

Competences Helping to Increase Students' Prophylaxis Competence in Medical Education and their Characteristics

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Abstract: This article explores the core competencies that contribute to the development of students' prophylactic competence in medical education. It highlights how these competencies - such as critical thinking, communication, health promotion, and ethical responsibility - play a vital role in preparing future healthcare professionals for effective disease prevention and health education.

Key points: Prophylactic competence, medical education, student skills, health promotion, communication, ethical responsibility, clinical practice, preventive medicine, curriculum integration, competence development.

Introduction.

In the process of studying hygiene, medical students develop a number of important competencies, including:

1. Prevention and health care competence. Students will master the basic concepts of health care and disease prevention. This will help them implement preventive measures when working with patients.

Prevention and health care competence is one of the most important competencies that medical students should develop. This competency teaches students to effectively organize activities aimed at preventing diseases, maintaining health, forming hygienic habits, and improving public health.

Students who possess this competency will develop the following knowledge and skills:

- **Knowledge of basic concepts and methods of health care.** Students will become familiar with modern concepts and basic methods of disease prevention and health care . This will allow them to take effective measures to protect the health of patients [1] .
- **Epidemiological analysis and risk assessment.** Students will gain knowledge in epidemiology and risk factor assessment, which is important in combating the spread of diseases.
- **Compliance with hygienic standards and sanitary rules.** By adhering to hygienic rules and sanitary standards, students acquire skills to prevent infectious diseases in the healthcare system.
- **Planning and implementing preventive measures.** Students will acquire the skills to plan and organize preventive measures to improve public health.
- **Information dissemination and health education.** Students play an important role in maintaining health by promoting a healthy lifestyle among the population, providing information about hygiene, proper nutrition, and physical activity.
- **Working with the population and providing advice.** Students develop skills in working with the public in the field of prevention and health care, providing advice to them, and promoting a healthy lifestyle [2].

- **Communication and counseling skills.** Students will develop important communication skills to be effective in communicating with patients and counseling them about prevention.

Research and methods.

Through the competence of prevention and health care, students learn to correctly assess, plan and implement preventive measures. This is an important factor in maintaining and improving the health of the population as future medical workers.

2. Hygienic analysis and diagnosis skills. Students will gain knowledge in hygienic analysis and assessment of factors affecting health. This skill will allow them to take active measures to prevent diseases.

Hygienic analysis and diagnosis skills are important competencies that need to be developed in medical students. Through these skills, students effectively organize activities aimed at preventing diseases, limiting their spread, and creating hygienic conditions necessary to improve the health of the population, while adhering to various sanitary and hygienic rules.

Students who have acquired hygienic analysis and diagnostic skills will develop the following knowledge and skills:

- **Knowledge of the theoretical foundations and methods of analysis.** Students are provided with fundamental knowledge of sanitary-epidemiology, disease control and prevention. This will allow them to identify the risk of disease and assess risk factors.
- **Knowledge of laboratory research methods for diagnosis.**

Students will learn laboratory research methods necessary for hygiene and sanitation analysis, including the processes of conducting various chemical, microbiological, and physical analyses [3].

- **Disease risk assessment and analysis.** They will learn to conduct analyses aimed at identifying risk factors and controlling them. This will help them assess the risk of disease outbreaks.
- **Study of nature and environmental factors.** Skills are developed to study the impact of environmental factors on human health, including assessing factors affecting the quality of air, water, and food. This allows students to conduct ecological hygiene analyses.
- **Communicate and present test results.** Students will gain the skills to explain test results in a clear manner and provide medical advice based on this information.
- **Assessing compliance with hygienic standards and making recommendations.** Students learn to assess compliance with hygienic and sanitary standards, make appropriate recommendations, and monitor compliance with sanitary rules.
- **Use of various diagnostic tools.** They know how to effectively use modern laboratory equipment and analytical tools, including analyzing statistical data and providing medical conclusions based on them.

Hygienic analysis and diagnostic skills will enable students to properly direct preventive and sanitary work in maintaining public health as future medical workers.

Result and discussion.

3. Competence in compliance with sanitary and hygienic standards. Students are formed with the skills to follow sanitary and hygienic rules in medical institutions, which is one of the important skills that medical students need to develop. This competence helps students prevent diseases, improve sanitary conditions and protect public health. Students who have this skill will be able to work effectively in the field of public health, fully complying with sanitary and hygienic rules [4].

The competency to comply with sanitary and hygienic standards includes the following knowledge and skills:

- **Knowledge of norms and standards.** Students will learn national and international standards, laws and regulations related to sanitation and hygiene. This will give them a clear understanding of how to fully comply with sanitation regulations.
- **Analysis and assessment of sanitary conditions.** The skills of assessing sanitary conditions in various medical institutions, industrial enterprises or public places are developed. They can determine whether the places comply with sanitary regulations.
- **Monitoring compliance with sanitary requirements .** Students will gain the ability to monitor compliance with sanitary requirements and take necessary measures to maintain these requirements. This will allow them to work in the sanitary inspection .
- **Assessing and reducing hygiene risks.** Students will develop the skills to identify and develop recommendations for reducing risks related to sanitation and hygiene [5].

In conclusion, the development of prophylactic competence in medical students is a critical component of modern medical education. By fostering a set of targeted competencies—such as health communication, analytical thinking, ethical responsibility, and practical prevention skills—educators can better prepare future physicians to address public health challenges. Integrating these competencies into the curriculum through modern didactic methods and interactive learning environments not only enhances students' academic performance but also ensures their readiness to apply preventive strategies in clinical and community settings. Strengthening these skills contributes to the formation of competent, socially responsible, and proactive healthcare professionals.

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