

## OPINION STATEMENT

on a dissertation paper with author: **Dr. Tihomira Mitkova Schiller**,  
doctoral student of independent training at the Department of "Social Medicine and Public Health"  
FPH at Medical University of Plovdiv,  
with Scientific supervisor Assoc. Prof. Nina Musurlieva, DD, PhD  
on the following topic:  
**"Medical errors in dental practice – a comparative analysis and a dental practice risk  
management model"**

for awarding the educational and scientific degree "Doctor" in the field of higher education 7.  
Healthcare and sports, professional field 7.1. Medicine, Doctoral Program "Social Medicine and  
Organization of Healthcare and Pharmacy"

In charge of the opinion statement: Prof. Dr. Anjelika Velkova-Monova, PhD, DSc  
Head of the Department of Social Medicine,  
Faculty of Public Health,  
Medical University of Sofia

The presented dissertation, developed by doctoral student Dr. Tihomira Schiller, and the procedural documents fully meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its Application, as well as the relevant regulations of Medical University-Plovdiv. The documentation is complete, informative and very well prepared.

### **Dissertation data**

The dissertation work of Dr. Tihomira Schiller has a total volume of 149 pages and includes 116 pages of main text, a bibliography and 42 appendices presenting the research tools and tables with the main results of the analyses. The work is illustrated with 7 tables and 44 figures. The content follows the classic structuring of a dissertation paper. The bibliography covers 211 literary sources, out of which - 25 in Cyrillic and 186 - in Latin. Nearly two-thirds of the cited publications are from the last 10 years. The dissertation is characterised by a clear and precise scientific style and an excellent graphic layout.

### **Assessment of the topic relevance**

In the recent decades, the public and professional interest in the topic of patient safety in medical and dental practice has grown significantly. The introduction of modern high-tech methods of diagnosis and treatment, the complexity of the work and the increase in the workload of doctors, the increased demands and expectations of patients regarding the process and the results of the received medical and dental care have made the topic of risk management in medicine and dentistry highly relevant and important.

The dissertation work of Dr. Tihomira Schiller comparatively investigates medical errors in dental practice and the possibilities of reducing risks related to the human factor and the organization of work in Bulgaria and Germany. The chosen topic is necessary, relevant and significant. It allows for identification of problem areas in the perception, assessment and treatment of medical errors in dental practice and for proposing effective management approaches to improve the related prevention and control.

### **Evaluation of the literature review**

The literature review comprises 45 pages of the dissertation. It is structured logically and presents the main concepts, theories and scientific views regarding adverse events and the possibilities of their management in dental practice. Dr. Schiller shows a very good understanding of the nature of the problem by focusing the literature review and framing her empirical work specifically on the state of the problem in Bulgaria and Germany.

The PhD student traces the historical development of the subject of medical errors and the attitude of the professional community to open communication, registration and study of their sources in order to manage them effectively. The practices in Bulgaria and Germany are compared in terms of ensuring the safety of patients and the legally defined responsibility of doctors to ensure security in the provision of medical and dental care. Both the differences and the unidirectional processes in the two countries to successfully control the risk are indicated. Risk management is discussed as part of achieving high quality of the medical activities. The doctoral student makes correct generalizations about the current state of the problem, draws attention to the shortcomings and gaps identified by the literature analysis in the study of the causes of medical errors in dental practice, and addresses them appropriately when determining the purpose and tasks of scientific research.

### **Evaluation of the methodology**

Doctoral student Dr. T. Schiller sets a clear and precise goal for a comparative study of the attitude of the dentists who have completed their education in Bulgaria and Germany on the topics of patient safety and medical errors. The indicated four research tasks fully correspond to the topic and are a logical development of the goal. I believe that the second task can be divided into two independent tasks, which will emphasize the importance of each of the aspects of the topic studied.

The methodology of the scientific research is adequately selected for the fulfillment of the set goals and tasks and is competently presented by the doctoral student. Dr. Schiller has created an original questionnaire in Bulgarian and in German to study the opinion of dentists about patient safety and about medical errors in dental practice. 351 dentists in Bulgaria and Germany were surveyed with an online survey. Statistical analysis of the data was performed using appropriate classical and modern analytical methods.

### **Evaluation of the results**

Dr. Schiller presents and discusses the results of the implementation of the research tasks and makes summaries and conclusions after each of them. A detailed description of the socio-demographic characteristics of the studied groups of doctors in Bulgaria and Germany was made, emphasizing and explaining the feminization of the profession, the participation in the study mainly of young doctors, of those working in individual practices, the presence of additional education in health management for each third participant in the study. The obtained data on the distributions of these characteristics were used in subsequent analyses, and in my opinion, comparative studies of doctors with and without additional qualifications in health management regarding the risk management practices they apply would be useful.

Interesting results were reported by the doctoral student regarding the evaluations of the dentists regarding the systematized knowledge obtained at the university to ensure the safety of patients. The need to include optional disciplines, the knowledge of which will increase the safety of the doctor's work and improve the control over traditional risk factors for adverse events, is obvious.

A valuable contribution of the dissertation work are the results of the comparative analysis of the attitudes of the Bulgarian and German dental doctors regarding the reporting of medical errors,

their registration and use as a basis for training and prevention. The evidence presented regarding the influence of education, professional qualifications and experience, the role of class organizations, etc. has enabled Dr. Schiller to develop a logical, original and properly oriented model for risk management in dental practice. The model integrates both the regularities established from the research carried out in fulfillment of the previous tasks, and the results of a survey of Bulgarian dentists regarding the approaches to the assessment and control of risks in their practice. The developed model clearly defines the main areas of risk, the resulting goals and tasks in the work of dental doctors for risk management and identifies the need for specific training and acquisition of competences of doctors in the relevant areas. The doctoral student's professionally developed and proposed postgraduate training program or elective subject in the training of medical professionals on the topic of "Patient Safety in Dental Practice" would contribute to increasing patient safety.

#### **Evaluation of the conclusions and contributions**

Dr. Schiller has presented 9 final conclusions from the scientific research in fulfillment of the tasks of the dissertation work. They synthesize the significant results of the work and reflect them truly and correctly.

Based on the results of the dissertation work, Dr. Tihomira Schiller makes a few but very specific and clear recommendations to the responsible institutions to improve the training of dental students in patient safety and risk management; to the class organization for the creation of an anonymous register of medical errors, etc.

Dr. Schiller's recommendations regarding postgraduate training and advanced training for dental practitioners in the area of risk management are very helpful.

I fully agree with the doctoral student's contributions to the dissertation.

An important scientific and practical contribution of the development is the risk management model created by Dr. Schiller in the dental practice in Bulgaria.

#### **Notes and recommendations**

I have no significant critical remarks on the dissertation work of Dr. Tihomira Schiller.

#### **Abstract and publication activity**

The abstract accurately presents the structure and content of the dissertation work.

Dr. Schiller's dissertation publication list includes 3 research papers in which she is the first author. Two of the articles were published abroad in specialised scientific journals. The publications present different parts of the dissertation work and correctly reflect the results obtained.

#### **CONCLUSION**

The dissertation work of Dr. Tihomira Schiller is a completed independent scientific study on the relevant and significant topic of ensuring patient safety and improving the quality of dental care. The review of the literature on the problem is thorough and comprehensive; a clear study goal and logical tasks are demonstrated, an appropriate methodology is used and original scientific results with theoretical and practical contributions are presented. I give a highly positive evaluation of the dissertation work and propose to the respected members of the Scientific Jury to award Dr. Tihomira Mitkova Schiller with the educational and scientific degree "Doctor" in the doctoral program "Social Medicine and Organization of Health Care and Pharmacy".

In charge of the opinion statement:



Заличено на основание  
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Sofia

(Prof. Dr A. Velkova-Monova, PhD,