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**THE POTENTIAL CAPACITY OF THE “INFECTION CONTROL”
DISCIPLINE IN THE FORMATION OF RESPONSIBLE ATTITUDE TO
THE PATIENT SAFETY AMONG MASTER NURSES IN THE PROCESS
OF PROVIDING MEDICAL AND PREVENTIVE CARE**

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**ПОТЕНЦІАЛ ДИСЦИПЛІНИ «ІНФЕКЦІЙНИЙ КОНТРОЛЬ»
У ФОРМУВАННІ В МЕДИЧНИХ СЕСТЕР-МАГІСТРІВ
ВІДПОВІДАЛЬНОГО СТАВЛЕННЯ ДО БЕЗПЕКИ ПАЦІЄНТІВ
У ПРОЦЕСІ НАДАННЯ ЛІКУВАЛЬНО-ПРОФІЛАКТИЧНОЇ
ДОПОМОГИ**

Abstract. In the article we have analyzed the significance and importance of the “Infection Control” discipline in pursuing a master’s degree in nursing. The article states that the master nurse is the lead organizer and executor of activities related to the creation of a safe hospital environment, while the correctness and completeness of the actions at the workplace depends on the depth of theoretical knowledge and sophistication of practical skills. The paper specifies the general and occupational competencies, forms and methods of conducting lectures and practical sessions, describes the expected results of training, indicates interdisciplinary integration, draws attention to the problems of honesty in the performance of autonomous and individually research work by the seekers of higher education. It is noted that the practical health care needs such a master nurse, who not only possesses thorough professional knowledge, but also is capable to act clearly and quickly in an emergency, perfectly master up-to-date techniques of preventing, in particular, the healthcare-associated infections through the developed clinical judgment. It is the competency based potential capacity of the “Infection Control” academic discipline that makes it possible to realize these tasks. The priority area of improving the educational process is its practical orientation and significance.

Key words: master; nursing; education; infection control; safe hospital.

Аноація. У статті проаналізовано значення та важливість навчальної дисципліни «Інфекційний контроль» у підготовці магістрів медсестринства. Вказано, що медична сестра-магістр – головний організатор та виконавець заходів, пов’язаних зі створенням безпечного лікарняного середовища, а правильність та повнота дій на робочому місці залежать від глибини теоретичних знань і досконалості практичних навичок. У роботі перераховано загальні та фахові компетентності, форми і методи проведення лекційних та практичних занять, описано очікувані результати навчання, вказано міждисциплінарну інтеграцію, звернено увагу на проблеми доброчесності при виконанні здобувачами вищої освіти індивідуально-дослідної самостійної роботи. Зазначено, що практичній охороні здоров’я необхідна така медична сестра-магістр, яка не лише володіє ґрунтовними фаховими знаннями, але й здатна чітко та оперативно діяти в критичних ситуаціях, бездоганно володіти найсучаснішими методами профілактики, зокрема, внутрішньолікарняної інфекції на основі розвинутого клінічного мислення. Саме компетентнісний потенціал навчальної дисципліни «Інфекційний контроль» дозволяє реалізувати вказані завдання. Пріоритетним напрямком удосконалення навчального процесу стає його практична орієнтованість та значущість.

Ключові слова: магістр; медсестринство; навчання; інфекційний контроль; безпечна лікарня.

Introduction. Prevention of the hospital infections is one of the topical issues of medicine. It is difficult to define the economic and social losses that are associated with these diseases. The key organizational functions in preventing the healthcare-associated infection (HAI) shall be assigned to the general directors and medical

directors of nursing (master nurses) of the health care facilities (HCF). It is they who determine the sequence of preventive measures and infection control aimed at preventing the emergence and spread of the infectious diseases associated with the delivery of health care.

It is beyond argument that the preventive activity of the medical staff should be a priority, therefore the

“Infection Control” academic discipline is crucially important and necessary during the professional training of masters in nursing. The professional activity of a master nurse should focus on the measures aimed to minimize and timely clear the probable hazards adversely affecting the performance of professional duties of HCF staff and patients recovery processes.

In the system of reforming the health care of Ukraine the special significance is taken on the quality of staffing in this sector, and therefore new requirements arise to the quality of providing learning services performed by the medical higher educational establishments (HEE) [1.9]. The master of nursing should not only possess thorough professional knowledge, but also skillfully use them in the professional activity, perfectly perform the practical skills, provided by job descriptions [3].

S. Hordiichuk, M. Kichula, I. Makhnovska, L. Nikohosian, V. Shatylo have thoroughly investigated various aspects of the medical education development, in particular, nursing. There has been assessed the competencies of the medical students [4]. The importance of the competency building approach in the process of providing learning services has been defined [5]. The priority directions for improvement of the educational process within the framework of the system value approach have been established [6]. However, the issue of potential capacity of the “Infection Control” academic discipline, professional training of master nurses for purposes of the responsible attitude to the patient safety in the process of providing medical and preventive care remains insufficiently covered. A special attention should be paid to the issues related to the formation of professionally important competencies and practical significance of the “Infection Control” course.

The aim – to determine the potential capacity of the “Infection Control” discipline in the formation of master nurses’ responsible attitude to the safety of patients undergoing medical treatment in the health care facilities (HCF) and to establish competencies formed during the process of achieving mastery of course and required for further professional activities.

Methods. Bibliosemantic method (analysis, correlation, comparison, generalization, systematization of the academic literature for studying the problem state), method of systems analysis and logic generalization (for the purpose of determining the significance of the “Infection Control” discipline in the professional training of masters in nursing).

As a research material we have used scientific publications on nursing education, Standard of the

Higher Education of Ukraine and Educational and Professional Program on the Master’s degree of the subject area 22 “Health Care» of the specialty 223 “Nursing” of the specialization “Nursing Care”, education plans and programs, syllabus of the “Infection Control” academic discipline.

Results. Insufficiently justified wide use of antimicrobial drugs, increased stay of patients in the inpatient department, non-compliance with the rules of disinfection and sterilization – all these and many other factors today intensify the hospital infection problems. The healthcare-associated infection has negative consequences for both the patient and the state (complications in the course and prognosis of the main disease, additional expenditures for diagnostics and treatment, increased period of the patient’s inability to work). Therefore, the study of the “Infection Control” course, which focuses on the prevention of healthcare-associated infection among HCF patients and staff, takes on particular significance in the professional training of master nurses.

The purpose of learning the “Infection Control” academic discipline is to acquire the necessary knowledge and practical skills on issues relating to the sanitary and hygienic, epidemiological, medical and preventive activities aimed at creating a safe hospital environment. In addition, the program provides for the consideration of issues related to the determination of the nurses’ role in providing the medical and protective treatment; establishing general principles for the prevention of infectious diseases; characteristics of organizational, anti-epidemic, specific HAI control measures.

The “Infection Control” as an academic discipline appears not only as one of the most significant in the formation of responsible attitude to the patients safety among the master nurses, but also opens a wide range of opportunities for the formation and development of professionally important competencies.

The Law of Ukraine “On the higher education” (Section I, Article 1, paragraph 13) says: “Competency is the ability of a person to successfully socialize, study, carry out professional activity, emerging from the dynamic combination of knowledge, skills, abilities, ways of thinking, views, values, other personal qualities” [8].

In the “Infection Control” course there have been formed and combined general and professional competencies required for the perfect performance of professional duties provided by the Standard of the Higher Education of Ukraine and Educational

and Professional Program on the Master's degree of the subject area 22 "Health Care" of the specialty 223 "Nursing" of the specialization "Nursing Care". General competencies include the capacity for abstract thinking, analysis and synthesis; ability to determine, pose and solve the problems; ability to adapt and act in a new situation. Among the professional (special) competencies there are the following: the ability to evaluate the impact of dangerous factors regarding the risk of development of the most common diseases; mastering the main diagnostic and prevention methods; using theoretical knowledge and practical skills in organizing the management process in the nursing structural subdivisions.

The requirements for the master nurses' professional competency evolve over time. The professional competency consists of the occupational, personal and social components [7]. In learning the "Infection Control" course the occupational component is associated with the knowledge about the causes of occurrence and prevention of HAI, stages of medical devices processing (disinfection, pre-sterilization clearing and sterilization) and their quality control. The autonomous and individually research works performed by the seekers of higher education promote responsible attitude to self-development, self-improvement (personal component). Not least important are the master nurses' teamwork skills, ability to provide comfortable psychological interaction between the HCF staff and patients (social component). Achieving peak professional performance in nursing is possible only through the awareness of importance of future professional activity, ceaseless evaluation and identification of the key points in the performance of practical skills, continuous analysis and interpretation of theoretical information.

Now the requirements for the nursing staff are rapidly changing which is due to the processes of health care reforming. Therefore the education should be future-oriented and focused on the qualitative professional training [1]. In the organization of an educational process the practical component should be preferred [2]. Precisely this is stressed in studying the "Infection Control" academic discipline in Zhytomyr Medical Institute of Zhytomyr regional council. A significant part of time is devoted to the development of professionally important practical skills and abilities such as: organization of work in the therapeutic department with a view to creating the safe hospital environment; quality control of pre-sterilization cleaning of medical devices, sterilization

quality assessment; sanitary and bacteriologic study of human microbiology; filling the report of sanitary and anti-epidemic regime inspection in the hospital and outpatient department etc.

The HCF master nurse always has a number of important tasks: to make the list of disinfectants, purchase quantity and to determine the rate of disinfectants and antiseptics reserves, taking into account the conditions of a particular department, ease of administration, germicidal properties; to constantly monitor compliance with the aseptic and antiseptic regulations; to identify the pathogenic flora carriers among medical personnel and to determine the sources of infection among patients; to monitor the quality of the work performed by middle grade medical staff. Precisely these particular professional tasks are performed and discussed by the seekers of higher education in practical classes in the "Infection Control" academic discipline.

The quality level of practical training at HCF premises forms and promotes the development of key competencies. During practical training future masters learn to work in a team and to lead a team, to organize work, that is fundamentally important in further professional activity in the positions of medical directors in nursing.

The analysis of the education programs and plans, syllabus of the "Infection Control" academic discipline points to reconciliation between the theoretical and practical components. Theoretical learning looks beyond the transfer of knowledge including also elements of practical training. A constant emphasis on further working activity makes it possible for the seekers of higher education to see the responsibility for the work performed, in particular, related to the safety of patients and subordinates.

It is common knowledge that the deepest knowledge is those which the students gain on their own. Future master nurses on their own master the techniques of epidemic examination, learn to make a hygienic assessment of the conditions of patients stay in the HCF, draw the plans of precautions to prevent the healthcare-associated infections in the specialized departments of hospitals, characterize the microclimate and efficiency of premises ventilation in the health care facilities. Self study of the proposed topics of the course will help the future master nurses to be active in solving outstanding problems related to the professional activity, to demonstrate self-dependence and responsibility in the works; to compare; to make a quantitative and qualitative assessment, to adjust expected and factual results.

The study of the “Infection Control” academic discipline requires of the future master nurses to constantly prepare for practical sessions, perform the autonomous and individually research work (AIRW), study recommended basic and supplementary literature. Regular preparation and participation in the practical classes means familiarization with the academic discipline program and plans of lectures and practical sessions, perfect study of theoretical material, performance of tasks, proposed for individual work. Persevering work of the seeker of higher education should constantly show evidence of self-dependence in fulfilling the set tasks and no evidence of repetition and plagiarism.

In the course the special attention is paid to the students’ compliance with a policy of integrity when performing the autonomous and individually research work. Where there is evidence of plagiarism in any types of work the seeker of higher education gets failing grade and must repeat fulfillment of the task.

The study of the “Infection Control” academic discipline is based on such previously studied disciplines as “Clinical Nursing”, “Occupational Safety in the Field” and is integrated with the following subjects: “Public Health and Public Nursing”, “Social Medicine and Medical Statistics», «Family Medicine”, “Palliative Medicine”. Knowledge acquired in the “Infection Control” course lays the foundations for further learning the theoretical material and mastering practical skills from the system of courses for pursuing a master’s degree in 22 “Health Care” of the specialty 223 “Nursing” of the specialization “Nursing Care”, provided for by the education plans.

The current level of students preparation makes the instructor orient towards transition from the pedagogical traditionalism to the introduction of new forms and methods of conducting lectures and practical sessions, which should be filled with relevant, meaningful information of practical importance. Sessions in the “Infection Control” academic discipline in Zhytomyr Medical Institute weave together the traditional methods and the modern interactive ones: press conference, case study (case-method), binary class, “brainstorm” etc. Well-chosen thematic videos and presentations make much of an emotional impression on the students, create awareness of the importance of issues related to the safe hospital environment, give rise to thoughts that administration of day-to-day infection control will be an important

part of their professional duties. Precisely this variety allows the future health workers to perfectly and easily master professionally important information.

Among the expected educational outcome in cognitive and emotional (affective) spheres it stands to mention the ability to take an active part in solving outstanding issues associated with the professional activity, to set and agree upon the plans of professional activity, to identify job-related problems and find ways of their constructive solution. The future master nurses should develop their talents regarding the selection of a strategy ensuring the safety of patients in the HCF in every particular case.

The level of development of modern society specifies strict requirements to education in the higher medical school, in particular, to master nurses professional training. The priority area of improving the educational process is its practical orientation and significance.

Conclusions and Prospects for Research. 1. The study of the “Infection Control” academic discipline in the process of pursuing a master’s degree in 22 “Health Care” of the specialty 223 “Nursing” of the specialization “Nursing Care” shows the multifacetedness of the problem of creating safe environment for the HCF patients and medical staff to the seekers of higher education, promotes formation of a system point of view on the prevention of the healthcare-associated infection.

2. The study of issues, provided by the education program of the “Infection Control” academic discipline, helps the future professionals of the specialty 223 “Nursing” to avoid mistakes in their further professional activity, to minimize risks to the HCF patients and to eliminate diseases of medical staff in the process of performing functional duties.

3. Today’s realities satisfy that the practical health care needs such a master nurse, who not only possesses thorough professional knowledge, but also is capable to act clearly and quickly in an emergency, perfectly master up-to-date techniques of preventing, in particular, the healthcare-associated infections through the developed clinical judgment. It is the competency based potential capacity of the “Infection control” academic discipline that makes it possible to realize these tasks.

It is appropriate to further consider issues concerning peculiarities of studying “The Infection Control” discipline in the remote mode.

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