

STATEMENT

By Prof. Dr. Vladimir Hristov Gonchev , MD, PhD
Burgas State University "Prof. Dr. Assoc. Prof. Zlatarov"

Member of the Scientific Jury, according to the order of the Rector of the Medical University
- Varna with No.: R-109-505/10.12.2025

Regarding the defense of the Dissertation on the Topic: "Efficacy of influenza vaccines for preventing morbidity among adults over 80 years of age" for the award of the scientific and educational degree "Doctor" in the Field of Higher Education: 7. Health and Sports, Professional Field: 7.4. Public Health , Scientific Specialty: "Public Health Management" of candidate Pavel Mutter, doctoral student in the free form of doctoral studies at the Department of Social Medicine and Organization of Health Care , Faculty of Public Health at the Medical University - Varna with Scientific Supervisor: Prof. Dr. Ts. Paunov, PhD, MD

1. General presentation of the procedure and the doctoral student

The administrative documents on the procedure, provided for in the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for its implementation and the Regulations for the Development of the Academic Staff of MU-Varna are presented in full.

Brief biographical data:

Pavel Mutter was born in Vitebsk. He currently lives in Israel.

In 2001, she obtained a bachelor's degree at Hadassah - Hebrew University Faculty of Nursing; 2008 – Master of Science in Clinical Nursing at Hadassah – Hebrew University Faculty of Nursing; 2018 – Geriatric Nursing at Hadassah – Hebrew University Faculty of Nursing.

Professional experience :

The doctoral student works in an organization: Kupat Holim Meuhedet – unified health insurance fund.

The candidate has stated the following professional and social skills: Community health services in the home related to Providing medical services and care to patients with chronic and acute conditions, Explaining medications and side effects to patients, family members and caregivers, as well as thoroughly reviewing the tests prescribed by the doctor. Discussing care plans with patients and explaining test results and the proper use of medications.

The doctoral student is fluent in Russian, English, and Hebrew.

2. General characteristics of the dissertation work

The dissertation contains 110 pages, of which 87 are main content and 23 pages of literary sources. The work is illustrated with 3 tables and 12 figures. The content includes the following chapters: Introduction, Literature review, Purpose, hypothesis and methods, Own research, Results, Discussion, Conclusions, Contributions, Conclusion and Published articles. The bibliography includes 155 literary sources.

3. Topic relevance

The dissertation work of doctoral student Pavel Mutter examines an extremely important and fundamental topic of our time. Due to the fact that more and more people are reaching the advanced age of over 80 years, the medical community is obliged to pay special attention to the health of this age group. Studies on morbidity, the frequency of hospitalizations and the need for drug treatment should be directed at the needs of this group. In his work, Pavel Mutter attempts to study the effectiveness of the influenza vaccine in people aged 80 and over with dementia. An analysis was made that seeks relationships between immunization status, accompanying chronic diseases, acute infectious morbidity, the need for additional drug treatment and hospitalizations. The study highlights how, as people age, they suffer more often from cancer and chronic diseases of the cardiovascular system, diabetes, nephrological diseases, neurodegenerative diseases such as dementia and Alzheimer's disease. Working in the field of medical care for such patients, the doctoral student points out the problems related to functional limitations, eating disorders and the need for extensive drug intervention. In Israel, all citizens are health insured and the national health insurance system covers the treatment of diseases, including dementia and Alzheimer's disease. Undoubtedly, the increase in the percentage of elderly people over the age of 65 brings many challenges to society and the health system. These groups are at high risk of severe morbidity with multiple chronic diseases and due to the physiological characteristics of advanced age. One of the serious threats to the health of patients with dementia is the risk of infections, such as those caused by influenza viruses. This is a factor that further burdens the resources and finances of the health and health insurance system. This is precisely why studies of this nature are important for the prognosis, planning and making important decisions in the field of health care.

The introduction is instructive, and **the literature review** is based on 155 sources, of which over 70% are from the last 10 years. The review provides up-to-date information on the topic. The dissertation candidate is well-informed and able to handle literature data.

The goal is formulated clearly and precisely, aiming to focus attention on a better understanding of the current problem of aging, chronic diseases among people over 80, the risk of influenza and the possibilities for prevention through immunization. The tasks are precisely defined and correspond to the set goal.

The methods used for the studies conducted are a large set, which explores the multifaceted nature of the problem. Patients with dementia were monitored for a 5-year period (2018-2023). Inclusion and exclusion criteria, confounding factors, dependent and independent variables were provided. The main dependent variable was the background chronic diseases added to dementia. The independent variable in this study was influenza vaccination, which compared patients who received influenza vaccination and patients who did not receive influenza vaccination. A series of statistical methods were used. Statistical data processing was performed with SPSS version 27 statistical software. Graphical representations of the statistically processed data are presented.

"Results and Discussion" section responds to the tasks set. It is impressive that out of all 2396 participants, only 13.02% had never been immunized. The results show that assessing the effectiveness of the influenza vaccine among patients with dementia over 80 years of age is not easy at all. Many factors intervene, such as chronic diseases, reduced immunity, taking various medications, different health status, which leads to deviations from the expected effect of the

vaccine. This is certainly one of the reasons for the discrepancy between the data from the literature review and world experience. The work did not find any differences in the incidence of pneumonia in immunized and non-immunized people, as well as in terms of prescription drugs. However, the literature review categorically indicates the good effectiveness of the influenza vaccine and the reduction of complications from influenza. Unfortunately, the results obtained fail to answer the question of the economic effectiveness of the influenza vaccine for the health system, which should not underestimate the contribution of the work. By studying the literature in this work, the doctoral student makes an indirect analysis and conclusions about the economic effectiveness of immunization.

conclusions are outlined , which accurately summarize the results of the review and our own research.

I fully accept the proposed total of 12 contributions.

I. Theoretical contributions

1. Scientific knowledge on the effectiveness of influenza vaccination in a population of people over 80 years of age with dementia has been expanded by integrating epidemiological, clinical and socio-medical indicators within the framework of public health.

vaccination programs in very elderly patients through a comprehensive approach is justified , including not only morbidity and hospitalizations, but also indicators related to functional decline, medication consumption and health vulnerability.

3. The scientific understanding of the influence of immunoaging , comorbidity , and socio-health factors on the observed effectiveness of preventive interventions in older people with dementia has been supplemented.

II. Methodological contributions

1. A complex analytical model was applied to assess the effect of influenza vaccination, based on a comparison between vaccinated, partially vaccinated and unvaccinated groups in a real population environment.

2. An approach has been introduced to use indirect indicators of health outcomes (frequency of antibiotic treatment, diagnosed pneumonia and hospitalizations) as a tool for assessing the effectiveness of preventive programs in real medical practice.

population data for the analysis of public health interventions in groups with a high degree of medical and social vulnerability has been demonstrated .

III. Scientific and applied contributions

1. Factors influencing vaccination coverage in adult patients with chronic diseases and dementia have been identified, which creates a basis for optimizing preventive policies in the healthcare system.

2. It has been shown that the interpretation of the results of vaccination programs can be influenced by selection and health status differences between patient groups, which is of significant importance in planning and evaluating national immunization strategies.

3. Evidence is provided for the need for an individualized approach to implementing preventive interventions among very elderly patients, taking into account the degree of comorbidity and functional status.

IV. Practical contributions

1. Guidelines are proposed to improve the management of preventive programs in older people through a more active role of medical professionals in making immunization decisions.

2. The results obtained can be used in developing strategies to reduce complications, antibiotic use, and preventable hospitalizations among the elderly population.

3. The study provides a scientific basis for improving policies aimed at maintaining functional independence and quality of life in patients with dementia through preventive health interventions.

Conclusion: The dissertation work is complete, it is the work of the author himself and is a good model for directing future studies to vulnerable populations in our society. New searches for possibilities for the prevention of influenza and its complications through immunization are needed. Careful selection of participants and special attention to the design of this type of studies is needed with regard to confounding factors, randomization and assessment of infectious morbidity by indirect indicators.

The dissertation meets the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria. The work is presented in a complete and well-formed form. I positively evaluate the dissertation "**Efficacy of influenza vaccines for preventing morbidity among adults over 80 years of age**" and give my positive vote for awarding Pavel Mutter the scientific and educational degree "Doctor" in the Field of Higher Education: 7. Health and Sports, Professional Direction: 7.4. Public Health, Scientific Specialty: "Public Health Management"

11.03.2026

Prepared the opinion:

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
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/Prof. Vladimir Gonchev, MD, PhD/