

Надійшла 10.10.2021

Акцептована 11.12.2021

УДК 313.13:614.39:616.6

DOI 10.26641/2307-5279.25.4.2021.253391

## **Analysis of the state of urological care in Ukraine (2019–2020)**

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### **Keywords:**

staff, beds, inpatient care, nephrectomy, morbidity, prevalence, oncurological pathology, mortality

ДСТУ 8302 2015:

Saidakova N.O., Shulyak O.V., Startseva L.M., Kononova G.E. Analysis of the state of urological care in Ukraine (2019–2020). *Урологія*. 2021. Т. 25, № 4. С. 295–299. DOI: 10.26641/2307-5279.25.4.2021.253391.

APA:

Saidakova, N.O., Shulyak, O.V., Startseva, L.M., & Kononova, G.E. (2021). Analysis of the state of urological care in Ukraine (2019–2020). *Urologiya*, 25(4), 295–299. DOI: 10.26641/2307-5279.25.4.2021.253391.

### **SUMMARY**

The paper analyzes the data of official reporting for 2019–2020, which presents the main quantitative and qualitative indicators of the urological service in Ukraine. It is noted that while maintaining human resources, the bed stock has significantly decreased. At the same time, the number of patients treated in hospitals for all leading nosological forms decreased several times and mortality increased at the same time. And with the decrease in the number of operated patients, the postoperative mortality in urolithiasis and prostate diseases increased. There are fewer institutions with urological offices.

In all oncurological diseases, the incidence decreased and the prevalence increased. There is a tendency to increase the diagnosis of stage IV of the process and the proportion of deaths up to a year from the time of its establishment. Mortality tends to decrease, with the exception of PC.

### **INTRODUCTION**

#### **Вступ**

Improving the quality of medical care, and, in particular, specialized urological care, to some extent, is subject to the provision of the population of Ukraine. Therefore, mastering the dynamics of change is always of interest, especially given their dependence on the socio-economic situation in the country [1, 2]. There has also been a particular impact in recent years on area reform [3, 4]. Under such conditions, the systematic study of the main indicators of the profile service allows to assess the real situation in order to identify negative trends

against the background of advances in the diagnosis and treatment of nosological forms that prevail in clinical practice [5, 6]. It is important to provide the population with urologists, beds, and we must not ignore what happened and is happening with coronavirus infection (Covid-19). Currently limited information from official sources, for obvious reasons, does not allow to analyze the incidence, prevalence of diseases of the genitourinary system, with the exception of oncurological pathology. However, the indicators of inpatient care, in their comparison with the hospital fund staffing can be considered informative [7, 8, 9]. The results of analytical and synthetic analysis of the main indicators of

urological care for 2019–2020, proposed in this paper, will be a guide to the processes that have developed today.

The purpose of the work: a comparative analysis of quantitative and qualitative key performance indicators and the effectiveness of specialized urological care for the adult population of Ukraine.

## **MATERIALS AND METHODS**

### **Матеріали і методи дослідження**

The work is based on data from state and sectoral statistical reports of medical institutions of the Ministry of Health of Ukraine and data from the State Statistics Service of Ukraine. The reports for 2019–2020, F. №№ 47, 20, 7, 35 were used.

## **RESULTS AND DISCUSSION**

### **Результати та їх обговорення**

In 2020, 1,554 doctors provided specialized urological care to the population of Ukraine, which was 15 people less than last year, including 1,484 for adults (8 less) and 70 for children (7 less). At the same time, their supply remained unchanged, namely: 0.38; 0.44 for the first two categories per 10,000 and 0.01 per 1,000 for children. Significant fluctuations of indicators are traced in the context of regions. It was the largest for the adult population in Chernivtsi oblast (0.80), attention is paid to Lviv (0.73), Kyiv (0.62), Ivano-Frankivsk and Odessa oblasts (0.61 and 0.60, respectively). The lowest provision was in the Transcarpathian oblast (0.26). Doctors with high professional training work in Ukraine. In the reporting year, they increased with higher qualification to 65.8% against 62.9% in 2019, but decreased from I to 24.8% against 27.0% and II – 9.7% against 10.1%; the total number of testers also decreased to 82.4% against 85.3%. This can be presented as a result of rejuvenation. More than 90% of certified doctors in Mykolayiv, Kirovohrad, Lviv, Sumy, Chernihiv oblasts, while in Dnipropetrovsk, Zhytomyr, Chernivtsi, Ternopil ones and Kyiv barely exceeds 70.0%. The number of doctors of the highest category is less than 50% in Cherkasy (38.6%), Kherson (42.3%), Ivano-Frankivsk (48.1%) oblasts, 80% – in Odessa, Rivne.

The full strength of staff positions in treatment and prevention facilities is quite high, but less than in the past (89.65% vs. 91.42% in 2019). In polyclinics it is even smaller (85.7% vs. 87.78%, respectively). At the same time, the number of institutions with urological offices decreased: to 601 in 2020 against 643 in the past (by 6.5%). These data are of particular interest and are significant in terms of weakening outpatient care, while it should

be developed given the emphasis on reform. By the number of offices, the following regions are distinguished: Dnipropetrovsk (33), Liviska (44), and Kharkiv (41) with a population of over 2 millions.

During the reporting period, the bed stock underwent significant changes. In 2020, there were only 4,160 beds, which is 816 less than last year (-16.4%); of these 3718 – for the adult population (against 4480, ie less by 762 – 17.0%) and 442 (against 496, -10.9%) – for children. Provision for 10 thousand of the relevant population was 1.0 for all, 0.90 – for adults and 0.59 – for children, which is less than in 2019 by 16.0%, 15.9% and 9.2% in accordance. In terms of oblasts, the indicator ranged from 0.48 in Zhytomyr oblast and 0.44 in Kyiv to 1.48 in Cherkasy oblast. The distribution of beds remained close to last year, namely: 47.3% – in city hospitals, 25.3% – in oblast's, 23.3% – Central district and 3.9% – HIPW (Hospitals for Invalids of the Patriotic War). During the year, the number decreased in urban areas by 19.4%, regional – by 10.6%, CDH – by 32.0%, hospitals – by 13.8.

As a result, during the reporting period there was a decrease in hospitalized patients with kidney infection (by 44.0% to 27072 people), chronic pyelonephritis (by 46.5% to 16098), renal and ureteric stones (by 26.4% to 62587), diseases of the prostate (by 33.2% to 21574 people.). At the same time, the mortality rate for all of them increased from 1.35 to 2.21 (by 63.7%), from 1.86 to 3.19 (by 71.5%), from 0.29 to 0, 31 (by 34.8%) and from 0.29 to 0.32 (by 10.3%). In addition, with a decrease in operations on the kidneys and ureters (by 10.8% to 40,787), prostate (by 21.7% to 15,279) postoperative mortality increased by 26.3% and 3.3% to 0.48 % and 0.31%, respectively.

The decrease by 18.6% of nephrectomies to 2412 in 2020 is positive. The vast majority of them were still performed in oblast-oncological dispensaries and regional hospitals (25.0% and 25.7%, respectively), although during the year their number decreased and increased in urban and other MPI (MSU). Unfortunately, fewer such operations were performed at Scientific Research Institutes (SRI), regional centers of urology and nephrology (from 15.8% to 3.3%). The revealed negative tendency in the structure of distribution of organ-removed operations by types of medical institutions affected the postoperative mortality. Over the year, the indicator grew by 51.0% to 1.62. This is alarming, especially given the need for a balanced approach to nephrectomy with the existing possibilities and a recognized point of view on the maximum preservation of the organ. Neoplasms, as the reason for kidney removal, predominate in their structure

(74.7%), the second place is occupied by urolithiasis (7.8% vs. 8.0%), the third – hydronephrosis (6.9% vs. 7.1%).

The incidence and prevalence are, for known reasons, only in onco-urological pathology. Their rank distribution was preserved. The first place in terms of levels (per 100 thousand) is occupied by prostate cancer (PC) – 31.2 and 245.1, respectively, the second kidney cancer (KC) – 8.9 and 101.3, the third cancer of the urinary bladder (CUB) – 8.3 and 86.1, respectively. It is noteworthy that during the year the incidence rates decreased for all nosological forms equally by 22.0% in PC and KC, by 20.2% – CUB. In cases of RC and CUB, the incidence of men is 1.5 and 5 times higher than for women, but decreased among them almost equally (by 21.3% and 23.1%) and was among the first 11.1 and 14.6, respectively, among the second – 7.0 and 2.9 (per 100 thousand), respectively. At the same time, prevalence rates increased by 5.0%, 3.7% and 3.0% (PC, KC, CUB, respectively). This can be assessed as a result of socio-economic transformations and can be attributed to the disorder of the health care system.

The negative changes that have taken place during the year are evidenced by the data of identifying patients by stages of the process. From 24.4% to 30.1% it increased in stage IV with PC, by 9.7% to 24.25% – with KC and by 8.4% to 8.61% – CUB. In all nosological forms, there is a significant tendency to increase the number of patients who died within a year from the time of diagnosis. The indicator is especially obvious in PC (up to 31.3% from 12.1%), by 1.3% (up to 19.97) – at KC and by 1.6% (up to 16.71%) in CUB. Due to the success achieved in the medical contingent, the share of those registered for 5 years or more increased by 9.5% for PC and 3.0% for KC and CUB, in 2020 the figures were 47.2%; 63.6% and 61.0% respectively. The introduction of the latest technologies in clinical practice has also provided a tendency to reduce mortality (by 100 thousand) due to CUB by 1.3% to 4.935, KC by 0.25% to 5.798, BPH by 15.3% to 0.526, by 3.0 % to 0.697 for kidney and ureter stones. The exception was RPZ, where the figure increased by 5.6% to 22,545.

Thus, the analysis of available official statistics revealed problematic issues of providing specialized urological care to the population of Ukraine. Their solutions require further in-depth study, especially in the aspect of early diagnosis of onco-urological pathology with expert assessment of its quality. In the current conditions, educational work among the population on awareness of risk factors for malignant neoplasms, the main manifestations and the paramount importance of medical activity in order

to preserve their own health continues to be important.

## CONCLUSIONS

### Висновки

In Ukraine in 2020 urological care was provided by 1,554 doctors – 1,484 adults and 70 – children, which was 15, 8 and 7 less than last year; the provision of the population remained 0.38 and 0.44 (per 10 thousand for all and adults) and 0.01 per 1000 for children. During the year, the number of specialists with the highest qualification category increased (to 65.8% against 62.9%, decreased from I to 21.8% against 27.0% and II – 9.7% against 10.1%, decreased the rate of certified to 82.4% vs. 85.3%. Staffing in MPI is lower than 89.6% vs. 91.42%, in clinics it is even lower (85.7% vs. 87.78%, respectively), as well as fewer full-time positions (735.0 vs. 763.25).

During the reporting year, the bed stock in the country decreased by 16.4% to 4160 (-17.0%) beds, of which 3718 (-17.0%) for adults and 442 (-10.9%) for children, the provision of the population was 1.0, 0, 9 and 0.59 (by 10 thousand) and was lower by 16.0%, 15.9% and 9.2% than in 2019. Their distribution remained: 47.3% – was in urban, 25.3% – regional, 23.3% – CD hospitals, 3.9% – IPW hospitals, for the year they decreased by 19.4%, 10.6%, 32.0%, 13.8%, respectively. At the same time, there were fewer institutions with urological offices up to 601 versus 643 (by 6.5%).

It was found that in 2020 with a decrease in hospitalized patients with kidney infection (44.0%), chronic pyelonephritis (46.5), kidney and ureter stones (26.4%), prostate disease (by 33.2%) increased mortality by 63.7%, 71.5%, 34.8% and 10.3%, respectively; with a reduced number of operations on the kidneys and ureters (by 10.8%), prostate (by 21.7%) postoperative mortality increased by 26.3% and 3.3%, respectively.

It is stated that in 2020 2412 nephrectomies were performed, which is 18.6% less than in 2019; half of them were performed in oblast oncological dispensaries and regional hospitals, although during the reporting year they decreased and increased in city and other hospitals, from 15.8% to 3.3% their number decreased in SRIs, regional centers of urology and nephrology. Neoplasms occupy the first place in the structure of causes (74.7%), the second urolithiasis (7.8%), the third – hydronephrosis (6.9%).

The rank distribution for oncurological pathology is preserved. It was revealed that in 2020, the incidence of all nosologies became lower, and the prevalence increased: PC and KC by 22.0%,

CUB by 20.2% to – 31.2; 8.9 and 8.3 (per 100 thousand), respectively; by 5.0%, 3.7% and 3.0% to 245.1; 101.3; 86.1, respectively. There was a widespread increase in those first detected in stage IV and the percentage of deaths within a year from the time of diagnosis.

Mortality (per 100 thousand inhabitants) from neoplasms (CUB, KC, BPH) tends to decrease by 1.3% to 4.935, 0.25% to 5.798, by 15.3% to 0.526, as well as kidney and ureter stones by 3.0% to 0.697, with the exception of PC, in which the figure increased by 5.6% to 22,545.

## СПИСОК ЛІТЕРАТУРИ

### References

1. Лехан В.М., Крячкова Л.В., Заярський М.І. Аналіз реформи охорони здоров'я в Україні: від здобуття незалежності до сучасності. *Україна. Здоров'я нації*. 2018. № 4(52). С. 5–9.

2. Lekhan V.N. et. al. Ukraine: Health System Review. *Health Systems in Transition*. 2015. No. 17(2). P. 153.

3. Національна стратегія реформування системи охорони здоров'я в Україні на період 2015–2020 років. Стратегічна дорадча група з питань реформування системи охорони здоров'я в Україні. 2015. 41 с. URL: <http://healthsag.org.ua/strategiya>.

## РЕФЕРАТ

### Аналіз стану урологічної допомоги в Україні (2019–2020)

Н.О. Сайдакова, О.В. Шуляк,  
Л.М. Старцева, Г.Є. Кононова

У роботі проаналізовані дані офіційної звітності за 2019–2020 рр., за якими представлені основні кількісні та якісні показники діяльності урологічної служби в Україні. Відмічено, що при збереженні кадрового потенціалу суттєво став меншим ліжковий фонд. Разом з чим, у декілька разів скоротилась кількість пролікованих в стаціонарах хворих за усіма провідними нозологічними формами, і одночасно зросла летальність. А із зменшенням прооперованих більшою стала післяопераційна летальність при сечокам'яній хворобі та хворобах передміхурової залози. Стало менше закладів, що мають урологічні кабінети.

При усіх онкоурологічних захворюваннях зменшилась захворюваність і зросла поширеність. Відмічена тенденція до збільшення діагностики IV стадії процесу та питома вага померлих до

4. Стеценко С.Г. Медична реформа в Україні: право, політика, мораль. *Публічне право*. 2017. № 4. С. 57–61.

5. Сайдакова Н.О., Старцева Л.М., Кононова Г.Є., Кравчук Н.Г. Основні показники урологічної допомоги в Україні за 2018–2019 роки. Київ: Поліум, 2020. 127 с.

6. Децик О.З., Яворський А.М., Яворський М.І. Шляхи поліпшення задоволеності пацієнтів в системі управління якістю стаціонарної допомоги. *Сучасні медичні технології*. 2013. № 2(18). С. 45–48.

7. Андрух В.С., Андрух В.Н., Слободян М.В. Сучасні аспекти безперервного професійного розвитку лікарів у сфері охорони здоров'я України. *Практикуючий лікар*. 2019. № 2. С. 5–8.

8. Білинська М.М., Васюк Н.О., Бойко С.Г. Політика та управління в секторі економіки та фінансування системи охорони здоров'я в Україні: навчальний посібник. Київ: НАДУ, 2017. 98 с.

9. Гребняк М.П., Кірсанова О.В., Таранов В.В. Формування кадрового потенціалу громадського здоров'я. *Україна. Здоров'я нації*. 2018. № 3(50). С. 17–20.

## REFERENCES

### Список літератури

1. Lekhan, V.N. et. al. (2015). Ukraine: Health System Review. *Health Systems in Transition*, 17(2).

## РЕФЕРАТ

### Анализ состояния урологической помощи в Украине (2019–2020)

Н.А. Сайдакова, А.В. Шуляк,  
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В работе проанализированы данные официальной отчетности за 2019–2020 гг., согласно которым представлена динамика основных количественных и качественных показателей деятельности урологической службы в Украине. Отмечено, что при сохранении кадрового потенциала существенно стал меньше коечный фонд. Вместе с тем, в несколько раз сократилось количество пролеченных в стационарах больных по всем ведущим нозологическим формам и одновременно возросла летальность. А с уменьшением прооперированных большей стала послеоперационная летальность при мочекаменной болезни и болезнях предстательной железы. Стало меньше учреждений, которые имеют урологические кабинеты.

При всех онкоурологических заболеваниях снизилась заболеваемость и возросла распрост-

року з часу його встановлення. Смертність має тенденцію до зниження, за винятком РПЗ.

**Ключові слова:** кадри, ліжка, стаціонарна допомога, нефрэктомії, захворюваність, поширеність, онкоурологічна патологія, смертність.

раненность. Отмечена тенденция к увеличению диагностики IV стадии процесса и числа умерших до года с момента его установления. Смертность имеет тенденцию к понижению, за исключением рака предстательной железы.

**Ключевые слова:** кадры, кровати, стационарная помощь, нефрэктомия, заболеваемость, распространенность, онкоурологическая патология, смертность.