DEVELOPMENT OF POSTGRADUATE MEDICAL EDUCATION IN UKRAINE

Abstract. Background. WHO experts note that there is no generally accepted approach to continuing medical education in Europe today, but there is a general opinion that the quality of medical services depends directly on continuous developing and evaluating professional competencies by medical doctors in their advanced training. Special attention has always been placed in insuring (and constant improving) academic level of education services providers or training programs, on the basis of which medical doctors coordinate their own plans for obtaining the necessary professional knowledge and skills. The most important precondition for ensuring advanced training is the creation of a unified accreditation system for education services providers or training programs, as well as the “collective responsibility” of all participants in medical education settings. The purpose was to investigate the development of medical postgraduate and continuing education system in Ukraine on the example of the leading national postgraduate education establishment, Shupyk National Medical Academy of Postgraduate Education. Materials and methods. Archival materials. We used the general (universal) method, historical and logical methods in researching. Results. According to the definition of the World Federation of Medical Education (WFME), postgraduate medical education is the phase of medical education in which medical doctors develop their competences after completion of their basic medical qualification. This education phase is carried out in accordance with specific rules and instructions. Postgraduate medical education includes preparation for certification and/or licensure, industrial/professional training, specialization and narrow specialization, as well as other formalized training programs for developing certain expert functions. Being a part of the continuum of medical education postgraduate education is included in continuing medical education (CME) or continuing professional development (CPD). According to the WFME definition, CPD refers to training medical doctors, which begins after completion of their basic and postgraduate medical education and continues thereafter throughout the professional life of each medical doctor. Modern medicine development is currently going on at an extremely rapid pace, and medical doctors’ skills and knowledge are rapidly becoming obsolete. The article traces the introduction of postgraduate medical training in Ukraine on the example of the National Medical Academy of Postgraduate Education (NMAPE). Conclusions. The introduction of postgraduate training for medical doctors in Ukraine is studied on the example of more than 100 years of NMAPE activity, which allows to state that combining research & innovation, training and medical practice enabled the education establishment to become an example to follow and the role model in educational & methodical activity in postgraduate medical and pharmaceutical education settings.

Keywords: NMAPE; continuous professional development; postgraduate medical education system
of educational services providers or training programs, as well as the "collective responsibility" of all participants in the system of medical training.

The purpose was to investigate the development of medical postgraduate and continuing education system in Ukraine on the example of the leading national institution of postgraduate education, Shupyk National Medical Academy of Postgraduate Education.

Materials and methods

Archival materials. We used the general philosophical (universal) method, historical and logical methods in researching. General philosophical (universal) method is used in the study of all areas of reality and at all stages of each specific cognitive process. The historical method involves considering the objective process of the object's development, its real history with all its peculiarities. This implies reproducing in thinking the historical process in its chronological sequence and specificity. The logical method is a reflection of the historical process in abstract and theoretical sequential form. That is, the logical is in essence also historical, but free from coincidences, details, zigzags. Historical and logical research methods are unified, as they study the same object, the genesis of its origin and development [1].

Results and discussion

Recently, economically developed countries have begun to rely on education in their development strategies. Among fundamental principles of forming a world unified research & education space, continuing professional development (CPD) system occupies a specific place and creates the most favorable conditions for increasing the duration of active life and maximum, effective use of human experience and intelligence.

According to the definition of the World Federation of Medical Education (WFME), postgraduate medical education is the phase of medical training during which medical doctors gain experience after completion their basic medical qualification. This professional training phase is carried out in accordance with specific rules and instructions. Postgraduate medical education includes preparation for certification and/or licensure, industrial/professional training, specialization and narrow specialization, as well as other formalized training programs aimed at development of certain expert functions. Postgraduate medical education includes preparation for official registration, industrial / professional training, specialization and narrow specialization, as well as other formalized training programs appropriate to the performance of certain expert functions. According to the WFME definition, CPD refers to medical doctors training, which begins after their completion of basic medical education and postgraduate training, and continues thereafter throughout the professional life of each medical doctor.

Modern medicine is advancing at an extremely rapid pace, and society has begun to make higher demands on practitioners' ability to prove their compliance with accepted professional standards. With that end in view, in many countries of the world medical doctors are required to participate in lifelong learning programs that are based on two key aspects – a) maintaining the level of professional expertise through lifelong learning and professional development, b) further testing of acquired skills and knowledge using different evaluation and feedback mechanisms (recertification or revalidation) [2].

The first attempts to introduce postgraduate training for medical doctors in Ukraine date back to the late 80s of the XIX century and are related to the activity of the Kharkiv Medical Society (1861), when in 1889 Professor V. Krylov organized Repeating and Demonstrative Courses in Bacteriology on the basis of the Pasteur Station and the Kharkiv Bacteriological Institute. Less than ten years later, in Kyiv, Professor V. Vysokovych also organized systematic courses in theoretical and practical Bacteriology in 1897 on the basis of the Bacteriological Institute, and in 1901 the first in the Russian Empire courses in Pathological Anatomy.

Thus, at the outset of postgraduate medical education, stood scientists of medical faculties of the Kharkiv and Kyiv universities, however, the establishment of a specialized educational establishment — at present Shupyk National Medical Academy of Postgraduate Education became possible only during the Ukrainian statehood (1917-1919), during the revival of Ukrainian education, science and culture.

The creation of such a specialized institution was attributed to socio-political processes that took place in Ukraine during 1917–1918. This short historical period was marked by the revival of Ukrainian culture and education, including medical education. On October 5, 1917, the Ukrainian People's University was founded in Kyiv as the initial form of laying the foundations of the national Ukrainian higher school, including its medical faculty, which coexisted with the medical faculty of St. Volodymyr's University, in November 1918 the first and new for Ukraine (in St. Petersburg in 1885) the type of higher educational institution was created — the Clinical Institute of Advanced Training for Medical Doctors (hereinafter — the Institute).

It is significant that the at the origins of its creation were the medical community — the Trade Union of Kyiv Doctors, whose leading representatives, graduates of the Medical Faculty of St. Volodymyr University M. Levitsky, O. Lazariev, E. Sklowsky, G. Bykhovskyi, I. Frumin and others became the founders of a new type of establishment and its first professors.

The mission of the establishment was clearly defined in its first Statute: "1) The vision of the Clinical Institute: Clinical Institute of the Kyiv Union of Doctors is a research & training establishment, the purpose of which is medical specialty training in practical and theoretical medicine for medical doctors, organizing repeated courses aimed at supplementing and refreshing medical doctors' knowledge, and finally, organizing research work for medical doctors in their chosen fields"[3].

According to archival materials, in May 1918 at the general meeting of the Union of Kyiv Doctors, on behalf
of one of the city patrons N. Uvarova, doctor M. Kiselevich proposed “to transfer the building of the liquidated Consolidated Red Cross Infirmary named after F. Tereshchenko at the corner of Bibikovsky Boulevard and Tereshchenko Street, 13/7, together with some medical supplies and household equipment for the use by the Clinical Institute”, which was the beginning of the creation of the Institute training venue [4].

Professor M. Levitsky (1918–1922) became the first Chairman of the Board. Among the main tasks of the Institute, Professor M. Levitsky defined: “... training medical doctors in the field of theoretical and practical medicine, replenishing and refreshing knowledge of young medical doctors, to achieve this goal periodic repeated courses by all specialties are organized, as well as practical scientific work is conducted, it results in improving medical care for the broad population of Kyiv and its outskirts...”[4].

At the beginning of its activity training process for medical doctors at the Clinical Institute involved practical work in medical institutions and evening lectures, systematic classes began in the autumn semester of 1920, when 117 medical doctors became the first learners of “newly opened repetitive courses”.

During 1921–1929, well-known scientists worked for the Institute: Professors S. Stavraki (1921), O. Lurie (1921), O. Bernstein (1921), G. Bykhovsky (1922), I. Titov (1922), B. Mankovsky (1923), I. Frumin (1926), I. Zalkind (1927), A. Chaika (1929).

Summing up the Institute’s achievements for the first 10 years of its activity, noting its role and place in the health care system and outlining the perspective, its Director Professor O. Bernstein in 1928 emphasized: “... among the devastation, hunger, epidemics in the first days of the revolutionary era, this cultural center was created – one of the stages of Soviet medicine development. In 10 years the Institute became a large research & training institution, which strengthened the knowledge of more than 2,500 medical doctors, which was more than 1/4 of all medical doctors in Ukraine...”[5].

The beginning of the 1930s was marked by the completion of a radical reorganization of the higher medical school of Ukraine. According to the new Statute (1931), the duties of learners were defined for the first time: “After graduation all learners of institutes of advanced training were obliged to work in positions assigned by the NCHC or the USSR and the most powerful educational institu-

During the Second World War, the names of the Chief Therapist of the North Caucasus and the I Ukrainian Fronts and the Head of the Department of Therapy Professor V. Vasylenko, the Chief Surgeon of the Evacuation Center of the First Ukrainian Front, Major General of the Medical Service and the Head of the Department of Urology, Professor A. Chaika and many others went down in history.

After the liberation of Kyiv, the Institute resumed its work according to the Resolution of the Government of Ukraine dated November 18, 1943. The first departments (of Surgery, Neurosurgery, Orthopedics and Traumatology) began operating in 1944 on the basis of the former 408th District Military Hospital and some medical institutions [7].

The first directors of the post-war Institute (Ya. Okhrimenko, 1943–1944; V. Komisarenko, 1944; I. Kalchenko, 1944–1957) underwent all the difficulties of the reconstruction period while creating training capacity and physical infrastructure for the renewal of pre-war departments and creation of new ones. In this matter the Institute received considerable support from the Kyiv Regional Hospital, which in 1944 was approved by the People’s Commissariat of Health of the USSR to be the Institute’s training facility and which housed the vast majority of clinical and some theoretical departments.

According to the Order of the People’s Commissariat of Health of the USSR dated March 21, 1944, the medical and sanitary-hygienic faculties were restored, and in 1945 the planned training for specialists in the system of the Ministry of Health began. During this period, Major General L. Maslov, Professor A. Kryuchynsky, Professor O. Arutunov, Associate Professor S. Ivanov, Professor M. Amosov worked for the Institute (1955–1970). In 1953, the qualitative and quantitative membership of the departments was replenished thanks to joining Kyiv Institute for Advanced Training of Pharmacists. 1957–1959 (the Director Associate Professor V. Bratus) were marked by opening of the departments of Medical Radiology (1957, Professor O. Gorodetsky), Therapy № 2 (1958, Professor I. Lerner) and Pediatrics № 2 (1959, Professor E. Gorodetska) [7].

In the late 1950s, the Institute was headed by Professor M. Umovist, who held this position for 25 years (1959–1984). This period was marked by important events in the life of the Institute, which left an imprint on all its further activity. They are related, firstly, with a significant increase in the number of departments to meet the needs of practical health care, which since the early 60’s has taken the direction in expanding, improving and enhancing the specialized care quality. Second, from 1965 onwards for more than a quarter of a century (until 1991), the Institute was subordinate to the Ministry of Health of the USSR, which gave it a new “international” status, as learners came from all the republics of the USSR, although medical doctors from Ukraine always accounted for almost half of the entire contingent of learners.

By 1991, the Institute became one of the largest in the USSR and the most powerful educational institu-
tions of this type in Ukraine. If in the first postwar year it employed only 68 research & academic staff members, including 19 professors, 20 associate professors and 29 assistants, in 2013 the staff consisted of more than 1,600 employees, among them more than 820 research & academic staff members, 220 Doctors of Sciences and 496 Candidates of Sciences.

A new period in the Institute activity began in October, 1991 (since 1984 the Rector – Professor V. Gyrin). Under the new conditions that coincided with beginning of the medical education reform in Ukraine, the Institute took a priority position in the field of postgraduate training and became a training center of the Ministry of Health of Ukraine in postgraduate settings.

According to the Concept of the mentioned reform, aimed at achieving the level of training for medical doctors as in the most developed countries, in 1992 new forms of postgraduate training for medical doctors and pharmacists were introduced, in particular, pre-certification courses, full-time and part-time training for interns, training courses by a number of specialties for administrative, research & academic staff members of institutes and faculties of advanced training for physicians of medical higher education institutions.

The new requirements set by the Concept of Reforming Higher and Postgraduate Medical Education, health care demands and emergence of new research directions had a significant impact on the departments’ number and quality structure. The Institute acquired a new status after the Cabinet of Ministers of Ukraine issued the Resolution “On the Establishment of the Kyiv Medical Academy of Postgraduate Education” dated May 13, 1996, according to which a new type of education establishment of higher (IV) level of accreditation was created on its basis, the only medical academy of postgraduate education in Ukraine for that time.

In commemoration of the 80th anniversary of the Academy, according to the Resolution of the Cabinet of Ministers of Ukraine № 513 of April 20, 1998 “On Perpetuation of the Memory of P. Shupyk”, the establishment was named after a prominent statesman and scientist Professor Platon Lukych Shupyk (1907 -1986), who held the position of the Minister of Health of Ukraine twice (1952-1954, 1956-1969), made a significant contribution to the development of educational, research and material capacity of the Academy, and for 14 years (1965-1979) headed the Department of Social Medicine and Health Care (the Dean – V. Trokhymchuk), the Faculty of Advanced Training for Physicians of Medical & Preventive and Pharmaceutical Sciences (the Dean – S. Kushnirenko), Pediatric (the Dean – M. Markov), Obstetrics & Gynecology (the Director – L. Suslikova), 5 faculties: Surgical (the Dean – V. Shuba), Therapeutic (the Dean – S. Kushnirenko), Pediatric (the Dean – M. Markov), Medical & Preventive and Pharmaceutical (the Dean – V. Trokhymchuk), the Faculty of Advanced Training for Research & Academic Staff (the Dean – L. Babintseva), which unite 81 departments, scientific library, 4 centers (the Educational & Methodological Center of Distance Education, the Research Center, the Stomatological Training & Teaching Center, the Center of Simulation Training Methods and the Division of...
Advanced Training by the Specialty “Stomatology” for Junior Medical Specialists.

The Academy is the leading center in Ukraine in postgraduate settings for teaching & methodological work for medical doctors and pharmacists, which is entrusted by the Ministry of Health of Ukraine to develop the most standard training programs for specialization, and internship, computer attestation programs used by all institutions and faculties of postgraduate education.

Every year the Academy develops and updates more than 100 curricula and programs of training courses, publishes more than 60 educational & methodical publications (textbooks, training manuals, reference books) and conducts more than 1.5 thousand training courses for more than 3 thousand interns and more than 25 thousand medical doctors and pharmacists.

The Academy scientists’ research developments are appreciated both in Ukraine and in the world. Research outcomes by the Academy research & academic staff members for the last twenty years have been reflected in more than 500 monographs, 130 textbooks, 600 manuals, 190 reference books, 950 methodical recommendations and information letters, 640 patents. Over the past 35 years, the Academy scientists have received more than 560 copyright certificates for inventions, some of which are patented in the United States, Italy and other countries [7].

One of the priorities of the Academy is the continuity of scientific knowledge. Currently, the Academy has 11 Specialized Academic Councils for the defense of Doctor of Sciences and Doctor of Philosophy theses by 17 specialties, namely: Neurological Disorders (Professor Yu. Golovchenko); Obstetrics and Gynecology, Anesthesiology and Intensive Care (Corresponding Member of the National Academy of Medical Sciences of Ukraine, Professor Yu. Vdovychenko); Forensic Medicine, Skin and Sexually Transmitted Diseases, Clinical and Laboratory Diagnostics (Professor S. Vozianov); Drug Technology and Organization of Pharmaceutical Business and Forensic Pharmacy, Pharmaceutical Chemistry and Pharmacognosy (Professor L. Davtian); Ophthalmology (Professor S. Rykov); Internal Medicine, General Practice – Family Medicine (Professor O. Shekera); Social Medicine (Academician of the National Academy of Medical Sciences of Ukraine, Professor Yu. Voronenko); Surgery (Professor G. Kozynets); Stomatology (Professor O. Pavlenko); Cardiology, Medical Rehabilitation, Physiotherapy and Balneology, Medical and Biological Informatics and Cybernetics (Professor O. Mintsar); Radiation Diagnostics and Radiation Therapy (Professor T. Babkina).

NMAPE is a co-founder of dozens of scientific and scientific & practical publications, most of which are included to the List of Scientific Professional Publications of Ukraine. In 2001, NMAPE was the first institution of higher medical education in Ukraine to become a collective member of the International Personnel Academy (UNESCO). In 2006, the Academy was included in the registers of four US organizations: Standard Industrial Classification (SIC), Data Universal Numbering System (DUNS), Employer Identification Number (EIN), NATO Commercial and Government Entity (NATO CAGE) and Central Credit Register (CCR). This gives the Academy the opportunity to be a recipient for grants from the US Congress and the US National Institutes of Health. Since 2008 NMAPE has been a collective member of the European Academy of Natural Sciences. A significant event was signing in 2016 a cooperation agreement between NMAPE and the leader of the European medical educational Karolinska Institutet (Sweden). Since 2017, the Academy has been a member of the Magna Charta Universitatum. In 2018, the Academy became a member of the Organisation for PhD Education in Biomedicine and Health Sciences in the European System (ORPHEUS) and received the Recognized for Excellence 5 Stars certificate in the EFQM excellence system.

Awarding honorary titles (Doctor Honoris Causa and Professor Honoris Causa) to famous world scientists is traditionally practised. Doctors Honoris Causa of the Academy are Professor Theodor Helbrugge (Germany), Professor Albert Schinzel (Switzerland), Professors Honoris Causa are the Alternative Nobel Prize laureate George Vitulkas (Greece), Professor Hubertus von Foss (Germany), Professor Kitbor Weiss (Austria), Professor Maciej Smetanski (Poland). The Academy is a co-organizer of the Association “Medical Informatics” with offices in Canada, USA, Germany, Vietnam, China, Bulgaria [5].

Today NMAPE has taken the next step in the second century of its existence. Prospects for the development of NMAPE are defined in the basic documents: Strategy and Development Program, and the main strategic task is to form a model of NMAPE based on combining education, research, medical practice and innovation, integrating into international research and educational space and carrying out the necessary preparatory activities for obtaining the status of a research university by NMAPE.

At all stages of the Academy's activity, research & academic staff has made a significant contribution to the treasury of Ukrainian medicine and education, thereby helping health care and higher medical education reforming in Ukraine.

Conclusions

The introduction of postgraduate training for doctors and pharmacists in Ukraine is studied on the example of more than 100 years of NMAPE activity and it allows to state that on the basis of combination of education, research, medical practice and innovations in Ukraine, the center has become an example to follow and a model of educational & methodological work in postgraduate medical and pharmaceutical education settings.

Conflicts of interests. Authors declare the absence of any conflicts of interests and their own financial interest that might be construed to influence the results or interpretation of their manuscript.
У статті простежено запровадження післядипломної освіти в Україні. Наразі розвиток сучасної медицини відбувається надзвичайно швидкими темпами, а навички та знання лікарів швидко застаються, звідси здійснюється важливий процес підвищення кваліфікації, що відбувається в подальшому протягом професійного життя кожного лікаря.

Мета: дослідити розвиток післядипломної та безперервної освіти в Україні на прикладі проведення національної установи післядипломної освіти – Національної медичної академії післядипломної освіти імені П. Л. Шупика.

Загальні положення. Ключові слова: післядипломна медична освіта, безперервний професійний розвиток, навчальна програма в рамках післядипломної медичної освіти, підготовка до сертифікації, освіта в Україні на прикладі НМАПО.

Резюме. Актуальність. Експерти ВОЗ зазначають, що сьогодні в Європі не існує загальнозвизнаного підходу до безперервної медичної освіти, проте існує загальна думка, що якість медичних послуг безпосередньо залежить від постійного розвитку певних експертних функцій. Будучи частиною безперервної медичної освіти, післядипломна освіта включається в безперервну медичну освіту (БМО) або безперервний професійний розвиток (БПР) через перейня з визначенням WFME, БПР стосується підготовки лікарів, яка починається після закінчення базової освіти.

Результати. Згідно з визначенням, використовуються загальні (універсальний) метод, історичний та логічний методи. Результати. Згідно з визначенням Всесвітньої федеральні медичної освіти (WFME), післядипломна медична освіта – це фаза медичної освіти, на якій лікарі розвивають свої компетенції після завершення базової медичної кваліфікації. Цей етап навчання проводиться відповідно до певних правил та інструкцій.

Висновки. Загальновизнаний підхід до безперервної медичної освіти є ключовим напрямом підвищення кваліфікації лікарів. Окрім цього, важливою є створення ефективної системи акредитації, що гарантує якість освіти.

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"коллективная ответственность" всех участников медицинского образования. **Цель:** исследовать развитие системы последипломного и непрерывного образования в Украине на примере ведущего национального учреждения последипломного образования — Национальной медицинской академии последипломного образования имени П. Л. Шупика (НМА-ПО). **Материалы и методы.** Архивные материалы. В исследовании мы использовали общий (универсальный) метод, исторический и логический методы. **Результаты.** Согласно определению Всемирной федерации медицинского образования (WFME), последипломное медицинское образование — это фаза медицинского образования, на которой врачи развивают свои компетенции после завершения базовой медицинской квалификации. Этот этап обучения проводится в соответствии с определенными правилами и инструкциями. Последипломное медицинское образование включает подготовку к сертификации и/или лицензирования, производственную/профессиональную подготовку, специализацию и узкую специализацию, а также другие формализованные учебные программы для развития определенных экспертных функций. Будучи частью непрерывного медицинского образования, последипломное образование включается в непрерывное медицинское образование (НМО) или непрерывное профессиональное развитие (НПР). Согласно определению WFME, НПР касается подготовки врачей, которая начинается после окончания базового и последипломного медицинского образования и продолжается в дальнейшем в течение профессиональной жизни каждого врача. Сейчас развитие современной медицины происходит чрезвычайно быстро, и навыки и знания врачей быстро устаревают. В статье прослеживается внедрение последипломной медицинской подготовки в Украине на примере НМАПО. **Выводы.** Внедрение последипломной подготовки врачей в Украине изучается на примере более 100-летней деятельности НМАПО, что позволяет утверждать, что сочетание исследований и инноваций, обучения и медицинской практики позволило учебному заведению стать примером для подражания в учебно-методической деятельности в условиях последипломного медицинского и фармацевтического образования. **Ключевые слова:** НМАПО; непрерывное профессиональное развитие; система последипломного медицинского образования