УДК 378.046-021.68:61(4) DOI 10.11603/m.2414-5998.2022.3.13424

## N. O. Fedchyshyn

ORCID https://orcid.org/0000-0002-0909-4424 Scopus Author ID 57202833382

## N. I. Hantimurova

ORCID https://orcid.org/0000-0001-8587-7570

## V. V. Franchuk

ORCID https://orcid.org/0000-0001-8484-8049 ResearcherID GZM-5397-2022 Scopus Author ID 57201718225

## N. I. Yelahina

ORCID https://orcid.org/0000-0002-5423-8327 Scopus Author ID 57484881900

I. Horbachevsky Ternopil National Medical University

# BASIC PRINCIPLES OF ORGANIZATION OF POST-GRADUATE MEDICAL EDUCATION DEVELOPMENT: EUROPEAN CONTEXT

## Н. О. Федчишин, Н. І. Гантімурова, В. В. Франчук, Н. І. Єлагіна

Тернопільський національний медичний університет імені І. Я. Горбачевського МОЗ України

## ОСНОВНІ ПРИНЦИПИ ОРГАНІЗАЦІЇ ПІСЛЯДИПЛОМНОЇ МЕДИЧНОЇ ОСВІТИ: ЄВРОПЕЙСЬКИЙ КОНТЕКСТ

**Abstract.** The article states that postgraduate medical education is determined by international standards, which have general application. These standards take into account differences in the content and process of medical education in countries through the prism of peculiarities in traditions of education, culture, socio-economic conditions, health and disease spectrum and in different forms of medical care system. The standards of post-graduate medical education, which are guided by: basic medical education, post-graduate medical education and continuous professional development are analyzed. It has been established that the scientific basis of medicine and the desire to base evidence for clinical practice are universal indicators, and the task of medical education is to provide medical care.

**Key words:** postgraduate medical education; standards of medical education; professional development; provision of medical care.

**Анотація.** У статті з'ясовано, що післядипломна медична освіта визначається міжнародними стандартами, які мають загальне застосування. Ці стандарти враховують відмінності в змісті і процесі медичної освіти в країнах крізь призму особливостей у традиціях навчання, культурі, соціально-економічних умовах, спектрі здоров'я і хвороб та у різних формах системи надання медичної допомоги. Проаналізовано стандарти післядипломної медичної освіти, якими керуються: базова медична освіта, післядипломна медична освіта та безперервний професійний розвиток. Встановлено, що наукова основа медицини і прагнення базувати докази для клінічної практики є універсальними показниками, а завданням медичної освіти є надання медичної допомоги.

**Ключові слова:** післядипломна медична освіта; стандарти медичної освіти; підвищення кваліфікації; надання медичної допомоги.

**Introduction.** Improving the health of all people is the main aim of medical education. This is also the main aim of the World Federation of Medical Education (WFME). As an international body representing all medical teachers and medical educational institutions, WFME assumes a commitment to improve high scientific and ethical standards in medical education, initiating the introduction of new methods of teaching,

new educational tools and innovative management of medical education [12].

The system of higher medical education and professional training of doctors are being modernized in the context of general trends of higher education development in Ukraine. Scientific work is important for the research, which considers development of professional competence of specialists in the

 $\ensuremath{\mathbb{C}}$  N. O. Fedchyshyn, N. I. Hantimurova, V. V. Franchuk, N. I. Yelahina

system of post-graduate education (O. V. Varetska, Yu. S. Zaporozhtseva, O. Yu. Lysenko, V. I. Saiuk), peculiarities of the health care system specialists trainingas an inter-branch problem (I. Ye. Bulah, O. P. Volosovets, Yu. V. Voronenko, M. S. Ponomarenko, I. V. Sokolova, A. S. Nemchenko, Ya. V. Tsehmister, O. V. Chalym).

The issues of post-graduate education of doctors were studied by foreign scientists (K. Fleming, D. Fitgerald – reform of post-graduate medical education); (T. Hrai, D. Hood, T. Farell – the feedbackbetween subjects of post-graduate medical education); (M. Dogerti, L. Carrie, D. Kombes – a competent approach in postgraduate medical education).

**The aim** is to analyze the international standards of postgraduate medical education, focusing on similarities and differences in the content of medical education in European countries.

**Theoretical framework.** These scientists believe that the main features of post-graduate medical education in European countries are aimed at continuous professional development of doctors, continuous improvement of their professional qualification, improvement of the content of training, legal establishment of degree education; structuring of medical education at pre- and post-graduate stages, competently oriented and professionally directed approaches to formation of educational programs, passing licensing examinations [6, 7]. Standardization and professionalization of doctors' training at the postgraduate stageare based on the requirements for professional activity of the medical worker and moral-ethical behavior of the doctor, strengthening of responsibility for the results of medical practice.

According to these powers, the WFME in its 1998 document began implementation of the program "International Standards in Medical Education". The aim was to create a mechanism to improve the quality of medical education in a global context that must be applied by institutions responsible for medical education and in programs during the continuous development of medical education. At the early stages of the initial document "Standards in the Basic Medical Education" it became clear that the specificity of international standards in any limited sense would have a negative impact on medical institutions and their educational programs and would actually reduce the quality of medical education. The criticism became a common phenomenon and consisted in that medical education adapted inappropriately to constantly changing conditions in the system of medical care, as well as to the needs and expectations of society [13, 14]. Thus, the lever for change and reform was to be included in the standards. This led to the creation of the concept of WFME standards to achieve success at two different levels: the basic standards or the minimum requirements; and standards for quality development.

International standards of WFME cover all three phases of medical education: basic medical education; postgraduate medical education; and continuous professional development. As for the development of post-graduate medical education, the stage in which doctors develop their competence after receiving basic medical qualification is important. This period of study usually takes place in accordance with established rules and norms. Training is developed on the basis of teaching, which means that young doctors work, for example, in the conditions of a clinic with more experienced colleagues who take responsibility for their instruction and supervision.

Post-graduate medical education includes preregistration training, professional training, specialist and subordinate specialist training and other formal training programs to perform certain expert functions. In addition to practical clinical aspects, further theoretical education is needed. This can be organized in various ways in close connection with clinical training at regional, national or international theoretical courses. Such programs may be conducted by universities, specialist committees, medical societies and colleges or post-graduate medical education institutions [15].

At the international level there are significant differences in the number of recognized specialties and expert functions in medicine, organization, structure, content and requirements in postgraduate medical education. Qualification in expert functions is also obtained through BME. In some regions of the world, training of specialists is carried out through appointments in hospital/medical departments for several years, while in other parts of the world there are only theoretical courses for a shorter period without specific requirements for practical training.

However, over the past decades there has been an increasing combination of training methods with emphasis on practice and theory. Modern principles of medical education have a greater influence in all countries. In the field of post-graduate medical education high-tech educational programs were developed, the components of which include clinical/practical skills under the supervision of experts, theoretical training, research, systematic evaluation of educational programs [8].

Postgraduate medical education is recognized by international standards, which have general application

in medical education. They take into account differences in the content and process of medical education in countries because of differences in traditions of education, culture, socio-economic conditions, health and disease spectrum, as well as different forms of medical care system. Such differences can also be observed in some countries. However, the scientific basis of medicine and the desire to base evidence for clinical practice are universal indicators, and the task of medical education throughout the continuum is to provide medical care. Despite the differences, there is a growing degree of equivalence of the structure, process and product of post-graduate medical education all over the world.

International standards should, of course, be changed or supplemented according to regional, national and institutional needs and priorities. Each country is responsible for ensuring that the programs of post-graduate medical training support the fulfillment of the tasks of the national system of medical care [3].

The United international standards of medical education will promote mobility of practitioners and facilitate the admission of doctors in other countries than those in which they study. Ensuring the competence of doctors who have received education in other countries will thus be stimulated. In the end, low-quality educational programs can be improved by using an internationally recognized standards-based assessment and accreditation system, thereby improving the quality of medical care, both nationally and internationally.

The WFME Working Group applied the principles that were developed to move from basic medical education to post-graduate medical education. Attention was focused on the general application of recommendations on improving the quality of medical education [8].

Standards must be clearly defined, meaningful, appropriate, relevant, measurable, achievable and acceptable to users. They should have some implications for practice, recognize diversity and promote adequate development.

Postgraduate medical education may be defined as the stage at which doctors are trained under the guidance of obtaining independent practice after completion of basic medical qualification. It includes pre-registration training, professional training, specialist and subordinate specialist training and other formal training programs. After completion of the official post-graduate program of study, as a rule, a degree, a diploma or a certificate is issued.

In accordance with the basic standards of postgraduate medical education should follow a systematic program of training, which describes general and specific components of education. Preparation should be a practice — on the basis of personal participation of the doctor-practitioner in providing services and ensuring responsibility for patient care in educational institutions. The training program should include integrated practical and theoretical training. The doctor-practitioner should obtain knowledge of the scientific bases and methods of the chosen field of medicine, as well as by influence of a wide range of relevant clinical / practical experience in different conditions in the chosen field of medicine, be aware of the scientific-proven medicine and making important clinical decisions.

The process of preparation should include practical clinical work and the corresponding theory of the basic medical-biological, clinical, behavioral and social sciences; clinical decisions; communication skills, medical ethics, public health policy, judicial medicine, and managerial disciplines are necessary to demonstrate professional practice in selected medical sectors. The general composition, structure and duration of training and professional development should be described with clear definition of aims and expected results on the basis of tasks and their connection with basic medical education and medical care. Components that are mandatory and non-mandatory must be clearly formulated. The nature of training in professional development should be described and respected and integration between training and service provision should be ensured (on-the-job training) [15].

In order to improve the quality of post-graduate medical education, it is necessary to cooperate with basic medical education and active medical education / professional development. Training should be directed, the doctor-practitioner should learn through observation and regular evaluation and feedback. The training process should provide an increasing degree of independent responsibility such as skills, knowledge and experience. Every doctor-practitioner should have access to educational consultations. In the course of preparation, the doctor-practitioner should undergo formal training, concerning the critical evaluation of literature, scientific data and evidence medicine, as well as carry out research. The training process should ensure the development of knowledge, skills, relations and personal qualities as a medical expert, a health fighter, a communicant, an employee and a team member, a scientist, an administrator and a principal.

The integration of theory and practice should be ensured in the course of training. Coordinated training in several places in the selected field of medicine should be provided in order to obtain experience in different fields and in the management of discipline. The body responsible for the training program should be provided with resources for planning and implementation training methods and innovations in the training program. He must have data about staff, doctor-practitioners and other relevant stakeholders in the curriculum planning process. The health system's property should be effectively used for service-based learning purposes. Training should be considered as an additional and not subject to the requirements of providing medical services [2, 10].

In accordance with the basic standards, post-graduate medical education should include the evaluation process, and competent authorities should determine and approve the methods used for the evaluation of practitioners, including exam criteria and other types of evaluation. The evaluation should emphasize the format of training methods and constructive feedback. The principles, methods and practices of evaluation should be clearly linked to the objectives of training and should facilitate learning. The assessment should document the level of preparation. A constructive feedback on the success of a doctor-practitioner should be on a permanent basis.

As for quality improvement, reliability and validity of evaluation methods should be documented and evaluated and should be encouraged to involve external examinators. An additional set of evaluation methods should be applied. Different stages of training should be documented in a special educational journal. There should be a mechanism of appeal of established results and, if necessary, should be taken into account another opinion or organized change of mentor/principal or additional training. Methods and practices of evaluation should facilitate integrated learning and assess the specified requirements of practice, as well as knowledge, skills and relationships [1, 5]. The methods used should facilitate constructive interaction between clinical practice and evaluation. Acceptable success standards should be clearly defined and communicated to doctor-practitioners and principals [11].

## List of literature

- 1. Ворона І. І. Професійно-комунікативна культура майбутніх лікарів крізь призму фахової освіти / І. І. Ворона, Г. Я. Кітура // Медична освіта.  $2021. N_{\odot} 3. C. 81-86.$
- 2. Павлишин Г. Я. Специфіка навчання іншомовного професійно орієнтованого мовлення у парадигмі інфотехнологій / Г. Я. Павлишин, І. А. Прокоп // Науковий вісник Ужгородського національного університету. Серія «Педагогіка. Соціальна робота». 2015. С. 126—129.

Post-graduate studies should be conducted properly with the payment of scholarships in the selected field of medicine and should include participation in all medical measures – including call-by-call training – that correspond to training, thus devoted to professional activity of practical training and theoretical training during the whole working time [9]. The conditions for providing medical services and the responsibility of practitioners should be defined and known to all parties. The policy of representation and the corresponding participation of doctor-practitioners in the development and evaluation of the training program, working conditions and other issues related to training should be available.

As for quality improvement, the selection policy should define criteria relating to the special abilities of potential practitioners in order to improve the results of the training process in the selected field of medicine. The selection procedure should be transparent and open to all qualified graduates with basic medical education. The selection procedure should include a mechanism for monitoring and appeal. The number of doctor-practitioners should be reviewed on the basis of consultations with relevant stakeholders [4]. Given the changing needs of doctors in different fields of medicine, the number of positions should now be changed with due attention to the existing needs of the community and society and market forces.

Conclusions and Prospects for Research. Training of highly qualified doctors in higher educational medical institutions requires constant improvement of the generally accepted and search ways of optimization of the educational process. The quality of training technologies in higher educational medical institution directly influences the level of professional training of doctors. The global socio-economic development requires improvement of the system of providing medical services and ensuring their quality. Therefore, continuous professional development is a professional obligation of every doctor and a prerequisite for improving the quality of higher education in general.

- 3. Accreditation Council for Graduate Medical Education (ACGME) and American Board of Medical Specialties (ABMS). ABMS/ACGME Core Competencies, 1999.
- 4. A Model of Forming the Health Culture of Future Physicians Using Health-Saving Technologies / N. Fedchyshyn, O. Kvas, N. Sultanova [et al.] // International Journal of Applied Exercise Physiology. 2020. Vol. 9 (11). P. 126—134. DOI 10.26655/JJAEP.2020.11.1.

- 5. Commission of the European Communities. Directive 93/16/EEC. Brussels, 1993.
- 6. Development of Medical Students Creativity as a Priority of Modern Higher Education / A. Vykhrushch, T. Khvalyboha, N. Fedchyshyn [et al.] // Wiadomości lekarskie. 2021. T. LXXIV (12). S. 3204–3213. DOI 10.36740/WLek202112115.
- 7. European Union of Medical Specialists. Charter on Training of Medical Specialists in the European Community. UEMS, 1993.
- 8. General Medical Council. Good Medical Practice.—3rd Edition. London, 2001. Access mode: http://www.gmc-uk.org.
- 9. Prokop I. A. Professional culture in the context of future doctor training / I. A. Prokop, I. I. Vorona // Медична освіта. 2020.-N 1.-C. 117-121.
- 10. Prospective Doctors Professional Preparation / N. Fedchyshyn, L. Bilovus, O. Mysyk [et al.] // Journal of Research

- in Medical and Dental Science. 2021. Vol. 9 (7). P. 29–37.
- 11. The health culture of future doctors through the prism of the health-preserving competence formation / N. Fedchyshyn, O. Romanchuk, L. Bilovus [et al.] // Wadomości lekarskie. 2021. T. LXXIV (8). S. 1931–1938. DOI 10.36740/WLek202108127.
- 12. World Federation for Medical Education // Basic Medical Education. WFME Global Standards for Quality Improvement. Copenhagen: WFME, 2003.
- 13. World Federation for Medical Education. Proceedings of the World Summit on Medical Education // Medical Education. 1994. Vol. 28 (Suppl. 1).
- 14. World Federation for Medical Education. The Edinburgh Declaration // Lancet. 1988. Vol. 8068. P. 464.
- 15. World Health Assembly. WHA Resolution 42.38. Geneva: WHO.

#### References

- 1. Vorona, I.I., & Kitura, H.Ya. (2021). Profesiino-komunikatyvna kultura maibutnikh likariv kriz pryzmu fakhovoi osvity [Professional and communicative culture of future doctors through the prism of professional education]. *Medychna osvita Medical Education*, 3, 81-86 [in Ukrainian].
- 2. Pavlyshyn, H.Ya., & Prokop, I.A. (2015). Spetsyfika navchannia inshomovnoho profesiino oriientovanoho movlennia u paradyhmi infotekhnolohii [The specifics of teaching foreign language professionally oriented speech in the paradigm of information technologies]. *Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Seriia «Pedahohika. Sotsialna robota» Scientific Bulletin of the Uzhhorod National University. Series "Pedagogy. Social work"*, 126-129 [in Ukrainian].
- 3. (1999). Accreditation Council for Graduate Medical Education (ACGME) and American Board of Medical Specialties (ABMS). ABMS/ACGMECore Competencies.
- 4. Fedchyshyn, N., Kvas, O., Sultanova, N., Humenna, I., & Bilavych, H. (2020). A Model of Forming the Health Culture of Future Physicians Using Health-Saving Technologies. *International Journal of Applied Exercise Physiology*, 9(11), 126-134. DOI 10.26655/IJAEP.2020.11.1.
- 5. (1993). Commission of the European Communities. Directive 93/16/EEC. Brussels.
- 6. Vykhrushch, A., Khvalyboha, T., Fedchyshyn, N., Bagriy, M., Fedoniuk, L., Protsyk, H., & Hnatyshyn, S. (2021). Development of Medical Students Creativity as a Priority of Modern Higher Education. *Wiadomości lekarskie*, LXXIV (12), 3204-3213. DOI 10.36740/WLek202112115.

- 7. (1993). European Union of Medical Specialists. Charter on Training of Medical Specialists in the European Community. UEMS.
- 8. (2001). General Medical Council. Good Medical Practice. (3rd Edition). London. Retrieved from: http://www.gmc-uk.org.
- 9. Prokop, I.A., & Vorona, I.I. (2020). Professional culture in the context of future doctor training. *Medical Education*, 1, 117-121.
- 10. Fedchyshyn, N., Bilovus, L., Mysyk, O., Yablonska, N., & Pemiakova, O. (2021). Prospective Doctors Professional Preparation. *Journal of Research in Medical and Dental Science*, 9(7), 29-37.
- 11. Fedchyshyn, N., Romanchuk, O., Bilovus, L., Mysyk, O., Nazaruk, V., Yablonska, N., & Pantyuk, T. (2021). The health culture of future doctors through the prism of the health-preserving competence formation. *Wadomości lekarskie*, LXXIV(8), 1931-1938. DOI 10.36740/WLek202108127.
- 12. (2003). World Federation for Medical Education. Basic Medical Education. WFME Global Standards for Quality Improvement. Copenhagen: WFME.
- 13. (1994). World Federation for Medical Education. Proceedings of the World Summit on Medical Education. *Medical Education*, 28(1).
- 14. (1988). World Federation for Medical Education. The Edinburgh Declaration. *Lancet*, 8068, 464.
- 15. World Health Assembly. WHA Resolution 42.38. Geneva: WHO.

Received 22.11.22 Recommended 24.11.22

E-mail address for correspondence: fedushunno@tdmu.edu.ua