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QUALITY OF HIGHER MEDICAL EDUCATION IN GERMANY: REALITIES AND PECULIARITIES

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ЯКІСТЬ ВИЩОЇ МЕДИЧНОЇ ОСВІТИ В НІМЕЧЧИНІ: РЕАЛІЇ ТА ОСОБЛИВОСТІ

У статті проаналізовано рівень підготовки майбутніх лікарів у Німеччині, який базується на науковій основі та гарантованій якості підготовки фахівців медицини. Обґрунтовано, що медичне навчання закладає необхідний фундамент для медичної професії в середовищі, яке характеризується швидким науковим прогресом. Усвідомлення неможливості оптимальної реалізації визначених напрямів удосконалення системи професійної підготовки майбутніх лікарів в умовах традиційних навчальних планів, незважаючи на їх оновлення відповідно до нового законодавства,

запропоновано огляд розробки й паралельної реалізації експериментальних навчальних планів, що здійснюється владою федеральної землі, в якій знаходиться ЗВО. Обґрунтовано цілі реформ та очікуваних результатів якісного удосконалення медичної освіти, врегулювання можливостей переходу від експериментального до традиційного навчального плану з урахуванням вимог післядипломної освіти, зарахування кількісних і якісних показників підготовки студентів, визначено об'єктивні оцінки ефективності навчальних планів у процесі апробації та реалізації кінцевих результатів. Пояснено, що до медичної кваліфікації належать як формування навичок і умінь в області наукових досліджень, так і підготовка персоналу для викладання, наукових розвідок. Професорсько-викладацький склад забезпечує викладання базових предметів та клінічних дисциплін й викладання предметів до клінічного та клінічного циклу забезпечують штатні викладачі. Якісна підготовка фахівця має відповідати стандартам вищої освіти, академічним вимогам, конституційному праву на медичне обслуговування.

Ключові слова: *якість медичної освіти; система професійної підготовки; майбутні лікарі; навчальний план.*

QUALITY OF HIGHER MEDICAL EDUCATION IN GERMANY: REALITIES AND PECULIARITIES

The article analyzes the level of future doctors' training in Germany, which is based on a scientific basis and guarantees quality of medical professionals' preparation. It is substantiated that medical education is the necessary foundation for the medical profession in an environment characterized by rapid scientific progress. Awareness of the impossibility of optimal implementation of certain areas of improvement in the system of professional training for future doctors in the context of traditional curricula, despite their updating in accordance with new legislation, offers a review of development and parallel implementation of experimental curricula by the federal state. It has been emphasized the substantiation of the purposes of reforms and expected results of qualitative improvement of medical education, regulation of possibilities under transition from experimental to traditional curriculum taking into account requirements of postgraduate education, enrollment of quantitative and qualitative indicators of preparation of students, objective estimations of efficiency of curricula in the process of testing and implementation of the final results. Medical qualifications include both the formation of skills and abilities in the field of scientific research and the training of personnel for teaching and scientific research. The teaching staff provides the academic process for basic subjects and clinical disciplines and the teaching of subjects for the clinical cycle is provided by full-time teachers. High-quality specialist training must meet the standards of higher education, academic requirements, and the constitutional right to health care.

Key words: *quality of medical education; system of professional training; future doctors; curriculum; German.*

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Introduction

Optimization of research in the field of improving the professional training of future specialists and professional training in general pose challenges to the educational system, which require first of all to address both the historical and pedagogical heritage and the study of foreign experience on many issues. Such an analysis will allow to identify the advantages and avoid miscalculations and will promote the further development of quality vocational education. An important component of the domestic educational system is higher medical education, aimed at high-quality reproduction of human resources in the field of health care in Ukraine. The main directions of reorganization of the domestic system of higher medical education are determined by domestic processes, and the choice of European vision, and the benefits of global development. Such aspects include bringing the structure, content and quality of medical education in line with both state needs and the requirements of the health care system of international standards. Modernization of the domestic health care system and, consequently, medical education is complex and controversial (Shulha et al., 2020, p. 57; Vykhrushch et al., 2020, p. 278). It has undergone many changes, reforms, reorganizations, which were caused by internal and external factors. The works of M. Pirogov, V. Razumovsky, and V. Florinsky made a significant contribution to the development of higher medical education in Ukraine. Some issues of development of higher medical education were studied by A. Bourke (1997), B. O'Brien & K. Forrest (O'Brien et al., 2018), J. Powell & L. Graf (Powell et al., 2012), O. Winkler & R. Sackmann (2020), H. Ertl (2005), J. Huisman, L. Meek and F. Wood (2007). The relevance of retrospective assessment is due to certain factors, as current situation places new demands on physicians in particular and medical staff of any level in general, and a systematic assessment of the experience in providing quality medical education will facilitate effective management decisions.

Theoretical framework

Nowadays national higher medical education is marked by intensive reform processes, which determine the relevance of research on the functioning and reform of the system of professional training for medical personnel in developed countries of the world and Europe. References to experience in this area from leading countries are frequent. Thus, the historical aspect and prospects for the development of medical education in Canada aroused interest of T. Yeroshkina (Yeroshkina & Derevyanko, 2018); professional training of nurses in Ca-

nadian universities became the topic of the thesis of Yu. Lavrysh (2009); trends in the development of medical education in the Slovak Republic were analyzed by S. Andreychin (Andreychyn, 2006); the structure of professional training of future doctors, the peculiarities of state examinations in medical specialties in Germany and Austria were studied in the works of G. Klishch (Klishch, Fedchyshyn, & Yelagina, 2017), N. Kuchumova (2012); hence the peculiarities of the formation of higher medical education and the training of physicians in Great Britain were researched by I. Palamarenko (Palamarenko, 2014). The study of Germany's experience in the field of development, formation, current trends, the main achievements of the reform and modernization of higher medical education is particularly relevant nowadays. According to German historians of pedagogy G. Bühler (1999), G. Gebert (1994), S. Kliesch (1990), S. Schliesfer (2003), H. Shäfer (Schäfer, 1998), D. Scheffner (1999) with the change of generations in Germany not only the requirements for medical education were modified, but also educational standards, focused primarily on the formation of knowledge, skills and abilities in medical practice, which over time have become traditional ones.

In "Educational Reforms in German Medicine (Studienreform in der deutschen Medizin 1953–1959)" H. Shäfer analyzed the main problematic issues of improving the system of professional training of future doctors in Germany. The author was ready to solve the problem of such training, as he was included in the work of the commission for the reform of medicine. As a representative of the High Commission, while participating in the congresses of medical schools in Germany he proposed the core solutions to address this issue. H. Shäfer (Schäfer, 1998, p. 49) pointed out the unpreparedness of Germany in the 50s for a constructive dialogue and interaction of the main subjects of higher medical education in the country. The author proposed a comparative aspect of the German system with the peculiarities of higher medical education in the United States in the postwar period and pointed to the lack of intensity of the clinical and practical component and maladaptation to the legal framework.

Examining the development of medical education in Germany, G. Gebert in his article "Reform of the Doctor's Professional Training" ("Die Reform der Ausbildung zum Arzt") suggested considering the peculiarities of the functioning and development of the system of medical training in Germany from another point of view. He drew attention to the principles of medical practice that correspond to traditional values and stressed the need for continuous self-improvement of the doctor in the new environment, when the rapid development of medical biological sciences, information technology, changes in the organization and functioning of health care. G. Gebert (1994) emphasized cooperation with other health professionals, recommended that the rights of patients should be taken into account, and emphasized the importance of undergraduate medical education as a prerequisite for obtaining good medical practice.

Another researcher S. Kliesch (1990) in his publication "The state of medical education in GDR" ("Zur Situation der Ärztlichen Ausbildung in BRD") described the content and organizational and methodological foundations of medical education in higher medical institutions in Germany and noted the importance of theoretical and practical training of a doctor who is able to perform their duties professionally, has the basics and methods of medical thinking, has a high level of knowledge, skills and abilities, able to implement the functions of the medical profession independently in society. The author focused on problematic issues, namely the lack of integration of natural, chemical and medical disciplines, the excessive theoretical orientation of the clinical stages of undergraduate training of future doctors, which, in turn, may reduce the motivation of medical students for the future profession (Kliesch, 1990, pp. 144–145).

Our interest was generated by G. Bühler's (1999) work "Medical Education and Reform in the Soviet Occupation Zone and the GDR (1945–1990)" ("Medizinstudium und Studienreform in der BRD und in der DDR (1945 bis 1990))" where the author analyzed the legislative regulations, curricula, level and main trends in the training of future doctors. He drew attention to the continuity of all stages of medical education, in accordance with the purpose and content, and pointed to the full control of public authorities over medical education, which, in turn, limited the academic rights and freedoms of universities and other higher education institutions (Bühler, 1999, p. 36).

In the article "Medical education reform in Germany – aspirations and hesitations" ("Die Reform des Medizinstudiums in Deutschland – Bestreben und Bedenken") D. Scheffner notes that during the 1960s and 1970s, about 200 concepts and proposals for the reform of higher medical school, and its legal framework was updated over the course of a century almost every three years. However, the optimal conditions for the implementation of the reform in practice were created only at the end of the twentieth century, due to the weakening of the centralized regulation of medical education. In his work the scientist hopes that higher medical schools in Germany, developing and implementing creative ideas and innovative approaches will contribute to the progress of the German higher medical education system, and thus the quality of the national health care system (Scheffner, 1999, pp. 10–13).

In the works mentioned above special emphasis is put on the practical activities of the teacher at the medical institution, because the quality of acquired professional competence of the medical students depends on the teacher's commitment, the use of different forms and methods of work. This raises questions about the assessment of the professional training of the teaching staff. The teachers themselves have sometimes a negative attitude to innovative evaluation of their work. An analysis of the experience of the German education system will be useful to study this problem.

Medical education in Germany, as in other European countries, has a well-organized health care structure. A peculiarity of the German system is a clear traditional heredity of treatment and a high level of health professionals' training. In the Netherlands, for example, or in the United Kingdom, health professionals practice exclusively in hospitals and are involved there in appropriate systems for providing quality services. The German health care system enables constant professional and scientific activity of a doctor and against this background ensures the quality of education and medical practice. Today we raise the issue of the quality of medical education and consider how the state ensures the quality of higher medical education, how higher education is funded according to the rating, how intermediate and final exams are conducted and the results of medical students who are responsible for medical training are evaluated, etc.

In Germany the practice-oriented vector of medical training prevails with a special emphasis on the use of the latest technologies in the educational process, the modern content of education and the compliance of teaching staff with modern world requirements for such training. State legislative and regulatory documents regulate the approaches and principles of the educational process in accordance with the traditions and experience in medical education, as well as the dynamic requirements of the health care system, technical capabilities of medical practice, improving the scientific base of medical science (Fedchyshyn & Bychok, 2017, p. 159).

Accordingly, higher medical institutions use official papers on the education of these territories. Modern processes in the field of medicine place new additional requirements in a globalized society. In addition to highly qualified professional theoretical and practical training, teachers have the condition to acquire computer technology skills, knowledge of foreign languages, etc. For example, at the Medical Faculty of the Humboldt University's of Berlin tradition is to award the best professors and lecturers based on the results of a student survey. The evaluation of the quality of the teaching staff is also determined by the scientific activity, in particular the amount of funding for research, which is allocated by interested organizations or enterprises, for example, drug development.

It is worth noting some innovations in the field of higher medical education in Germany, namely, the Law on Attestation of Physicians (2002), which specifies the goals of medical education, aimed at both physical health and mental & spiritual health. Of course, the main goal of medical education in any society remains common, we mean the practical training of a doctor capable of independent responsible professional activity, postgraduate education and continuing professional development. Such training is supported by the state and is carried out at the medical faculties of universities. Given the demographic changes in Germany, as well as epidemiological threats, new requirements are set for the quality of training of doctors and health workers. That is why certain hopes are placed on the non-state sector of medical education, but in compliance with all

standards, which caused a "struggle" for guarantees of a high level of medical care, regardless of the institutional and legal basis of education (Schliesfer, 2003).

Acquisition of medical education is regulated by the Regulations on licensing of doctors and dentists who are granted the admission to the medical (dental) profession. Medical education should provide the formation of basic knowledge, skills and abilities in all subjects necessary for effective comprehensive services. This is primarily knowledge of the structure and functions of the body in a state of norm and pathology; skills and abilities of diagnostic, therapeutic, rehabilitation, preventive activities; awareness of the socio-economic consequences of medical activities; possession of moral and ethical principles of medical activity; understanding the impact of family, environment, society on health, organization of health care, overcoming the consequences of the disease; skills of cooperation with other specialists and practical experience of interaction with patients and medical care based on an interdisciplinary approach. According to the data from 2014 about 3% of students receive education in non-state medical institutions in Germany. The Committee on Admission to Higher Education (Stiftung für Hochschulzulassung) determined 10.658 places for medical faculties and 2.119 for dental ones by state order for the 2014/2015 academic year.

In accordance with the EU Legislation on Medical Education in Germany, nearly 300 places were allocated for medical faculties and 40 places for dental faculties for non-state institutions. In recent years there has been an increase in the number of non-state institutions. The reasons for the establishment of such institutions are as follows: first, the effective operation of medical clinics contributes to the growth of the amount of those who wish to receive medical education; secondly, outside of large cities, the offers of non-state medical education institutions help to eliminate the shortage of doctors, especially in rural areas; third, non-state educational medical institutions are in demand among entrants who do not meet the final grade set by the Admissions Committee, and fourth, non-state medical institutions often offer students innovative curriculum concepts in line with the needs of health education reform.

The Association of Scholars has different motivations for the lack of physicians in some hospitals, as well as in rural areas, the Advisory Council welcomes the development of the health care system, but points out that the shortage of physicians is a distribution problem that can to be solved, first of all, at the expense of subsidy policy. As a result, some academic medical schools grant the status of university practice hospitals to rural or peripheral medical institutions. Admission to public schools depends on the final assessment of the applicant. In many cases, the authorization processes in the selection for universities change.

The Scientific Council welcomes all efforts in both the public and private sectors to select students for medical facilities, as there is a significant mismatch between supply and demand. Therefore, the Scientific Council recommended to use the procedure of selection to universities according to the target directions

of individuals for a certain medical profile. The need to reform medical education is also noted by the Scientific Council, which has recently made every effort to provide innovative approaches to the development of medical research. In particular, universities, together with other medical training institutions, are actively searching for new models of medical education and practice (Schliesfer, 2003).

Whereas the Scientific Council recognizes the significant potential contribution of non-state higher medical institutions to the format of innovation, namely the optimization of practical training of students (increase in the number of practical classes (45%), introduction of block practice, increase of sanitary service); reorganization of the educational process on the basis of interdisciplinary and problem-oriented approach; introduction of elective disciplines into the educational process; abolition of practical training after completion of undergraduate education (Arzt im Praktikum); introduction of general medicine to the list of compulsory and optional subjects during clinical and practical training.

Curricula for the training of doctors in Germany provide a patient-oriented vector of studying, which, in turn, is enhanced by clinical and practical classes (training at the patient's bedside). Such implementation and approaches to curricula are aimed at direct interaction of the doctor with the patient, observation, communication, care. Thus, in the process of communication and interaction with patients, future doctors develop a sense of responsibility for their professional activities, competence, the desire to enrich their knowledge and self-improvement. The curriculum intensifies the learning process by optimizing the environment, atmosphere and activation of independent learning activities of students. The main idea of improving the curriculum is the implementation of internationally recognized principles of constructive learning, i.e. contextuality, cumulativeness, interactivity, etc.

At the Medical Faculty of the Humboldt University of Berlin (Charite – Universitätsmedizin Berlin), which is a joint educational institution of the abovementioned university (Humboldt-Universität zu Berlin) and the Free University of Berlin (Freie Universität Berlin), the general goal is defined as training doctors to strengthen, maintain and restore health, well-being at the individual and social levels. The purpose is specified by realization of such tasks as formation of basic knowledge, abilities and skills in the field of family medicine; development of the ability to understand and take into account the interests and needs of the patient and his relatives in the process of practical professional activity; mastering the skills and willingness to make adequate medical decisions, taking into account ethical, legal, environmental, economic aspects; formation of skills of self-assessment, self-reflection and teamwork; development of scientific thinking and research skills; development of motivation and readiness for continuous professional development.

Medical qualifications include both the formation of skills and abilities in the field of scientific research and the personnel training for teaching and scientific research. The teaching staff provides the teaching of basic subjects of clinical disciplines and the teaching of subjects for the clinical cycle is provided by full-time teachers.

The aim of teaching these disciplines is to give medical students the knowledge of the real health needs of society and enrichment of opportunities and conditions for the formation of social, spiritual and moral aspects of their professional competence as one of the basic goals of medical education. For example, the course "History, Theory, Ethics of Medicine" aims to provide future physicians with knowledge of the historical processes of development and the current state of medical theory and practice, its moral and ethical aspects in their inseparable connection. Meanwhile, the purpose of its study is not only to acquaint future doctors with certain historical facts of medical science and practice or clearly defined moral canons of medicine, but to form the ability to orientate in the development, current state of medicine, its ethical principles and act accordingly. Basing on the historical examples and current ethical conflict situations medicine is revealed as a process where the formation of ethical and moral positions and beliefs of a doctor is a prerequisite for meeting society's expectations, ethical standards and their further enrichment and improvement (Nakhaieva et al., 2020, p. 28).

In the interests of ensuring a high level of quality of medical care at the university level the Scientific Council for Medical Education of Germany promotes the functioning of medical, pharmaceutical and dental schools, gymnasiums, colleges, which are guided by uniform requirements, criteria, tasks teaching.

Most medical schools in Germany have taken advantage of this opportunity and have been implementing alternative curricula since the 2003/2004 academic year, the main purpose of which is to test new ideas and identify opportunities and ways to improve the traditional system of higher medical education. These pathways were determined, first of all, in view of the main shortcomings of traditional curricula, which reflect an overly regulated system, and thus insufficient flexibility to adapt to the requirements of the XXI century. This is, in particular, a disciplinary model of organizing the content of education, which involves the consistent study of individual disciplines and is a significant obstacle to the rational systematization of knowledge. For example, the structure of the respiratory system is studied within the discipline "Anatomy" but the functions of these organs are studied later within the discipline of "Physiology", pathology of the respiratory system, their clinical symptoms and ways of therapy are learnt only after a few semesters, as well as the resulting essential distinction between preclinical and clinical stages.

Conclusions

Thus, the conceptual ideas for building alternative curricula were implementation of a competency-based approach where medical education should ensure the development of systematic professional thinking of students, primarily through a combination of theory and practice, interdisciplinary integration of educational content in thematic blocks; intensification of practical training in the process of direct interaction with patients and acquaintance of students from the first year of study with the problems of prevention, rehabilitation and care of patients with chronic diseases and objective psychosocial and economic aspects of further professional practice; individualization of education, in particular by reducing the normative component of the content of education on the basis of its integrated structuring and condensation and expanding the free space for development and implementation by students on the basis of thorough theoretical and practical training of their individual needs and interests; application of the principle of "learning spiral" as a methodological framework for the selection of content and technologies of education, which involves the gradual enrichment and deepening of students' knowledge with a shift of emphasis from theory to practice in proportion to the progress of their knowledge and skills.

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