

OPINION

by

Assoc. Prof. Eliyana Panayotova Ivanova, MD, PhD

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Head of the Academic Council in Epidemiology at the Department of Hygiene and
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Regarding: Dissertation for awarding the educational and scientific degree “**Doctor**” in the field of higher education 7. Healthcare and Sport, professional field 7.4. Public Health, doctoral programme in “Public Health Management”

Doctoral candidate: **Deyana Ivanova Ilieva**

Dissertation topic: “SURVEILLANCE AND CONTROL OF HEALTHCARE-ASSOCIATED INFECTIONS – CONTEMPORARY CHALLENGES”

Scientific supervisors: Prof. Desislava Vankova, MD, PhD, DSc and Prof. Tsonko Paunov, MD, PhD

In accordance with Order No. R-109-503/10.12.2025 of the Rector of the Medical University “Prof. Dr. Paraskev Stoyanov” – Varna, Prof. Dimitar Raykov, MD, PhD, DSc, and based on Protocol No. 1/16.12.2025, I have been appointed to prepare the present opinion.

This opinion has been prepared and presented in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at the Medical University – Varna.

Brief biographical information about the doctoral candidate

Deyana Ivanova Ilieva graduated with a Master’s degree in Public Health Protection and Control from the Medical University “Prof. Dr. Paraskev Stoyanov” – Varna in 2018. In the same year she obtained qualification as a manager of disinfection, disinsection and deratization activities. Since 2020 she has been enrolled as a full-time PhD student at the Department of Social Medicine and Healthcare Organization.

Her professional career began in 2006 as a Health Inspector at the Regional Health Inspectorate – Varna, Department of Anti-epidemic Control. Since 2007 she has been working as a Public Health Inspector in the Department of Sanitary Control, Infection Control Team at the University Hospital “St. Marina” EAD – Varna. Since 2023 she has also been an Assistant Lecturer at the Medical College – Varna in the Department of Public Health Inspection.

Relevance and significance of the dissertation:

The topic of the dissertation “Surveillance and Control of Healthcare-Associated Infections – Contemporary Challenges” is highly relevant and of significant epidemiological importance both from a scientific and practical perspective. Healthcare-associated infections (HAIs) represent one of the major challenges for modern public health systems. The increasing antimicrobial resistance and the dynamic development of medical technologies further emphasize the importance of this research and the need for scientifically justified prevention and control measures. The dissertation provides a comprehensive analysis of the problem and establishes a basis for practical application of the obtained results, enabling better management of the epidemic process of HAIs in the conditions of the contemporary hospital environment.

General description of the dissertation: The dissertation is logically and consistently structured in a volume of 175 standard pages, including one appendix and illustrated with 48 figures and 15 tables. The bibliography contains 300 references, of which 16 are in Cyrillic and 284 in Latin. The dissertation includes all major components of a scientific study: introduction, literature review (44 pages), aim and objectives (1 page), materials and methods (5 pages), results and discussion (83 pages), conclusions and contributions (6 pages).

The literature review analyses the main characteristics of the epidemic process of healthcare-associated infections at global, European and national levels, including incidence, etiological and clinical structure, antimicrobial resistance and risk groups. Preventive measures are discussed in detail and European models for improving surveillance and control systems are presented.

The research aim is clearly formulated and the derived objectives are correctly defined, focusing on the epidemiological characteristics of HAIs and the effectiveness of surveillance and control systems.

The research methodology applies appropriate and modern methods for data collection, processing and analysis, ensuring objectivity and reliability of the results.

The results of the study are presented textually and illustrated with tables and figures. The statistical analysis is adequate. The doctoral candidate has developed the research in several directions, including analysis of the prevention, surveillance and control system of HAIs at the University Hospital “St. Marina” – Varna over a ten-year period; investigation of the main epidemiological characteristics of HAIs; incidence, frequency of hospital infections and antibiotic use, as well as etiological and clinical structures. A

comparative epidemiological analysis between the pre-COVID-19 period (2013–2019) and the pandemic period (2020–2022) has been conducted, along with analysis of hospital outbreaks in high-risk wards. The performed correlation analysis clearly demonstrates the relationship between different localizations of HAIs and their etiological agents. The research combines a wide range of scientific methods with a comprehensive epidemiological approach. Each section of the study concludes with a discussion. The analysis of the results is thorough and logically structured, successfully combining theoretical knowledge with practical experience.

The main conclusions are clearly formulated, logically substantiated, and contribute to the advancement of scientific knowledge in the field of public health and the control of healthcare-associated infections (HAIs).

The contributions are grouped into two main areas:

1. Scientific contributions – expanding existing knowledge through results from a ten-year analysis of healthcare-associated infections, revealing dynamically changing characteristics in their etiological and clinical structure, antibiotic use and control practices applied in a nationally significant university hospital.
2. Practical contributions – development of an integrated model for management and surveillance of HAIs, which may serve as a national reference for good practices in hospital epidemiology.

The abstract has been prepared in accordance with the requirements, is well illustrated, and fully reflects the essence of the dissertation.

Scientometric indicators: The doctoral candidate presents two full-text publications related to the topic of the dissertation, in which she is the first author.

Conclusion:

The presented dissertation represents a completed independent scientific study characterized by relevance, strong theoretical preparation, adequate methodology and practical significance of the results.

Based on the above, I consider that the dissertation meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at the Medical University – Varna. Therefore, I give a **positive evaluation** and propose that the respected scientific jury vote in favour of awarding the educational and scientific degree “Doctor” to Deyana Ivanova Ilieva.

Prepared by:

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§1, б. „В“ от Регламент (ЕС)
2016/679

09.03.2026

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