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# A MODERN MODEL OF MASTERS' IN DENTISTRY PROFESSIONAL TRAINING

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# СУЧАСНА МОДЕЛЬ ПРОФЕСІЙНОЇ ПІДГОТОВКИ МАГІСТРІВ-СТОМАТОЛОГІВ

**Abstract.** The article reveals that the system of masters' in dentistry professional training in Ukraine does not sufficiently meet the international requirements and education levels regulated by the National Qualifications Framework. At the same time, the updated field standard of higher education in the specialty "Dentistry" (2019) contains a number of contradictory conditions, in particular: the availability of educational-professional training program and educational-scientific (optional for universities) one with different number of credits (300 and 360 correspondingly). The necessity to implement the levels of junior bachelor (dentist's assistant) and bachelor (odontologist-hygienist) into the model of masters' in dentistry professional training process was substantiated. This allows students of higher dental education institutions to start practical activity from the first year of studying, which can encourage them to increase the level of their professional competence and restore the preventive component of dental care to the population of Ukraine. It has been proved the expediency to prolong the period of masters' in dentistry professional training to 6 years with the last year of practically oriented study to ensure compliance of dental education in Ukraine with the requirements of the World Federation for Medical Education in terms of the amount of academic load and the need to strengthen its practical component.

A modern model of masters' in dentisry professional training has been developed in accordance with the National Qualifications Framework and the requirements of the World Federation of Medical Education.

**Key words:** higher medical education; masters' in dentistry professional training; model of masters' in dentistry professional training; reformation of dental education; field education standard.

Анотація. У статті доведено, що система професійної підготовки магістрів-стоматологів в Україні не відповідає достатньою мірою міжнародним вимогам і регламентованим Національною рамкою кваліфікацій рівням освіти. Водночас оновлений галузевий стандарт вищої освіти за спеціальністю «Стоматологія» (2019) містить низку суперечливих положень, зокрема: наявність освітньо-професійної і освітньо-наукової (на вибір ЗВО) програм підготовки з різним об'ємом кредитів (300 і 360 відповідно).

Обґрунтовано необхідність імплементації у модель процесу професійної підготовки магістрів-стоматологів рівнів молодшого бакалавра — асистента стоматолога, бакалавра — одонтолога-гігієніста і магістра — лікаря-стоматолога. Це дасть змогу студентам закладів вищої стоматологічної освіти розпочати практичну діяльність з молодших курсів, що сприятиме підвищенню рівня їх професійної компетентності і відновленню профілактичної складової стоматологічної допомоги населенню України. Для забезпечення відповідності стоматологічної освіти в Україні вимогам ВФМО у частині обсягу навчального навантаження і необхідності посилити її практичну складову доведено доцільність продовжити термін професійної підготовки магістрів до 6 років з останнім — практично-орієнтованим роком навчання.

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## КОМПЕТЕНТНІСНИЙ ПІДХІД У ВИЩІЙ МЕДИЧНІЙ ОСВІТІ

Розроблена модель професійної підготовки магістрів-стоматологів відповідно до Національної рамки кваліфікацій і вимог Всесвітньої федерації медичної освіти.

**Ключові слова**: вища медична освіта; професійна підготовка магістрів-стоматологів; модель професійної підготовки магістрів-стоматологів; реформування стоматологічної освіти; галузевий освітній стандарт.

**Introduction.** In the context of active changes in Ukrainian society, one of its important components is health care system reforming as a basic component of providing the nation's health. Ukrainian medical field requires modernization according to Ukraine's intention to integrate into the international educational and professional environment. This task can be fulfilled only if all elements of the system in the field are reorganized, one of them is higher medical and its component – dental education.

It has been defined that the system of professional dentists' training in Ukraine is not perfect and remains controversial. What kind of work can a graduate from the National Dental Faculty of medical university perform, and according to the Law on Higher Education [2] – Master in Dentistry? For a long time, graduates from dental faculties work as dentists' assistants in private clinics, where the quality of service does not satisfy the patient. However, the NQF [4] provides specific educational levels of specialist's training according to the relevant competencies, where the specified position of a dentist's assistant is seen in the lower, initial, career paths.

**The aim** – to develop a modern model of masters' in dentistry professional training in accordance with the National Qualifications Framework (NQR) and requirements of the World Federation for Medical Education (WFME).

**Theoretical framework.** The solution to the problem of the national health care system modernization and the level of medical care improvement, obviously, can be started with the good quality education and provision of the country with competent doctors. The first step on this path was the updating of the educational field standard [1], which overtook (in 3 years!) the transition to masters' training in the medical education system, particularly in the field of dentistry. But expectations for its compliance with WFME requirements were not justified. The educational field standard was adopted in June 2019 after two years (!) of discussions at the level of Ministry of Education and Science of Ukraine, Ministry of Health of Ukraine, and Committee on Public Health of Verkhovna Rada. It contains a number of controversial items that can not improve the quality of dental education. In particular, the availability of educational and professional and educational and scientific (optional from External admission testing) training programs with different number of credits (300 and 360), and as a result obtaining the same master's degree, raises questions about their equivalence and, in general, the acceptability of such compromises. At the same time, in the leading foreign medical universities, the master's program is filled with the relevant content such as performing the research work and it involves at least 2 years of advanced training.

It is necessary to mention that compliance with the criteria of the World Federation for Medical Education (WFME) [6] provides unification on basic professional training of doctors, including curricula, programs to provide students' education and doctors' employment in any country of the world. However, WFME allows up to 40 % for accommodation of institutional, regional and national characteristics. This helps preserve the best achievements of the national medical school. It is important to emphasize that Ukrainian dental education traditionally provides more substantive content comparing to foreign countries.

Graduates from dental faculties of Ukrainian medical universities are not just dentists in the narrow meaning of this word, but they study to treat diseases of the oral tissues and organs in the maxillofacial region. Besides, the diploma of our new qualified dentist contains the first word – a doctor which reveals all the responsibility and profound sense of this profession. The results of conducting survey among graduates, representatives of the educational community and employers, showed that they were very concerned about the low level of students' practical training [3]. Therefore, the urgent need of medical education reform is implementing the principles of the Bologna Process into Ukrainian higher education system as a key to improving the quality of education and international integration. In order to fulfill this task, it is necessary:

- to improve curricula and syllabuses in the way of reduction the training load to 6–7 disciplines per term (currently 10–13) as required by the EU Education Quality Control Commission (a student receives intensive information flows that take more time for reading, analysis and reinterpretation of data from several scientific sources on each topic). Obviously, it induces an extension of the term of training at least for one year of study;
- to provide 6 terms of compulsory professional
   English studying and promote optional
   English

learning during the whole period of studying in accordance with the requirements of field education standard [1];

- the last year of study should be more practically oriented in order to reform the current tendency of separating the educational process from the medical practice. The system of sequential patients' treatment by students is not applied. Besides, dental medical institutions, which serve the bases for dental faculties, are more involved in commercial activities;
- mandatory providing of an access to international scientific bases, computerization and stable access to the Internet in universities;
- to master the researching skills for own constantprofessional development and the possibility of sharing experience with colleagues;
- —to ensure the implementation of academic mobility principle, as integration into international environment is impossible without it. Thus, the students exchange programs (a term duration) should be carried out on an ongoing basis;
- to solve the problem of personnel support in the educational process is possible by improving the image of university teacher and encouraging academic mobility.

Teachers need to be retrained to meet modern requirements. They are required to know foreign languages. Globalization and internationalization of modern society caused transformational changes in medical and particularly dental education. Therefore main purpose of a new European process is to create conditions that support the formation of future dentists' professional competence. Foreign language competence is considered one of the important components of it as it provides the opportunity to receive more scientific information especially in the context of medical emergencies. Future medical specialists, regardless their specialties, must be able to deal with any medical emergencies that can happen to any person at any time and any place. In order to cope with this challenging task, future dentists should learn the procedure how to provide the first aid for different medical emergencies. Since they can occur in any country, dentists have to be ready to give instructions in foreign language [5]. Mentioned above causes the strong need to provide the course on "Professional English" throughout the whole period of masters' in dentistry studying. Modern paradigm of medical education also requires dentists improving IT skills in addition to their high professional level; moreover, regular traineeships should be provided at the universities' expenses that creates extra motivation and responsibility. A teacher, who has up-to-date medical information and is able to apply it in practice, is interesting for a student. Otherwise, young people attend fashion lectures and trainings which faithfulness and quality remains doubtful. This issue is necessary to be taken under control of the government.

To improve the quality of future dentists' clinical training, it is essential to immerse them in practical professional activity at the beginning of his studies at the university. Therefore, it is necessary to find a way during the training to provide students with the opportunity to get as close as possible to the patient and clinical work. Currently, it is almost impossible to solve this problem only in the conditions of a university base. However, the situation might be significantly improved with the introduction of a level [4] model of dental education, which allows future professionals to pass the stages of professional development first as a dentist's assistant, then hygienist on the basis of three-year training in dental clinics outside the university. Nowadays, such education is performed by institutes for training dental assistants and hygienists graduated from 14 medical schools. At the same time, this kind of education can be also provided by universities at higher level with introducing the knowledge of basic disciplines and medical emergencies. The next level, which is based on four-year study, after mastering the knowledge and skills of major dental diseases, provides a competent approach to the treatment of tooth tissues and diagnosis of pathological conditions. At this stage, a future dentist has to prove a bachelor's degree and be able to realize this capacity in a professional environment. Childcare and social institutions require such professionals. Mentioned above points out that the level system of dentists' training in accordance with the National Qualifications Framework from the junior bachelor dentist's assistant and bachelor – odontologisthygienist to the master will encourage the restoration of preventive oral health care to the population of Ukraine and increase the level of health. At the same time, it is important to prepare the legal framework of dental specialty "odonthologist-hygienist" and to add it to dental specialties' classifier. Moreover, it is necessary to define the functional duties of this specialty as the basic unit of primary and extremely important element - preventive care. The analysis of international and own scientific-pedagogical experience, normative legal base that regulates the professional training of masters in dentistry in Ukraine, taking into account its depth and importance for preserving the health of the nation, gives grounds to offer the following model of masters' in dentistry training presented in Figure 1:

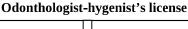
Junior Bachelor – 6 level National Qualifications Framework (NQR) of Ukraine Professionally qualified level – "dentist's assistant"

3 years of theoretical and practical training – 180 credits ECTS according to successfully passed STEP 1 i OSCI 1

License of dentist's assistance



Bachalor – 7 level National Qualifications Framework of Ukraine Professionally qualified level – "odonthologist-hygenist"
 4 years of theoretical and practical training – 240 credits ECTS according to successfully passed licensing exams similar to STEPs i OSCI



**Master's degree in the field of dentistry** – 8 **level** National Qualifications Framework of Ukraine

Professionally qualified level – "general dentist" 6 years of theoretical and practical training – 360 credits ECTS, master's thesis defence, according to successfully passed STEP 2 i OSCI 2.

**Dentist's license** 

Fig. 1. Model of masters' in dentistry training.

In terms of medical reform implementation in Ukraine, patients who require dental care are the most affected on account of extremely expensive dental treatment. Thus, it destroys completely the intentions to restore prophylactic field at the level of children's institutions and manufacturers. Obviously, the health of a nation depends on odontogenic diseases. Under such circumstances, dental education reform is inevitable. The state needs competent dentists. Most head of the dental departments from Ukrainian medical universities including members of Ukrainian and European Association of maxillofacial surgeons, Ukrainian Association of dental education participated in briefing which took place 23.10.2017 at the Basic Department of Surgical Dentistry and Oral and

Maxillofacial Surgery of O. Bohomolets National Medical Univesity (Head – Corresponding Member of the National Academy of Medical Sciences of Ukraine Professor V. Malanchuk), where mentioned above approaches to dental education reform have been endorsed. This initiative was supported by the National Academy of Medical Sciences, the professional community of the Dental Association of Ukraine and Ukrainian Association of Dental Education.

**Conclusions and Prospects for Research.** A modern model of masters' in dentistry professional training has been developed in accordance with the NQR and the requirements of the WFME. Further researches will be concerned of practical implementation of presented model into educational process of medical universities.

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