

## **REVIEW**

**by Assoc. Prof. Evgeniya Kuncheva Dimitrova, MD**  
**Medical University - Pleven; Faculty of Health Care;**  
**Department of Nursing Therapeutic Care**

of a dissertation submitted for the award of the educational and scientific degree “Doctor”  
in: Higher Education Area 7 “Health Care and Sport,”  
Professional Field 7.4 “Public Health,”  
Doctoral Programme “Health Care Management”

**Author:** YULIYANA HRISTOVA GEORGIEVA

**Title:** CLINICAL NURSING MONITORING OF PATIENTS WITH COMPLICATIONS OF  
TYPE 2 DIABETES MELLITUS

**Scientific Supervisor:** Prof. Silvia Borisova Dimitrova, DSc,PH

### **1. General Description of the Submitted Materials**

With Order No. R-109-527 of 23 December 2025, issued by Prof. Todorka Kostadinova, PhD in Economics - Director of the Directorate “Accreditation, Quality and Project Activities” at the Medical University “Prof. Dr. Paraskev Stoyanov”, I have been appointed as a member of the scientific jury to ensure the procedure for the defense of a dissertation entitled “Clinical Nursing Monitoring of Patients with Complications of Type 2 Diabetes Mellitus”, submitted for the award of the educational and scientific degree “Doctor” in: Higher Education Area 7 “Health Care and Sport”, Professional Field 7.4 “Public Health”, Doctoral Programme “Health Care Management”.

The author of the dissertation is Yuliyana Hristova Georgieva, a doctoral candidate in independent training at the Department of Health Care Management, Shumen Branch, Faculty of Public Health, Medical University - Varna, under the scientific supervision of Prof. Silvia Borisova Dimitrova, DSc, PH, Medical University - Varna, Department of Health Care.

The set of materials submitted by Assist. Georgieva in both hard copy and electronic format complies with Article 36 (1) of the Regulations for the Development of the Academic Staff of Plovdiv University and includes the following documents:

- application to the Rector for the initiation of a procedure for the defense of a dissertation;
- curriculum vitae in European format;
- minutes of the departmental council related to reporting readiness for opening the procedure and to the preliminary discussion of the dissertation;
- dissertation manuscript;
- abstract of the dissertation;
- list of scientific publications related to the dissertation topic;
- copies of the scientific publications;
- declaration of originality and authenticity of the submitted documents.

The doctoral candidate has submitted two publications in Bulgarian scientific journals.

## **2. Brief Biographical Information about the Doctoral Candidate**

Assistant Yuliyana Hristova Georgieva was born on 29 July 1972 in the city of Ruse. She graduated from the Medical Secondary School in Ruse with a specialization in General Nursing in 1993. Later, she completed her higher education at Sofia University “St. Kliment Ohridski”, earning a Bachelor’s degree in Social Pedagogy and a Master’s degree in Social Activities. She subsequently obtained a Master’s degree in Health Care Management from the Medical University - Sofia.

Her professional career as a nurse began in 1994 at the Unified District Hospital – Ruse, First Polyclinic. Following the restructuring of healthcare institutions, she continued her work at DCC 1 – Ruse Ltd, where she holds the position of Chief Nurse.

In 2021, after a competitive selection procedure, she was appointed as an Assistant at the University of Ruse “Angel Kanchev,” Faculty of Public Health and Health Care, Department of Health Care. She is involved in the education of students in the Nursing program. She conducts practical training in Fundamentals of Nursing Care, particularly within the integrated courses “Nursing Care for Neurological Patients” and “Nursing Care for Children and Adults with Disabilities.” She also participates in the clinical training of nursing students from the first to the seventh semester.

Assistant Georgieva actively participates in international and national conferences, scientific projects, and seminars. She has publications in the journal “Health Care” and in electronic proceedings of scientific forums. In October 2023, she was enrolled as a doctoral candidate in independent form of study in the doctoral program “Health Care Management,” with a dissertation topic entitled “Clinical Nursing Monitoring of Patients with Complications of Type 2 Diabetes Mellitus.”

She is a member of the Bulgarian Association of Health Care Professionals. Since 2020, she has also been a member of the Bulgarian Public Health Association and the European Public Health Association.

## **3. Relevance of the topic and relevance of the set goals and objectives**

The dissertation contains 270 standard typewritten pages and is illustrated with 69 figures, 28 tables, 5 schemes and 6 appendices. The bibliographic list includes 249 titles, of which 36 in Cyrillic, 213 in Latin, including Internet sources.

The topic under consideration is topical, since type 2 diabetes mellitus is among the leading chronic non-communicable diseases in the world and represents a deepening public health problem. Diabetes is among the ten leading causes of death in the world. In Bulgaria, according to data from the National Center for Public Health and Analysis for 2024, it was found that over 520,000 people live with diagnosed diabetes, with the real number probably exceeding 700,000 due to undiagnosed cases. The trend is to increase the incidence by about 3% per year, especially among people over 55 years of age. Diabetes mellitus is considered one of the leading causes of mortality and premature disability in our country and occupies a stable share in the structure of chronic morbidity. It accounts for more than 95% of all cases of diabetes and is closely related to lifestyle, age, obesity and social determinants of health.

What has been said so far determines the great complex burden of the disease and proves the need for systematic and continuous clinical nursing supervision, aimed at early recognition of deviations, prevention of complications and training of patients for self-control. Nursing care is an essential element of the multidisciplinary approach to the management of type 2 diabetes mellitus.

and not only the health, but also the socio-economic outcome of the treatment depends on their effectiveness. Optimization of nursing care, in the conditions of outpatient control and clinical supervision of patients with complications of type 2 diabetes mellitus, is an important prerequisite for improving the results of treatment and reducing the economic and social burden of the disease on the healthcare system.

#### 4. Knowing the problem

Assistant Georgieva is familiar with the state of the problem in detail. The literature review is 51 pages. It consists of 4 sections and a thorough critical analysis of the available literature on the problem. In the first part, the doctoral student examines the epidemiological burden and clinical significance of type 2 diabetes mellitus, its global and national distribution and trends in its incidence based on the studied literature. The acute and chronic complications of diabetes mellitus with their clinical manifestations are examined in detail. In the second part, the doctoral student clarifies the essence of the concept of "clinical nursing observation" based on established theoretical models in nursing. The implementation of clinical nursing observation requires professional qualities from the nurse, such as clinical intuition and analytical thinking, which can assist her in clinical decision-making based on scientific principles and ethical standards. The doctoral student emphasizes the need for an effective approach to patient education and communication, which is of utmost importance for the educational and consultative functions of the nurse in diabetic patients and is a basic tool for achieving effective diabetes control and preventing complications. In **the third part**, Assistant Georgieva focuses on the applicability of theoretical and conceptual models in clinical nursing supervision of patients with type 2 diabetes mellitus. She establishes that these models assist the nurse in developing an individualized approach based on supervision, self-care and adaptation to the chronic disease. The coordinating role of the nurse in the team approach to diabetes management is emphasized, which also includes ensuring effective communication between the members of the medical team and the patient. The doctoral student examines in detail the application of clinical nursing supervision in specific chronic complications of type 2 diabetes mellitus – diabetic neuropathy and diabetic foot, diabetic nephropathy, cardiovascular complications. Good practices in the supervision and prevention of complications of type 2 diabetes mellitus are described in Israel, Ireland, the USA, the United Kingdom, the Netherlands, Australia, etc., where nurse-led models are applied, in which care is more patient-oriented. The analysis of international experience and scientific publications outlines a clear trend towards expanding the professional responsibilities of nurses. In **the fourth part**, Assistant Georgieva focuses on contemporary recommendations and guidelines in the management of care in type 2 diabetes mellitus, which include a multidisciplinary approach to disease management, individualization of care, risk assessment and management, motivation, information and education of patients for lifestyle changes, tracking and monitoring of key health parameters. To achieve effective clinical nursing supervision, the nurse is assisted by various systems for continuous blood sugar monitoring, a hybrid system for insulin therapy and, last but not least, European and international guidelines of the American Diabetes Association, WHO, International Diabetes Federation, International Council of Nurses, National Standards and Algorithms in Nursing Practice, etc., which are published and available on the INTERNET.

At the end of the literature review, the doctoral student makes 6 conclusions that argue for the need for individualization of the therapeutic and nursing approach, systematic monitoring of the

glycemic profile and inclusion of nursing interventions in the prevention and control of complications.

## **5. Research methodology**

The purpose of the study is formulated clearly and precisely. To achieve it, a sufficient number of 8 specific tasks have been set, which are arranged in chronological order.

4 hypotheses are presented, which are formulated in accordance with the purpose and tasks of the study. The subject and object of study are defined. The design of the study includes theoretical and empirical research.

### **The research methodology includes:**

#### **1. Sociological methods**

- **Survey method** – 2 patient questionnaires were developed – to assess the dynamics of self-control, self-management and quality of life of the patients participating in the study;

- **In-depth interview** - a specific research toolkit was developed for an in-depth interview for endocrinologists selected on a voluntary basis with pre-defined inclusion criteria.

- **Standardized interview** - to study the professional competencies, activities and attitudes regarding the participation of nurses in the training and follow-up of patients, and a questionnaire for a standardized interview was developed.

- **Experimental method** for assessing the effectiveness of the developed nursing intervention and its applicability in outpatient practice.

#### **Statistical methods**

The results are described through tables, graphs and numerical indicators for structure, frequency, average values, correlation coefficients, etc.

In the analysis of the results, the following parametric and non-parametric tests were applied to test hypotheses for normal and close to normal distribution of cases: Student's t-test, Kolmogorov-Smirnov criterion, Levene's test, Pearson's  $\chi^2$  - test, comparative analysis, etc.

The selected research methodology allows achieving the set goal and obtaining an adequate answer to the tasks solved in the dissertation work.

The groups covered in the study (patients, nurses, endocrinologists) include a sufficient number of individuals, which indicates the representativeness of the sample.

## **6. Characteristics and evaluation of the dissertation work**

**In the first chapter** "Literature review - relevance and theoretical foundations" the doctoral student in 4 sections proves the relevance of the problem, based on a critical analysis of the literature used. Of interest are the presented theoretical and conceptual models of nursing care, as well as the modern concept of clinical observation in the work of the nurse. The recommendations and guidelines of the American Diabetes Association, WHO, International Diabetes Federation, International Council of Nurses, National Standards and Algorithms in Nursing Practice, etc. in the management of care for type 2 diabetes mellitus are examined in detail. Good practices in the monitoring and prevention of complications of type 2 diabetes mellitus are described in Israel, Ireland, USA, United Kingdom, Netherlands, Australia, etc., where nurse-led models are applied, in which care is more patient-oriented.

**In the second chapter** "Purpose, tasks, material and methodology of the study" Assistant Georgieva describes in detail the design and organization of the conducted study. The design of the

experimental study, as well as that of the program "I control diabetes", are also presented in detail. The chosen research methodology allows achieving the goal set in the dissertation work.

In the third chapter "Results and Discussion" the doctoral student presents the results of her studies. The demographic characteristics of the 180 patients with type 2 diabetes included: gender, age, marital status, place of residence, employment and income adequacy. A statistically significant relationship was established between income adequacy and compliance with dietary recommendations, i.e. it is clearly established that the economic factor has a significant influence on the possibilities for compliance with prescriptions and implementation of a healthy diet. Limited financial resources are a real barrier factor for effective self-management of diabetes. The doctoral student examined in detail the general hygienic and dietary regimen of the respondents and established a statistical relationship between some socio-demographic and behavioral factors that influence the effectiveness of self-control and self-management of the disease in patients with type 2 diabetes mellitus. As a result of the results obtained, Assistant Georgieva confirmed the hypothesis that the combined approach - nutrition and exercise - is the most effective in controlling the disease. The patients' trust in the nurse was studied, which is an important element for their effective care. The doctoral student found that patients with a higher level of education more often perceive nursing consultations as a reliable source of information and support, i.e. there is the potential of the nurse as a leading educator in the process of outpatient control and self-management of diabetes. The statistical analyses conducted clearly show that self-control and quality of life in patients with type 2 diabetes mellitus are the result of the interaction of multiple factors - age, education, income, physical activity and awareness. The established dependencies confirm the need for an individualized approach to nursing care, which takes into account both the medical and socio-behavioral characteristics of the patient. The doctoral student also examined the health status of the respondents and their awareness of the disease, and in over half of them she found chronic complications and polymorbidity, which emphasizes the need for increased monitoring, early prevention and training for self-control. A statistically significant dependence was established between the complications of diabetes, chronic concomitant diseases and the effectiveness of self-control of blood sugar at home. This once again proves the need for an integrated approach to patients with type 2 diabetes mellitus, in which the nurse plays a key role in clinical nursing supervision. An assessment of patient satisfaction with healthcare and the level of trust in the nurse are key indicators of the effectiveness, accessibility and quality of the medical care provided. A high level of trust in the medical team and the presence of effective communication between patients and nursing staff are established, as more than half of the patients are completely satisfied with the quality of the healthcare received.

The doctoral student presents a professional profile of nurses in the care of patients with type 2 diabetes mellitus, by examining the opinions of 70 nurses directly involved in the care of patients with type 2 diabetes mellitus and working in various structures of hospital and outpatient care. The analysis covers the professional experience, satisfaction with the profession, opportunities for professional development and training needs of nurses involved in the monitoring, control and care of patients with type 2 diabetes mellitus. The professional competencies examined include clinical monitoring, training, consulting and support for self-control. The results obtained outline the importance of the clinical competence and supportive role of the nurse in the management of type 2 diabetes mellitus.

Assistant Georgieva found that nurses have an attitude towards an integrated approach to the patient, but specific activities related to training, counseling and prophylaxis are still not evenly

represented as main components of nursing practice. An expert assessment of the role of the nurse in clinical monitoring and the multidisciplinary team in the care of patients with type 2 diabetes mellitus was made, through in-depth interviews with 10 endocrinologists. A clearly expressed critical position towards the current model of standard health care for patients with type 2 diabetes mellitus is outlined. All interviewed doctors emphasize that the nurse has the necessary potential to take on a significantly more active role in the clinical monitoring of patients with type 2 diabetes mellitus. Experts define her as a competent, accessible and sustainable participant in long-term care. The importance of the nurse's communication skills as a tool for behavioral change and building patient commitment is strongly emphasized. A significant number of experts (n=9) indicated the need for additional specialized training in order for the nursing role to be expanded within the multidisciplinary team. The results of the in-depth interviews with the expert physicians show a unanimous position regarding the expanded and key role of the nurse in the context of clinical monitoring and prevention of complications in patients with type 2 diabetes mellitus.

**In Chapter Four,** "The Nurse in the Comprehensive Monitoring of Patients with Complications of Type 2 Diabetes Mellitus - An Integrated Model and Practical Algorithm," a concept for an expanded nursing role in patients with type 2 diabetes mellitus and its complications is developed. This concept is based on the hypothesis that effective management of a chronic disease requires systematic assessment, continuity of care, and active patient participation in the treatment and self-control process, and is achieved through clinical nursing monitoring.

An integrated nursing care model for patients with complications of diabetes mellitus is proposed, grounded in fundamental scientific principles and patient-centered care, emphasizing the active involvement of patients in managing their own health. The model combines systematic nursing assessment, interventions, and continuous monitoring of outcomes with the aim of optimizing patient condition and improving quality of life. A Health Status Monitoring Card was developed as a structured nursing tool for systematic documentation of patients' clinical and functional indicators, while the Self-Monitoring Diary serves as a key instrument for actively engaging patients in the management of their disease. The use of the diary not only provides an important source of data for nursing and medical assessment but also supports the development of self-observation skills, self-reflection, and personal responsibility.

The doctoral candidate proposes a practical approach for implementing the integrated nursing care model for patients with complications of type 2 diabetes mellitus, which represents a continuation of the theoretical and conceptual framework of the model. This approach specifies the sequence of actions, assessment and intervention tools, roles of the involved participants, and methods for monitoring outcomes. As part of the training provided to respondents, an educational brochure entitled "I Control My Diabetes" was developed as practical teaching material, designed to support patients in the daily management of their condition.

The "I Control My Diabetes" program is aimed at achieving sustainable improvement in self-control, behavioral change, and quality of life in patients with type 2 diabetes mellitus. The training is structured into five thematic modules covering the main aspects of disease self-management. It is delivered by a nurse through individual and group sessions and was piloted over a six-month follow-up period. Its effective application demonstrates that the program makes a structural contribution to contemporary diabetes practice and can be implemented as a standard educational model. The design and methodology of the pilot implementation, as well as the obtained results, are described in detail.

Five generalized scientific conclusions are formulated, related to physical activity of participants in the experimental group, dietary behavior, clinical and laboratory indicators, and other outcomes. A total of 22 statistically significant relationships were identified, providing evidence that systematic monitoring and interpretation of data enable early recognition of risk trends and prevention of complications. The results of the present study demonstrate that a structured nursing program represents an effective interventional strategy in the management of type 2 diabetes mellitus. The developed model leads to measurable improvements in patient behavior, clinical and laboratory indicators, self-control, and quality of life.

The expanded role of the nurse is established as a key factor for sustainable disease management. The implemented algorithms, models, and tools have high potential for practical application and represent a scientifically grounded, effective, and reproducible interventional practice.

#### **Chapter Five: “Conclusions, Recommendations, and Contributions”**

I agree with the nine conclusions drawn by the doctoral candidate and with the overall conclusion that the obtained results support the appropriateness of broader implementation of structured nursing activities for clinical monitoring and education in outpatient practice as an approach with potential to improve disease control and reduce the risk of complications in patients with type 2 diabetes mellitus.

Recommendations are addressed to the Ministry of Health, the National Health Insurance Fund, the Bulgarian Medical Association, and healthcare institutions.

The implementation of some of these recommendations would contribute to the realization of comprehensive medical and social care for patients with type 2 diabetes mellitus, in line with the identified and analyzed best practices.

### **7. Contributions and Significance of the Research for Science and Practice**

Based on the conclusions drawn, the recommendations made, and the results of the author’s own research, the following contributions can be highlighted:

#### ***Theoretical and Conceptual Contributions:***

- A conceptual model of clinical nursing monitoring for patients with complications of type 2 diabetes mellitus has been developed, integrating clinical, behavioral, and psychosocial aspects into a unified and structured framework for nursing practice.
- The role of the nurse in the process of long-term monitoring, early detection of deterioration in health status, and prevention of complication progression has been theoretically substantiated and systematized.
- The relationship between levels of glycemic control, the clinical course of complications, and the need for a differentiated nursing approach based on individual risk level in patients with type 2 diabetes mellitus has been theoretically justified and conceptualized.
- The theoretical understanding of clinical nursing monitoring in patients with complications of type 2 diabetes mellitus has been expanded through systematic analysis in the context of comprehensive, long-term, and integrated healthcare.

#### ***Applied and Practical Contributions:***

- A conceptual nursing care model and stages for its implementation in practice have been developed.

- Professional nursing activities and tasks related to comprehensive clinical monitoring, prevention of complications, and maintenance of compensated status in patients with type 2 diabetes mellitus have been defined and systematized.
- Practical algorithms and tools for systematic and targeted nursing intervention have been developed, including: – a model for outpatient clinical monitoring and control of patients with complications of type 2 diabetes mellitus; a model for conducting structured educational sessions; the informational brochure “I Control My Diabetes”; algorithms for nursing activities in the clinical monitoring of patients with complications of type 2 diabetes mellitus.
- An original educational program “I Control My Diabetes” has been developed and piloted, integrated into the process of clinical nursing monitoring, aimed at increasing health literacy and self-control among patients with complications of type 2 diabetes mellitus.
- A structured nursing care model has been piloted in a real clinical setting, demonstrating a trend toward improvement in key clinical and behavioral indicators in patients with complications of type 2 diabetes mellitus.

#### **8. Assessment of the Publications Related to the Dissertation**

The doctoral candidate has submitted two publications related to the dissertation, published in peer-reviewed journals – the journal “Health Care” and Proceedings of the University of Ruse “Angel Kanchev”, Volume 63, Book 8.3. Health Care, pp. 21–25. The articles are structured in accordance with academic requirements and include the following sections: Introduction, Materials and Methods, Results and Discussion, and Conclusions. The presented research data are representative in nature, and the obtained results are statistically significant.

The overall work of Assistant Professor Georgieva demonstrates her capacity for conducting independent scientific research. In the development of her dissertation, the doctoral candidate has shown conscientiousness, clear purposefulness, and objectivity in conducting the research and in adhering to the principles of scientific ethics.

After a thorough analysis of the reviewed dissertation, I have no critical remarks regarding the doctoral candidate.

#### **9. Abstract of the Dissertation**

The dissertation abstract is structured in accordance with the established requirements, comprises 75 pages, and reflects the main results achieved in the dissertation.

#### **CONCLUSION**

The dissertation contains scientific, scientific-applied, and applied results that represent an original contribution to science and fully comply with all requirements of the Academic Staff Development Act of the Republic of Bulgaria, the Regulations for its Implementation, and the Regulations of the Medical University – Varna. The submitted materials and dissertation results fully meet the specific requirements adopted in connection with the Regulations of the Medical University – Varna for the implementation of the Academic Staff Development Act.

The dissertation demonstrates that the doctoral candidate Yuliyana Hristova Georgieva possesses in-depth theoretical knowledge and professional skills in the scientific field of “Health Care Management,” and demonstrates the qualities and abilities necessary for the independent conduct of scientific research.

In view of the above, I confidently give my **positive assessment** of the conducted research presented in the reviewed dissertation, abstract, achieved results, and contributions. and **I propose that the esteemed scientific jury award the educational and scientific degree “Doctor”** to Assistant Yuliyana Hristova Georgieva, a doctoral candidate in the doctoral program “Health Care Management”.

20 January 2026

Reviewer: .....  
(Assoc. Prof. E. Dimitrova, MD)

Заличено на основание чл. 5,  
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