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DEVELOPMENT FEATURES OF REGION HEALTH CARE IN THE EUROPEAN AND UKRAINIAN CONTEXT (ON EXAMPLE OF THE KHARKIV REGION)

Niemiec L., Kliuczko L., Kulieszowa A., Mazurova A. **Cechy rozwoju systemu ochrony zdrowia w obwodzie charkowskim w kontekście europejskim i ukraińskim.** Przedstawiono analizę społeczno-geograficzną systemu ochrony zdrowia na poziomie regionalnym na przykładzie obwodu charkowskiego na Ukrainie, jako ważnego elementu społecznego zabezpieczenia ludności. Przeprowadzono analizę porównawczą poszczególnych wskaźników systemu ochrony zdrowia na Ukrainie i w wybranych państwach europejskich. Wykazano regionalne cechy rozwoju systemu ochrony zdrowia i określono miejsce obwodu charkowskiego na podstawie wybranych wskaźników. Opierając się na analizie SWOT przedstawiono też problemy i priorytetowe kierunki polityki regionalnej w sferze ochrony zdrowia.

Немец Л., Ключко Л., Кулешова А., Мазурова А. **Особенности развития системы здравоохранения Харьковской области в европейском и украинском контексте.** Статья посвящена общественно-географическому анализу системы охраны здоровья регионального уровня на примере Харьковской области Украины, как важной составляющей социальной безопасности населения. Выполнено сравнительный анализ отдельных показателей системы охраны здоровья Украины и европейских государств. Установлены региональные особенности развития системы охраны здоровья Украины и определено место Харьковской области по некоторым показателям. На основании SWOT-анализа выявлены проблемы и приоритетные направления региональной политики в сфере охраны здоровья.

Key words: Health Care, provision with doctors, provision of nursing and midwifery personnel, provision with hospital beds

Słowa kluczowe: system ochrony zdrowia, dostępność do lekarzy, dostępność do personelu medycznego średniego stopnia, dostępność do łóżek szpitalnych

Ключевые слова: система здравоохранения, обеспеченность докторами, обеспеченность средним медицинским персоналом, обеспеченность больничными койками

Abstract

Article is devoted to the human geographical analysis of Health Care system of regional level on the example of the Kharkiv region, as an important component of social population security. Comparative analysis of separate indicators of Health Care of Ukraine and the European countries is made. Regional features of development of Ukrainian Health Care system are defined and the place of the Kharkiv region by some indicators is determined. Based on the SWOT-analysis problems and the perspective directions of development of regional policy in the sphere of Health Care are revealed.

INTRODUCTION. STATEMENT OF A PROBLEM

At the present stage of development of Ukraine, one of the priority state social policy directions is the development of health care as the component of national security. Because the health care is an element of social protection and important sector of economy. Population health as consequence of social and economic development needs the state support and long-term investments. Formation of effectively functioning branch of health care is necessary for improvement of quality of the state human capital, providing its sustainable development, prevention of threat

to population health, reduction of the budgetary expenses on medical care in the conditions of growth and distribution of noninfectious diseases and ageing of population.

In recent years it was created a number of powerful factors of nation-wide level which negatively influence on health system development. In particular, imperfection of standard statutory-legal support, continuous insufficient funding of branch, gradually progressing demographic crisis, deficiency of medical staff etc.

It should be noted that today the World Health Organization (WHO) recommends to the countries to allocate for health care needs not less than 5% of GDP (*Zdravookhranenie Ukraïny...*). Long time the real consolidated budget of medical branch in Ukraine fluctuated within 3–4% of GDP though in the majority of the European countries makes more than 8% of GDP (*Oficijnyi sayt Strategichnoy doradchoyi grupy...*). For example, in Germany budgetary appropriations on state medical branch in 2012 reached 260 billion euro that made 11,3% of GNP, in Austria – 11,5%, in Poland – 6,7%, in Slovakia – 7, 8%, in Hungary – 7,8%, in the Czech Republic – 7,7%, in Italy – 9,2% (*Golovne upravlinnia statystyky...*). It is necessary to notice that primary medical care is financed by local budgets (city, district). Secondary, tertiary and emergency care is financed by regional budget.

Therefore human geographical research of regional Health Care system is really actual.

Objective of this research is the human geographical analysis and detection of features of regional Health Care system on the example of the Kharkiv region of Ukraine.

RESEARCH METHODS

Basic provisions of modern human geography, theoretical regulations on the territorial organization of human services were formed methodological basis of this research. In work were applied system approach, general scientific methods (the analysis and synthesis, methods of induction and deduction, abstraction and generalization, comparison), special methods (mapping, social and geographical modeling, SWOT-analysis) and interdisciplinary methods (statistical, mathematical, the literary analysis).

Theoretical base of research are scientific works by A. G. VORONOV (1981), O. V. CHAKLIN (1986), V. O. SHEVCHENKO (1994), L. T. SHEVCHUK (1997), V. O. SHEVCHENKO et al. (1998), I. V. MARTUSENKO (2005), G. A. BARKOVA (2007), N. I. MEZENCEVA, S. P. BATYCHENKO (2009), L. M. NIEMETS', G. A. BARKOVA, K. A. NIEMETS' (2009), T. BROWN (2010), Kh. E. PODVIRNA

(2010), K. NIEMETS', T. POGREBS'KYI (2012), A. N. RESHETNIKOVA, V. M. ZAYTSEV (2012), L. M. NIEMETS et al. (2014), A. C. GATRELL, S. J. ELLIOTT (2015), and other scientists. Materials of Kharkiv Regional Management of Health Care, Kharkiv Regional Management of Statistics, State Statistics Service of Ukraine, World Health Organization, numerous references and results of own investigations were used for performing this research.

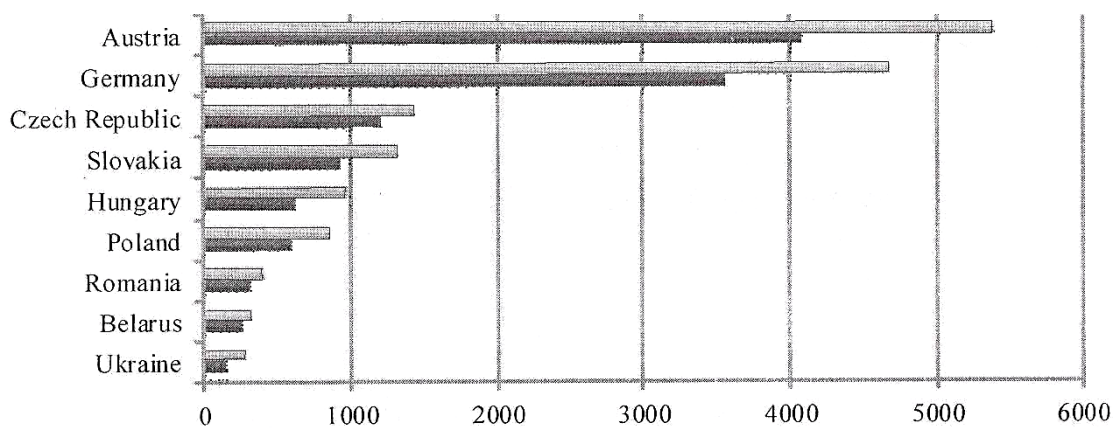
THE RESULTS OF RESEARCH

At the present stage of development the Ukrainian Health Care needs optimization and reforming. The decision on carrying out reform of Health System of Ukraine was made by the Law of Ukraine No. 3612 of July 7, 2011 "On an order of carrying out reforming of health system in Vinnitsa, Dnepropetrovsk, Donetsk region and the city of Kiev" (*Oficijnyi sayt Vsesvitn'oyi...*). Reforming of health system in Ukraine began on January 1, 2012 with "pilot regions", namely Vinnitsa, Dnepropetrovsk, Donetsk region and the city of Kiev.

Serious changes in political system, social and economic situation in Ukraine for the last period has been inducing to creation of "National strategy of creation of new Health Care in Ukraine for 2015–2025" which Discussion continues (RESHETNIKOVA, ZAYTSEV, 2012).

Strategy has to become a basis for development of policy and definition of an order of decision-making in the field of health care, including the decision on filling and distribution of budgetary funds for this field. Because expenses from the state budget on health care are covered only by about 60% of the total amount of the services used by the population.

According to WHO the public expenditures on Health Care in Ukraine counting on one inhabitant make about 160 US dollars when in the European countries this indicator averages 1500–2200 US dollars (*Golovne upravlinnia statystyky...*). In 2012 the public expenditures on Health Care in Germany counting on one inhabitant made 3572 US dollars, Austria – 4085,1 US dollars, Poland – 598,4 US dollars, Slovakia – 934,80 US dollars, in Hungary – 628,00 US dollars, in the Czech Republic – 1214,2 US dollars, in Republic of Belarus – 261,50 US dollars (*Golovne upravlinnia statystyky...*). Therefore, expenses on medical branch financing in Ukraine counting on one inhabitant is many times less in comparison with the European countries, that interferes receiving timely highly qualified medical services to the population (fig. 1).



Per capita total expenditure on health at average exchange rate (US\$)

Per capita government expenditure on health at average exchange rate (US\$)

Fig. 1. General and public expenditures on Health Care of some European countries (US \$), 2012 (after: *Oficijnyi sayt Vsesvitn'oyi...*)

Rys. 1. Ogólne i państwowe wydatki na służbę zdrowia w niektórych państwach europejskich (USD), 2012 (wg: *Oficijnyi sayt Vsesvitn'oyi...*)

The Kharkiv region one of the most powerful regions on demographic, economic and to other potentials in Ukraine. Considering Health System of the Kharkiv region, it is necessary to notice, that during last 5 years it is observed increase in the general financing of branch and expenses of budgetary funds in calculation for one inhabitant by

1,7 times, that is from 2,6 billion UAH to 934,6 UAH respectively. Regional Health Sector at the expense of budgets of all levels annually receives on average no more than 45–47% of need for financial resources for its stable functioning and ensuring appropriate level of medical services to the population (fig. 2).

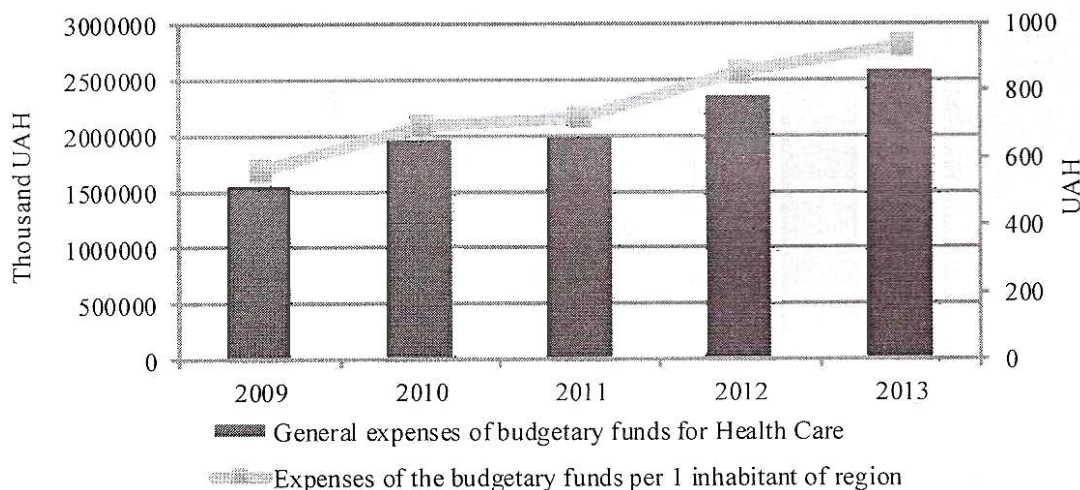


Fig. 2. Dynamics of the general expenses of budgetary funds for Health Care of the Kharkiv region, 2013 (after: *Golovne upravlinnia statystyky...*)

Rys. 2. Dynamika ogólnych wydatków budżetowych na ochronę zdrowia w obwodzie charkowskim, 2013 (wg: *Golovne upravlinnia statystyky...*)

Not less important indicators, characterizing development of health system is provision with doctors, nursing, midwifery personnel and hospital beds.

According to WHO provision of the population with doctors in 2013 in Europe averaged 33,3 doctors per 10 thousand population, in Ukraine – 35,2

doctors per 10 thousand population, in Slovakia – 51,78, Republic of Belarus – 48,53, Austria – 32,46, Germany – 21,57 (*Derzhavna sluzhba statystyky...; Golovne upravlinnia statystyky...*) (fig. 3).

Due to methodology of WHO don't treat doctors: physiotherapists, doctors on physiotherapy exercises and sport, manual therapy, reflexologists, dentists,

doctors of a sanitary and epidemiological profile, and also doctors at the main work in establishments of training, scientific research institute, offices of governing control agency. Therefore there are some methodological distinctions in statistics of the European states and Ukraine.

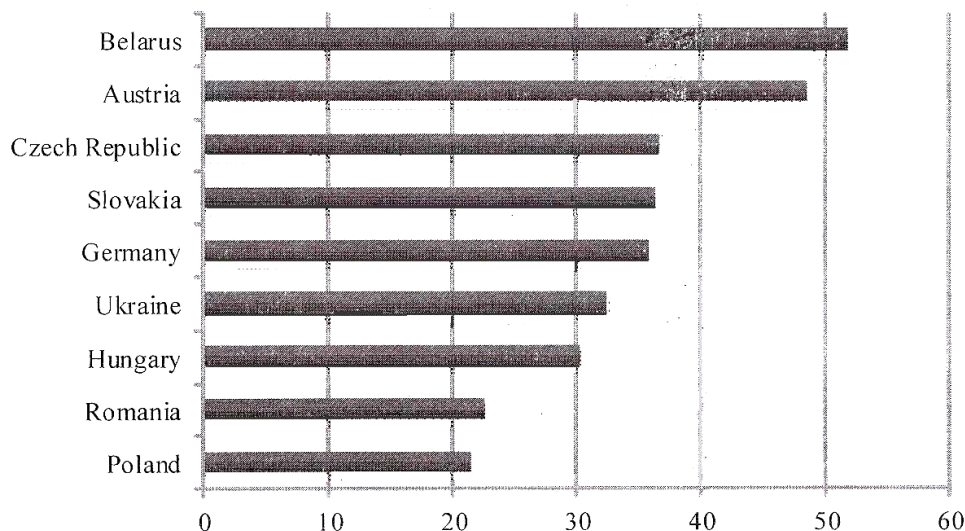


Fig. 3. Provision of doctors in some European countries (number of doctors per 10 thousand population), 2012 (after: *Oficijnyi sayt Vsesvitn'oyi...*)

Rys. 3. Dostępność do lekarzy w niektórych państwach europejskich (liczba lekarzy na 10 tys. mieszkańców), 2012 (wg: *Oficijnyi sayt Vsesvitn'oyi...*)

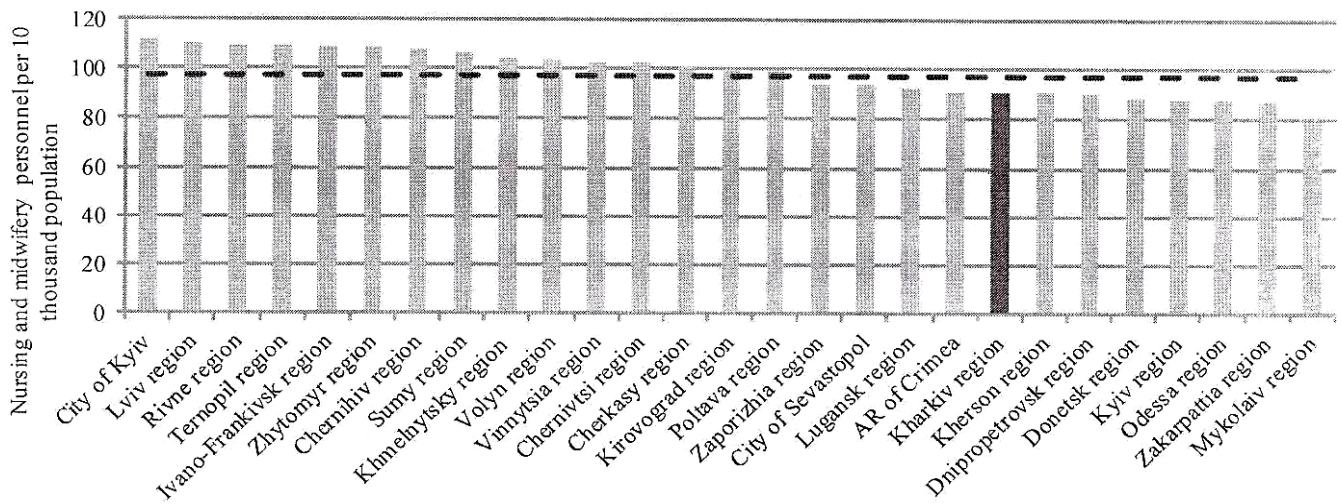
According to State Statistics Service of Ukraine provision of the population with doctors of all specialties in general on Ukrainian regions in 2013 were 48 doctors per 10 thousand population. It is necessary to pay attention, that there are certain regional distinctions of the specified indicator. So the greatest indicators of provision of the population with doctors of all specialties are in the city of Kiev, Chernivtsi and Ivano-Frankovsk region. The Kharkiv region takes the 4th place on an indicator of provision with doctors of all specialties (57,6 doctors per 10 thousand population). There is more than Ukrainian nation-wide value (fig. 4, 5).

By calculations of WHO provision of the population with the nursing and midwifery personnel in 2013 Europe averaged 84,2 per 10 thousand population, in Ukraine – 64,2 per 10 thousand population (fig. 6). Munich declaration of WHO (2000) recommended ratio: 1 doctor per 4 nurses. Considering told, it is necessary to pay attention that a ratio of number of doctors to nursing and midwifery personnel in 2013 in Europe were 2,09 nursing and midwifery personnel on 1 doctor, in Ukraine – 2,03 nursing and

midwifery personnel on 1 doctor (*Golovne upravlinnia statystyky...*).

According to State Statistics Service of Ukraine provision of the population with nursing and midwifery personnel in Ukraine in 2013 averaged 97,4 of the paramedical staff per 10 thousand population. The city of Kiev, the Lviv, Rivne and Ternopil regions have the high level of provision with paramedical personnel. In the Kharkiv region the indicator of provision with nursing and midwifery personnel was 91,1 (the 20th place in Ukrainian rating), there is less than nation-wide value (*Derzhavna sluzhba statystyky...*) (fig. 7, 8).

Provision of the population with hospital beds in Ukraine in 2013 made 88,0 hospital beds per 10 thousand population. According to this indicator the Kharkiv region takes the 7th place in a rating of Ukrainian regions (90,7 hospital beds per 10 thousand population), that slightly exceeds nation-wide value (fig. 9). Leading regions are the Chernigiv, Lugansk, Lviv, Kherson and Dnipropetrovsk regions. The indicator of provision with stationary beds at the level of areas and the cities of the Kharkiv region significantly differs (*Derzhavna sluzhba statystyky...*).



Number of nursing and midwifery personnel (per 10 thousand population) Average value across Ukraine

Fig. 4. Distribution of Ukrainian regions on an indicator of provision with all specialty doctors (number of specialty doctors per 10 thousand population), 2013 (after: *Derzhavna sluzhba statystyky...*)

Rys. 4. Kolejność obwodów Ukrainy według wskaźnika dostępności lekarzy wszystkich specjalności (liczba lekarzy wszystkich specjalności na 10 tys. mieszkańców), 2013 (wg: *Derzhavna sluzhba statystyky...*)

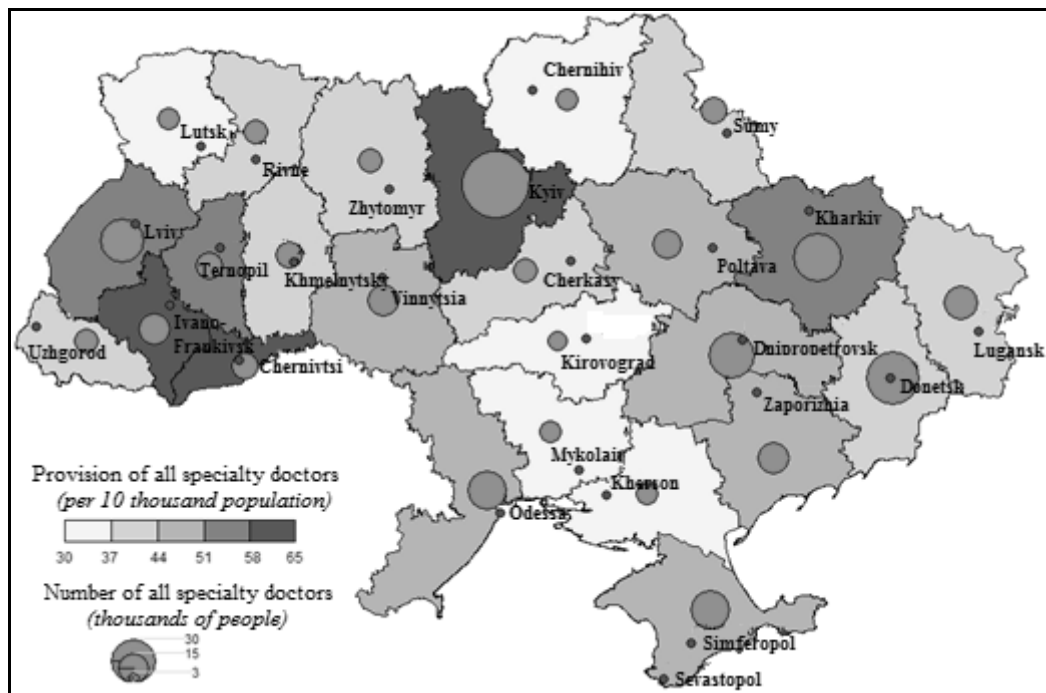


Fig. 5. Provision of all specialty doctors in Ukrainian regions, 2013 (after: *Derzhavna sluzhba statystyky...*)
 Rys. 5. Dostępność dla ludności lekarzy wszystkich specjalności w poszczególnych obwodach Ukrainy, 2013 (wg: *Derzhavna sluzhba statystyky...*)

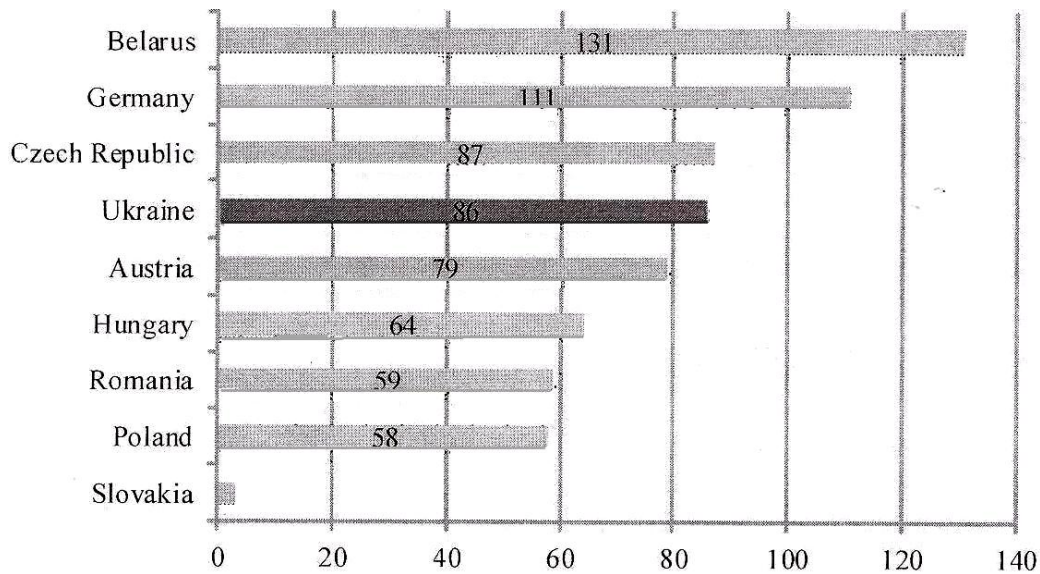


Fig. 6. Provision of nursing and midwifery personnel in some European countries (number of nursing and midwifery personnel per 10 thousand population), 2012 (after: *Oficijnyi sayt Vsesvitn'oyi...*)
 Rys. 6. Dostępność średniego personelu medycznego w niektórych państwach europejskich (liczba średniego personelu medycznego na 10 tys. mieszkańców), 2012 (wg: *Oficijnyi sayt Vsesvitn'oyi...*)

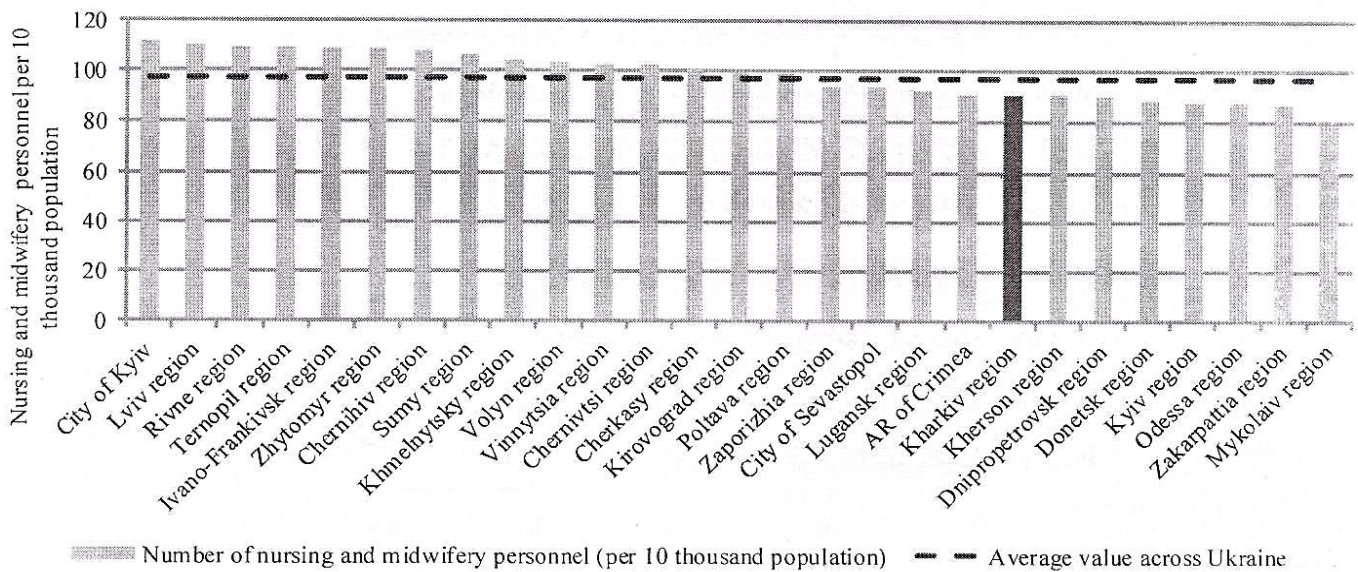


Fig. 7. Distribution of Ukrainian regions on an indicator of provision with nursing and midwifery personnel (number of nursing and midwifery personnel per 10 thousand population), 2013 (after: *Derzhavna sluzhba statystyky...*)
 Rys. 7. Kolejność obwodów Ukrainy według wskaźnika dostępności średniego personelu medycznego (liczba średniego personelu medycznego na 10 tys. mieszkańców), 2013 (wg: *Derzhavna sluzhba statystyky...*)

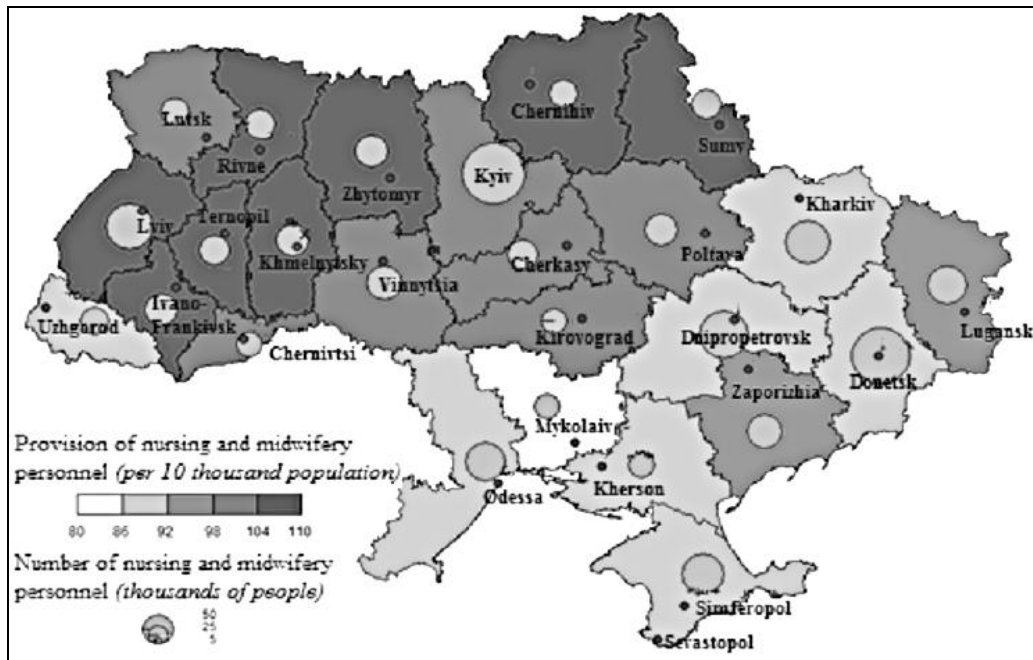


Fig. 8. Provision of nursing and midwifery personnel in Ukrainian regions, 2013 (after: *Derzhavna sluzhba statystyky...*)
 Rys. 8. Dostępność dla ludności średniego personelu medycznego w poszczególnych obwodach Ukrainy (wg: *Derzhavna sluzhba statystyky...*)

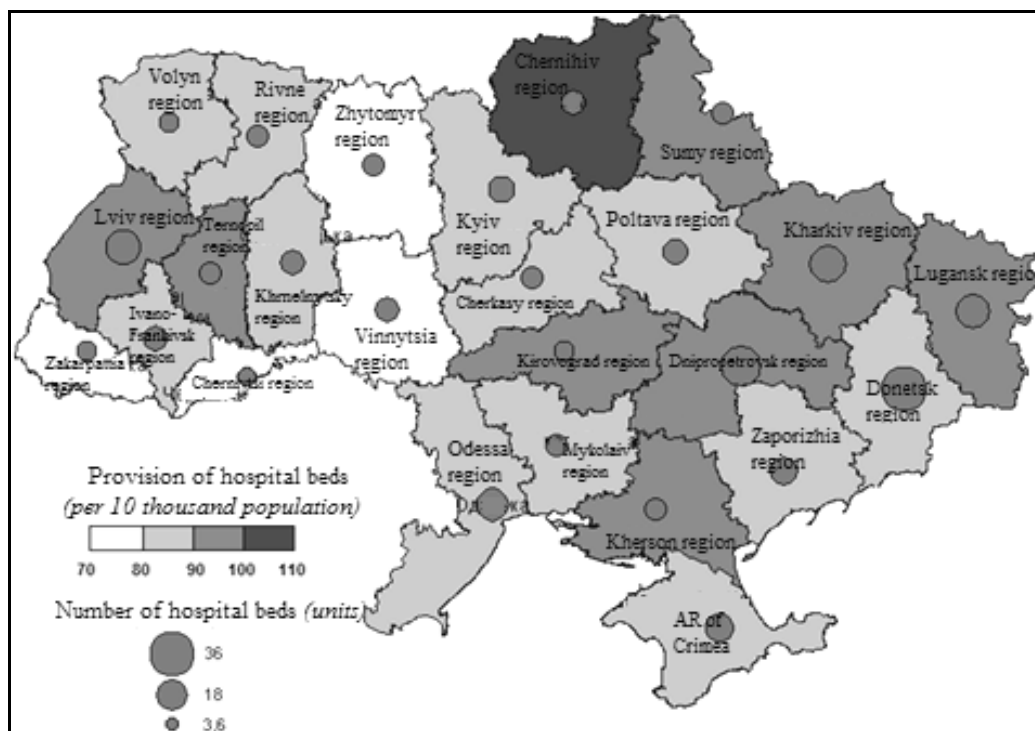


Fig. 9. Provision of hospital beds in Ukrainian regions, 2013 (after: *Derzhavna sluzhba statystyky...*)
 Rys. 9. Dostępność dla ludności łóżek szpitalnych w poszczególnych obwodach Ukrainy, 2013 (wg: *Derzhavna sluzhba statystyky...*)

So the analysis of statistics, standard and legal documents, information periodic materials allowed to reveal problems of functioning and development of Health Care in Ukraine and the Kharkiv region.

Application of SWOT-analysis allowed identifying strength and weaknesses, opportunities and threats of Health Care of the Kharkiv region (table 1).

Table 1. SWOT-analysis of Health Care in the Kharkiv region
 Tabela 1. Analiza SWOT systemu ochrony zdrowia w obwodzie charkowskim

Strength	Weakness
<ul style="list-style-type: none"> • High skill level of Health Care staff • Work system on the Health Care professional development organization of • Efficiency of medical services • Equipment by the newest equipment of health care institutions in some large settlements • Existence of the program of the state guarantees of rendering free medical care to the population • Various types of the medical institutions providing medical care and medical services • Possibility of a choice of medical institution form (private, municipal, state) 	<ul style="list-style-type: none"> • Lack of trained medical resource • Absence of young specialists. • Lack of municipal housing for doctors • The obsolete equipment in medical institutions • Low availability of medical care • Discrepancy of property complexes of Health Care institutions to the standards • Low image of health workers • Surplus of the reporting (monitoring) and unreal terms of their performance • Focus of competitive procedures on low cost, but not on quality of service • Low financing of medical service • Low computer equipment
Opportunities	Threats
<ul style="list-style-type: none"> • Opportunity to take part in various European programs • Providing office housing in rural areas • Opportunity to provide salary growth • Possibility of involvement of the private medical organizations 	<ul style="list-style-type: none"> • Outflow of doctors owing to a low salary and lack of housing • Aging of medical staff • Termination of providing medical services in certain profiles in connection with a critical condition of the room • Reduction of quantity (or in general absence) doctors of some specialties: hematologist, gastroenterologist, chemotherapeutist and others in healthcare institutions in rural areas

CONCLUSIONS

For realization of tasks on state and regional levels according to "National Strategy of new Health Care in Ukraine for 2015–2025" it needs to creation State Strategy of Regional Development which conforms to European standards.

In the context of modernization of the Health Care regional sphere according to the strategic directions of a state policy development of primary establishments of medical care remains priority providing medical care of the population on all administrative units corresponding to an order of the organization of European medical care.

Also within Strategy introduction program of insurance medicine in Ukraine since the end of 2015 which will provide functional changes in Health Care system. For example, effective and transparent use of the budgetary funds allocated for it, reorganization of a network of hospitals and other medical institutions, development of tariffs for medical services etc.

There are 32 legally independent centers of primary medical and sanitary help which part 331 medical out-patient clinics and 500 feldsher-midwife

station in Kharkiv region. From among all out-patient clinics 298 (90%) are the isolated structural divisions, including 251 (100%) rural and 47 (59%) city.

Further development of establishments of primary link according to their modernization provides gradual planning of decentralization of primary medical care – out-patient clinics from the center of primary medical and sanitary help on different address. That considerably will increase the level of availability of medical services to inhabitants of region, after all in more than 75% of patients start asking for medical care from the first link.

According to the current legislation of Ukraine, this process is expected to be completed by January 1, 2020. That will demand the corresponding budgetary appropriations or other sources of financing within the current legislation.

Creation and realization of new Strategy of social and economic development of the Kharkiv region assumes observance of the principles of strategic vision of development of the region, an integrated approach to problems of spatial development; developments of regional and interregional clusters, creation of new workplaces est.

Priorities of next year regional policy of Health Care of the Kharkiv region will be directed, first on:

- the organization and ensuring activity of profile branch according to the strategic directions of a state policy in the sphere of Health Care and conditions of strengthening of threats of national security of Ukraine,
- strengthening of control of effective and rational use of budgetary funds,
- further modernization of the regional sphere of Health Care according to standards of the current legislation,
- improvement of a material condition of subordinate of Health Care institutions,
- solution of personnel disproportions and questions of social protection of Health Care staff,
- counteraction to distribution of socially dangerous and noninfectious diseases,
- strengthening of cooperation in health sector with public organizations.

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