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THE MORBIDITY RATE OF GENITOURINARY DISEASES ACCORDING TO THE DATA ON POPULATION RECEIVING MEDICAL CARE IN A MULTIFUNCTIONAL HEALTH CARE FACILITY

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ABSTRACT

The aim: Establishing the characteristic features and morbidity rate of genitourinary diseases in order to substantiate the need for health care services.**Materials and methods:** The article uses bibliographic, medical, statistical and content analysis, as well as analytical methods. We have analyzed the sex-age characteristics of the morbidity rate of genitourinary diseases, with the morbidity rates among different sex-age groups of the population in 2015-2022 evaluated.**Results:** Diseases of the genitourinary system constitute a significant share in the overall structure of the morbidity rate (7.3%-10.6%) and disease prevalence (6.1%-7.3%) among adults.

In 2015-2022, the dynamics of the morbidity rate of genitourinary diseases and their prevalence were characterized by a constant increase until 2019, with a subsequent decrease until 2022. Such trends in the morbidity rate and prevalence of genitourinary diseases among people may be related to the impact of the COVID-19 pandemic, which led to the restricted access to health care services as a result of taking measures to prevent the spread of infection, excessive load on the network of health care facilities within the pandemic period, etc.

The features of prevalence and dynamics of the incidence of genitourinary diseases in adolescents, adults, and persons of older age groups are determined.

Conclusions: The identified sex-age characteristics of the morbidity rate of genitourinary diseases, prevailing nosologies in certain age and sex groups will become the basis for substantiating measures to improve the quality of medical care, taking into account the principle of patient centricity and integration of care.**KEY WORDS:** morbidity; prevalence of diseases; diseases of the genitourinary system; gender and age characteristics

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INTRODUCTION

Health and well-being of the population are important conditions for the social development and progress of humanity in various spheres of life. The principal goal of achieving a high level of health and well-being requires solving many socio-economic, medical and organizational tasks with the priority of the universal coverage of health care services. The specified direction of health care sector development is determined by a number of international documents adopted by the UN and the WHO. The Sustainable Development Goals of the UN provide for ensuring universal health coverage [1].

A resolution adopted by the UN General Assembly in 2017 declared the 12th of December as the International Universal Health Coverage Day. According to national priorities, it is recommended to perform educative activities and organize events to raise awareness of

the need for a reliable and sustainable health care system and universal health coverage [2]. The WHO twice dedicated World Health Day to the issue of universal health coverage [3-4].

The issue of universal health coverage is defined as a priority in the programme documents of the WHO/Europe Health-2020: Foundations of European Policy in Support of the Actions of the Entire State and Society in the Interests of Health and Well-being and Priority Tasks in the Field of Improving Health Care Systems in the WHO European Region for 2015-2020 [5-6].

In the European Agenda for Action 2020-2025: United Action for Better Health, the WHO guides Member States' efforts to build stable, sustainable, and evidence-based health systems by five areas of activity [7].

Universal health coverage is known to assume that all people receive necessary services without financial dif-

difficulties caused by their payment. This principle requires ensuring access to the entire range of basic services, including health promotion, prevention, diagnosis, treatment, rehabilitation and palliative care. Methods of ensuring general health coverage at the national level shall be determined, taking into account the specific needs of the population and available resources [8-9].

An indisputable condition for achieving universal health coverage is an effective system of primary health care, oriented to people's needs. Thus, it is necessary to reorient national health care systems to primary health care as a solid foundation for ensuring universal health coverage [10].

According to the WHO, the health coverage index increased from 45 to 67 in 2000-2019. However, despite the progress, 30% of the world's population still does not have access to basic health services. Nearly 2 billion people face disastrous or devastating health care costs. The COVID-19 pandemic has become a new obstacle to universal health coverage. [11].

Achieving universal health coverage requires, inter alia, determining the needs for these services, which, in turn, are determined by the state of health of the population. Therefore, monitoring health and determining the needs of the population is an integral part of measures to achieve universal health coverage.

Important population health monitoring is protected by the Law of Ukraine On the Public Health System. Its provisions ensure establishing and functioning of a monitoring and evaluation system in the field of public health; establishing a public health information fund, in other words, a state information resource which contains data on the state of health, sanitary and epidemic well-being of the population, as well as indicators of the living environment [12].

Among the numerous components of population health monitoring, an important role is played by collection and analysis of data on the morbidity rate of diseases of the genitourinary system with regard to prevalence of pathology among the population, its contribution to the formation of the health burden, as well as negative medical and social effects, etc.

THE AIM

Establishing the characteristic features and morbidity rate of genitourinary diseases in order to substantiate the needs for health care services.

MATERIALS AND METHODS

The article uses bibliographic, medical, statistical and content analysis, as well as analytical methods. We have

studied statistical data on the population receiving medical care in a multifunctional health care facility with regard to genitourinary diseases. For this purpose, data on seeking medical care have been taken from the statistical reporting form No. 12. We have analyzed the sex-age characteristics of morbidity rate of genitourinary diseases separately for teenagers, adults and people above the working age, with the morbidity rates among different sex-age groups of the population in 2015-2022 evaluated.

RESULTS

Studying the morbidity rate among adults, served in a multifunctional health care institution, has shown that pathology of the genitourinary system is quite common. A relative share of genitourinary diseases in the overall morbidity rate of the population served was 7.3-10.6% in 2015-2022. The share of this pathology in the structure of the prevalence of diseases was also significant and amounted in different years of the study 6.1% - 7.3%.

The analysis of the morbidity rate of genitourinary diseases among adults had a clear upward tendency in 2015-2019. During the period specified, it increased from 3,558.5 cases to 4,831.5 cases per 100,000 adults, i.e. 35.8%. In the following years, the morbidity rate of genitourinary diseases decreased to 3,517.0 cases in 2020, 3,397.8 cases in 2021, and 2,580.5 cases per 100,000 adults in 2022 (Fig. 1).

The basic nosological forms of genitourinary diseases include diseases of the prostate gland, kidney and ureteral stones, cystitis, kidney infections, inflammatory and non-inflammatory diseases of the uterine cervix, pathologic menopause and postmenopausal disorders, etc. Most of them are characterized by a higher morbidity rate in 2015-2019, followed by a decline. Thus, the morbidity rate of prostate diseases among people receiving medical care increased from 659.3 cases in 2015 to 1055.0 cases per 100,000 adults in 2019, or by 60%, with a subsequent decrease to 295.7 per 100,000 of the corresponding population in 2022.

Trends to a significant increase of the morbidity rate of adults in 2015-2019 were typical for salpingitis, oophoritis (by 4.5 times), inflammatory diseases of the uterine cervix (by 6.5 times), and menstrual disturbance (by 4.8 times).

In general, the genitourinary disease prevalence increased in 2015-2019 from 21,006.6 cases to 24,530.5 cases per 100,000 adults, i.e. by 16.8%. In the following years, there was a gradual decrease in the prevalence of this pathology to 21,040.2 cases per 100,000, or almost to the initial level of 2015.

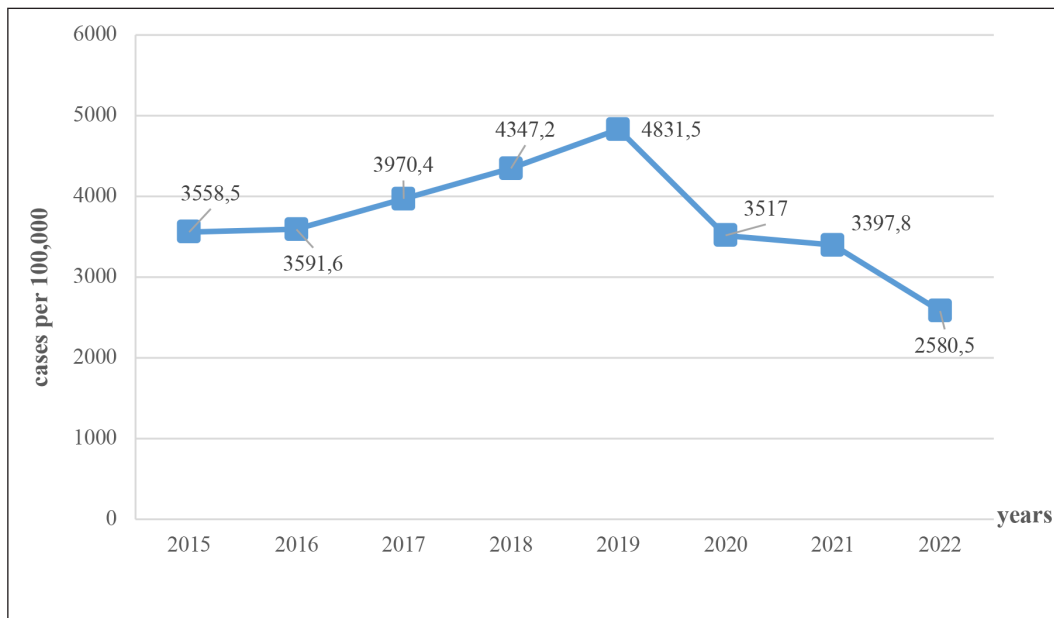


Fig. 1. Morbidity rates of genitourinary diseases among adults seeking medical care in a multifunctional health care facility in 2015-2022 (per 100,000)

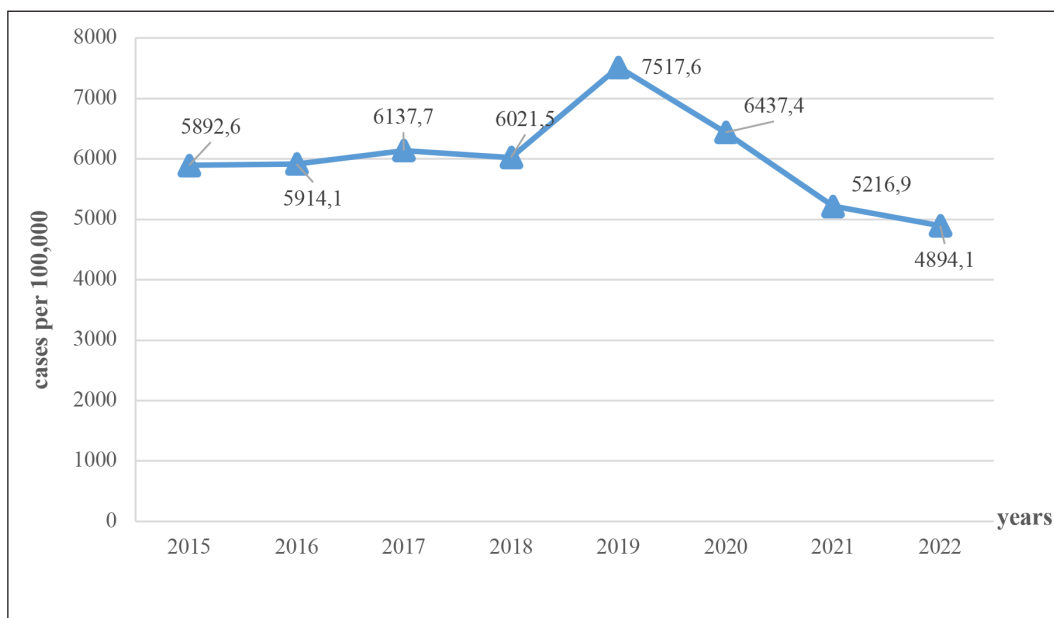


Fig. 2. Prevalence of prostate diseases among adults receiving medical care in a multifunctional health care facility in 2015-2022 (per 100,000).

Among individual nosological forms of genitourinary diseases, the rapid rates of increase in prevalence in 2015-2019 were characteristic of diseases of the prostate gland (+27.6%). The gradual decrease in the prevalence of this pathology in subsequent years of studying reached the level of 4,894.1 cases per 100,000 adults in 2022, which is 16.9% less than the initial level of 2015 (Fig. 2).

In 2015-2019, the increase in the prevalence of kidney and ureteral stones (+21.6%), cystitis (+59.0%), and cervical inflammatory diseases among adults visiting a multifunctional health care facility was observed (+11 times), pathologic menopause and postmenopausal disorders (+5.8%). At the same time, the prevalence of salpingitis, oophoritis, endometriosis, and non-inflammatory diseases of the uterine cervix tended to decrease.

The analysis of the age-related aspects of disease prevalence of the genitourinary system in 2022 has shown that the highest prevalence rates of this pathology are characteristic of adults (21,040.2 cases per 100,000), the lowest – of adolescents (1,106.5 cases per 100,000). The same regularity is observed for the morbidity rate of diseases of the genitourinary system (Fig. 3).

In 2022, the most frequent genitourinary disease of teenagers was cystitis (553.3 cases per 100,000), of adults – diseases of the prostate gland (295.7 cases per 100,000), kidney and ureteral stones (123.4 cases per 100,000), cystitis (155.0 cases per 100,000), kidney infections (40.2 cases per 100,000), etc., of people above working age – prostate gland hyperplasia (244.6 cases per 100,000), cystitis (134.3 cases per 100,000), kidney

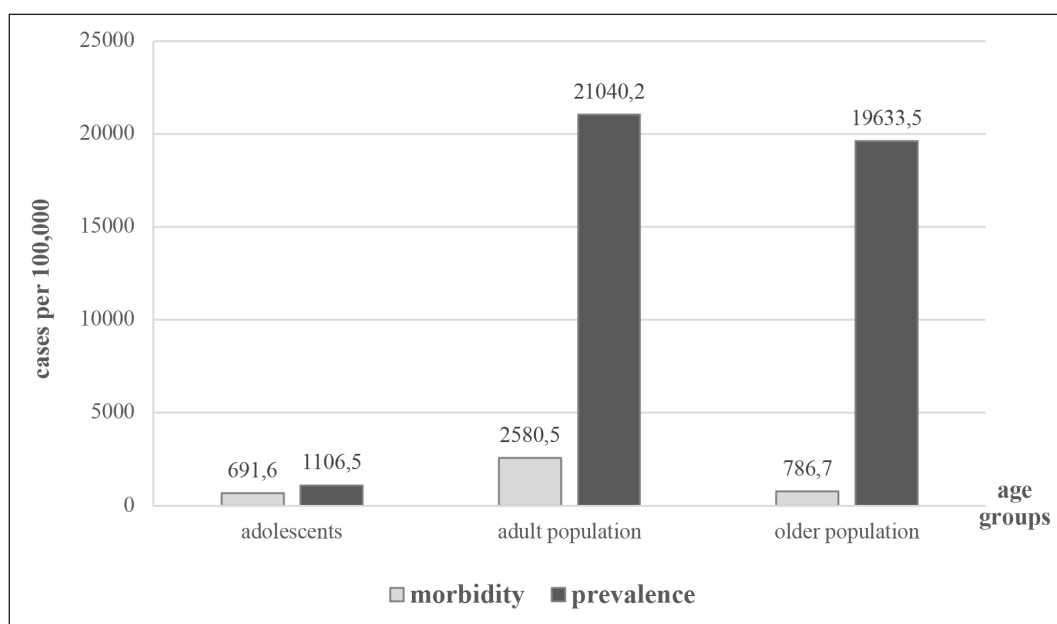


Fig. 3. Morbidity and prevalence rates of genitourinary diseases in 2022 (per 100,000) in various age groups seeking medical care in a multifunctional health care facility

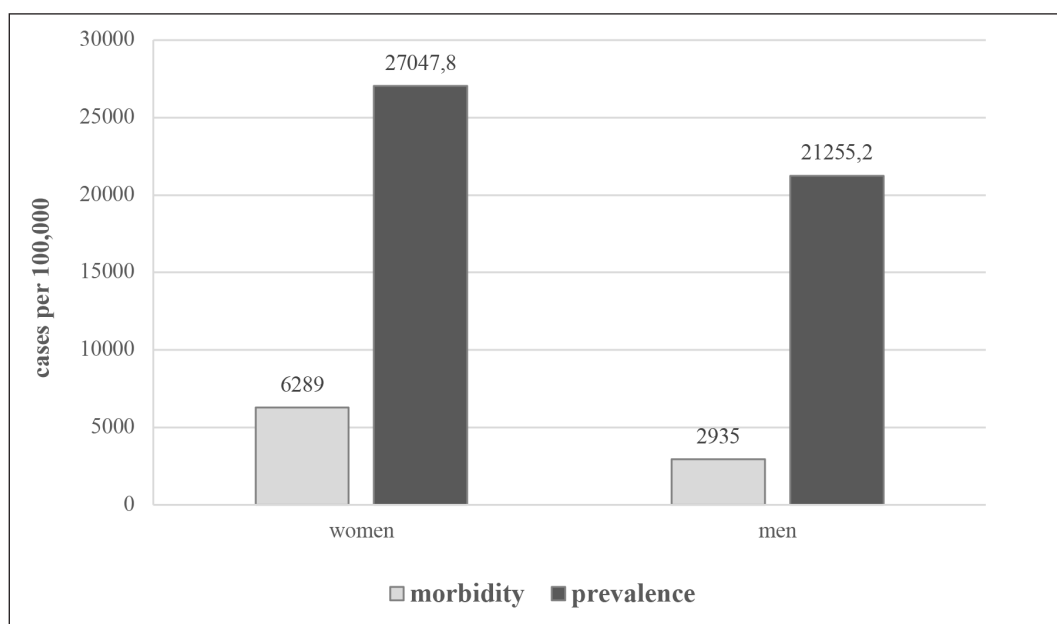


Fig. 4. Morbidity and prevalence of genitourinary diseases among men and women receiving medical care in a multifunctional healthcare facility in 2019 (per 100,000)

and ureteral stones (76.7 cases per 100,000), kidney infections (14.4 cases per 100,000).

In 2022, among the most common pathologies of the genitourinary system of teenagers were kidney and ureteral stones (553.3 cases per 100,000), chronic glomerulonephritis (138.3 cases per 100,000), and of adults – diseases of the prostate gland (4,894, 1 case per 100,000), kidney and ureteral stones (800.8 cases per 100,000), cystitis (473.6 cases per 100,000), kidney infections (86.1 per 100,000), of people above working age – prostate gland hyperplasia (3458.5 cases per 100,000), kidney and ureteral stones (719.5 cases per 100,000), cystitis (561.2 cases per 100,000), kidney infections (177.5 cases per 100,000).

In 2015-2019, the speed of growth in morbidity rates of genitourinary diseases was the highest among teen-

agers (+200.9%), and the lowest among the elderly (28.8%). The genitourinary disease prevalence grew at the fastest rate among adults (16.7%), with the lowest one among teenagers (+9.4%).

The study has analyzed the peculiarities of the morbidity rate of genitourinary diseases depending on gender of people, receiving medical care in a multifunctional health care facility. In 2019, the morbidity rate of genitourinary diseases of men was 2,935.0 cases per 100,000, and of women – 6,289.0 cases per 100,000, respectively. In 2019, prevalence of genitourinary diseases among men reached 21,255.2 cases per 100,000, among women – 27,047.8 cases per 100,000 (Fig. 4).

As the above data show, a higher morbidity rate of genitourinary diseases is characteristic of women, compared to that of men. This is due to a higher

morbidity rate of kidney infections (by 79.3%), cystitis (by 32 times) of women than that of men, as well as a high morbidity rate of salpingitis, oophoritis, inflammatory and non-inflammatory diseases of the uterine cervix, pathologic menopause and postmenopausal disorders. Among men, compared to women, higher morbidity rates of kidney and ureteral stones were revealed (3.2 times), as well as high morbidity rates of prostate gland diseases.

Diseases of the genitourinary system are known to cause a number of medical and social problems, including suffering, deterioration of the quality of life, loss of working capacity, disability and death. Malignant diseases of the genitourinary organs make a significant contribution to the health burden. While analyzing the morbidity rate of genitourinary cancer of people receiving medical care in multifunctional healthcare facilities in 2015-2022, we have revealed a decreased rate from 43 to 20 cases per 10,000 people, or by 53.4%. Within this period, there was a significant decrease in the morbidity rate of kidney, bladder and prostate cancer. At the same time, we have revealed an increase in prevalence of malignant neoplasms of the genitourinary system among people served by 5.1%, and prostate cancer by 13.1%. In 2015-2022, the morbidity rates of kidney and bladder cancer, as well as other types of cancer of the genitourinary system, remained high.

In 2015-2022, the share of deaths from cancer of the genitourinary system in the overall population mortality structure ranged from 8.5% to 16.3%. At the same time, we have not revealed a stable trend in the dynamics of mortality rates from cancer of the genitourinary system over the years of studying.

DISCUSSION

Analysis and evaluation of the frequency and dynamics of the morbidity rate of genitourinary diseases of people receiving medical care in a multifunctional health care facility enabled identifying some features and patterns of prevalence of this pathology, depending on age, sex, nosological form, etc. It is important to note that the genitourinary pathology constitutes a significant share in the overall structure of the morbidity rate (7.3%-10.6%) and prevalence of diseases (6.1%-7.3%) among adults.

The general trend is an increased morbidity rate of genitourinary diseases among adults from 2015 to 2019 (by 35.8%) and genitourinary disease prevalence (by 16.8%), with a further decrease of these indicators until 2022 (by 46.6 % and 14.2%). This trend may be due to the influence of such an important confounder as the

COVID-19 pandemic and the quarantine restrictions caused by it. These factors have led to a lower number of visits to health care facilities and a decreased availability of medical services. This trend has been noted in the works of other researchers. In particular, the analytical review *Health and Education: How the COVID-19 Pandemic Affected Access to Public Services in Ukraine* has stated that access to public health care services was limited during the pandemic. The lockdown introduction in order to reduce the scale of the COVID-19 pandemic, the significant burden on the network of the health care facilities and the re-orientation of part of the health care facilities to the preferential service of patients with COVID-19 and urgent patients have led to restrictions in providing services to people, search for alternative ways of receiving services or refusal of receiving services [13].

This problem is global, as the diversion of health care system resources to combating COVID-19 has caused long-term irregularities in providing basic types of medical care to people in many countries around the world. The WHO experts indicate that new obstacles to meeting the demand for medical services, such as restrictions on movement, reduced ability to pay, as well as fear of infection, have created additional unprecedented problems in achieving universal health coverage [14].

An important result of the study is establishing the structure of the morbidity rate of genitourinary diseases of people receiving medical care in a multifunctional health care facility, within the context of determining the needs for medical care and the resources required. Considering the frequency of diseases and the negative dynamics, priority should be given to prevention, diagnosis and treatment of diseases of the prostate gland, kidney and ureteral stones, cystitis, kidney infections, inflammatory and non-inflammatory diseases of the uterine cervix, pathologic menopause and postmenopausal disorders. These data are consistent with the data of other researchers with regard to the medical and social significance of the genitourinary pathology and its trends [15-16].

The age-related characteristics of the prevalence of genitourinary diseases indicate high rates among adults compared to teenagers, which is natural given the decrease in the body resistance with age, the influence of numerous adverse factors of production and environmental nature, etc. throughout life. The data revealed during the study on the peculiarities of the morbidity rate of each age group and its dynamic changes are an important basis for determining the priority of preventive, diagnostic and therapeutic measures for different age groups.

The gender aspects of the morbidity rate of diseases of the genitourinary system raise an important issue of preserving and strengthening reproductive health, indicate the priority of prevention and treatment of salpingitis, oophoritis, inflammatory and non-inflammatory diseases of the uterine cervix. This approach is consistent with the Sexual and Reproductive Health Action Plan in support of implementing the Sustainable Development Agenda for the Period up to 2030 in Europe – No One Left Behind [17]. At the same time, in terms of ensuring healthy aging, the issues of medical care for women with pathologic menopause and postmenopausal disorders and men with prostate diseases require special attention.

Particular attention should be paid to the identified problems of an increased prevalence of malignant neoplasms of the genitourinary system among people in 2015–2022 by 5.1%, including prostate cancer by 13.1%; high prevalence rates of kidney and bladder cancer, and other types of genitourinary cancer with no declining trends and persistent genitourinary cancer mortality rates. These data are consistent with the data of other researchers, which indicates the global nature of the problem of combating malignant neoplasms of the genitourinary system [18].

The features and trends in the morbidity rate of genitourinary diseases of people receiving medical care in a multifunctional health care facility enable determining the needs for medical care and the priorities of preventive, therapeutic and diagnostic activities.

CONCLUSIONS

Diseases of the genitourinary system constitute a significant share in the overall structure of the morbidity rate (7.3%–10.6%) and disease prevalence (6.1%–7.3%) among adults.

In 2015–2022, the dynamics of the morbidity rate of genitourinary diseases and their prevalence were characterized by a constant increase until 2019, with a subsequent decrease until 2022. Such trends in the morbidity rate and prevalence of genitourinary diseases among people may be related to the impact of the COVID-19 pandemic, which led to the restricted access to health care services as a result of taking measures to prevent the spread of infection, excessive load on the network of health care facilities within the pandemic period, etc. The issue requires in-depth study, clarification of the reasons and justification of the relevant organizational and management decisions.

Priority, in terms of improving medical care in accordance with needs, should be given to prevention, diagnosis and treatment of diseases of the prostate gland, kidney and ureteral stones, cystitis, kidney infection, inflammatory and non-inflammatory diseases of the uterine cervix, pathologic menopause and postmenopausal disorders, given the significant prevalence of these nosological forms and negative growth trends.

The identified sex-age characteristics of the morbidity rate of genitourinary diseases, prevailing nosologies in certain age and sex groups will become the basis for substantiating measures to improve the quality of medical care, taking into account the principle of patient centricity and integration of care.

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The Authors declare no conflict of interest.

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