## REVIEW

by Assoc. Prof. Radost Spiridonova Asenova, MD, PhD, DCs(Med) Head of the Department Urology and General Practice Medical University of Plovdiv

of a dissertation for the award of educational and scientific degree "Doctor" Professional field: 7.1 Medicine, Scientific specialty: General Practice

## Author: Vanya Antonova Alexandrova, MD

Department: "General Medicine", Faculty of Medicine, Medical University Varna "Prof. Dr. Paraskev Stoyanov"

Topic: Immunization calendar and vaccinations in Bulgaria - current trends, problems and opportunities for their solution

Supervisor: Prof. Valentina Majova, MD, PhD Consultant: Prof. Dimitrichka Bliznakova, MD, PhD

The Statement is written pursuant to the Order of the Rector of Medical University of Varna №P-109-592/31.12.2021

#### General presentation of the procedure

The presented set of materials on an electronic and written media is in accordance with the Rules and Regulations of Medical University of Varna and includes all the necessary documents related to the procedure.

Dr. Vanya Alexandrova is a qualified specialist with more than twenty years of experience. She started her professional career as a doctor at the Department of Pediatrics - MU Varna and since 2005 she has been working as a GP. Doctor Alexandrova has two specialties, Pediatrics and General Medicine. Since 2015 she holds the academic position of Assistant Professor at the Department of General Medicine. Dr. Vanya Alexandrova is distinguished by rich research and professional activity. That is proven by her participation in scientific forums and courses for improving the qualification. The additional experience, gained as a senior expert at Regional Health Insurance Fund in Varna, should be accepted as additional advantage related the topic of the dissertation. Doctor Alexandrova is a member of EURACT and an active member and participant of BGPSRE.

### **Relevance** of the dissertation

The topic developed by Dr. Alexandrova is undoubtedly relevant and practical. In the context of the current unprecedented epidemiological situation, interest in vaccines will continue to grow. GPs are expected to be at the forefront of the fight against infectious diseases, through adequate and timely motivation of parents and coverage of children who need immunizations. In recent years, there has been a tendency in Bulgaria to refuse to vaccinate children, not only from the Roma ethnic group, but also among the Bulgarian population, which is particularly disturbing. The legislation in the country allows us this type of behavior towards health although there are some administrative measures in favor of vaccination. An effective policy in the field of protection of children's health must be based on the results of scientific research as the current study, which identifyes the specific problems of immunization and vaccination of children in Bulgaria and outlines guidelines for future action.

## Knowledge of the problem

Doctor Vanya Alexandrova acquired two specialties, Pediatrics and General Medicine, which is a prerequisite for more in-dept information on the studied problems. The analysis of the obtained results and their skillful interpretation are proof of the good knowledge of the problem by Dr. Vanya Alexandrova.

### Characteristics and evaluation of the dissertation and its contributions

The dissertation meets the requirements for acquiring the educational and scientific degree Doctor. It is written in 145 pages and illustrated in 26 tables and 45 figures. 196 sources are used,

41 of them in the Cyrillic alphabet and 155 in Latin. All of them are relevant to the studied problems.

The scientific work began with an introduction in which Dr Aleksandrova presented the significance of the selected topic and the necessity for its study. Theoretical analyses were focused on the problems which the doctor researched. The literature, which objectively presented the relevance of the problems, was precisely selected. A brief historical overview of vaccine prophylaxis were made. Modern concepts related to vaccines were discussed in depth. Challenges in general practice related to immunization coverage with mandatory and recommended vaccines, including vulnerable groups and the main causes of low immunization coverage, were also discussed.

In the Aim and Tasks chapter, the pursued aim and the six tasks related to its implementation are formulated logically. The aim of the study was to study and evaluate the practices of immunization and vaccination in our country according to the introduced immunization calendar in Bulgaria in order to reveal current trends and problems in their application, as well as opportunities for their solution.

The chapter Material and Methods described in detail the conducted three surveys and the relevant target group. A documentary method for analysis of legislative documents was used, related to the problem of compliance with the immunization calendar in Bulgaria and trends in vaccination in Bulgaria and worldwide. All this allowed Dr Alexandrova to look at the problem from different points of view. Adequate statistical methods were used in the processing of the primary data and they gave the opportunity to disclose significant correlations among the features and statistically significant conclusions to be reached.

The analysis of the obtained data was presented thoroughly in the Results and Discussion chapters. The chosen research methods were appropriate and gave the necessary information for the realisation of the aims and tasks. The study results were interpreted correctly with respect to the main indicators.

The conclusions drawn reflect the main aspects of the conducted research. Despite the very good vaccination coverage of 95.1% of the children of the respondents in the study, 24.71% of the respondents considered the vaccines dangerous, and 31.18% indicated them as ineffective. In addition, 35.29% of respondents believed that vaccines lead to a decline in immunity, and 40.59% said that vaccines can harm their children.

One main conclusion was that the knowledge of GPs related to immunoprophylaxis was not at the required high and modern level. 89.74% of the surveyed GPs indicated that there should be additional training courses related to mandatory and recommended vaccines, due to the dynamic development of vaccine prophylaxis and the need to constantly update the knowledge of doctors and medical professionals directly related to it.

The detailed research of Dr Alexandrova is a solid basis for the contributions formulated by her. They are grouped in two main aspects: those of original scientific and affirmative nature. Those include the current trends and the main reasons for hesitation and / or refusal of parents to immunize their children against the background of the epidemiological situation in the world and in our country, as well as the fact that the main source of information about vaccines in over half of the surveyed parents is the Internet space.

## Assessment of the candidate's publications and personal contributions

Regarding the dissertation four publications are presented. One of the publications is referred in Scopus. In all articles doctor Alevandrova is the first or leading author.

#### Summary of the dissertation

The presented summary of the dissertation is prepared according to the requirements and reflects the main results objectively.

### **CONCLUSION**

The dissertation contains original scientific contributions which are original contribution to science and meet all requirements from the Law on Development of the Academic Staff of Republic of Bulgaria (LDASRB), Rules and Regulations for application of LDASRB and the Rules and Regulations of Medical University of Varna. The presented materials and dissertation results fully comply with the specific requirements approved in the Rules and Regulations of Medical University of LDASRB. I believe that scientific research on actual problems in General Practice has been done. Data are presented that enrich the knowledge of the problem and can be successfully used both in practice and as a starting point for future research.

Due to the above-mentioned, I give my positive assessment on the conducted research, presented by the dissertation, summary of a dissertation and achieved results and contributions and suggest to the members of the Honourable Scientific Committee that the doctor Vanya Alexandrova be awarded the educational and scientific degree Doctor, in the scientific specialty General Practice, professional field 7.1 Medicine, from the field of higher education 7. Healthcare and Sport.

27.01.2022

Plovdiv

# Reviewer:

Assoc. Prof. Radost Spiridonova Asenova, MD, PhD, DCs(Med) Head of the Department Urology and General Practice Medical University of Plovdiv