

STATEMENT

**by Assoc. Prof. Katya Genova Eguruze, PhD
Department of Health Care
Faculty of Public Health
Medical University - Varna**

for the dissertation work of Inna Stoyanova Nenova

**on topic: ELECTRONIC SYSTEM FOR MANAGEMENT OF OBSTETRIC CARE IN
OUTPATIENT CARE**

For the award of the degree of Doctor of Education and Science
Field of higher education 7. Health Care and Sport
Professional field 7.4. Public Health
Specialty "Health Care Management"
Scientific Supervisors: Prof. Silviya Borisova Dimitrova, PhD, DSc
Assoc. Prof. Margreta Parashkevanova Vasileva, PhD

By Order No. R-109-548/06.12.2023 of the Rector of Medical University "Prof. Dr. Paraskev Stoyanov" - Varna I have been elected as a member of the Scientific Jury, and on the basis of Protocol No. 1/13.12.2023 I have been appointed to prepare an opinion on the procedure for the acquisition of educational and scientific degree "Doctor" with candidate Inna Stoyanova Nenova at Medical University - Varna.

Details of the procedure

Inna Stoyanova Nenova is enrolled as a full-time PhD student in the doctoral program "Health Care Management" in the field of higher education 7. Health Care and Sport, professional field 7.4 Public Health with Order No. R-109-485/04.11.2020 of the Rector of Medical University - Varna.

On the basis of the report No. 102-2803/15.11.2023 from Assoc. Prof. Katya Genova Eguruze, PhD, Head of Faculty and protocol No. 104-1391/27.11.2023 of the Dean of the Faculty of Public Health was dismissed with the right of defence by the order of the Rector of MU-Varna No. R-109-548 of 06.12.2023.

All necessary documents provided for in the Law on the Development of Academic Staff in the Republic of Bulgaria, the Regulations thereto and the Regulations on the Development of Academic Staff at Medical University - Varna have been submitted.

Biographical data and career development of the PhD student

Inna Stoyanova Nenova obtained her Bachelor's degree in Midwifery at the Medical University - Varna, Faculty of Public Health, Department of Health Care (2015), and in 2019 her Master's degree in Health Management and in Health Care Management at the Medical University - Varna.

The beginning of her professional career was in 2015 at the Medical center "St. Antony" – Varna. She started her career at the Medical Center "St. Antony" Ltd. She started her career in 2015 at the Medical center "St. Antony" in Varna, where she worked as a medical registrar. In the period 2015 - 2020 she was a midwife at the Medical Center "Chaika" Ltd - Varna and at the Medical Center "Prof. Dr. D. Stamatov" - Varna Ltd, and from 2017 to 2018 she also held the position of "Office Manager" at the Medical Center "Prof. Dr. D. Stamatov-Varna" Ltd. From 2021 to the present moment she has been the Chief Midwife at the Medical Center "Prof. Dr. D. Stamatov-Varna" Ltd.

She has taken part in conferences and scientific forums, has publications and scientific communications, some of which are related to the dissertation. She has participated in a number of continuing education courses. She speaks and writes English.

General characteristics of the dissertation

The dissertation is presented in a total of 208 pages, with the standard structure for the professional field, in five chapters. 2. Aim, objectives, material and methodology of the study; 3. Results and discussion; 4. Electronic midwifery care management system - practical application; 5. Conclusions, recommendations and contributions. It is richly illustrated with 66 figures, 27 tables and 8 appendices.

The bibliographic list includes 181 titles, of which 77 in Cyrillic, 67 in Latin and 37 Internet sources.

Assessment of the relevance of the topic

The midwifery profession has a long history and a centuries-old tradition, which in its development has passed through various stages to acquire its modern shape. Midwifery care involves a range of activities related to pregnancy, childbirth and the postnatal period, making the role of the midwife necessary, relevant and of utmost importance. The organisation of care for women during pregnancy in this country differs significantly from that in other countries in the world and in Europe. The modern Bulgarian midwife is a person with higher education qualified to provide independent care for women with normal pregnancies and childbirth, and the structures in which she can be realised are: hospital, outpatient care, assisted reproduction centre and independent practices, but unfortunately this role is significantly limited. The problem is extremely topical for our country.

In today's society, obstetric care requires a high level of digitalisation. For the realization of consistent, continuous and individualized health care, electronic documentation of the activities performed is necessary. Information is an important part of the analysis, planning and evaluation of outcomes. The modern healthcare system requires the midwife to have specialized knowledge and skills. An electronic midwifery record would facilitate access to health data and patient information and for timely clinical decision making. The essence of telemedicine lies in the remote delivery of health care, medical consultations, prevention and dissemination of health information using telecommunication infrastructure.

This makes the topic of Inna Nenova's dissertation significant, relevant and dissertationable.

The literature review is structured in four parts, which consistently and thoroughly trace the main aspects relevant to the problem studied by the PhD student. The analysis of the precisely selected scientific information is competently directed to the needs of the specific research.

It begins with a historical overview of the development of midwifery care from antiquity to the present day, highlighting that the role of the midwife has continually changed. The doctoral student has examined in detail and comprehensively presented the development of midwifery care in Bulgaria, especially after the Liberation, when the founding of midwifery as we know it today began.

The in-depth analysis of the educational and organizational aspects in the continuing education of the regulated profession of midwifery in Bulgaria gives grounds for Inna Nenova to note that they contribute to the maintenance and development of specific professional competencies that enhance the quality of midwifery care.

Around the world, attitudes towards pregnancy follow-up and the role of the midwife in this process vary. Foreign experiences and independent midwifery practices are presented, highlighting the positive aspects in applying a range of midwifery activities and care in this direction. Contrary to global trends, midwives in our country are severely limited in their independent competencies and activities, and are not accepted as an equal member of the medical team.

Inna Nenova's rich professional experience helps her to analyze in depth the digitalization in the field of healthcare and in particular in midwifery practice. The PhD student ably points out that technology significantly supports patient-centred care by improving communication between medical professionals, reducing the risk of medical errors, enhancing access to medical information and promoting personalisation of care.

The methodology of the study is detailed and includes: aim, objectives, hypotheses, material and methodology of the study.

The aim of the dissertation is clearly and specifically defined: "To investigate and optimise the management of obstetric care by developing a methodology for integrating an electronic obstetric record in outpatient care".

Seven tasks are outlined to achieve the aim, covering all aspects of the research work carried out by the PhD student. Four hypotheses are formulated.

The material and methodology of the study are correctly described and include: subject and object, logical units and territory of the study. The research design includes theoretical and empirical research which are described in detail. The inclusion and exclusion criteria are defined. The stages of the research are detailed, reflecting the specific activities, instruments used and timing. The attached toolkit is self-developed, includes two questionnaires for conducting an in-depth interview (among midwives and experts) and a questionnaire for conducting a standardized interview (for health care educators). It is tailored to the specific information gathering described in detail and presented in the thesis.

The PhD student used a wide range of methods adequate to the set aim and objectives: sociological and statistical methods of data processing and analysis.

Results and discussion

The dissertation presents the results obtained from the research, structured and logically formed in chapter three, after their statistical processing.

A total of 60 respondents divided into three groups were included in the study:

- medical professionals with professional qualification "Midwife" practicing in outpatient care facilities (n=30);
- lecturers involved in the teaching of students in Philosophy and Introduction to Nursing and Midwifery. Theoretical Foundations and "Practical Foundations of Nursing and Midwifery Care for Pregnant, Parturient and Gynecologically Ill Women" (n=20);
- experts, proven professionals in midwifery care (n=10).

The presentation of the results for each of the study groups begins with a comprehensive socio-demographic profile.

A majority of respondents expressed a positive attitude towards the introduction of an electronic obstetric record. It is noteworthy that the experts unanimously (90%) support the proposal that the record should be based on the nursing care plan, thus ensuring an individual approach, continuity and continuity of care. According to respondents, the most important documents that should be present in the electronic record are the specialised forms and the care plan ($p < 0.001$).

The global trends are to limit paper documentation and actively transfer data electronically. More than half (67%) of the faculty surveyed felt that midwifery students do not have the necessary training to use medical software. The experts' opinion is that midwives will not encounter any difficulties when working with the electronic midwifery record. However, all respondents are of the opinion that there will be a need for additional courses to improve computer skills. The three guppy respondents overwhelmingly support the idea that the electronic midwifery record should be enshrined in regulations, seen as a good tool for valuing midwifery work and believe that it will contribute to midwives reaching their full potential. The SWOT analysis method was applied to identify the strengths and weaknesses of the electronic midwifery record concept.

Chapter four - Electronic midwifery care management system - practical application presents the international experience in the implementation of an electronic patient record. The analysis of electronic health records establishes compliance with logical consistency, clear structure and quick access to important information.

The available data from electronic health records studied provides the basis for the PhD student to propose: Guidelines in practice for health care professionals. The creation of an electronic record for the management of midwifery care in outpatient care includes midwifery-specific documentation so as to maximise the ease and reduction of administration of the

activities carried out, as well as providing the ability to track over time problems encountered, interventions implemented and outcomes achieved.

Conclusions and contributions

Nine conclusions have been formulated, which logically follow from the preceding analysis, accurately reflect the results obtained from the theoretical, quantitative and qualitative study, and show compliance with the aim and objectives of the presented work.

The recommendations made to the Ministry of Health, the National Health Information System, the Bulgarian Association of Health Care Professionals and educational institutions are convincing and have specific relevance to the problem under consideration.

The contributions in the thesis are of theoretical and cognitive and practical nature, which I accept.

In connection with the dissertation, the doctoral candidate presents a list of publications and contributions to scientific forums, containing four titles related to the topic of the presented work.

The abstract is structured as required and faithfully reflects the content of the thesis.

Conclusion

This dissertation is the first of its kind in-depth and focused study to develop and implement an electronic system for the management of midwifery care in outpatient settings and to elucidate the benefits of its implementation. It is distinguished by its timeliness, precision, high scientific and undeniable practical value. It shows that the doctoral student has a thorough theoretical background and professional skills that prove her good research capabilities.

I believe that the thesis meets all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria, its Implementing Regulations and the Regulations on the Development of Academic Staff at Medical University - Varna.

On the basis of the above, I give my positive vote and confidently propose to the esteemed Scientific Jury to award the degree of Doctor of Education and Science to Inna Stoyanova Nenova in the specialty of Health Care Management.

23.01.2024

Varna

Drafted the opinion:

Assoc. Prof. Katya Genova Eguruze, PhD

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
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