
**TRAINING PUBLIC HEALTH PROFESSIONALS
IN THE SYSTEM OF POSTGRADUATE EDUCATION:
THE EXPERIENCE OF UKRAINE AND EU COUNTRIES**

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INTRODUCTION

Contemporary transformational processes in the field of healthcare require the state to seek new approaches to the development of human resources capable of effectively responding to global challenges and ensuring a high level of public health protection¹. In the context of the growing importance of preventive medicine, the digitalization of medical services and Ukraine's integration into the European educational and scientific space, particular attention must be paid to the advancement of postgraduate education for professionals in the field of public health. This segment of education ensures the continuity of professional development, the renewal of competencies, and the acquisition of skills necessary for decision-making at both state and local levels.

In Ukraine, the establishment of a public health system is taking place under conditions of political and socio-economic instability, the consequences of war, migration processes, and simultaneously within the framework of the country's strategic course towards European integration. These factors intensify the need for professionals capable of implementing modern approaches to population health management, preventing the spread of infectious diseases, coordinating intersectoral cooperation, and introducing innovative technologies into the healthcare system. Postgraduate education functions not only as a tool for qualification improvement but also as a mechanism for adapting specialists to the rapid changes in the field of public governance.

At the same time, the Ukrainian system of postgraduate training in public health faces a number of challenges. Among them are the absence of unified competency standards, insufficient resource capacity, limited integration of

¹ Line Miray Kazin Ystaas. The Impact of Transformational Leadership in the Nursing Work Environment and Patients' Outcomes: A Systematic Review. *Nurs Rep.* 2023 Sep 11;13(3):1271–1290. <https://doi.org/10.3390/nursrep13030108>

practice-oriented approaches into the educational process, and weak development of interdisciplinary programs. Another pressing issue is that a significant part of educational programs remains focused on traditional approaches to healthcare, whereas modern societal needs require greater attention to preventive medicine, risk management, health communication, and digital competencies.

The experience of European Union countries in this context is highly valuable, as it demonstrates comprehensive models of continuous professional education, integration of academic and practical components, application of innovative pedagogical technologies, and the development of partnerships between state institutions and educational establishments. The analysis of European practices makes it possible to identify mechanisms that can be adapted to the Ukrainian context in order to build an effective system of training public health professionals.

The scientific exploration of this problem is particularly significant because the quality of professional training directly affects the state's ability to implement health policy, ensure proper coordination among sectors, and respond to new threats to human life and health². Therefore, the aim of this article is to provide a comprehensive analysis of the state of postgraduate training of public health professionals in Ukraine and in EU countries, to identify their common and distinctive features, and to formulate strategic directions for improving the national system in line with European standards.

The research employs methods of comparative analysis, institutional approach, competency-based analysis, and systemic generalization, which allow not only for an assessment of the current state of affairs but also for the identification of future development prospects. The scientific novelty of this study lies in the in-depth exploration of the potential of postgraduate education for improving the quality of managerial and professional decision-making in the field of public health, as well as in the proposals for adapting European experience to Ukrainian realities.

The practical significance of the study is reflected in the possibility of applying its results for the improvement of state policy in the fields of education and healthcare, the development of educational standards, training programs, and systems of continuous professional development. The findings of the article may be useful both for postgraduate educational institutions and for public authorities responsible for shaping the strategy of public health development in Ukraine.

² Khalid Masaad Saud Alharbi. The importance of training and development of employees in improving the quality of health services. August 2023 *International Journal of Health Sciences* 7(S1):2190-2201. <http://dx.doi.org/10.53730/ijhs.v7nS1.14473>

1. Theoretical and Methodological Foundations of Training Specialists in the Field of Public Health

The concept of public health, as both an academic discipline and a field of professional practice, has undergone significant evolution over the past decades. It has shifted from a narrow focus on disease prevention and epidemiological surveillance toward a broader, multidisciplinary paradigm that integrates social, economic, environmental, and behavioral determinants of health³. This transformation has important implications for the training of specialists in the sphere of public health, particularly in systems of postgraduate education where professionals are expected not only to update their technical knowledge but also to acquire complex managerial, analytical, and communicative competencies.

From a theoretical perspective, public health education is grounded in a competency-based approach⁴. This framework assumes that professionals should demonstrate not only knowledge of medical and biological sciences but also the capacity to apply this knowledge in policy development, strategic planning, and community engagement. Competencies in leadership, health economics, epidemiological analysis, risk assessment, and digital literacy are increasingly recognized as indispensable for the successful implementation of public health initiatives. Consequently, the methodological design of postgraduate training programs must be aligned with these evolving competency requirements.

The institutional approach provides an additional theoretical lens for analysing postgraduate education in public health. According to this perspective, educational systems function as part of a broader institutional environment where universities, governmental bodies, non-governmental organizations, and international agencies interact⁵. The effectiveness of postgraduate training depends on the extent to which these institutions coordinate their efforts, share resources, and align their objectives with public policy priorities. In countries where institutional cooperation is weak, training programs often lack coherence, practical orientation, and responsiveness to emerging health threats.

Another important methodological foundation is the systems approach, which views public health education as an integral element of the national healthcare system and public governance. Within this framework, postgraduate

³ Ross C Brownson. Evidence-Based Public Health: A Fundamental Concept for Public Health Practice. May 2009 Annual Review of Public Health 30(1):175-201 <http://dx.doi.org/10.1146/annurev.publhealth.031308.100134>

⁴ Larry D Gruppen. Competency-based education in the health professions: Implications for improving global health. November 2012 Human Resources for Health 10(1):43. <http://dx.doi.org/10.1186/1478-4491-10-43>

⁵ Odysseas Christou. Fostering a Whole Institution Approach to Sustainability Through Systems Thinking: An Analysis of the State-of-the-Art in Sustainability Integration in Higher Education Institutions. Preprints.org. January 2024. <http://dx.doi.org/10.20944/preprints202401.0937.v1>

education is not isolated from broader social processes but is directly influenced by demographic trends, epidemiological shifts, globalization, and technological innovation. For example, the COVID-19 pandemic demonstrated the urgent need for rapid adaptation of educational curricula to prepare professionals capable of managing health crises, ensuring intersectoral coordination, and communicating effectively with the public. Systems thinking thus emphasizes flexibility, adaptability, and resilience as essential characteristics of educational models.

The comparative methodology also plays a central role in the study of postgraduate training of public health professionals. Comparative analysis allows researchers to identify best practices across different national contexts, assess the transferability of educational models, and highlight the limitations of domestic systems. For Ukraine, comparison with EU countries provides valuable insights into the development of standardized competency frameworks, accreditation mechanisms, and lifelong learning systems. At the same time, comparative analysis underscores the need to adapt foreign practices to the specific socio-political and economic realities of the Ukrainian context, rather than relying on direct transplantation of models.

It is also necessary to take into account the methodological principles of interdisciplinary and integrative learning. Public health is by its nature a crosscutting field that intersects with medicine, sociology, economics, law, and political science⁶. Postgraduate education must therefore create opportunities for professionals to engage in interdisciplinary dialogue, develop systemic solutions, and cultivate skills that go beyond purely medical expertise. Integrative learning methods—such as problem-based learning, simulation training, case studies, and project-based assignments—help bridge the gap between theoretical knowledge and real-world application.

In the modern academic discourse, the digital transformation of education represents another crucial methodological dimension. Postgraduate programs in public health increasingly rely on digital platforms, blended learning, and e-learning tools, which expand access to training, ensure flexibility, and promote the exchange of knowledge across borders⁷. However, digitalization also poses challenges, including the need for robust digital competencies among both educators and learners, the assurance of educational quality, and the risk of widening inequalities between those with and without access to advanced technological infrastructure.

⁶ France Gagnon. Why and How Political Science Can Contribute to Public Health? Proposals for Collaborative Research Avenues. *Int J Health Policy Manag.* 2017 Apr 5;6(9):495–499. <https://doi.org/10.15171/ijhpm.2017.38>

⁷ Oluwadamilola Ogundiya. Looking Back on Digital Medical Education Over the Last 25 Years and Looking to the Future: Narrative Review. *J Med Internet Res.* 2024 Dec 19;26:e60312. <https://doi.org/10.2196/60312>

Thus, the theoretical and methodological foundations of training public health professionals in postgraduate education can be summarized as a synthesis of several key dimensions: the competency-based approach as a normative framework for defining learning outcomes⁸; the institutional approach, which situates education within a broader system of governance; the systems approach, which highlights adaptability and integration with healthcare and social systems; the comparative methodology, which enables learning from international experience; and interdisciplinary, which reflects the complexity of public health challenges⁹.

Together, these foundations shape the vision of postgraduate education as a dynamic, practice-oriented, and policy-relevant process that prepares specialists to respond to contemporary and future health challenges.

The development of such methodological underpinnings also implies the need for continuous revision and modernization of curricula, teaching methods, and evaluation tools. The growing complexity of health determinants and the acceleration of global changes demand that postgraduate education move beyond the transmission of static knowledge toward the cultivation of flexible competencies, critical thinking, and leadership capacities. In this regard, postgraduate training becomes not only an educational process but also a strategic instrument for strengthening national health systems, promoting social resilience, and supporting sustainable development.

The system of postgraduate education in Ukraine has traditionally been oriented toward the medical professions, with strong emphasis on clinical specialization, advanced training for physicians, and narrow professional development courses. Only during the last decade, under the influence of global health challenges and European integration processes, has the importance of postgraduate training in public health been recognized as a distinct priority within national policy. The establishment of the Center for Public Health of the Ministry of Health of Ukraine, the adoption of the National Strategy for the Reform of the Healthcare System, and cooperation with international organizations such as the World Health Organization (WHO) and the European Union have created the institutional foundation for developing a more coherent model of education in this field.

Despite these positive shifts, the Ukrainian system of postgraduate training in public health remains fragmented and insufficiently coordinated. The lack of a unified national framework for public health competencies means that

⁸ Tacettin Açıkgöz. Competency-Based Education: Theory and Practice. December 2021 *Psycho-Educational Research Reviews* 10(3). http://dx.doi.org/10.52963/PERR_Biruni_V10.N3.06

⁹ Ricardo Correia de Matos. Health and Social Care Integration: Insights from International Implementation Cases. *J Mark Access Health Policy*. 2025 Jun 5;13(2):28. <https://doi.org/10.3390/jmahp13020028>

educational institutions design their curricula independently, often based on outdated approaches or limited resources. As a result, there is significant variation in the quality, content, and practical orientation of training programs. In many cases, postgraduate courses emphasize theoretical aspects of epidemiology or hygiene without sufficient focus on modern issues such as health promotion, digital health tools, communication strategies, or intersectoral cooperation.

A further challenge is the insufficient resource base of Ukrainian postgraduate institutions. Many medical academies of postgraduate education operate with outdated infrastructure, limited access to international scientific databases, and inadequate financial support¹⁰. These constraints directly affect the quality of training by restricting exposure to innovative methodologies and reducing the opportunities for interactive or practice-oriented learning.

At the same time, the shortage of qualified teaching staff with real-world public health management experience contributes to the persistence of traditional, lecture-based pedagogical methods that are poorly suited to the development of practical competencies.

Nonetheless, several positive developments demonstrate the potential for system improvement. In recent years, specialized programs have been launched in cooperation with international partners, such as short-term courses on field epidemiology, health systems management, and health communication, supported by the U.S. Centers for Disease Control and Prevention (CDC), WHO, and EU-funded projects¹¹.

These programs introduce modern approaches to problem-based learning, simulation exercises, and interdisciplinary team training. Moreover, the growing participation of Ukrainian professionals in international academic networks, such as the Association of Schools of Public Health in the European Region (ASPHER), contributes to the gradual alignment of Ukrainian postgraduate education with European standards.

The digitalization of education has also influenced postgraduate training in Ukraine. The COVID-19 pandemic accelerated the adoption of e-learning platforms, online courses, and blended learning models in medical and public health education. While these innovations have improved access to training, especially for professionals working in remote areas, they also highlighted inequalities in technological infrastructure and digital competencies. Some institutions have successfully integrated online learning into their postgraduate

¹⁰ Anna Krymska. Challenges and opportunities of digital transformation in Ukrainian education. July 2024 *Futurity Education* 4(3):182-199. <http://dx.doi.org/10.57125/FED.2024.09.25.11>

¹¹ Jordan W Tappero. US Centers for Disease Control and Prevention and Its Partners' Contributions to Global Health Security. *Emerg Infect Dis.* 2017 Dec;23(Suppl 1):S5–S14. <https://doi.org/10.3201/eid2313.170946>

programs, while others continue to rely on traditional in-person lectures with minimal adaptation to digital tools. This unevenness creates disparities in training outcomes across different regions and institutions.

From a policy perspective, the Ukrainian government has declared the modernization of public health training a strategic priority, particularly within the framework of the country's European integration agenda. However, the implementation of this priority faces obstacles related to political instability, war-related disruptions, financial constraints, and competing policy demands. For example, the ongoing war has increased the demand for professionals trained in emergency response, trauma management, and psychosocial support, while at the same time limiting the ability of institutions to provide comprehensive postgraduate training due to security risks and resource shortages.

A key trend is the gradual recognition of the need to move from isolated, short-term courses toward a system of continuous professional development (CPD) that provides structured pathways for lifelong learning¹². The introduction of CPD requirements for healthcare workers represents a step forward, although the specific mechanisms for monitoring quality, accrediting courses, and integrating public health competencies remain underdeveloped. At present, many CPD opportunities are fragmented, donor-driven, or project-based, which undermines sustainability and long-term planning.

Another trend is the increasing awareness of the importance of intersectoral collaboration. Public health is not confined to the healthcare sector but involves education, social policy, environmental protection, and governance. Yet Ukrainian postgraduate programs rarely include cross-sectoral modules or joint training with professionals from related fields. This limitation reduces the capacity of graduates to operate effectively in multidisciplinary teams and to address the complex determinants of health that require coordinated action across government and civil society.

In summary, the state of postgraduate training of public health professionals in Ukraine can be characterized as transitional: progress has been made in terms of institutional development, international cooperation, and the introduction of digital tools, but the system still lacks a unified strategic vision, sustainable financing, and standardized competency frameworks. The main trends include the expansion of short-term donor-supported programs, the gradual adoption of digital and blended learning, the emergence of CPD requirements, and the growing emphasis on aligning national practices with European standards. At

¹² Lisa Merry. Continuing professional development (CPD) system development, implementation, evaluation and sustainability for healthcare professionals in low- and lower-middle-income countries: a rapid scoping review. *BMC Medical Education* July 2023;23(1). <http://dx.doi.org/10.1186/s12909-023-04427-6>

the same time, persistent challenges—fragmentation, limited resources, outdated pedagogical methods, and insufficient interdisciplinary—underscore the need for comprehensive reform.

The further development of postgraduate education in public health in Ukraine will depend on the state's ability to institutionalize reforms, secure stable funding, and establish clear competency-based standards. It will also require strengthening the integration of practical experience into training, promoting international academic mobility, and enhancing digital infrastructure.

These directions are essential for ensuring that Ukrainian professionals are adequately prepared to respond to both domestic health challenges and broader global threats, while also contributing to the country's integration into the European public health education and governance space.

Experience of EU Countries in Postgraduate Education for Public Health Professionals

European Union countries provide a diverse and advanced framework for the postgraduate education of public health professionals, reflecting the high priority accorded to health system strengthening, prevention strategies, and evidence-based policy-making. The structure, content, and delivery of postgraduate programs across the EU demonstrate a systematic approach to competency development, integration of interdisciplinary knowledge, and alignment with international health standards¹³. These experiences offer valuable lessons for countries such as Ukraine, seeking to modernize their public health education systems and achieve compliance with European best practices.

In most EU countries, postgraduate education in public health is designed according to well-defined competency frameworks. For instance, the European Core Competences Framework for Public Health Professionals, promoted by the Association of Schools of Public Health in the European Region (ASPHER), outlines a comprehensive set of competencies encompassing scientific knowledge, practical skills, leadership, communication, ethical standards, and research literacy¹⁴. These frameworks provide a benchmark for designing curricula, evaluating learning outcomes, and ensuring the comparability of qualifications across institutions and national contexts. Such standardization enhances the mobility of professionals, facilitates mutual recognition of qualifications, and strengthens the overall quality of public health practice.

¹³ I Dvulit. Alignment of Healthcare Training Criteria in Ukraine with European Standards. March 2025. *Georgian Medical News* 360(3):166-171. https://www.researchgate.net/publication/392435041_Alignment_of_Healthcare_Training_Criteria_in_Ukraine_with_European_Standards

¹⁴ Vesna Bjegović-Mikanović. Preparation of European Public Health Professionals in the Twenty-first Century. *Frontiers in Public Health*. February 20175. <http://dx.doi.org/10.3389/fpubh.2017.00018>

The institutional organization of postgraduate training in EU countries typically combines universities, research institutes, and health agencies. Academic institutions deliver theoretical and methodological content, while practical skills are acquired through partnerships with public health agencies, hospitals, municipalities, and international organizations¹⁵. For example, in the United Kingdom, the Master of Public Health (MPH) programs integrate field placements, community health projects, and internships in governmental or non-governmental organizations, enabling students to apply theoretical knowledge in real-world settings.

Similarly, in Germany, postgraduate programs often incorporate structured practica in local health departments, epidemiological surveillance units, and health promotion centers. These models emphasize experiential learning, problem-solving, and interdisciplinary collaboration.

A prominent feature of EU postgraduate programs is the extensive use of innovative teaching methodologies and digital technologies. Blended learning, e-learning platforms, simulation-based training, and interactive case studies have become standard components, enhancing flexibility and accessibility. For instance, Scandinavian countries such as Sweden and Denmark utilize online modules and virtual classrooms to complement in-person instruction, allowing professionals from remote regions to participate in advanced training without geographic constraints.

Digital platforms also facilitate international cooperation, peer-to-peer learning, and access to up-to-date scientific literature, fostering a culture of lifelong learning.

Quality assurance mechanisms are another critical aspect of EU postgraduate education. Accreditation processes, periodic program evaluation, and alignment with national qualification frameworks ensure that programs meet high academic and professional standards. In addition, professional associations and regulatory bodies often define continuing professional development (CPD) requirements, encouraging graduates to maintain and expand their competencies throughout their careers. This structured approach ensures that postgraduate training is responsive to emerging health threats, policy changes, and technological advancements.

An important trend observed across EU countries is the integration of interdisciplinary and intersectoral components into postgraduate curricula. Public health is recognized as a field that intersects with law, economics, environmental science, social policy, and data analytics. Programs are thus

¹⁵ Vidin Kirkov. Postgraduate training of healthcare professionals at Medical University – Sofia: financing and challenges. *Pharmacia* August 202572:1-4. <http://dx.doi.org/10.3897/pharmacia.72.e161290>

designed to cultivate both analytical and managerial skills, enabling graduates to operate effectively in multi-professional teams and address complex societal health challenges.

For example, the Netherlands emphasizes health policy and management competencies alongside epidemiological training, while Poland incorporates modules on health law, ethics, and social determinants of health. This holistic approach strengthens the capacity of professionals to implement evidence-informed interventions, coordinate cross-sectoral initiatives, and contribute to sustainable health outcomes.

International collaboration is another hallmark of EU postgraduate education. Partnerships between universities, joint degree programs, student exchanges, and collaborative research initiatives facilitate the transfer of knowledge, standardization of curricula, and exposure to diverse public health systems¹⁶. The Erasmus+ program, for instance, supports mobility and collaboration among students and faculty in multiple EU countries, fostering intercultural competence and broadening perspectives on global health issues.

Such experiences are particularly valuable for emerging public health professionals, as they provide insights into different policy frameworks, health system structures, and approaches to community engagement.

Funding mechanisms in EU countries are generally more stable and diversified than in many non-EU contexts. Governments, EU grants, professional associations, and research foundations provide sustained financial support for postgraduate training. This stability enables institutions to maintain high-quality faculty, invest in infrastructure, and develop long-term programs. In addition, scholarships and mobility grants enhance accessibility for students from diverse socio-economic backgrounds, promoting equity and inclusivity in public health education.

Despite the overall strength of EU postgraduate education, challenges remain. One such challenge is ensuring that programs remain responsive to rapidly evolving public health needs, including emerging infectious diseases, climate change, and digital health innovation. Another concern is balancing standardization with flexibility, so that curricula can be adapted to local contexts while maintaining comparability across countries.

Nevertheless, the EU experience demonstrates that well-structured, competency-based, interdisciplinary, and digitally supported postgraduate education can significantly enhance the quality and effectiveness of public health professionals.

¹⁶ Andrew Keith Davey. Internationalisation of the curriculum in health programs. *BMC Med Educ.* 2023 Apr 26;23:285. <https://doi.org/10.1186/s12909-023-04271-8>

In conclusion, the experience of EU countries provides a comprehensive model for the organization, content, and delivery of postgraduate education in public health. Key elements include: clearly defined competency frameworks, integration of theory and practice through institutional partnerships, use of innovative teaching methodologies, robust quality assurance, interdisciplinary and intersectoral training, international collaboration, and stable funding mechanisms.

These elements collectively contribute to the preparation of highly skilled professionals capable of addressing complex public health challenges, implementing evidence-based policies, and promoting population health at both national and international levels¹⁷. For countries like Ukraine, adaptation and contextualization of these best practices offer significant potential to enhance the capacity, effectiveness, and sustainability of postgraduate education in public health.

Comparative Analysis of Ukraine and EU Approaches in Postgraduate Education for Public Health Professionals

The comparison between Ukraine and European Union (EU) countries in the field of postgraduate education for public health professionals highlights both shared aspirations and structural divergences. While Ukraine is actively reforming its health system and seeking closer alignment with EU standards, the system of postgraduate training for public health professionals still reflects a legacy of the Soviet educational model, with limited integration of modern competency-based approaches, interdisciplinary methods, and international collaboration.

In contrast, EU countries have established a more systematic, competency-driven, and globally oriented system of postgraduate education. This comparative analysis enables the identification of Ukraine's current challenges, opportunities, and potential pathways for reform.

One of the most notable distinctions lies in the competency frameworks used for structuring curricula. In the EU, postgraduate education in public health is strongly guided by the European Core Competences Framework developed by the Association of Schools of Public Health in the European Region (ASPHER). This framework ensures consistency, comparability, and quality across different programs and institutions, emphasizing both scientific expertise and soft skills such as leadership, communication, and ethical responsibility.

In Ukraine, however, curricula are often more rigid, knowledge-oriented, and less adapted to rapidly changing public health needs. While some universities have begun to adopt elements of competency-based education, these efforts remain fragmented and lack systemic support.

¹⁷ David T S Hayman. Addressing the challenges of implementing evidence-based prioritisation in global health. *BMJ Glob Health*. 2023 Jun 8;8(6):e012450. <https://doi.org/10.1136/bmjgh-2023-012450>

Another area of divergence concerns interdisciplinary and integration with practice. EU countries actively cultivate cross-sectorial collaboration within postgraduate programs, incorporating elements of law, economics, environmental science, social sciences, and digital technologies. Practical training is organized through placements in health agencies, municipalities, and non-governmental organizations, providing students with hands-on experience in addressing real-world health challenges¹⁸.

In Ukraine, practical training remains limited, often focusing on clinical or narrowly medical aspects, without sufficient exposure to broader determinants of health, health management, or community-based interventions. This gap hinders the development of professionals capable of operating effectively within complex, multi-professional environments.

The use of innovative pedagogical methods and digital technologies also differentiates EU and Ukrainian contexts. In EU countries, blended learning, online courses, simulation-based modules, and interactive case studies are widespread, enhancing accessibility and adaptability of postgraduate education. In Ukraine, despite some progress during the COVID-19 pandemic, e-learning tools are still used inconsistently and often serve as supplementary rather than core components of postgraduate programs. The lack of digital infrastructure and standardized methodologies constrains the potential for innovation and lifelong learning.

A crucial dimension is quality assurance and accreditation mechanisms. EU countries maintain robust systems of external and internal evaluation, linked to national qualification frameworks and European standards. Programs are subject to periodic accreditation, ensuring high levels of accountability and responsiveness to evolving health system needs.

In Ukraine, while accreditation procedures exist, they are often bureaucratic, input-oriented, and insufficiently connected to measurable outcomes or international benchmarks. This undermines trust in qualifications and reduces opportunities for international mobility and recognition of Ukrainian professionals.

International collaboration constitutes another major difference. EU countries actively participate in joint degree programs, student and faculty mobility initiatives (e.g., Erasmus+), and cross-border research projects, which expand professional horizons and foster intercultural competence.

Ukrainian institutions, in contrast, face structural and financial barriers to such collaboration, which limits the internationalization of postgraduate education. Although individual partnerships exist, they are not institutionalized

¹⁸ Lisa V. Adams. The future of global health education: training for equity in global health. *BMC Medical Education* volume 16, Article number: 296 (2016). <https://bmcomeduc.biomedcentral.com/articles/10.1186/s12909-016-0820-0>

or supported at the systemic level. This creates an uneven playing field for Ukrainian public health professionals seeking to compete in global or European labor markets.

Despite these divergences, Ukraine also demonstrates areas of convergence and potential alignment with EU practices. The recent health reform agenda, supported by international donors and the Ministry of Health, has emphasized the need for a modernized workforce capable of addressing non-communicable diseases, health promotion, and digital health innovations.

Pilot programs have introduced elements of competency-based training and interdisciplinary curricula, though their reach remains limited. Furthermore, Ukraine's aspiration for closer integration into the European Higher Education Area (EHEA) provides a strategic framework for adopting best practices in postgraduate education.

The comparative analysis also reveals shared challenges. Both Ukraine and EU countries must continuously adapt postgraduate education to address emerging threats such as pandemics, climate change, migration, and the growing burden of chronic diseases. In addition, there is a shared need to balance standardization with flexibility, ensuring that education systems respond both to international benchmarks and to national or local contexts. This creates an opportunity for Ukraine to adopt EU strategies while tailoring them to its specific socio-economic, cultural, and health system conditions.

In conclusion, the comparison of Ukrainian and EU approaches to postgraduate education for public health professionals demonstrates both a gap and a potential bridge. While Ukraine lags behind in the adoption of competency-based frameworks, interdisciplinary, practical training, digital innovation, quality assurance, and international collaboration, the reform trajectory provides a strong foundation for transformation. Drawing on EU experience, Ukraine can accelerate the modernization of its postgraduate education system, thereby strengthening the capacity of its public health workforce and supporting sustainable improvements in population health.

2. Strategic Recommendations for Reforming Postgraduate Education in Public Health in Ukraine

The modernization of postgraduate education in public health in Ukraine requires a comprehensive, evidence-based, and multi-level reform strategy¹⁹. Building on the comparative analysis with EU countries, the following recommendations aim to align Ukrainian practices with international standards,

¹⁹ Lyudmyla Holomb. Modernization of theoretical and practical aspects of the development of higher medical education in Ukraine. October 2022 *Revista Amazonia Investiga* 11(55):163-171. <http://dx.doi.org/10.34069/AI/2022.55.07.17>

enhance the quality of professional training, and ensure the sustainability of reforms in the context of broader health system transformation.

A central recommendation is the adoption of a competency-based framework as the foundation of postgraduate education. Ukraine should adapt and implement the European Core Competences Framework for Public Health Professionals (ASPHER) to its national context²⁰. This would provide a clear structure for curriculum development, learning outcomes, and assessment methods. Competency-based education would ensure that graduates are not only knowledgeable but also skilled in leadership, communication, ethical reasoning, and interdisciplinary collaboration. Such alignment would facilitate the recognition of Ukrainian qualifications within the European Higher Education Area and support the mobility of professionals.

Second, it is crucial to integrate interdisciplinary and intersectoral perspectives into postgraduate curricula. Public health professionals must be equipped to address health challenges that extend beyond biomedical factors, including environmental risks, social determinants, economic constraints, and legal frameworks²¹.

Curricula should therefore incorporate modules on health economics, health law, digital health, policy analysis, and social sciences. Partnerships with faculties of law, economics, sociology, and information technology would help to broaden the skill sets of public health professionals, preparing them for multi-professional teamwork and cross-sectoral collaboration.

A third strategic direction is the enhancement of practical training and experiential learning. Ukraine should institutionalize structured placements in local health departments, public health agencies, NGOs, and international organizations. Practical training should be mandatory and integrated into curricula rather than optional or supplementary.

Developing partnerships with municipal governments and community organizations would expose students to real-world challenges, enhance problem-solving capacities, and foster a commitment to community engagement. Simulation-based training, case studies, and field projects could further strengthen the practice orientation of postgraduate programs.

Fourth, digital transformation of postgraduate education must be prioritized. Ukraine should develop a national digital platform for public health education,

²⁰ Olga Gershuni. Advancing public health workforce's professional development: implications for Ukraine. *European Journal of Public Health*, ckaf143. Published: 19 August 2025. <https://doi.org/10.1093/eurpub/ckaf143>

²¹ Gebbie K, Rosenstock L, Hernandez LM. *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. Institute of Medicine (US) Committee on Educating Public Health Professionals for the 21st Century; Gebbie K, Rosenstock L, Hernandez LM, editors. Washington (DC): National Academies Press (US); 2003 <https://www.ncbi.nlm.nih.gov/books/NBK221190/>

incorporating online modules, virtual classrooms, and open-access resources. Blended learning approaches would enhance flexibility and accessibility, especially for professionals in remote regions.

Integration of digital technologies would also support lifelong learning, enabling professionals to continuously update their skills in response to emerging health threats and innovations. International collaboration in developing digital curricula could ensure alignment with global standards and provide access to best practices.

Fifth, Ukraine needs to establish a robust system of quality assurance and accreditation. Postgraduate programs should be evaluated based on measurable learning outcomes, competency achievement, and graduate performance. External evaluations by independent agencies, coupled with internal monitoring, would enhance accountability and transparency. Linking accreditation to European and international frameworks would further strengthen trust in Ukrainian qualifications. A continuous professional development (CPD) system should also be introduced, requiring professionals to periodically update their competencies through accredited training programs²².

Another strategic priority is the strengthening of international cooperation. Ukrainian institutions should actively participate in Erasmus+ mobility schemes, joint degree programs, and cross-border research projects. Institutional partnerships with leading EU schools of public health would provide opportunities for curriculum development, faculty exchange, and collaborative research. International cooperation would not only improve educational quality but also help Ukrainian professionals build intercultural competence and adapt to diverse health system contexts.

In addition, Ukraine must address the issue of funding and sustainability. Stable and diversified funding sources are essential for the success of reforms. State funding should be complemented by international grants, partnerships with NGOs, and contributions from professional associations. Scholarships and mobility grants would ensure equitable access to postgraduate education for students from disadvantaged backgrounds. Investment in faculty development, infrastructure, and digital resources would further enhance the capacity of institutions to deliver high-quality education²³.

A final, overarching recommendation is the institutionalization of reform through policy and governance mechanisms. The Ministry of Health, in

²² Rodney H. Magwenya. Continuing professional development in the last decade – A scoping review. December 2022 *Journal of Adult and Continuing Education* 29(2):147797142211472 <http://dx.doi.org/10.1177/14779714221147297>

²³ Maan Habib. Digital transformation strategy for developing higher education in conflict-affected societies. *Social Sciences & Humanities Open*. Volume 8, Issue 1, 2023, 100627 <https://doi.org/10.1016/j.ssaoh.2023.100627>

collaboration with the Ministry of Education and Science, should establish a national strategy for postgraduate education in public health. This strategy should set clear goals, timelines, and indicators of success, and be supported by relevant legislation and regulatory frameworks. Strong governance would ensure coordination among universities, health agencies, and professional associations, preventing fragmentation and ensuring the coherence of reforms.

In conclusion, the reform of postgraduate education for public health professionals in Ukraine requires a holistic and strategic approach. By adopting a competency-based framework, enhancing interdisciplinary, strengthening practical training, embracing digital innovation, establishing quality assurance mechanisms, fostering international cooperation, ensuring sustainable funding, and institutionalizing reforms through governance, Ukraine can create a modern, resilient, and internationally competitive system of postgraduate education. Such a transformation will not only strengthen the capacity of the public health workforce but also contribute to the broader goals of health system resilience, population well-being, and European integration.

CONCLUSIONS

The conducted analysis demonstrates that the reform of postgraduate education in public health in Ukraine is not only a domestic necessity but also part of a broader European integration process. The challenges facing the Ukrainian healthcare system, including demographic change, epidemiological transitions, the impact of war, and global health threats, require a highly skilled, adaptable, and internationally competitive public health workforce. Postgraduate education plays a central role in shaping such a workforce, and its modernization is directly linked to the effectiveness, resilience, and sustainability of the health system as a whole.

The comparative analysis between Ukraine and the European Union reveals both significant progress and substantial gaps. On the one hand, Ukraine has taken important steps toward adopting modern educational standards, strengthening institutional capacity, and aligning with the Bologna Process.

On the other hand, the system remains fragmented, underfunded, and overly focused on theoretical rather than practical competencies. The lack of standardized competency frameworks, weak interdisciplinary collaboration, limited opportunities for practice-based training, and insufficient digital integration continue to undermine the effectiveness of postgraduate education.

A key conclusion is that Ukraine must fully embrace a competency-based, interdisciplinary, and practice-oriented model of postgraduate education. This model should be guided by the European Core Competences Framework for Public Health Professionals and tailored to the Ukrainian context. The shift

toward competency-based learning will not only improve the quality of education but also enable the recognition of Ukrainian qualifications within the European Higher Education Area, supporting professional mobility and cross-border collaboration.

The analysis also highlights the importance of digital transformation as a catalyst for reform. The integration of digital platforms, blended learning, and open-access resources can significantly expand access to high-quality education, particularly for professionals in remote regions. Digital tools also provide opportunities for lifelong learning, which is essential in a rapidly changing health landscape characterized by new technologies, emerging diseases, and evolving policy frameworks.

Another critical finding is the necessity of strengthened governance and quality assurance. Without clear regulatory frameworks, robust accreditation procedures, and transparent evaluation mechanisms, reforms risk remaining fragmented and inconsistent. Coordinated action by the Ministry of Health, the Ministry of Education and Science, universities, and professional associations is vital to ensure systemic coherence and sustainability.

Equally important is the role of international cooperation. Active participation in EU educational and research programs, faculty and student exchanges, and joint degree initiatives will accelerate Ukraine's integration into the European educational and health systems. Such cooperation not only raises the academic and professional standards of Ukrainian institutions but also creates pathways for innovation, knowledge transfer, and capacity building.

Finally, sustainable reform will require stable funding mechanisms and faculty development. Without adequate resources, even the most ambitious strategies cannot be implemented effectively. Investment in human capital—particularly in training educators and building institutional capacity—is essential to ensure that reforms are not only initiated but also sustained in the long term.

In sum, the modernization of postgraduate education in public health in Ukraine must be understood as a strategic investment in national and regional health security. Aligning with EU standards, embracing competency-based and digital approaches, ensuring strong governance, fostering interdisciplinary collaboration, and securing stable funding will allow Ukraine to build a resilient and internationally competitive public health workforce.

Such reforms will not only strengthen the healthcare system in the face of domestic and global challenges but also contribute meaningfully to Ukraine's path toward European integration.

SUMMARY

The article explores the theoretical, methodological, and practical foundations of postgraduate education in the field of public health, with particular attention to the comparative analysis of Ukraine and the European Union. The central argument of the study is that the modernization of postgraduate education for public health professionals in Ukraine is both an urgent domestic priority and a critical component of the country's European integration process.

In the face of demographic changes, epidemiological transitions, global health threats, and the ongoing consequences of war, Ukraine requires a highly skilled, adaptable, and internationally competitive public health workforce. The training of such specialists depends on the transformation of postgraduate education into a system that is competency-based, interdisciplinary, practice-oriented, and aligned with global and European standards.

The research identifies several systemic challenges within Ukraine's current framework of postgraduate education. These include fragmented governance structures, insufficient financial resources, a heavy reliance on theoretical instruction at the expense of practice-oriented training, and weak integration of digital technologies and innovations.

Furthermore, the lack of standardized competency frameworks and limited opportunities for lifelong learning undermine the ability of public health professionals to adapt to rapidly changing conditions. This situation creates a gap between the educational outcomes of Ukrainian institutions and the real needs of the healthcare system, particularly in the context of ongoing reforms and international collaboration.

By contrast, the experience of the European Union demonstrates that the implementation of standardized competency frameworks, interdisciplinary collaboration, and robust quality assurance mechanisms has significantly enhanced the preparation of public health professionals. EU countries have also invested heavily in digital transformation, developing flexible learning environments that promote accessibility and continuous professional development.

Importantly, the European Core Competences Framework for Public Health Professionals provides a model for aligning training with the competencies required to meet contemporary health challenges. These practices, as the article argues, offer valuable lessons and practical models for Ukraine's reform process.

The comparative analysis underscores the need for Ukraine to move decisively toward a competency-based education model, ensuring that public health professionals acquire not only theoretical knowledge but also practical skills, ethical competencies, and the capacity for interdisciplinary collaboration. The integration of digital technologies into postgraduate education is identified as a particularly promising driver of reform, enabling blended learning,

interactive case-based training, and wider access to high-quality resources, especially in rural or underserved areas.

In conclusion, the modernization of postgraduate education in public health in Ukraine should be understood as a strategic investment in national and regional health security. Aligning Ukraine's system with European best practices, adopting competency-based approaches, integrating digital tools, strengthening governance, and securing adequate funding will enable the creation of a resilient, innovative, and internationally competitive public health workforce.

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