

## **REVIEW**

from Prof. Maria Anastasova Semerdjieva, MD

Dean of Faculty of Public Health, Medical University-Plovdiv

Member of the Scientific Jury according to the Order P-109-310/29.07.2022 of the dissertation for the award of the educational and scientific degree "Doctor", professional field 7.4. Public Health, in the scientific specialty "Health Care Management "

**Author:** Donka Trifonova Sultanova

**Type of PhD:** full-time

**Topic:** "Characteristics of nursing care in pediatric ward and infection control"

**Scientific supervisors:** Assoc. Tsonko Paunov, Ph

Prof. Elena Zheleva, Ph

### **GENERAL PRESENTATION OF THE PROCEDURE AND THE PHD STUDENT**

The submitted set of materials on electronic and paper media is in accordance with the requirements for the acquisition of the PhD degree according to the Law on the Development of Academic Staff in the Republic of Bulgaria (LASDRB).

The doctoral student Donka Trifonova Sultanova graduated in 2017 as a Bachelor of Science at MU "Prof. dr. Paraskev Stoyanov" Varna, Branch - Sliven, specialty "Nurse", and in 2019 graduated from the Master's degree in "Nursing Care Management" at the Trakia University - Stara Zagora.

After completing her base education, she started working as a nurse at the "Dr. Ivan Seliminski" Hospital, Department of Pediatrics.

As a full-time doctoral student he participates in the clinical practice training of students of the specialty "Nurse".

She speaks English and Russian.

## **TOPIC RELEVANCE**

The dissertation is dedicated to current and significant problems related to the organization and provision of quality pediatric care. Nosocomial infections affect a huge number of patients worldwide, significantly increasing hospital stay length, long-term disability, antimicrobial resistance and mortality. This in turn leads to increased socio-economic losses. According to an estimate reported by WHO, approximately 15% of all hospitalized patients suffer from these infections. Pediatric wards are some of the highest risk wards in terms of HAIs. These infections account for between 4% and 56% of all neonatal deaths in different countries. Young children are easily infected and transmit infections. They are often carriers of infectious agents and can shed pathogens, especially respiratory and gastrointestinal viruses, even when asymptomatic. Behavioural characteristics in children, such as incontinence or inadequate hygiene, frequent placing of hands and toys in the mouth, increased salivation and close contact between children during play, facilitate the spread of infections. Children do not have the ability to comply with anti-epidemiological measures on their own and this requires diligent attention and supervision by the medical professionals who care for them.

All of this calls for the need to develop specialised programmes to combat HAIs, ones that meet the needs of the paediatric population, taking into account age-related factors, and to regulate strict requirements for caregivers.

## **CHARACTERISTICS AND EVALUATION OF THE DISSERTATION**

The dissertation contains 137 standard pages and is illustrated with 91 figures. Structurally, the work includes: introduction; literature review; research methodology; results and discussion; conclusions, contributions; appendixes and bibliography.

The dissertation begins with an introduction in which the doctoral candidate poses the importance of the chosen topic and the necessity of its development.

What follows is a literature review, the structure of which corresponds to the concept of the dissertation developed by the author. 175 literary sources were used, 59 of which in Cyrillic and 116 in Latin. All of them are relevant to the problem under study. The number of publications used from the last 10 years is significant (54%), which further contributes to the high valuation. Various aspects related to the peculiarities of childhood and the organization of health



care in the world and in our country are analyzed in a very professional and scientific way. A comprehensive review of the requirements and standards for the medical care of children has been undertaken. Current statistics on the prevalence of healthcare associated infections are presented. Various concepts of infection control and prevention in a pediatric ward are discussed.

The literature review in terms of content, logical structure and references clearly demonstrates the PhD student's knowledge, abilities and skills to work with scientific sources, to critically analyse them, to summarise and to formulate research objectives. Chapter One ends with clearly defined conclusions, which is a logical transition to the formulation of the aim and objectives of the thesis.

In the second part the main aim and tasks of the thesis are clearly and precisely formulated. The aim is focused on the specifics of health care in pediatric wards and the related organisation of infection control, as well as staff attitudes and knowledge regarding nosocomial infection control.

Three groups of logical units have been identified for the realization of the set tasks:

- Nurses providing health care in the paediatric structures of the "Dr. Ivan Seliminski" Hospital - Sliven and the "St. Marina" University Hospital - Varna.
- Students from the specialty "Nurse", studying at the Sliven Affiliate at MU "Prof. dr. Paraskev Stoyanov" - Varna.
- Orderlies working in the pediatric ward of the "Dr. Ivan Seliminski" Hospital - Sliven and the "St. Marina" University Hospital - Varna.

Two research methods were combined to supplement each other and ensure completeness of the primary data:

- **Survey method:** a direct individual survey was conducted among health care professionals, orderlies and students. Four main areas were investigated:
  - ✓ knowledge of the concept of nosocomial infections;
  - ✓ knowledge of the necessary precautions for the prevention and control of nosocomial infections;
  - ✓ the extent of practical application of precautions for prevention and control of nosocomial infections in the pediatric inpatient setting;
  - ✓ the need for further information on the problem of nosocomial infections in a paediatric ward.

➤ *Programmed interview*: an interview was conducted with health care professionals and nursing students to elicit the main responsibilities of health care professionals regarding the specificities of prevention and control of nosocomial infections in pediatric wards.

Adequate statistical analyses were applied in data processing.

The chapter "**Results and Discussion**" summarizes competently and thoroughly the main groups of variables studied.

The positive evaluation of the results obtained can be recognized through the following analyses and summaries of the research conducted:

- The chosen research methods are appropriate and provide the necessary information to implement the aim and objectives. The questionnaires used were developed independently by the PhD student.
- The empirical approach provides data to develop a theoretical and methodological basis for improving work organisation to reduce nosocomial infections in pediatric wards.
- The study provides an opportunity to reveal relationships between medical professionals' knowledge of necessary precautions for prevention and control of nosocomial infections and optimization of their management.
- The main responsibilities of medical professionals regarding the specific features of prevention and control of nosocomial infections are analyzed, which is a starting point for the formulation of successful management solutions in the fight against HAIs.
- The illustration of the results after the statistical processing of the collected data makes a good impression. This makes the analysis and interpretation of the results more accessible and ensures comparability in future similar studies.

The scientific work ends with conclusions that are relevant to the tasks and objectively reflect the results of the research.

The doctoral student's meticulous research is a solid basis for the formulated contributions. I am confident that the specific suggestions and guidelines will lead to the development of comprehensive programmes to increase the knowledge and motivation of medical professionals in pediatric settings for the prevention of HAI.



## **ABSTRACT AND PUBLICATIONS**

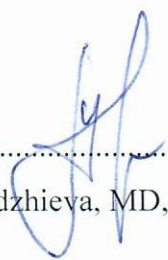
The structure and content of the abstract (65 pages) meet the requirements and reflect the main results obtained in the fulfillment of the set aim and tasks. In connection with the dissertation work three scientific articles are presented. In all scientific works D. Sultanova is an independent author. The publications related to the dissertation deal with some of the central issues underlying the research, while supplementing and developing it.

## **CONCLUSION**

The presented dissertation demonstrates a very good knowledge and analysis of the theoretical approaches to the subject of study; skilled combination of theoretical and empirical research, including skills in collecting, processing and interpreting empirical information; presence of author's scientifically applied contributions. Due to the above, I propose to the members of the Honorable Scientific Jury to award the doctoral student Donka Trifonova Sultanova the educational and scientific degree "Doctor" in the doctoral program "Health Care Management".

01. 09. 2022 r.

Plovdiv

Drafted the review:.....

/Prof. Maria Semerdzhieva, MD, PhD/