergency situations. The analysis of the age distribution showed that the largest share of respondents fall into the age groups **35–37 years** (39%) and **26–31 years** (29%). This is indicative that training in this field attracts not only young learners, but also people with wider life and social experience, which enriches the learning process and creates prerequisites for a more mature approach to the acquisition of practical competencies (Fig. 2):

**Fig. 2.** Age distribution



**Source:** autor's research

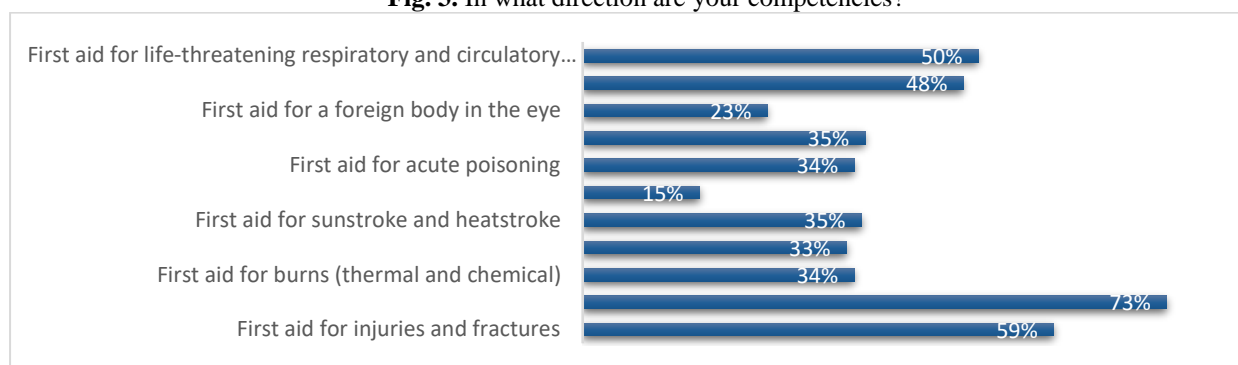
The results of the survey show that health care students have different degrees of competence in providing first aid, depending on the nature of the emergency. The highest values are observed in the provision of assistance for

bleeding (73%) and injuries and fractures (59%). This testifies to good theoretical and practical training in the most common traumatological incidents in practice. A high degree of confidence is also reported in competences related to dealing with life-threatening respiratory and circulatory disorders (50%), as well as in case of sunstroke and heat stroke (35%), dog or insect bites (35%), acute poisoning (34%) and frostbite (33%) – areas that are critical for the survival of victims and require a quick and adequate response.

On average, students demonstrate high scores as a foreign body getting into the eye (23%). This indicates the presence of basic knowledge, but also the need for additional practical training.

The lowest levels of competence were reported in situations of first aid in case of electrical injuries (15%). A likely reason for this is their less frequent occurrence in daily practice, as well as less overlap in curricula. The data confirm that students' preparation is strongest in areas related to life-threatening conditions and traumatology, while competences in more specific or rare situations remain underdeveloped. This requires a targeted upgrade of the learning process through practical trainings, simulations and interactive methods to ensure a more balanced and comprehensive development of knowledge and skills in the field of emergency care. The percentages are different from 100, as respondents are entitled to more than one answer (Fig. 3):

**Fig. 3.** In what direction are your competencies?

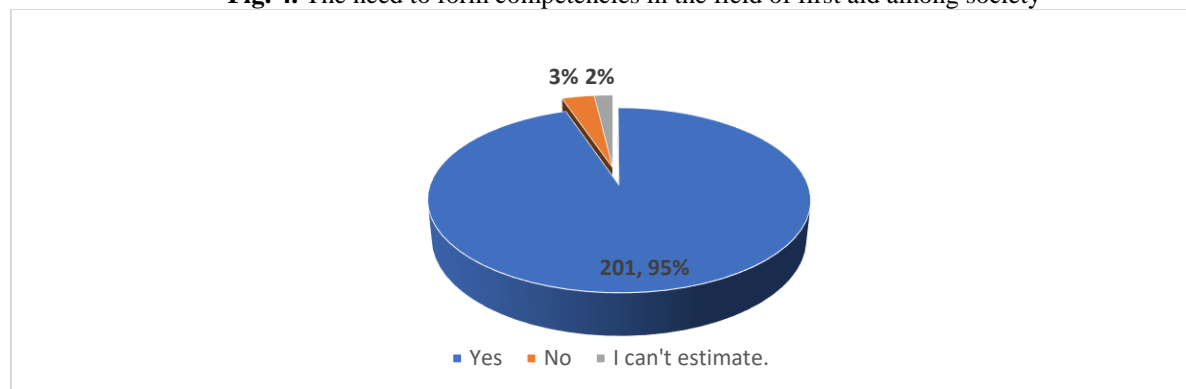


Source: autor's research

The analysis of the data (Fig. 4) shows strong support from health care students for the need to build competencies in the field of first aid among the general public. According to the survey, **95% of respondents (201 people) answered "Yes"** in the affirmative, which clearly underlines the general belief that these skills are an integral part of every citizen's preparation and have a key role to play in dealing with emergencies. Only **3%** of respondents said they could not judge, and **2%** answered "No". This ratio shows an extremely high level of awareness among health care students of the importance of First aid not only in a professional but also in a social context. The results highlight that future medical professionals perceive first aid training as a public priority and as a tool to reduce the risk and consequences of accidents and emergencies.

Therefore, it can be concluded that students not only recognize the importance of these competences, but are also willing to support initiatives related to their introduction and expansion among different social groups (Fig. 4.):

**Fig. 4.** The need to form competencies in the field of first aid among society



Source: autor's research

#### 4. DISCUSSIONS

The study highlights the importance of systematic first aid training for health care students. The highest confidence was reported for bleeding and injuries, while rare but serious conditions such as frostbite, heat stroke and electrical injuries required additional practical exercises and simulations (Perusanova L., A. Rasheva, D. Ivanova, 2024:100-105). Demographic data show a predominantly female participation and mature age groups, which influences the approach to knowledge acquisition. The high readiness to apply skills outside the learning environment demonstrates societal responsibility and potential for participation in volunteering initiatives. In summary, although students possess basic training, enhanced practical training would increase their confidence and professionalism in dealing with a variety of emergencies.

#### 5. CONCLUSIONS

The survey among health care students from the universities of Burgas and Plovdiv shows that they have good knowledge of first aid, but there are deficits in some specific situations such as frostbite and heat strokes. It is especially significant that **95% of the respondents** consider the formation of competencies in first aid to be socially necessary. This emphasizes the role of future health care professionals as active participants in improving health culture and security in society.

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#### REFERENCES

- Dragusheva S., & Uchikov P. (2025). Motivation for professional development Postgraduate specialisation of students Majoring in “nursing”. *Journal of Environmental Protection and Ecology* 26, No 4, 1610–1617.
- Dragusheva S., & Mladenova E. (2021). Formation of the professional skills of the trainee nurses during the pre-graduation traineeship. Collection of reports: "Presentation of unified methods for a therapeutic team in the treatment of culturally diverse patients in difficult non-standard situations" ISBN 978-619-237-081-7:123-130
- Dragusheva S., Petleshkova P., & Stamova-Georgieva M., (2024). Emphasis on improving the quality of nursing care and patient satisfaction. *Management and Education* 20(5):145-148.
- European Resuscitation Council. Kids Save Lives. [cited 13 Sep 2021]. In: Website [Internet]., Available: <https://www.erc.edu/projects/kids-save-lives>.
- Perusanova, L. (2022). Socio-medical significance of risk factors in patients with ischemic heart disease, *Health Policy and Management*, vol:22, issue:4, , pages:18-21, ISSN (print):1313-4981
- Perusanova, L., Rasheva, A., & Ivanova, D. (2024). Socio-medical problems in overweight pregnant women., *Management and Education*, vol:20, issue 5, pp.:100-105, ISSN (print):13126121
- Todorova, D., & Andonova, A. (2023). Problematic aspects and challenges ahead of the medical professionals working in emergency medical care in Bulgaria. *J of IMAB Jul-Sep; 29(3):5116-5119*. [Crossref - 10.5272/jimab.2023293.5116]
- Todorova, D., & Andonova A. (2025). Aggression and violence towards medical specialists in the center for emergency medical care in the republic of bulgaria. *Health Problems of Civilization*. 2025. doi:10.5114/hpc149317.
- Todorova, D.G, & Andonova, A. (2020). Telemedicine as an opportunity for improving the professional activity of medical specialists working in the Emergency medical centers and Emergency Medical Affiliate. *J. Phys.: Conf. Ser.* 1661 012197, doi:10.1088/1742-6596/1661/1/012197
- Valcheva, M. (2024). Healthcare for acute bronchiolitis in children under 2 years of age: clinical guidelines and best practices *Black Sea Journal of Medicine and Public Health*, ISSN: 2738-8654 Vol. 3, 84-88
- Van Der Velden P., Contino C., Akkermans A., & Das M. (2020). Victims of Medical Errors and the Problems They Face: A Prospective Comparative Study among the Dutch Population. *Eur. J. Public. Health.*; 30:1062–1066. doi: 10.1093/eurpub/ckaa106.