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CURRENT STATE AND STRATEGIC DIRECTIONS OF DEVELOPMENT OF PUBLIC MANAGEMENT OF NURSING EDUCATION IN UKRAINE

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Abstract. Current state and strategic directions of development of state management of nursing education in Ukraine. Striukov V.V., Grynko T.V., Krupskiy O.P., Vazov R.G. The article presents the results of the study of the current state of public administration and strategic directions of development of nursing education in Ukraine by on the example of Dnipropetrovsk region. The region was chosen because it ranks second in Ukraine in terms of population (first place Donetsk region). The purpose of the study is to determine the strategic prospects for reform and effective development of the medical sector, in particular the education system of health workers on the basis of the study of the current state of public health management. The article has a conceptual nature, so the following research methods were chosen: systematization and generalization; analysis and specification; abstract-logical. An analysis of the scientific database of domestic and foreign researchers found that public administration of the secondary medical education system, including the health care system, is in crisis and is characterized by globality, longevity and complexity. According to the results of statistical processing of primary data, it was found that despite the high level of graduates in the specialty «223 Nursing» of degrees professional junior bachelor and bachelor for five years (from 2016 to 2020) the number of nurses decreased by 21.6004% and this negative trend continues. State management of nursing education was defined as a special type of professional activity, the purpose and result of which is to ensure, support life and dynamic development of the industry whose main mechanisms are: regulatory-legal, coordination, organizational-motivational, educational-pedagogical, economic. The article emphasizes the need to develop strategic directions for the development of public administration in the system of medical education, which would provide medical institutions with highly qualified specialists, taking into account the market of educational services and the needs of society, to create and implement an effective resource mobilization mechanism to meet the needs of medical education, taking into account continuous professional development to train highly qualified professionals.

Реферат. Сучасний стан та стратегічні напрямки розвитку державного управління медсестринською освітою в Україні. Стрюков В.В., Гринько Т.В., Крупський О.П., Вазов Р.Г. У статті представлені результати дослідження сучасного стану державного управління та стратегічних напрямків розвитку медсестринської освіти в Україні на прикладі Дніпропетровської області. Область була обрана тому, що посідає друге місце в Україні за чисельністю населення (перше місце – Донецька область). Метою дослідження є визначення стратегічних перспектив реформування та ефективного розвитку медичної галузі, зокрема системи освіти медичних працівників, на засадах дослідження сучасного стану державного управління охороною здоров'я. Стаття має концептуальний характер, тому були обрані такі методи дослідження: систематизація та узагальнення; аналіз та конкретизація; абстрактно-логічний. При аналізі наукової бази даних вітчизняних та зарубіжних дослідників було встановлено, що державне управління системою освіти

середнього медичного персоналу, зокрема й системою охорони здоров'я, має кризовий стан та характеризується глобальністю, довготривалістю та складністю. За результатами статистичної обробки первинних даних було з'ясовано, що, незважаючи на високий рівень підготовки випускників зі спеціальності «223 Медсестринство» ступенів фаховий молодший бакалавр та бакалавр за п'ять років (з 2016 до 2020 року), кількість середнього медичного персоналу зменшилось на 21,6004%, і ця негативна тенденція спостерігається й далі. Державне управління медсестринською освітою було визначено як особливий вид професійної діяльності, метою і результатом якої є забезпечення та динамічний розвиток галузі, основними механізмами якого є: нормативно-правовий, координаційний, організаційно-мотиваційний, освітньо-педагогічний, економічний. У статті наголошується на необхідності розробки стратегічних напрямків розвитку державного управління в системі медичної освіти, яка б забезпечувала висококваліфікованими фахівцями медичні заклади з урахуванням ринку освітніх послуг та потреб суспільства; створення та впровадження дієвого механізму залучення ресурсів задля забезпечення потреб у медичній освіті, з урахуванням безперервного навчання, для підготовки висококваліфікованих фахівців.

The current stage of development of health care in Ukraine is characterized by further improvement of the system of medical care. In this regard, the system of medical education is especially important, which requires the introduction of innovative approaches in the training of future specialists in «Nursing», it is education that plays a significant role in overcoming the global economic crisis, it is education that solves the most acute problems [1] and development of society, because it is the competence and high professionalism of medical staff contributes to improving the quality of medical care delivery to the population at all levels, but it is possible through government intervention in all areas of training for health care institutions, directly of nurses by reforming the system of health care and education system of health workers [8].

The problem of reforming the health care system of Ukraine is multifaceted, so one of the priorities is the public management of human resources and their education, including a large number of medical staff, namely nurses, and junior medical staff. Innovative economic development leads to the transformation of the labor market, the emergence of new business models, which determines the complexity and dynamism of management objects and requires new scientific theories, technologies and management tools. First, the state management of innovation development and innovation infrastructure needs changes [35].

The above problem is global, as evidenced by the declaration of the member states of the World Health Organization and the report of the Third General Forum on Human Resources for Health, which states: by 2035 there will be a shortage of almost 13 million nurses in the world; over the next 10 years, as the situation in the industry does not change, 40% of professionals will look for his/her place in the world in other specialties. In each country there are problems and each state must individually, based on the socio-political and

economic situation, develop and implement measures to strengthen and retain staff and the health sector as a whole, noting that “funding is only one part of the problem” [36].

Reforms in nursing education in France began in 2009 (due to the Bologna Process) with the introduction of a multidisciplinary education from a licensed nurse to a master's and doctoral degree based on competencies, allowing a specialist to obtain a European diploma certification. According to French scientists, it is the modernization of the health care system that affects the medical professions, training and development of future professionals [27]. Despite this, there is a discussion among scientists within the framework of “science for nursing”, or nursing is a science [31, 33], and there are a number of problems and crises related to the financing, equality, accessibility, improvement and safety of working conditions to address the reform of primary health care in France [29, 34].

Polish researchers note that in the health care system of Poland there is a crisis associated with an increase in the number of elderly people, low (compared to most EU countries) wages, labor migration of health workers to more economically developed countries and as a consequence – increasing workload on nurses, which leads to deteriorating working conditions. In this regard, scholars are searching for and developing programs for the government that should be aimed at improving social and economic standards [28].

Bulgaria has faced such problems as underestimation of the role of the nurse, reduction of their number and growing need for professional autonomy, uneven provision of regions with nurses and, as a consequence, inequality in access to health care. Bulgarian researchers note the main causes of these phenomena: low wages, unclear criteria for professional growth, labor migration, etc. [13].

The study of the current state of public administration of nursing education is becoming increasingly relevant, as evidenced by the interest of domestic researchers in this topic. Shegedin Y.Y.

has conducted an analysis of state policy of Ukraine in the field of health care in terms of decentralization, health care reform and administrative territorial organization of Ukraine and justified the need to create a “Program for the development of nursing in Ukraine at the regional level” [19].

Khudoba O.V. considered the state-administrative aspects of medical training in terms of medical and social problems, emphasizing the importance of continuous professional programs, emphasizing that one of the mechanisms of public administration should be an adaptive approach to education, based on “the needs of adaptation to social conditions”. It is difficult to disagree with this, but the author considers the professional activities of nurses in the context of medical activities, assigning them an “extremely important role”, this statement cannot be fully accepted, especially when it comes to palliative and hospice care [16].

Birkovych T.I. and Gaborets Y.Y. considered the tools of public administration influence on raising the level of education of health care specialists. After analyzing the model of accreditation of treatment and prevention facilities, the authors found shortcomings in that it is based on regulatory compliance, rather than improving quality of health care delivery and offer criteria for evaluating medical institutions based on the level of efficiency of the institution – “clinical audit” [3].

Formulation of the problem. The fast rhythm of life in the universe at a time of political, economic and social changes forces workers of every industry, including medicine, to meet modern requirements and needs of society. The medical field is a “complex organism” and the security of the state may depend on it, on the competence and level of qualification of its employees. Every country, regardless of economic status, geographical location, and population has related problems – demographics, labor emigration, working conditions and safety, state of medical education, health care, but the solution depends on the economic development of the country and public administration. Today, Ukraine is experiencing bad times – frequent changes of government, respectively, a change in the principles of state policy on health care and education of health workers. The development of the industry in the context of the political, economic and social crisis in Ukraine is of paramount importance for the influence of public administration on the development of the health care system. An important need for research in this area is an active adaptation of domestic legislation in practical medicine and medical education according to a legislative and regulatory framework of European and world

standards, which will ensure the strategic development of the country.

The purpose of the article is determination of strategic perspectives of reforming and effective development of the medical sector in modern conditions on the basis of research of the current state of public health management, in particular the system of education of medical workers taking into account continuous professional development and development of this sphere in Ukraine.

MATERIALS AND METHODS OF RESEARCH

The article has a conceptual character, therefore the following methods were chosen to solve the set tasks: systematization and generalization – to study the essence and significance of the state administration of education of nurses; analysis and specification – to thoroughly study the purpose of the article and to analyze the development trends of the object of study; abstractively-logical method – to summarize the work; method of induction – for the formation of generalized conclusions; tables and figures – for visualization and systematization of information and statistics.

The scientific database of domestic and foreign researchers in the field of public administration of education of nurses and health care in particular, as well as the legislation of Ukraine became the information base of the study.

The most important source of human development and formation of him/her as a person is education. In modern socio-economic realities, education and the educational process become a purposeful and productive force [4].

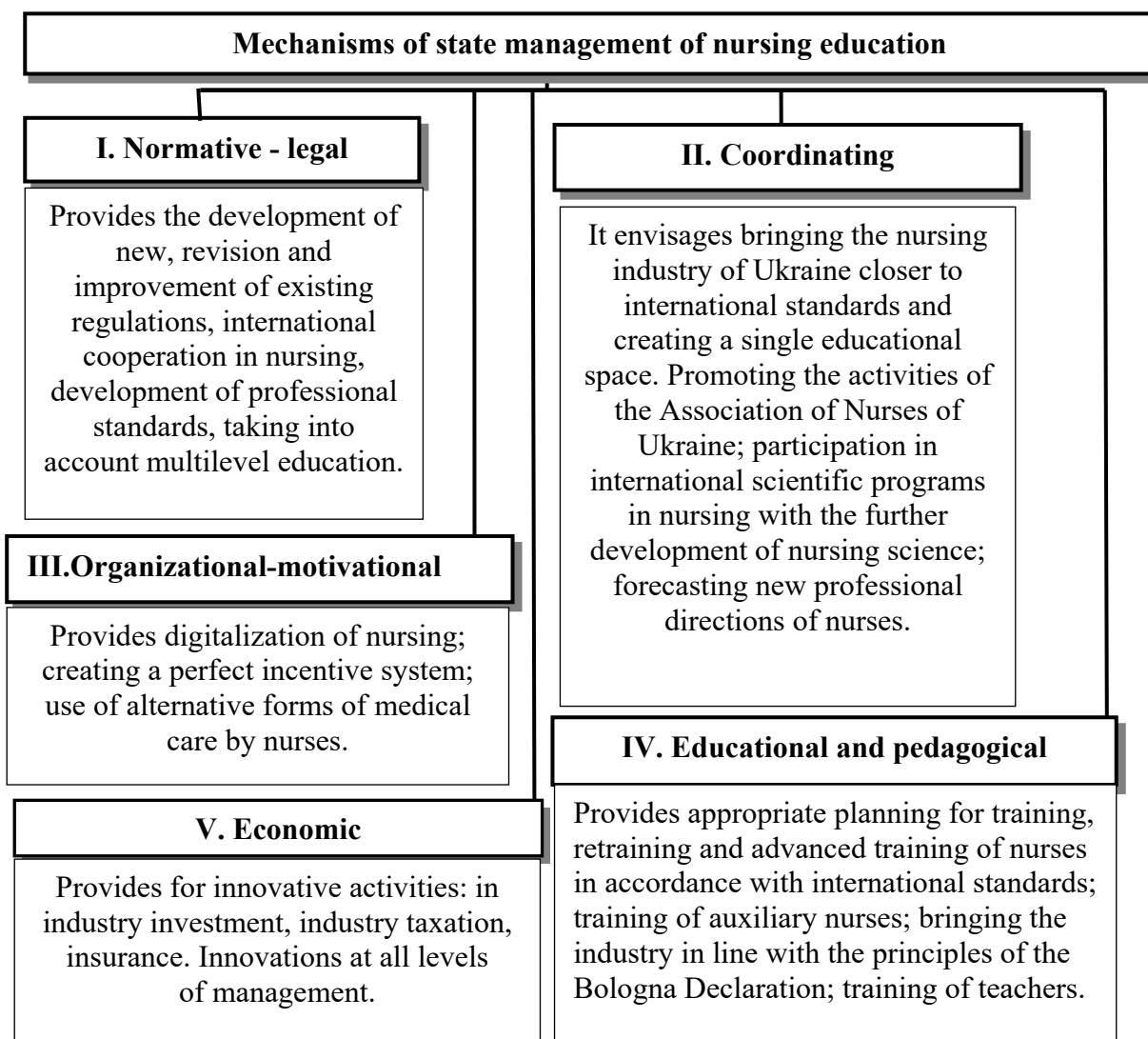
RESULTS AND DISCUSSION

Analyzing the laws and regulations of Ukraine [10] that provide the right to education, the state and its bodies are the main and comprehensive guarantee of a right of a human to education. It is the state that determines and implements educational policy, introduces modernization of the industry, determines strategic goals and directions of its reforming [20], so the management of education at the state level, in particular the education of nurses, should be given considerable attention. On February 27, 2019, Cabinet of Ministers of Ukraine approved the Government's order “On approval of the Strategy for the development of medical education in Ukraine”, according to which in the next 10 years it is planned to radically change the system of selection, training and professional development of Ukrainian physicians [11].

Public administration of nursing education is a special type of professional activity, the purpose and result of which is to ensure, support life's work and dynamic development of the industry, the essence of

which is to ensure important operating conditions: coordination/forecasting, organizational-legal, motivational, financial, material, pedagogical-educational, social and others (Fig. 1) that is the activity of

the state which is aimed at a qualitatively new level and integration of society and the state into the world professional community and the world educational space.



Note: developed by the author on the basis of [8, 19].

Fig. 1. The main mechanisms of public administration of nursing education

Following Ukraine's accession to the Bologna system in May 2005, the health care system and nursing education in particular are being reformed. And today a multilevel system has been introduced: junior specialist / professional junior bachelor (2019, the law "On professional higher education") term of study on the basis of basic general secondary education – 4 years, on the basis of complete general secondary education – 3 years; bachelor – 1-2 years, short program on the basis of a diploma of junior professional bachelor and 3 years – on the basis of complete general secondary education; master (full

higher education) 1-2 years. It is regulated by the laws "On Education", "On Higher Education", "On Professional Higher Education". The study of the level of readiness for continuous education of nurses conducted by Kiryan T.I. shows that students do not show enough desire to continue and improve their skills in bachelor's and master's degrees and we support this opinion because today the issue of legislative regulation of professional responsibilities and the level of education of nurses remains unclear [7]. This is exactly what both medical practitioners and medical college students expect from the state

[5]. In addition, this issue is not settled from a financial point of view, i.e. the salaries of nurses are not charged depending on the level of education. Today, the order No. 308/519 of 05.10.2005 “On streamlining the conditions of remuneration of employees of health care institutions and social protection institutions” where the average medical staff is listed as “specialists with basic and incomplete higher medical education” [9]. It is important to emphasize that from January 1, 2021 the tariff categories remained the same from 6 to 10, and salaries/tariff rates increased and depend on the qualification category, so the specialist with the highest qualification category has a salary of 4859 hryvnias and a tariff rate of 5265 hryvnias [15].

Training of specialists is an important component of economic growth, especially the state. Despite the large number and validity of scientific research on

personnel policy in the country, taking into account international standards, this issue, from a practical point of view – the adoption of legislation at the state level, remains unresolved. One of the most reasonable scientific works on the problems of personnel policy, in our opinion, is the work of Korolenko V.V. and Yurochko T.P. [7], who conducted a thorough analysis of regulatory-legal support, socio-economic and motivational aspects of personnel policy in the field of health care of Ukraine, shortcomings and ways for improvement were identified (Table 1). Considering these issues, the authors mention nursing staff together with medical staff, not specifying that nursing has its own fundamental features in matters, although the general principles of approaches to personnel policy both of nursing staff and medical staff are the same.

Table 1

Typical defects, conceptual principles and ways to solve problems of staffing health care system of Ukraine (by Korolenko V.V., 2018)

Typical defects of staffing	
Demographic and epidemiological characteristics.	Population aging, a sharp change in methods of diagnosis and treatment, migration.
Traditional approaches to training.	Allocation and management of human resources that do not meet modern health care needs.
Heterogeneity in geographical distribution and professional structure.	Total number of medical staff; doctor-nurse ratio; imbalance of specialists; imbalance in staffing city – village.
Lack of planning, forecasting, information system and research base,	There is no adequate planning and forecasting system at all levels (state – region – city). The information system and research base of human resources is imperfect and unreliable.
General problems.	Labor migration, shortage of medical staff, unsatisfactory working environment, imbalance of practical skills depending on the intensity and workload of the health worker.
Improvement of state personnel policy	
Strategic directions	Ways of providing
Modernization of the regulatory framework	Audit, systematization and harmonization of the existing framework and solution of existing problems in the industry, taking into account the experience of international practice.
Improving mechanisms of staffing planning	Establishment of an automated system of regional centers of staffing reporting.
Improving the system of motivations and incentives	Introduce quality indicators and modern approaches to payment for medical services, improvement of working conditions.
Optimization of the quality of medical training	Improvement of educational programs

Note: developed based on the source [7].

Health care reform is patient-centered. It is highly educated medical staff that should bring the treatment process to perfection and be patient-oriented. Good

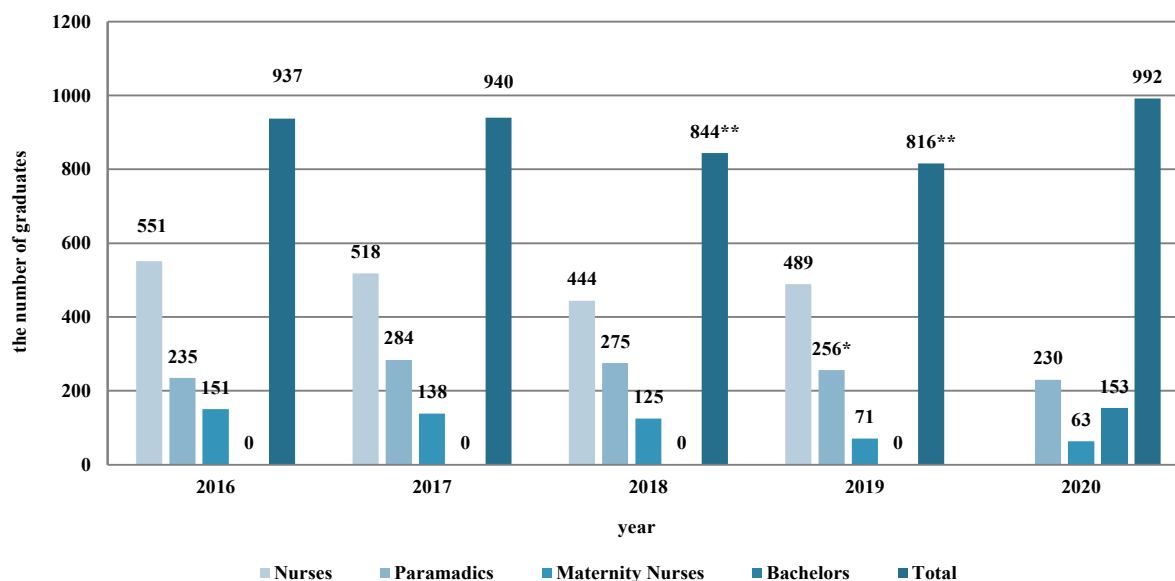
organization of external (government regulation) and internal processes of the medical institution, the treatment process and direct interaction with the patient

gives him/her the opportunity to accept treatment with pleasure, which has a positive effect on recovery [22]. It is important to correctly formulate “satisfaction” from the expected medical service in the patient, being the correct and client-facing branding in the market of medical services [21, 32].

We analyzed the current state of the health care system, first, providing with nurses, by the example of

Dnipropetrovsk region. The region was chosen because on May 1, 2021, according to the Ministry of Finance, it ranks second in Ukraine in terms of population (the first place – Donetsk region, third and fourth places are the city of Kyiv and Kharkiv region) [16].

There are five medical colleges in the region: in Dnipro, Kamyanske, Kryvyi Rih, Pavlograd, Nikopol (Fig. 2).



Notes: * — analytical reference on the specialization “Medical care” (paramedic) on the site of the testing center of the Ministry of Health of Ukraine is missing, the data are taken from the sites of medical colleges; ** – low graduation rates in 2018 and 2019 are related to the reform of secondary education and in 2015 there were no 11th grade graduates and external examinations were not conducted, and a low number of school graduates in 2016, so the total number was 20478 of applicants in Dnipropetrovsk region, the number of applicants who passed the external admission testing and got 120-160 points, 43.64% – 8937 applicants entered colleges with such score.

Fig. 2. Dynamics of the number of graduates of medical colleges in Dnipropetrovsk region for 2016-2020

For analysis we took the total number of students who have successfully passed a licensed integrated Exam Step M in the specialty “223 Nursing” degree – professional junior bachelor, Nursing, Medical/Paramedic and Obstetrics, graduates of all three specialties have the right to work as a nurse. We also took into account the number of graduates of Oles Honchar Dnipro National University and the number of students of Kamyanske Medical College majoring in “223 Nursing” bachelor's degree who successfully passed the licensed integrated exam Step B [2].

So, the number of graduates in the specialty “223 Nursing” each year remains high. A slight overall increase in the number of graduates in 2020 is due to the first graduates with bachelor's degree in nursing, since 2021 the number of graduates will increase, as the Kryvyi Rih Medical College began training bachelors in nursing (data from the site of Kryvyi Rih Medical College).

It is expedient to analyze the statistical data in the Dnipropetrovsk region for five years which will help us to understand provision with average medical personnel (Table 2).

The analysis of statistical data revealed that there is a negative trend of decreasing the number of nurses, so in five years the staffing of individuals decreased by 5.85%, there is also a decrease in staffing by 4678.25, the number of nurses (individuals) decreased by 5523 persons, as a result of a sharp it decrease in the provision of the population with full-time jobs (Fig. 3) – from 90.74 to 78.39 decreased by 12.35 full-time positions per 10,000 thousand of population (Fig. 3). Number of nurses decreased by 21.6004%. All this leads to burnout of medical workers [23, 30] and, as a consequence, an increase in the number of occupational errors and diseases [37].

Table 2

Indicators of provision with paramedical personnel in Ukraine for 2016 – 2020

Year	Full-time job of paramedical personnel	Providing with full-time per 10,000 population job	Occupied positions of paramedics	Individuals paramedics	Gap between full-time and occupied jobs	Gap between full-time jobs and individuals	% of staffing, taking into account part-time job	% of staffing of individuals
2016	29,282.50	90.74	27,591.00	25569	1,691.50	3,713.50	94.22	87.32
2017	29,220.00	90.53	27264.50	25191	1955.50	4,029.00	93.31	86.21
2018	27,978.00	87.34	25,426.50	23452	2,551.50	4,526.00	90.88	83.82
2019	26,742.25	84.27	24,103.75	21918	2,638.50	4,824.25	90.13	81.96
2020	24,604.25	78.39	21,695.75	20046	2,908.50	4,558.25	88.18	81.47

Note: the table is formed by the author on the basis of [12].

On January 1, 2017, the Law of Ukraine No. 1662-VIII “On Amendments to the Law of Ukraine “On Higher Education” on Employment of Graduates” adopted by the Verkhovna Rada of Ukraine on October 6, 2016 entered into force. On

this basis, human resources departments of Medical colleges do not have the right to demand from graduates a certificate of placement, so it is not possible to analyze the number of graduates who started working in the specialty.

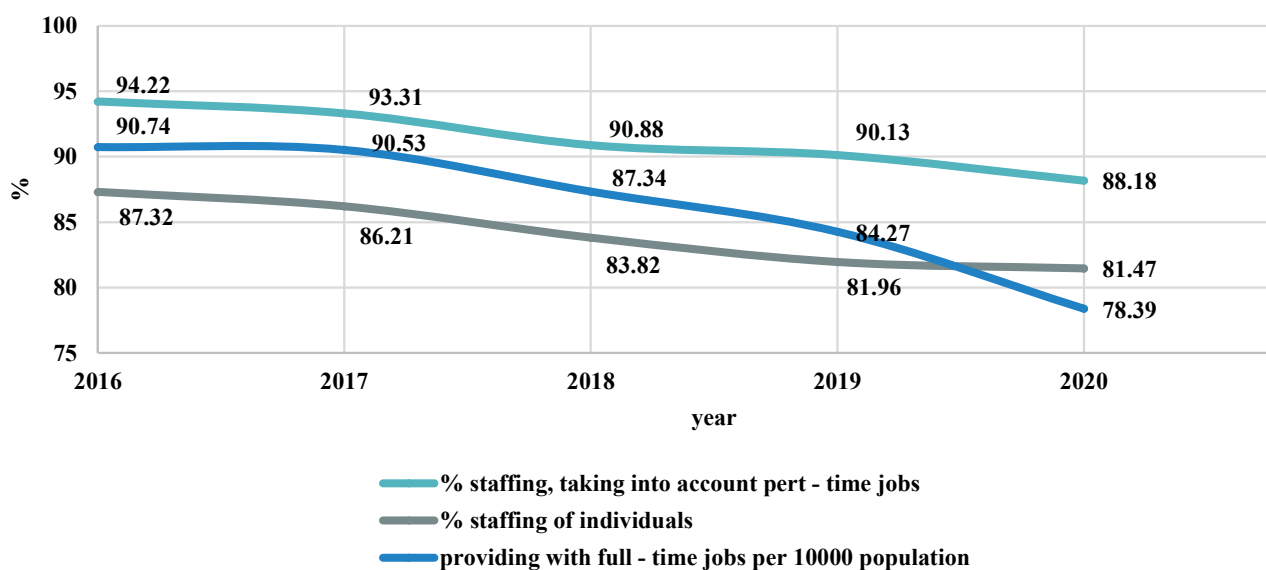


Fig. 3. Dynamics of reduction in the number of nurses in 2016-2020 [12]

It is not possible to reform the health care system without the education system. Colleges and schools for the training of paramedics, as noted above, have already accessed to the Bologna system, but the content of curricula remains outdated [14], nurses are taught to make independent decisions (within the nursing function), to nursing make diagnosis as required by European and international standards, but practicing nurses remain only performer of doctor's administrations. Bachelor's and master's

degrees in nursing do not provide prospects for financial growth. Advanced training is carried out in postgraduate centers of junior specialists with medical and pharmaceutical education in which training is conducted in an active form, taking into account innovative technologies and competency approach, new disciplines “Fundamentals of Management” and “Self-Management” were introduced [18], but it should be emphasized that nowadays information changes very quickly and the

knowledge that a person possesses today, tomorrow is not enough. Therefore, the system of continuous education can be considered formalized – in-service education is carried out by the schedule, once every three to five years, trainings are also conducted during in-service education. Also, strategic directions for the development of public administration in the system of medical education are the provision of highly qualified specialists of medical institutions, taking into account the market of educational services and the needs of society; development and implementation of an effective mechanism for attracting resources to meet the needs of medical education; coordination of the market of educational services with the needs of the medical industry.

Finally, it should be noted and emphasized that nowadays despite complications due to COVID-19 pandemic, there is a growing need for international knowledge sharing, new ways of learning, based on intercultural competences, new continuous education programs in clinical practice and leadership, and enhancing the status of the nurse in the chain doctor – nurse [24, 26].

CONCLUSIONS

1. Dnipropetrovsk region is the second by population, on the territory of which there are five medical colleges and a medical faculty at the National University Oles Honchar, annually almost 1000 people in the specialty “223 Nursing” graduate from but still there is a negative trend of reduction of working nursing medical staff. The problem of nursing education is global, long-term and complex. Previously developed programs for the development of nursing in Ukraine due to the constant updating of knowledge, rapid technical development and changes in the economy of the country today need significant improvement and systemic initiatives

from the state in reforming the health sector. Providing with highly qualified specialists of medical institutions, taking into account the market of educational services and the needs of society, is a strategic direction of public administration development in the system of medical personnel education.

2. Development of a strategic plan for the development of nursing with the introduction of effective mechanisms for attracting resources to meet the needs of medical education; coordination of the needs of the medical industry with the market of educational services; popularization of the profession of nurse among graduates of medical colleges and medical faculties of universities by significantly improving the working conditions of nurses.

3. Public administration of medical education and the health care system in general should take into account the current stage of development of society and be based on innovative mechanisms that will improve the quality of medical care to the population at all levels.

Contributors:

Striukov V.V. – conceptualization, methodology, validation, formal analysis, investigation, data curation, writing – original draft, visualization;

Grynko T.V. – conceptualization, methodology, validation, writing – review & editing;

Krupskiy O.P. – conceptualization, formal analysis, writing – review & editing, supervision, project administration;

Vazov R.G. – formal analysis, investigation, writing – original draft.

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