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PROSPECTS FOR THE IMPLEMENTATION OF STATE SUPPORT FOR CANCER PATIENTS AS A COMPONENT OF HEALTHCARE DEVELOPMENT IN UKRAINE

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INTRODUCTION

Oncological pathology causes significant changes in the physical and mental condition of patients. It leads to partial or complete disability due to chronic progressive course in every 6th patient (79 per 100 thousand populations). Mortality in oncology is 51.3%; does not live a year after diagnosis 31.4%; mortality is 188.4 per 100 thousand population. Due to the fact that 40% of patients among men and 26.6% among women – people of working age, a strong stratum of the population is formed, which is excluded from active social life[1]. At the same time, in most cases it is extremely difficult for cancer patients and their relatives to pay for treatment on their own, and therefore the urgency of improving the methods of state support for such persons is growing. Depending on the specific situation, public administration bodies use (simultaneously) administrative, economic, legal, socio-motivational management methods. Each of these methods is characterized by a corresponding list of means of state influence.

Administrative methods are based on the power of state power and include prohibition, permits and coercion. The permit stipulates consent to medical activities, and the prohibition and coercion are manifested in the need for specialists to have the appropriate certificates, to take regular training courses, to comply with established standards in the treatment of patients. In health care, the main tools of administrative methods that influence the process of providing medical services and productivity in this area are: development and control of state programs to provide free medical care to citizens of Ukraine; control over the activities of municipal and private health care systems; issuance of permits for the use of new technologies; accreditation of hospital institutions; issuance of licenses for the provision of medical services; regulation of prices for medical services; application of sanctions; certification of services; planning and quality training of the required number of staff; organization and ensuring the

[1] Мухаровська І.Р. Якість життя онкологічних хворих на етапах лікувального процесу. Психіатрія, неврологія та медична психологія. 2017. Т. 4. № 1. С. 91–95.

establishment of standards; certification of state sanitary and epidemiological supervision of medical institutions; medical workers; streamlining the statistical reporting system. The use of these methods in a market economy contributes to the preservation of social justice and access to goods, as well as regulates the asymmetry of information in the market of medical services.

Economic methods play an important role, because the main tool of public management of cancer patients support are the budget. The financial stability of medical institutions involves finding the optimal cost structure and ways to improve management efficiency and increase productivity. Tools in the framework of economic methods: planning and forecasting; ensuring financing of the industry at the expense of budget funds; providing conditions for centralized bidding for the supply of medical equipment and materials; tax policy; innovation policy; depreciation policy; regulation of financial flows of public sector organizations; introduction of a financing mechanism (health insurance). Economic methods make it possible to create conditions that force market participants to act in the direction necessary for society, solving certain tasks. These include: planning and forecasting the development of the sector; providing funding for this area from the budget; conducting centralized bidding for the supply of medical equipment and materials; funding targeted health programs; tax policy; purchase of new equipment and treatment technologies, i.e. innovation policy; depreciation policy; regulation of financial flows of public sector organizations[2]. Since January 2018, the Law of Ukraine "On State Financial Guarantees of Medical Care" of October 19, 2017 № 2168–VIII, which states that the main source of income of the primary health care institution will be cash payments under an agreement with the National Health Service of Ukraine. The amount of cash benefits will depend on the number and age of patients who have submitted a declaration of choice of a primary care physician working for a primary care provider. In this way the principle "money goes (to the institution) after the patient" is realized. The more patients choose a doctor (doctors) working in the institution, the greater the payment under the contract with the National Health Service of Ukraine and the greater the productivity of the doctor[3]. In the process of carrying out activities related to the provision of primary health care, each provider of primary health care bears costs, including: staff salaries, utilities, maintenance of official

[2] Кривуша С.Г. Складові механізму державного регулювання продуктивністю праці в секторі охорони здоров'я. Молодий вчений. 2018. № 12. С. 277–283.

[3] Про державні фінансові гарантії медичного обслуговування населення. Закон України від 19 жовтня 2017 р. № 6327. URL: http://zakon3.rada.gov.ua/laws/show/2168-viii. (дата звернення: 23.01.2020).

vehicles, current repairs, maintenance of the surrounding area, etc. These costs should be covered by income, which mostly means – at the expense of funds received from the National Health Service of Ukraine under the contract on medical care of population. Ensuring a balance between income and expenses is key to achieving financial stability and high productivity. Appropriate software has been developed to facilitate the financial planning of income and expenditure of the primary care provider. The availability of modern technical equipment of primary health care enterprises is an important component of providing quality medical care to patients at the primary level.

Ukrainian companies need certain incentives to create new products and bring them to the domestic market. Such incentives include targeted programs, localization of production and long-term government contracts. Public procurement will promote the introduction of innovations in medicine only if the criterion for selection is the focus on long-term treatment outcomes. At the same time, long-term contracts with the condition of localization of high-tech industries and the purchase of goods and services according to efficiency criteria should replace the auction model[4].

1. Prerequisites and trends in the spread of cancer in Ukraine

The formation of oncological pathology in the population is characterized by wave-like dynamics of progressive growth of all three of its indicators – the frequency of malignant neoplasms, the tumor prevalence and mortality from them. The average for the 30-year period levels of primary cancer incidence are 268.9 ± 27.8 cases, the prevalence of tumors – 1120.2 ± 98.7, mortality from them – 177.2 ± 16.9 cases per 100 thousand population. The prevalence of tumors of the breast, uterus, trachea, bronchi and lungs, rectum and colon, leukemia and esophageal cancer increased the most, and the number of patients with skin and lip tumors decreased. All levels of oncological pathology in the urban population of the region exceed the corresponding values of rural: the incidence of tumors – by 32.5%, their prevalence – by 22.6% and cancer mortality by 3.1%[5].

More often “occupational cancer” is diagnosed among men (93.0%), this is due to the fact that they are more likely to work in carcinogenic industries, namely: uranium mining and chemical (10.8%) industry (42.7%) and in

[4] Карлаш В.В. Регулювання державними закупівлями в системі охорони здоров’я України. Вісник Національного університету цивільного захисту України. (Серія: Державне управління). 2019. Вип. 1. С. 110–115.

[5] Грищенко С.В. Гігієнічні основи профілактики онкологічної захворюваності населення в регіонах з несприятливими екологічними умовами: автореф. дис. ... д.мед.н.: 14.02.01. Донецьк, 2001. 30 с.

mechanical engineering (18.4%). “Occupational cancer” among men occurs 10–15 years earlier than cancer in the general population of this sex, which determines that this pathology in 50.0% of cases occurs in working age (up to 59 years). The clinical features of “occupational cancer” are that it most often affects the respiratory, digestive, skin, hematopoiesis, urination. For “occupational cancer” the defining characteristics are the following: the emergence of primary-multiple localization of malignant neoplasms (about 10.0% of patients), precedence of other chronic inflammatory-dystrophic pathology, from target organs to carcinogenic agents this occurs earlier (from 10 till 15 years) than the occurrence of “occupational cancer”, the occurrence of occupational pathology (in 40.0% of patients). Due to the imperfection of the medical examination system for those working in carcinogenic and dangerous conditions, objective difficulties in the differential diagnosis of malignant neoplasms with inflammatory-dystrophic diseases caused by harmful production factors, such patients are characterized by late detection of oncological pathology (at III and IV stages of the process)[6].

The most polluted is the atmospheric air of the settlements of the Eastern and Southern regions of Ukraine. The level of danger of the air basin to human health is assessed in these regions as dangerous and very dangerous. The least polluted air in the settlements of the Northern region. The most dangerous for health water is consumed by residents of regions Donetsk and Odessa, where there is a combination of natural hydrochemical anomalies with a high degree of anthropogenic pollution of water sources. The highest quality drinking water, safe in chemical composition, is typical for the territories of the Western, Northern and Central regions of Ukraine with a low level of anthropopression and optimal natural mineral content. The highest concentrations of heavy metals were recorded in the soils of the Eastern and Southern regions of Ukraine, where they significantly exceed the hygienic regulations: lead – 2.5–3.6 times, zinc – 1.9–2.8 times, nickel – 1,5–2.0 times, for manganese – 1.2–1.3 times. The total rate of chemical soil contamination in these areas ranges from 78.6 to 123.6, which corresponds to a level dangerous to public health. The lowest (permissible) level of soil danger for public health was found in some regions of the Northern (Zhytomyr, Chernihiv) and Western (Volyn) regions (Zc = 8.0–10.4). The content of all investigated metals in the soils of these territories does not exceed the established standards. Hygienic characteristics of the state of chemical contamination of food products made from local raw materials, allowed establishing certain regional features. The highest level of their

[6] Варивончик Д.В. Виробнича канцерогенна небезпека в Україні та обгрунтування профілактики професійного раку: автореф. дис. ... д.мед.н.: 14.02.01. Київ, 2007. 35 с.

contamination with heavy metals (12.9–15.6% of analyzes in excess of regulations) and pesticides (8.5–15.8%) was observed in the Eastern and Southern regions, while nitrates – in the Western, Northern and Central regions (9.0–12.8%). The territorial load of pesticides is maximum in the Southern region, where it is 2.2 times higher than the permissible level, while nitrates in the West region (exceeding by 1.2–1.3 times).

The demographic situation in different regions of Ukraine differs significantly. The majority of the region's population structure is dominated by urban residents (54.1–82.8%) and only in the Western region do rural residents predominate (54.7%). The highest proportion of young women was recorded in the western and northern regions (21.9–23.8%), while the share of women older than working age was highest in the Eastern and Southern regions (26.1–27.5%). Indicators of women's reproductive behavior are more favorable in the Western and Northern regions, where the birth rate is 1.5–2.3 times higher, and the number of abortions per 100 births is 1.5–2.0 times lower than in the Eastern and Southern regions of Ukraine.

The most favorable macroeconomic situation has developed in the Eastern and Southern regions of Ukraine, which are the most developed in industrial and socio-economic terms. This is evidenced by the highest values of such indicators as specific gross economic income ($ 803.5–1265.4 people/year), average income ($ 684.2–993.0 people/year) and the share of residents with higher and incomplete higher education (21.2–25.3%). The worst socio-economic situation, according to these indicators, exists in the Western and Northern regions of Ukraine[7].

Unfortunately, the leading regularity of the modern territorial distribution of pathology in gynecologic oncology in Ukraine is observed, namely the growing geographical trend of all its indicators (frequency, prevalence, mortality) for uterine and ovarian cancer in the direction from northwest to southeast. Regarding malignant neoplasms of the cervix, there is another medical and geographical feature – the increase in all indicators of this pathology in gynecologic oncology is in the opposite direction – from northeast to southwest of our country. Most often, uterine cancer occurs in women in the Eastern region, where its level (25.3 ± 1.5%) is almost 1.5 times higher than the corresponding value in the Western region, which had showing minimal growth of pathology in Ukraine. Medical and cartographic analysis allowed identifying certain regions of Ukraine with a steadily increased incidence of malignant neoplasms of the reproductive system. The priority areas for the risk of uterine and ovarian cancer are

[7] Шамрай В.А. Гігієнічна оцінка впливу довкілля на формування онкогінекологічної патології та обґрунтування заходів щодо її профілактики: автореф. дис. ... к.мед.н.: спец. 14.02.01. Донецьк, 2006. 19 с.

Odessa, Donetsk and Zaporozhe regions, the risk of cervical cancer are Odessa, Mykolaiv, Vinnitsa, Zhytomyr and Kyiv regions. Throughout the study period, the lowest incidence of uterine and ovarian cancer in our country was observed among the female population of Zakarpattia, Ivano-Frankivsk and Chernivtsi regions, and the incidence of cervical cancer was observed among women living in Chernihiv, Sumy, Kharkiv, and Luhansk areas.

Thus, the territory of Ukraine, identified as the priority in terms of the risk of all malignant neoplasms of the female reproductive system is Odessa region. During the period 1989–2003, the incidence of malignant tumors of the uterus and ovaries among women in this area increased (on average by 41.5 and 24.9%, respectively), and the incidence of cervical cancer, by contrast, decreased by 8.7%. During the studied period of time there was a natural shift of age maxima of primary pathology in gynecologic oncology, namely the transition of uterine cancer from younger age (55–59 years) to older (65–69 years), and malignant tumors of the cervix and ovaries, on the contrary, from the older group (70–74 years) to the younger group (45–49 and 65–69 years, respectively).

Mental trauma of cancer patients is evidenced by the high prevalence of mental disorders among this contingent, which is, according to various authors, from 44 to 62.0%[8]. In addition to clinically defined disorders of the mental sphere, patients show a wide range of different forms of psychological maladaptation[9]. It is worth noting that in the terminal stage of the disease, which occurs due to the loss of patients' physical health and ability to self-care, the importance of the family for the patient increases many times over. Therefore, the cancer patient is surrounded by about 4–7 people who are to some extent involved in the support and care of the patient. Individuals involved in cancer support also experience intense mental dissipative stress[10]. Emotional trauma in oncology is also subject to medical staffs, which are immersed in a complex psychological atmosphere[11]. Antitumor therapy has a powerful arsenal of disease control,

[8] Holland J.C., Breitbart W.S., Jacobsen P.B. [et al.]. Psycho-Oncology. Oxford University press, 2010. P. 3–12.

[9] Савин А.И., Володин Б.Ю. Особенности психогенно обусловленных психических расстройств и психологические характеристики онкологических больных при разных опухолевых локализациях (подход к проблеме). Наука молодих. 2015. № 3. С. 82–86.

[10] Lukhmana S., Bhasin S.K., Chhabra P. [et al.] Family caregivers' burden: A hospital based study in 2010 among cancer patients from Delhi. Indian Journal of Cancer. 2015. Vol. 52. P. 146–151.

[11] Gillman L., Adams J., Kovac R. [et al.] Strategies to promote coping and resilience in oncology and palliative care nurses caring for adult patients with malignancy: a comprehensive systematic review. JBI Database System Rev Implement Rep. 2015. Issue 12. Vol. 13. P. 131–204.

including surgical, radiation, chemotherapeutic methods. However, the chronic course and progression of the disease, which are characteristic of cancer, make it especially important the influence of others on the quality of life of patients, to improve their physical and psychological well-being. Patients who have been diagnosed and treated for cancer have a decline in their quality of life. The most affected area was the physical and mental health of cancer patients. Deterioration of somatic well-being was caused by the presence of oncological pathology with clinical symptoms inherent in each specific nosology. Disorders in mental functioning occurred in response to stress associated with the disease. Physical disturbances reduced working capacity and, to some extent, self-care opportunities and independence in action. The decrease in self-control and the level of self-care in cancer patients is explained by the presence of the disease as such, especially evident in the elderly, and the phenomena of mental disorganization. The patients with cancer need external support in the face of severe stress. The patients with cancer are showed a decrease in satisfaction with relationships with other people, the level of emotional support from relatives and colleagues. The patients with cancer are have dissatisfaction psychosocial environment, reflected the existing features of the system of interpersonal relationships, as well as the growing need for outside participation. Cancer patients have feelings of incomplete personal and spiritual self-realization. Cancer significantly affects the quality of life of cancer patients, which is especially evident during the progression of the disease, the growth of somatic distress, the need to undergo repeated courses of anticancer therapy. The analysis of the obtained data allowed us to conclude that psychocorrection of the psycho-emotional sphere and harmonization of interpersonal relationships in cancer patients are important components of psychological care aimed at improving the quality of life of cancer patients.

The key factors determining the projected chromodynamics changes in the levels of oncological pathology are the high degree of anthropogenic pollution in cities and the predominance of “urban lifestyle” among the urban population, poor organization, low quality and low efficiency of medical care for the rural population as well as the deepening of the negative trend of demographic processes. Cancer morbidity and mortality from malignant neoplasms annually bring the population of the eco-crisis region a socio-economic damage of at least $ 112 million, which is about 2.0% of the gross domestic product of the region[12].

[12] Грищенко С.В. Гігієнічні основи профілактики онкологічної захворюваності населення в регіонах з несприятливими екологічними умовами: автореф. дис. ... д.мед.н.: 14.02.01. Донецьк, 2001. 30 с.

There are links between the levels of man-made pollution of air, drinking water, soils by chemical and physical factors (ionizing radiation, electromagnetic fields of various characteristics) and the levels of cancer incidence. Man-caused environmental pollution is most pronounced in the regions of Ukraine with significant development of mining and processing, metallurgy, chemical, machine-building industry, energy sector, which determines the high levels of morbidity due to exposure to carcinogenic agents in industries. There is also a period of long-term receipt of factors of these carcinogenic agents in the body of human due to man-made pollution. Atmospheric air pollution by aromatic hydrocarbons, heavy metal salts, formaldehyde, as well as modifiers and precursors of carcinogens (phenol, sulfur compounds, carbon, nitrogen, fluorine, chlorine), affects the population level of cancer in the population.

The key risk factors for the formation of most malignant neoplasms are

1) chemical factors known as the content in the air of 3.4 benzopyrene, soot, phenol and formaldehyde in concentrations exceeding hygienic regulations; content of heavy metals (especially lead, nickel and chromium) and pesticides in biological substrates of women, drinking water, food and soil in quantities exceeding the permissible level;

2) physical factors known as anthropogenic and natural radiation: high levels of accumulation of artificial (strontium-90, cesium-137) and natural (radium-226, thorium-232, potassium-40) radionuclides in the environment;

3) socio-economic factors known as low socio-professional status (primary education, work in enterprises with harmful working conditions) and unsatisfactory level of sanitary and domestic well-being (living in homes without utilities);

4) lifestyle and everyday life, these include tobacco smoking and alcohol abuse (alcohol consumption more than 4 times a month and more than 40 g in terms of pure alcohol once), reproductive disorders (namely its passive type, reducing the number of pregnancies and childbirth, increased abortion, reduced lactation, early menopause) and sexual (namely early (up to 18 years) onset of sexual life, a large number of sexual partners during life) behavior, long-term (more than 5 years) use of oral contraceptives of first-generation, high estrogen content, sedentary lifestyle, unfavorable psychological climate in the family and at work, absence of family (widow or single), passive rest, insufficient sleep (insomnia), medically unfavorable or unhealthy lifestyle;

5) diet, which includes carbohydrate-fat type of daily diet, irregular diet, tendency to overeat, the presence of excess body weight and manifestations of beriberi, permanent or seasonal.

Factors of high risk of oncological pathology in the population when exposed to carcinogenic agents in the workplace are the age of the worker,

which is for men must be more than 45 years, for women more than 40 years; total work experience in carcinogenic conditions of production for the population more than 20 years. The key organizational and medical determinants of both the prevalence of malignant tumors in the population and mortality from them are: 1) the proportion of diseases detected in occupational examinations of the population; 2) mortality up to 1 year from the date of diagnosis of the patient; 3) the proportion of neglected cases in patients; 4) primary morbidity; 5) special treatment coverage of primary patients. Thus, the most significant factors influencing the occurrence and prevalence of malignant neoplasms are socio-economic; natural and geographical; anthropogenic and ecological; way of life and way of life of the population, and food of the population.

2. Results and prospects of development of state management of support of patients with cancer in Ukraine

A fundamental shift in providing care to cancer patients were the following factors, namely, the prolongation of life expectancy of patients due to progress in the treatment of cancer, as well as the presence of multiple forms of cancer and / or comorbid pathology that directly or indirectly affects the treatment and recovery of patients. Cancer treatment has become complex and multimodal[13]. The first rehabilitation center for cancer patients was a research and production medical and social self-supporting association for the rehabilitation of the disabled known as "Argus", which was established in Kherson at the Soviet Foundation for Mercy and Health in 1989. The medical and social self-supporting association for the rehabilitation of the disabled "Argus" existed in the system of the Ministry of Social Security, namely in the Ministry of Labor and Social Policy of Ukraine until 2004. In pursuance of the State Program "Pediatric Oncology" for 2006–2010, which was approved by the Resolution of the Cabinet of Ministers of Ukraine according to the decree of July 19, 2006 № 983, in Kherson on the basis of the hospital. O.S. Luchansky, the Kherson City Rehabilitation Center for Children with Cancer was established. Various organizations and specialists were involved in the creation of the city rehabilitation center for children with cancer, such as pediatricians and nurses who worked in the hospital, as well as social workers and psychologists of the city Center for Social Services for Families, Children and Youth. Psychologists from the city's Center for Social Services for Families, Children and Youth began working with children directly at the

[13] Маркова М.В., Піонтковська О.В., Кужель І.Р. Стан та перспективи розвитку сучасної психоонкології. Український вісник психоневрології. 2012. Т. 20. Вип. 4. С. 86–91.

rehabilitation center. Volunteers from among senior students of "Ukraine" University and Kherson State University were also involved.

All primary patients and patients at the stage of diagnosis (about 90%) of cancer noted the impact of the disease on the psychological state. 10.1% of people denied the similar effect of cancer on their health, which could be a sign of psychological protection with increasing stress. Anxiety-excitatory states were characteristic of primary patients, and anxiety-depressive-inhibitory states were characteristic of patients who applied repeatedly. As the duration of the disease increased, the desire of cancer patients to be treated abroad increased (56.3, 60.5 and 68.4%). Patients with advanced cancer (11.4%) tended to turn to alternative medicine. Patients who were re-treated had a higher level of psychosocial consequences than those who came to the hospital for the first time[14].

Provision of patients with oncological neoplasms with drugs has been carried out in Ukraine since 2002 year within the framework of three targeted programs. The first program is known as the State Program known as "Oncology", it was designed for 2002–2006 years. The second program is known as "Children's Oncology", it was designed for 2006–2010 years. The third program, known as the "National Cancer Control Program" it was designed for 2007–2016 years. Given the sequestration of the state budget almost twice, the need to finance active hostilities in the south-east of the country, the devaluation of the national currency during 2014 year, formed extremely unfavorable conditions for centralized public procurement of drugs. According to experts, the adoption in April 2014 of the Law of Ukraine "On Public Procurement" did not significantly change the situation with the centralized provision of patients with drugs. No name of medicines was purchased with state funds under the state target programs, including for cancer patients. According to the current legislation, deliveries of drugs purchased at public expense must be made within 3 to 6 months from the date of signing contracts between the customer and supplier[15]. Therefore it is possible to speak with full responsibility about complete disruption of the centralized provision of patients with drugs according to the state target programs "Oncology" in 2014 year[16]. A total of 91 trade names of drugs under 59 international non-proprietary names were purchased. More

[14] Мухаровська І.Р. Аналіз особливостей організації медико-психологічної допомоги для пацієнтів онкологічного профілю. ScienceRise: Medical Science. 2016. № 9. С. 25–30.

[15] Галковская Г. Эффективное использование средств госбюджета на закупки препаратов – законное требование налогоплательщиков. URL: http://www.apteka.ua/article/304636. (дата звернення: 23.01.2020).

[16] Панфілова Г.Л. Дослідження стану фармацевтичного забезпечення онкологічних хворих в Україні. Клінічна фармація. 2015. Т. 19. № 1. С. 33–39.

interesting is the analysis of purchased drugs, taking into account all forms of release in terms of "imported / domestic" drug. The ratio (%) between imported and domestic drugs in the structure of the range of drugs purchased over the years of the study was: 82.4 : 17.6 (2009 year); 70.7 : 29.3 (2010 year); 84.1 : 15.9 (2011 year); 75.7 : 24.3 (2012 year); 76.1 : 23.9 (2013 year). That is, the unconditional dominance in the structure of procurement of drugs for patients is imported drugs. For some pharmacotherapeutic groups, the share of imported drugs is 75–80%, and anticancer drugs are no exception in these purchases.

Given the extremely unstable situation in the country's foreign exchange market and the permanent decline in the solvency of a significant proportion of the country's population, this has extremely negative socio-economic consequences and requires a system solution by the relevant government agencies. The largest number of domestically produced drugs was purchased in 2010 year. Thus, a relatively stable number of domestically produced drugs were purchased with state funds. During 2006–2012 years, no significant structural changes in the dynamics of the share of population morbidity in oncological neoplasms were observed. Thus, malignant neoplasms of the lungs, bronchi, and trachea (17.5–19.4%) consistently occupy the first positions in the structure of the incidence of oncological neoplasms among men. Among women, malignant neoplasms for breast cancer consistently occupy the first positions in terms of specific weight in the structure of morbidity (19.5–19.9%). On the second and third positions in the structure of men's morbidity of oncological neoplasms is gastric cancer, non-melanoma malignant neoplasms of the skin, prostate. Among women, non-melanoma malignant neoplasms of the skin and body of the uterus occupy the second and third positions in the structure of the incidence of oncological neoplasms.

According to 2011 year data, there was a decrease in the number of cancer patients compared to 2010 year by 25955 people (-3.0%), and the amount of tender purchases, by contrast, increased by ₴ (hryvnia currency) 25120.1 thousand (+12.7%) and ₴ 10306.4 thousand (+5.62%) in current and comparative prices, respectively. Against the background of an increase in the number of cancer patients in 2012 year by 62696 people (+6.3%), the amount of purchases in comparable prices, on the contrary, decreased compared to the previous period by ₴ 509.8 thousand (-0.3%). It is interesting that in 2013 year the amounts of tender purchases for cancer patients increased by ₴ 64214.9 thousand in existing (+27.9%) and by ₴ 48234.6 thousand in comparable prices (+25.0%) in the conditions of rather insignificant increase in number of patients on 37814 persons (+3,6%) to data of the previous period. On average, the state spent on pharmaceutical services per one cancer patient, meaning the average amount of tender

purchases of drugs per patient, about ₴ 219.00 per patient and ₴ 193.31 per patient, at current and comparative prices in accordance.

The highest value of this indicator in current prices was observed in 2013 year (₴ 270.42 per 1 patient), and the lowest according to 2009 data (₴ 185.41 per 1 patient). During the study period, this indicator ranged from $ 24.08 per patient (2009 year) to $ 33.83 per patient (2013 year). As you can see, despite the annual increase in purchases of drugs, the amount of purchased drugs per patient with cancer decreased from $ 28.30 (2011 year) to $ 27.43 (2012 year). Comparing the data of treatment protocols of cancer patients of different localization, which presents chemotherapy regimens, as well as the results of analysis of prices for anticancer drugs presented in the domestic market of drugs, we can responsibly state the following. These indicators do not correspond to the real need of cancer patients for highly effective and affordable antitumor drugs.

In recent years, there has been a tendency to increase funding, but if we take into account the need to finance the pharmaceutical supply of cancer patients, there is a catastrophic underfunding. According to the results of the analysis of the state of financing of pharmaceutical provision of cancer patients, it was established that the need for financing in 2011 year was provided only by 29.65% (₴ 32.99 per 1 patient), in 2012 year – by 26.77% (₴ 34 , 08), in 2013 year – by 31.60% (₴ 40.97), in 2014 year – by 36.87% (₴ 49.80), in 2015 year – by 55.34% ((94.97), in 2016 year – by 64.02% (₴ 137.31). It should be noted that the need for funds to finance the pharmaceutical supply of cancer patients is growing every year, and the number of people in this category is constantly growing, which is a very negative trend today[17]. The most significant share (46.5%) is spent on general hospitals that provide medical services to their most popular consumers (ordinary patients). Expenditures on specialized hospitals and institutions (14.7%) and primary care centers (11.5%) account for a significant share, the latter, in particular, are generally financed only from local budgets[18]. Part of the expenditures on these institutions in local budgets is meager, so they have an acute shortage of funds not only for improvement but also for current needs. Thus, it can be said that most health care facilities are fully or largely financed from local budgets, which is in line with the policy of budget decentralization, but they are not sufficiently funded to carry out reforms.

Until 2015, subventions in the health sector had a very meager share in the total amount of local budget expenditures on health care – less than 1%.

[17] Феденько С.М. Дослідження стану фінансування фармацевтичного забезпечення онкологічних хворих на територіальному рівні. Art of medicine. 2018. № 2. С. 116–122.

[18] Бюджетний кодекс України від 08 липня 2010 р. № 2456-VI. URL: http://zakon2.rada.gov.ua/laws/show/2456-17. (дата звернення: 23.01.2020).

The main types of subventions then were subventions for consumables and inhalation anesthesia and subventions for medicines for emergency care. At present, the medical subvention accounts for most of all expenditures on the industry, but almost a third of all local budgets for health care are financed from their own financial resources, which significantly reduce and limit the financial support of local communities. Regarding the distribution of the medical subvention by regions, most are received by more developed regions, as their infrastructure is more developed and requires more funds for services. Examples of such regions are Kharkiv, Dnipropetrovsk, Odesa regions and Kyiv. In general, the introduction of the medical subvention is a positive phenomenon, as until 2014 year there were very few targeted subventions in the field of health care. However, currently in the system of financial support of health care in Ukraine, including and at the level of local budgets, there are a number of problems, including the catastrophic lack of financial resources and their irrational use[19].

Among the shortcomings are a number of issues related to the timely conclusion of relevant agreements with international organizations, the establishment of constructive cooperation between the Ministry of Health of Ukraine and international organizations. The most problematic place in such a system of procurement is seen in the significant timing of deliveries, as well as the need to change the approaches to the formation of the nomenclature for procurement. Many violations of the provisions of the law on such procurement in the process of auctions and tenders, such as: the formation of lots for a particular supplier; indication of the trade name of the medicinal product instead of the international non-proprietary name; indication of a large list of drugs in one tender, which lead to the impossibility for individual manufacturers to apply for participation. Among the important problems should be noted the difficulties and costs in modern procurement, given its regulated procedures, which involve a lot of time. Another problem is the need to have qualified specialists for the medical institution in order to ensure the technological processes. Such specialists must undergo special training in procurement activities. And the current list of positions for health care workers does not include such specialists in the state. This reduces the ability of individual healthcare providers to address procurement problems. This problem causes the need for medical organizations to independently implement the organizational system of resource provision[20] [14].

[19] Глухова В.І., Скрипник Л.І. Державне фінансове забезпечення охорони здоров'я на рівні місцевих бюджетів. Облік і фінанси. 2018. № 1. С. 80–86.

[20] Карлаш В.В. Регулювання державними закупівлями в системі охорони здоров'я України. Вісник Національного університету цивільного захисту України. (Серія: Державне управління). 2019. Вип. 1. С. 110–115.

CONCLUSIONS

Summing up, it should be noted that funding for the treatment of cancer patients are held:

1. At the expense of the state budget under the Program: KPKVK 2301400 "Provision of medical measures of separate state programs and complex measures of program character" in the direction of "Purchase of medicines, immunobiological drugs (vaccines), medical products and other goods and services" in the part "Purchase of chemotherapeutic drugs, radiopharmaceuticals and accompanying drugs for the treatment of cancer patients".

2. At the expense of the local budget under the Program: Decision № 927-VII of February 28, 2019 at the XIX session of the VII convocation of the Kharkiv Regional Council adopted a comprehensive regional program "Health of Slobozhanshchina" for 2019–2020 years. The document takes into account the specific tasks and stages of implementation of some previously approved by the regional council of other regional programs in the field of "Health" on the basis of real budget opportunities for these budget periods, namely: development of maternal and child care, primary, secondary and also specialized medical care for the population of the region. In 2019, were planned expenditures for the purchase of medicines for the treatment of cancer patients at the expense of the state and local budgets of the Kharkiv region in the amount of ₴ 260 million (hryvnia currency).

So, at present, one of the most important problems of mankind is the fight against malignant neoplasms. The proportion of cancer as a cause of death is 12%. About 26% of the disability of the population is due to this disease. In 2015, 134104 new cases of cancer were registered (313.6 per 100 thousand people), 67.5 thousand patients (158.07 per 100 thousand people) died from this disease[21]. During 1990–2018, the share of cancer cases doubled. According to experts, by 2021 the incidence of malignant neoplasms in Ukraine will increase by 15%, and may be about 370 per 100 thousand populations[22]. Because most patients seek medical attention in the extreme stages of cancer, there is a high mortality rate of such people within 1 year after the diagnosis of "oncology".

Positive (by 4.8%) dynamics of cancer mortality within 1 year after diagnosis in Ukraine is in some contradiction with the preservation of relatively high parameters of this indicator in Kharkiv region, which indicates the preservation of relatively low effectiveness of state support for

[21] Шафранський В.В Щорічна доповідь про стан здоров'я населення, санітарно-епідеміологічну ситуацію та результати діяльності системи охорони здоров'я України в 2015 р. Київ, 2016. 452 с.

[22] Квіташвілі О.М. Щорічна доповідь про стан здоров'я населення, санітарно-епідеміологічну ситуацію та результати діяльності системи охорони здоров'я України в 2014 р. Київ, 2015. 460 с.

such persons. This is also indirectly evidenced by the increase (by 37.2%) in the number of cancer patients registered in the Kharkiv region.

The existing, partly disappointing, results are due to a number of accumulated problems, without the fastest solution of which it is impossible to radically improve the situation in this area.

SUMMARY

The strategic risks in the field of health care in Ukraine in the long run is the lack of a modern mobile innovation-oriented health care system, which must be flexible to the demands and objective needs of society. Practical oncology in Ukraine does not have the opportunity to carry out rehabilitation measures in relation to cancer patients either at the hospital level or on an outpatient basis. Lack of methodological and personnel support of the rehabilitation process does not allow improving the quality of life of cancer patients, to fully ensure the prevention of metastasis and complications of tumor disease. At the same time, in most cases it is extremely difficult for cancer patients and their relatives to pay for treatment on their own, and therefore the urgency of improving the methods of state support of such persons is growing, which prompted the authors to conduct a study and an analysis of the regulatory framework of Ukraine depending on carcinogenic hazards and prevention of morbidity, including of workers with the risk of disease on “occupational cancer”. As a result of the study, it was determined that in Ukraine the statistics of citizens’ appeals to the Public Expert Consultation Center for Cancer Patients are disappointing: up to 85% of people who have been treated for cancer do not have access to full rehabilitation; more than 70% of them do not have the financial capacity to order paid rehabilitation services. This indicates that the health risks are growing dramatically if the state does not take them into account "threats" that violate the “traditional social order” of human life, which is traditionally determined by the quality of life. Of the 39 nosological forms of cancer, which are provided by medical and technological documents for the standardization of medical care in oncology, only a few provide a certain amount of rehabilitation measures. Another problem is the lack of approved national standards in the provision of rehabilitation services, which makes it impossible to develop common approaches to the rehabilitation of cancer patients.

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