

Current trends and epidemiological features of genitourinary diseases in the Osh region

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Abstract. Diseases of the genitourinary system represent a significant medical and social problem, substantially affecting quality of life, ability to work, and demographic indicators. The aim of this study was to examine overall morbidity and primary incidence of genitourinary diseases among the adult and paediatric population of the Osh region over the study period. The research was based on an analysis of official statistical data from regional medical institutions and the Ministry of Health. The findings indicated that overall morbidity and primary incidence showed a downward trend following a period of increase, which was associated with restrictions on preventive examinations and a rise in chronic infections. Significant gender differences were identified: women were more likely to suffer from inflammatory conditions, whereas men more frequently experienced prostate disorders and urolithiasis. It was concluded that systematic monitoring and analysis of urological morbidity are essential for improving preventive measures, increasing access to healthcare, and developing regional public health programmes. After reaching a peak in 2021 (45,870 per 100,000 population), overall morbidity decreased to 33,240 cases by 2024, while primary incidence declined from 22,480 to 17,210 per 100,000 population. Kidney and urinary tract diseases predominated (67.5%), with chronic pyelonephritis accounting for 26.9%. The incidence rate

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among women was, on average, 2.1 times higher than among men. The obtained results can be used to plan regional prevention programmes, optimise patient routing, and improve the effectiveness of urological care in medical institutions in the Osh region

Keywords: urological pathologies; urinary tract infections; nephrological disorders; prevalence structure; population analysis; dynamics of urological diseases; sanitary and demographic characteristics

INTRODUCTION

Diseases of the genitourinary system (DGS) occupy one of the key places in the structure of chronic non-infectious pathology in the world and in the Kyrgyz Republic. According to the World Health Organisation, about 7-10% of the adult population suffer from various forms of kidney and urinary tract diseases, and urinary tract infections (UTIs) are among the three most common bacterial diseases in women of reproductive age. Urological pathologies account for 9-15% of visits to outpatient clinics, which highlights their significance for the healthcare system. The incidence of UTIs increases by 2-3% annually, and the prevalence of chronic kidney disease (CKD) has increased by 15-18% between 2019 and 2024. Particularly high rates are recorded in regions with insufficient access to specialised medical care and low levels of prevention [1].

The trends observed in Central Asian countries, including Kyrgyzstan, are similar. According to statistics from the Kyrgyz Ministry of Health, the overall incidence of diseases of the genitourinary system for the period 2019-2024 ranges from 31 to 46 thousand cases per 100 thousand population, with higher rates characteristic of the southern regions of the country – Osh and Jalal-Abad. There has also been an increase in the incidence of urolithiasis and prostate diseases in men, which is associated with lifestyle changes, increased salt intake and delayed seeking of medical care [2].

Recent studies have examined various aspects of the epidemiology of urinary tract infections and kidney disease, but a number of important issues remain understudied. E. Broughton *et al.* [3] conducted a systematic review of the literature on the epidemiology of complicated urinary tract infections and showed an increase in their prevalence, as well as a link to comorbid conditions and antibiotic resistance. However, their work focused mainly on generalised international data, without analysing regional differences and incidence dynamics at the level of individual territories. Scientists Y. He *et al.* [4] analysed global epidemiological trends in UTIs and proposed predictive models for further growth in incidence. The authors used large databases and mathematical modelling, but did not consider the actual rates of primary and overall incidence in specific regions and did not take into account the influence of local socio-demographic factors.

In their review, H. Al Lawati *et al.* [5] systematised current understanding of the pathogenesis, diagnosis, and treatment of UTIs within the framework of the educational curriculum. The work was mainly clinical and educational in nature and was not aimed at analysing

the epidemiological situation or the temporal dynamics of morbidity. M. Gottlieb *et al.* [6] studied the epidemiology of urinary tract infections in adult patients who visited emergency departments. The authors showed the structure of visits and the frequency of UTIs in emergency medicine settings, but their data did not reflect the situation in the general population and did not allow for an assessment of long-term trends in incidence.

The study by C. Yoon *et al.* [7] focused on the clinical and microbiological characteristics of recurrent acute pyelonephritis in women. Despite a detailed analysis of pathogens and clinical forms, the study did not address the prevalence of the disease and its dynamics at the population level. The study by Y.H. Hsu *et al.* [8] analysed the frequency of acute urinary retention after endoscopic enucleation of the prostate and its impact on surgical outcomes. The authors showed a link between this complication and increased catheterisation and hospitalisation times, but the study was limited to a surgical sample of patients and did not consider the population and epidemiological aspects of urological morbidity.

Thus, previous studies have not sufficiently addressed regional characteristics, overall and primary morbidity rates, as well as gender and age differences in infectious and inflammatory diseases of the genitourinary system over time. These gaps and the need to analyse official statistical data at the regional level determined the relevance of this study, in which these issues are revealed using the example of a specific region. The high socio-economic significance of this pathology is associated with its impact on the working capacity, reproductive health, and quality of life of the population. Therefore, the study of trends in the incidence of diseases of the genitourinary system, especially at the regional level, is of great practical importance for the planning of preventive and therapeutic measures. The aim of this study was to analyse the dynamics of the overall and newly diagnosed incidence of diseases of the genitourinary system in the adult and paediatric population of the Osh region in 2020-2024.

MATERIALS AND METHODS

The study was conducted using a retrospective descriptive-epidemiological design and focused on analysing the incidence rates of diseases of the genitourinary system among the adult and paediatric populations of the Osh region of the Kyrgyz Republic during 2020-2024. The study was based on official statistical data from the Osh Regional United Hospital, the Osh Region Public Health Centre and the Ministry of Health of the Kyrgyz

Republic [2, 9]. State statistical reporting forms No. 12 "Report on Diseases Registered in Patients Living in the Service Area of a Medical and Preventive Institution" and form No. 14 "Report on the Activities of the Hospital" were used, which are standard tools for recording morbidity in the healthcare system of the Kyrgyz Republic.

The analysis included all registered cases of diseases of the genitourinary system (class 14th of the International Statistical Classification of Diseases and Related Health Problems, 10th revision, codes N00-N99). The nosological groups were distributed as follows: glomerular and tubulointerstitial kidney diseases (N00-N15, N25-N28), urolithiasis (N20-N23), prostate diseases (N40-N42), male infertility (N46), lower urinary tract infections, cystitis, pyelonephritis and other diseases of the urinary system (N30-N39) [10]. The inclusion criteria were completeness of information on the nosological form, field and age group of the patient.

The indicators of overall morbidity (prevalence), reflecting the total number of registered cases per 100,000 population, and primary morbidity (incidence), taking into account only newly detected cases per 100,000 population, were calculated. The analysis was conducted taking into account gender and age groups, distinguishing between the adult population (aged 18 and older) and children (0-17 years). The structural analysis involved determining the share of individual nosological groups in the overall morbidity structure.

Statistical processing was performed using Microsoft Excel 2021 and IBM SPSS Statistics 26.0 software. The normality of data distribution was checked using the Shapiro-Wilk criterion. To compare the mean values for normal distribution, Student's t-test for independent samples was used, and for deviations from normality, Mann-Whitney's U-test was used. Structural indicators were compared using Pearson's χ^2 test. The level of statistical significance was set at $p < 0.05$.

The dynamics of the indicators were assessed by constructing linear trends with the calculation of growth or decline rates using the formula:

$$\text{growth rate (\%)} = \frac{[(\text{final year indicator} - \text{base year indicator}) / \text{base year indicator}] \times 100\%}{(1)}$$

To identify statistically significant trends, linear regression was used with an assessment of the coefficient of determination (R^2) and verification of the significance of the regression model. The study was conducted on aggregated, anonymised statistical data that did not contain personal information, and therefore did not require the approval of an ethics committee in accordance with national and international recommendations for conducting epidemiological studies based on secondary data from government statistics.

RESULTS AND DISCUSSION

According to data from the Osh Region Territorial Health Administration [2], between 2020 and 2024, between 30,800 and 45,200 cases of genitourinary system diseases were registered annually among the adult population, accounting for an average of 6.4% to 7.1% of all registered morbidity in the region. The largest increase in incidence was observed in 2021 (due to post-COVID complications of chronic diseases), while in 2024 there was an 18.7% decrease compared to 2021 ($p < 0.05$). Among women, the incidence rate averaged up to 29.8 thousand per 100 thousand population, and among men, it was about 14.5 thousand per 100 thousand population, which corresponds to general global epidemiological trends. In the structure of primary incidence, the share of diseases of the kidneys and urinary system (N00-N39) was 67.4%, including chronic pyelonephritis – 27.8% and urolithiasis – 15.2%. The dynamics of the overall incidence of diseases of the genitourinary system in the Osh region from 2020 to 2024 is shown in Figure 1.

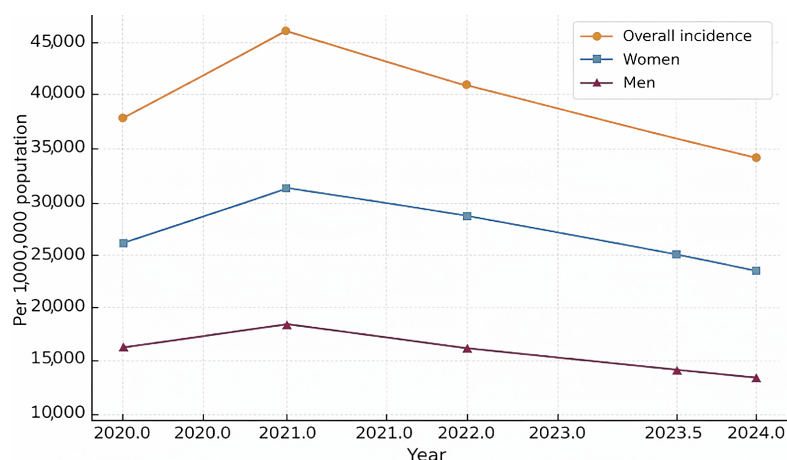


Figure 1. Dynamics of the overall incidence of diseases of the genitourinary system in the Osh region for the period 2020-2024 (per 100,000 adult population)

Note: * $p < 0.05$ – statistically significant differences between indicators within the series

Source: developed by the authors based on [2]

An analysis of official medical statistics for the Osh region shows that between 2020 and 2024, the overall incidence of diseases of the genitourinary system ranged from 33,200 to 45,870 cases per 100,000 population. The highest value of the indicator was recorded in 2021 – 45,870 per 100,000 population ($p < 0.05$), which is explained by the delayed impact of the COVID-19 pandemic, restrictions on preventive examinations, and an increase in the number of chronic inflammatory diseases. The minimum value of the overall incidence rate was recorded in 2024 – 33,240 per 100,000 population, which indicates a positive downward trend (by 27.5% compared to 2021,

$p < 0.05$). Among women, a higher incidence rate was maintained throughout the period under review, ranging from 28,600 to 30,400 cases per 100,000 population, while among men, it ranged from 12,800 to 15,200 cases per 100,000 population. The gender differences were statistically significant ($p < 0.05$) and consistent with global trends, according to which women are more likely to suffer from infectious and inflammatory diseases of the urinary tract [1, 2]. The structure of morbidity by nosology in accordance with the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10), is presented in Figure 2.

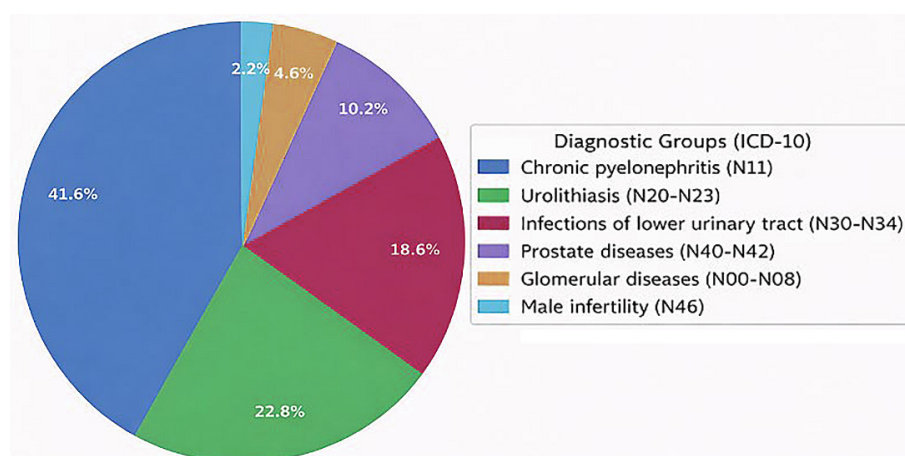


Figure 2. Structure of nosologies of diseases of the genitourinary system in the Osh region for 2020-2024 (in percentage terms)

Note: ** $p < 0.01$ – statistically significant differences between the specific weights of nosological groups

Source: developed by the authors based on [9, 10]

An analysis of the structure of morbidity revealed a marked predominance of chronic inflammatory processes in the genitourinary system: chronic pyelonephritis accounts for almost half of all registered cases (41.6%), which significantly exceeds the proportion of acute and other forms of lower urinary tract infections (18.6%). Urolithiasis confidently holds second place (22.8%), which, together with chronic pyelonephritis, forms the main burden on the region's nephrology and urology services – more than 64% of cases relate to these two nosologies. This points to the continuing problem of late diagnosis, insufficient correction of metabolic disorders, and the recurrent nature of the disease. Despite their high frequency in the general population, lower urinary tract infections rank only third in the overall morbidity structure, which may indicate that acute forms are mainly treated on an outpatient basis and are less frequently recorded in summary statistics compared to chronic processes. In men, prostate diseases account for a significant proportion (10.2%), while glomerular lesions and male infertility remain relatively rare (less

than 5% in total), which is consistent with the gender-specific profile of urological pathology in the region. The data obtained emphasise the need to prioritise the strengthening of prevention and dispensary observation of patients with chronic pyelonephritis and urolithiasis as the main factors in the chronicity and progression of kidney disease in the Osh region. The indicators of primary incidence of diseases of the genitourinary system in the Osh region, distributed by gender and years of observation, are presented in Figure 3. The dynamics of primary incidence is characterised by a pronounced peak in 2021 (22,480 cases per 100,000 population) followed by a steady decline to a minimum in 2024 (17,210 cases per 100,000 population; $p < 0.05$). Over the five-year period, the overall rate decreased by 23.4%. Throughout the period, the incidence rate among women was consistently and significantly higher than among men, with a similar trajectory: an increase to a peak in 2021 and a more pronounced decline in subsequent years. The average primary incidence rates for the entire period were approximately 28,100 cases per 100,000

population for women and approximately 13,400 cases per 100,000 population for men (women were ill on average 2.1 times more often). Urinary tract infections (N30-N39) and pyelonephritis (N11) accounted for the majority of newly diagnosed cases. In addition,

the analysis showed that in the 0-14 age group, the average incidence rate was 7,900 cases per 100,000 children, with girls accounting for 62% of all cases, and acute forms of pyelonephritis and cystitis being the most frequently reported [9, 10].

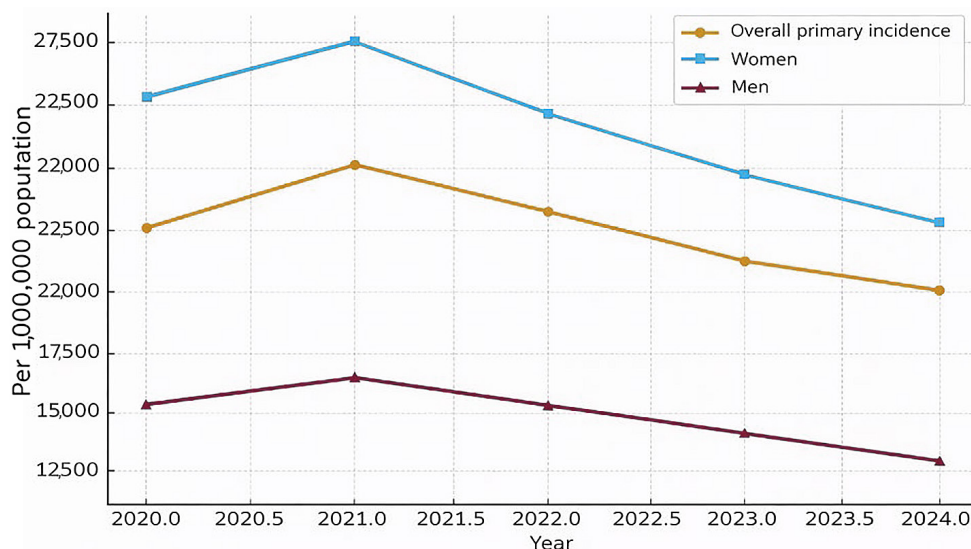


Figure 3. Dynamics of primary incidence of diseases of the genitourinary system in the Osh region (2020-2024, per 100,000 population)

Note: * $p < 0.05$ – statistically significant differences between indicators for men and women

Source: developed by the authors based on [9]

Studying the prevalence and dynamics of diseases of the genitourinary system in the Osh region is crucial for understanding the structure of morbidity and the factors influencing its growth. These data make it possible to assess the effectiveness of regional prevention programs, the availability of medical care, the quality of diagnostics, as well as the staffing and material and technical support of medical institutions. According to the results of the analysis, in the period 2020-2024, the Osh region saw a downward trend in both the overall and primary incidence of diseases of the genitourinary system. After peaking in 2021 due to the consequences of the COVID-19 pandemic and temporary restrictions on routine examinations, the indicators gradually declined, reflecting an improvement in the quality of preventive measures and increased access to specialised urological care. The gender differences identified are consistent with the literature: women are more likely to develop diseases due to the anatomical and physiological characteristics of the urinary system and increased susceptibility to lower urinary tract infections. Among men, diseases associated with the prostate gland and urolithiasis are more pronounced, which is also confirmed by studies conducted in neighbouring regions of the Kyrgyz Republic [9, 10].

Kidney and urinary system diseases (N00-N39) sharply predominate in the structure of morbidity, accounting for a total share of 87.6%. Chronic

pyelonephritis (N11) occupies the leading position with 41.6%, which is almost twice the proportion of lower urinary tract infections (18.6%) and significantly higher than in most previously published regional studies. The high prevalence of chronic pyelonephritis and urolithiasis (22.8%) confirms the persistent chronicity of infectious and inflammatory processes in the region and highlights the need to prioritise the strengthening of dispensary observation and secondary prevention of these nosological forms among the working-age population.

The observed trends in the incidence of diseases of the genitourinary system in the Osh region are consistent with broader epidemiological patterns in Central Asia, especially in terms of the prevalence of chronic inflammatory processes and pronounced gender differences. In the study, diseases of the kidneys and urinary system (N00-N39) accounted for 87.6% of all registered cases, with chronic pyelonephritis (N11) being the most common nosology – 41.6%, followed by urolithiasis (22.8%) and lower urinary tract infections (18.6%). The identified structure emphasises the chronicity of infectious processes, which is consistent with the data of S. Lai *et al.* [11], who studied the prevalence of urological disorders in patients with CKD and recommended the systematic use of uroflowmetry to assess urine flow in nephrology patients. The results obtained in this study show a similar association of chronic forms with a high proportion of pyelonephritis and

glomerular diseases (4.6%), however, the population-based nature of the data suggests a wider regional prevalence compared to hospital samples, indicating the advisability of introducing such methods into routine screening to prevent progression to CKD in the Osh region.

The strong association between pyelonephritis and urolithiasis (in total > 64%) echoes the work of F. Ciccarese *et al.* [12], which analysed complicated pyelonephritis against a background of chronic kidney stone disease with frequent complications (abscesses, sepsis) in stone-associated cases. In contrast to the clinical and radiological focus of that study, the present epidemiological data show a higher overall proportion of urolithiasis (22.8%) as one of the leading nosologies, which is probably due to regional factors (diet, water quality in the south of the Kyrgyz Republic). This highlights the need to integrate radiological diagnostics into prevention programmes to support the observed decline in morbidity (by 23.4% in primary cases from 2021 to 2024).

Prostate diseases accounted for a significant proportion of cases in men (10.2%), which is consistent with the findings of L. Cormio *et al.* [13], who assessed the improvement in lower urinary tract symptoms and quality of life in patients with benign prostatic hyperplasia while taking a whole tomato-based supplement. The data obtained confirm a gender-specific pattern with a predominance of prostate diseases and urolithiasis in men, while infectious forms are 2.1 times more common in women. In contrast to the emphasis on dietary interventions in the work of L. Cormio *et al.*, the present study highlights the need for a broader preventive approach, including lifestyle modification, to maintain the downward trend in morbidity in the post-pandemic period.

In a regional context, conclusions about the incidence among the reproductive-age population and gender differences (women are 2.1 times more likely to be affected, with a childhood incidence of 7,900 per 100,000, 62% of whom are girls) are confirmed by the results of M.N. Aibashov *et al.* [14], who conducted an epidemiological analysis of the prevalence and incidence of diseases of the genitourinary system among the reproductive-age population of the Kyrgyz Republic (15-49 years) and noted high rates of urinary tract infections and pyelonephritis. In contrast to the upward trend in their nationwide data (2003-2016), this study recorded a decline after 2020, probably due to enhanced post-pandemic prevention. This comparison highlights the importance of local monitoring, as the Osh region has seen a more pronounced decline (23.4%) and a predominance of acute forms in children (pyelonephritis and cystitis), which requires the development of targeted interventions in the south of the Kyrgyz Republic to harmonise with national indicators. Overall, the comparisons confirm the chronic and gender-specific nature of diseases of the genitourinary system in the region and justify the need to strengthen preventive strategies.

The identified structure of morbidity, with a predominance of diseases of the kidneys and urinary system (N00-N39) – 87.6%, where chronic pyelonephritis accounts for 41.6%, is consistent with the data of B.L. Ademola *et al.* [15], who in an 8-year review described the clinical, morphological and histological features of chronic pyelonephritis, emphasising its frequent chronicity and the need for long-term observation. Similarly, A.L. Flores-Mireles *et al.* [16] in a review of the epidemiology of urinary tract infections noted the high prevalence of recurrent forms and mechanisms of pathogen persistence, which explains the predominance of chronic pyelonephritis in the present study. Gender differences (women are 2.1 times more likely to get sick) and the prevalence of infectious and inflammatory processes in women are consistent with the review by J. Herness *et al.* [17], where acute pyelonephritis in adults is considered a predominantly female pathology with an emphasis on rapid diagnosis and treatment to prevent complications. The peak incidence in 2021, followed by a 23.4% decline by 2024, reflects the impact of the COVID-19 pandemic, as confirmed by the analysis by E.J. Choi *et al.* [18], which showed a global increase in urinary tract infections and delays in care during the pandemic. The results obtained indicate a positive effect of the restoration of preventive measures in the Osh region.

The identified downward trend in primary incidence after the peak in 2021 (by 23.4%) is consistent with the findings of T. Kurmanbekov *et al.* [19], who analysed the dynamics of urogenital disease incidence in Kazakhstan for 2015–2022 and noted a decline in rates after 2018 associated with improved urological resources and regional differences (high incidence in northern regions). In contrast to the national data for Kazakhstan, where a further decline is predicted, in this study the emphasis on gender differences (women are 2.1 times more likely to be affected) highlights the need for local prevention programmes in the southern regions of Kyrgyzstan.

The results obtained on the dynamics of the incidence of diseases of the genitourinary system in the Osh region for 2020–2024 (peak in 2021 with a subsequent decrease of 23.4%) demonstrate the regional specificity of the post-pandemic period. A comparison with data from neighbouring Central Asian countries reveals certain parallels and differences. In particular, G. Zhakhina *et al.* [20], based on national data from Kazakhstan for 2014–2020, identified a downward trend in the incidence of chronic kidney disease, but predicted its growth by 2030 due to demographic shifts and risk factors. Contrary to these predictions, the present study observes a steady decline in primary incidence after 2021, which is likely due to the restoration and strengthening of preventive measures in the Osh region.

The data obtained on the prevalence of kidney and urinary tract diseases (67.5%) in the structure of morbidity are consistent with the results of a global study of

the burden of disease. A systematic analysis by the GBD Chronic Kidney Disease Collaboration [21] on the prevalence of chronic kidney disease for the period 1990-2017 showed an increase to 697.5 million cases, which is 29.3% higher than in 1990, with the largest increase in low- and middle-income countries. This confirms the global nature of the problem of urological morbidity and the need to strengthen preventive measures at the regional level. The identified gender differences, with the incidence rate in women 2.1 times higher than in men, are consistent with the data of M. Medina & E. Castillo-Pino [22], who in an epidemiological review of urinary tract infections showed that women account for up to 85% of all cases of uncomplicated lower urinary tract infections. The established predominance of chronic pyelonephritis (26.9%) and lower urinary tract infections (12.4%) confirms the conclusion that recurrent infections remain the main reason for seeking urological care among the female population.

Thus, the analysis showed that the incidence of diseases of the genitourinary system in the Osh region demonstrates a positive downward trend after the peak period of 2021, reflecting an improvement in the quality of preventive measures and the accessibility of medical care to the population. The epidemiological features identified, including pronounced gender differences and the predominance of infectious and inflammatory diseases of the kidneys and urinary tract, are consistent with global trends and underscore the need for a differentiated approach to the prevention and treatment of urological pathology.

CONCLUSIONS

The analysis of epidemiological data on diseases of the genitourinary system among the adult and paediatric population of the Osh region for the period 2020-2024 revealed several key trends reflecting the current state of urological morbidity in the region. A steady decline in the overall incidence rate has been observed, from a maximum of 45,870 cases per 100,000 population in 2021 to a minimum of 33,240 cases in 2024, representing a decrease of 27.5% ($p < 0.05$). A similar trend was observed for primary incidence: from a peak of 22,480 cases per 100,000 population in 2021, the rate fell to 17,210 in 2024, reflecting a decrease of 23.4% ($p < 0.05$).

Structural analysis revealed the predominance of diseases of the kidneys and urinary system (N00-N39), accounting for 87.6% of all registered cases. Among them, chronic pyelonephritis (41.6%) ranks first, followed by urolithiasis (22.8%) and lower urinary tract infections (18.6%). In men, prostate diseases accounted for a significant proportion (10.2%). Significant gender differences were identified: the incidence rate among women throughout the period consistently exceeded that among men by an average of 2.1 times (from 28,600 to 30,400 cases per 100,000 women versus 12,800-15,200 among men). In the paediatric population (0-14 years), the average incidence rate was 7,900 per 100,000 population, with 62% of cases occurring in girls, predominantly with acute forms of pyelonephritis and cystitis. The observed decline in incidence rates indicates an increase in the effectiveness of preventive measures, improved early diagnosis, and expanded access to urological care for the population of the Osh region in the post-pandemic period. However, the persistence of a high proportion of chronic forms (especially pyelonephritis – 41.6%) highlights the need for further improvement of the system of dispensary observation and secondary prevention.

Further research should focus on an in-depth analysis of the risk factors influencing the development of chronic kidney disease, including social and hygienic conditions, lifestyle characteristics, access to medical care, and patient adherence to treatment. It is also important to study age and gender differences in disease dynamics, develop early detection programmes and optimise patient routing. A promising direction could be the creation of a regional monitoring system for diseases of the genitourinary system using modern digital technologies, which would allow for more accurate forecasting of the epidemiological situation and increase the effectiveness of preventive measures.

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CONFLICT OF INTEREST

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REFERENCES

- [1] World Health Organization. World Health Statistics 2025 [Internet]. [cited 2025 June 27]. Available from: <https://www.who.int/publications/b/78420>
- [2] National Statistical Committee of the Kyrgyz Republic. Health statistics [Internet]. [cited 2025 April 12]. Available from: <https://stat.gov.kg/ru/statistics/zdravoohranenie/>
- [3] Broughton E, Bektas M, Colosia A, Kuper K, Fernandez MM, Al-Taie A, et al. A systematic literature review of the epidemiology of complicated urinary tract infection. *Infect Dis Ther*. 2025;14(6):1157-81. DOI: [10.1007/s40121-025-01149-8](https://doi.org/10.1007/s40121-025-01149-8)
- [4] He Y, Zhao J, Wang L, Han C, Yan R, Zhu P, et al. Epidemiological trends and predictions of urinary tract infections in the global burden of disease study 2021. *Sci Rep*. 2025;15(1):4702. DOI: [10.1038/s41598-025-89240-5](https://doi.org/10.1038/s41598-025-89240-5)

- [5] Al Lawati H, Blair BM, Larnard J. Urinary tract infections: Core Curriculum 2024. *Am J Kidney Dis.* 2024;83(1): 90–100. DOI: [10.1053/j.ajkd.2023.08.009](https://doi.org/10.1053/j.ajkd.2023.08.009)
- [6] Gottlieb M, Amponsah T, Bernard K, Moyer E. Epidemiology of urinary tract infections in adults among United States emergency departments from 2016 to 2023. *Am J Emerg Med.* 2025;93:7–12. DOI: [10.1016/j.ajem.2025.03.038](https://doi.org/10.1016/j.ajem.2025.03.038)
- [7] Yoon C, Kim J, Jang W, Ko JW, Kim J, Pai H, et al. Clinical and microbiological characteristics of female patients with acute pyelonephritis who experienced urinary tract infections within the previous year. *J Infect Public Health.* 2024;17(2):349–58. DOI: [10.1016/j.jiph.2023.12.011](https://doi.org/10.1016/j.jiph.2023.12.011)
- [8] Hsu YH, Hou CP, Weng SC, Tsai HY, Tsao SH, Juang HH, et al. Analysis of urinary retention after endoscopic prostate enucleation and its subsequent impact on surgical outcomes. *World J Urol.* 2024;42(1):305. DOI: [10.1007/s00345-024-04918-1](https://doi.org/10.1007/s00345-024-04918-1)
- [9] Ministry of Health of the Kyrgyz Republic. Statistical reporting forms on morbidity [Internet]. [cited 2025 September 14]. Available from: <https://med.kg/>
- [10] World Health Organization. International statistical classification of diseases and related health problems [Internet]. 2019 [cited 2025 August 15]. Available from: <https://icd.who.int/browse10/2019/en?referrer>
- [11] Lai S, Luciani LG, Cai T, Corgna S, Pastore A, Celi G, et al. Chronic kidney disease and urological disorders: systematic use of uroflowmetry in nephropathic patients. *Clin Kidney J.* 2019;12(3):414–9. DOI: [10.1093/ckj/sfy116](https://doi.org/10.1093/ckj/sfy116)
- [12] Ciccarese F, Brandi N, Corcioni B, Golfieri R, Gaudiano C. Complicated pyelonephritis associated with chronic renal stone disease. *Radiol Med.* 2021;126(4):505–16. DOI: [10.1007/s11547-020-01315-7](https://doi.org/10.1007/s11547-020-01315-7)
- [13] Cormio L, Calò B, Falagario U, Iezzi M, Lamolinara A, Vitaglione P, et al. Improvement of urinary tract symptoms and quality of life in benign prostate hyperplasia patients associated with consumption of a newly developed whole tomato-based food supplement: A phase II prospective, randomized double-blinded, placebo-controlled study. *J Transl Med.* 2021;19(1):24. DOI: [10.1186/s12967-020-02684-3](https://doi.org/10.1186/s12967-020-02684-3)
- [14] Aibashov MN, Baiyzbekova DA, Kasymova RO, Kenenbaeva RM. [Epidemiological analysis of indicators of prevalence and morbidity of diseases of the genitourinary system of the population of reproductive age in the Kyrgyz Republic](#). *Int J Appl Fundam Res.* 2018;12(2):225–9.
- [15] Ademola BL, Atanda AT, Aji SA, Abdu A. Clinical, morphologic and histological features of chronic pyelonephritis: An 8-year review. *Niger Postgrad Med J.* 2020;27(1):37–41. DOI: [10.4103/npmj.npmj_109_19](https://doi.org/10.4103/npmj.npmj_109_19)
- [16] Flores-Mireles AL, Walker JN, Caparon M, Hultgren SJ. Urinary tract infections: Epidemiology, mechanisms of infection and treatment options. *Nat Rev Microbiol.* 2015;13(5):269–84. DOI: [10.1038/nrmicro3432](https://doi.org/10.1038/nrmicro3432)
- [17] Herness J, Buttolph A, Hammer NC. [Acute pyelonephritis in adults: Rapid evidence review](#). *Am Fam Physician.* 2020;102(4):173–8.
- [18] Choi EJ, Xu P, Barham D, El-Khatib FM, Amini A, Djaladat H, et al. Comparison of outcomes for hypogonadal men treated with intramuscular testosterone cypionate versus subcutaneous testosterone enanthate. *J Urol.* 2022;207(3):677–83. DOI: [10.1097/JU.0000000000002301](https://doi.org/10.1097/JU.0000000000002301)
- [19] Kurmanbekova T, Toguzbaeva K, Dzhusupov K, Tazhiyeva A. The dynamics of morbidity and provision of urological resources in the Republic of Kazakhstan. *Clin Epidemiol Glob Health.* 2024;25:101700. DOI: [10.1016/j.cegh.2024.101700](https://doi.org/10.1016/j.cegh.2024.101700)
- [20] Zhakhina G, Mussina K, Yerdessov S, Gusmanov A, Sakko Y, Kim V, et al. Analysis of chronic kidney disease epidemiology in Kazakhstan using nationwide data for 2014–2020 and forecasting future trends of prevalence and mortality for 2030. *Ren Fail.* 2024;46(1):2326312. DOI: [10.1080/0886022X.2024.2326312](https://doi.org/10.1080/0886022X.2024.2326312)
- [21] GBD Chronic Kidney Disease Collaboration. Global, regional, and national burden of chronic kidney disease, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *Lancet.* 2020;395(10225): 709–33. DOI: [10.1016/S0140-6736\(20\)30045-3](https://doi.org/10.1016/S0140-6736(20)30045-3)
- [22] Medina M, Castillo-Pino E. An introduction to the epidemiology and burden of urinary tract infections. *Ther Adv Urol.* 2019;11:1756287219832172. DOI: [10.1177/1756287219832172](https://doi.org/10.1177/1756287219832172)

Ош облусундагы несеп-жыныс системасы ооруларынын учурдагы тенденциялары жана эпидемиологиялык өзгөчөлүктөрү

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Аннотация. Несеп-жыныс системасынын оорулары калктын жашоо сапатына, эмгек жөндөмдүүлүгүнө жана демографиялык көрсөткүчтөрүнө олуттуу таасирин тийгизген маанилүү медициналык-социалдык көйгөй болуп саналат. Изилдөөнүн максаты белгилүү бир мезгил ичинде Ош областынын чоң жана балдар калкынын арасында несеп-жыныс системасынын оорулары боюнча жалпы жана биринчилик оорулуунун көрсөткүчтөрүн изилдөө болгон. Иш аймактын медициналык мекемелеринин жана Саламаттык сактоо министрлигинин расмий статистикалык маалыматтарынын талдоосуна негизделген. Оорулардын таралышынын динамикасын, структурасын жана тенденцияларын баалоо менен медициналык статистиканын ыкмалары колдонулган. Изилдөө жыйынтыктары несеп-жыныс системасынын оорулары боюнча жалпы жана биринчилик оорулуунун деңгээли алардын өсүү мезгилинен кийин төмөндөө тенденциясына ээ экендигин көрсөттү, бул профилактикалык кароолордун чектелиши жана өнөкөт инфекциялардын санынын көбөйүшү менен шартталган. Аялдар көбүнчө калыпка келтирүүчү оорулар менен, ал эми эркектер – простата бездин патологиялары жана несеп таш оорусу менен ооруганда айкын гендердик айырмачылыктар аныкталган. Урологиялык оорулуунун структурасын системалуу мониторинг жүргүзүү жана талдоо профилактикалык иш-чараларды өркүндөтүү, медициналык жардамдын жеткиликтүүлүгүн жогорулатуу жана калктын ден соолугун коргоо боюнча аймактык программаларды иштеп чыгуу үчүн маанилүү мааниге ээ деген тыянак чыгарылган. Жүргүзүлгөн талдоо 2021-жылдагы жалпы оорулуунун чокусунан кийин (100 миң калкка 45 870) 2024-жылга чейин анын 33 240 учурга чейин төмөндөгөнүн, ал эми биринчилик оорулуу 100 миң калкка 22 480дөн 17 210го чейин азайганын көрсөттү. Ошондой эле оорулардын структурасында бөйрөк жана несеп чыгаруу системасынын оорулары (67,5 %) басымдуулук кылаары аныкталган, алардын ичинен өнөкөт пиелонефрит 26,9 %ды түзөт, ал эми аялдардын оорулуунун деңгээли эркектерге караганда орточо эсеп менен 2,1 эсе жогору. Алынган жыйынтыктар профилактиканын аймактык программаларын пландаштырууда, бейтаптарды маршрутташтырууну оптималдаштырууда жана Ош областынын медициналык мекемелеринде урологиялык жардамдын натыйжалуулугун жогорулатууда колдонулушу мүмкүн

Негизги сөздөр: урологиялык патологиялар; несеп жолдорунун инфекциялары; нефрологиялык бузулуштар; таралыш структурасы; популяциялык талдоо; урологиялык оорулардын динамикасы; санитардык-демографиялык өзгөчөлүктөр

Современные тенденции и эпидемиологические особенности заболеваний мочеполовой системы в Ошской области

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Аннотация. Болезни органов мочеполовой системы являются значимой медико-социальной проблемой, оказывающей существенное влияние на качество жизни, трудоспособность и демографические показатели населения. Целью исследования было изучение показателей общей и первичной заболеваемости болезнями мочеполовой системы среди взрослого и детского населения Ошской области за определённый период времени. Работа основана на анализе официальных статистических данных медицинских учреждений региона и Министерства здравоохранения. Использованы методы медицинской статистики с оценкой динамики, структуры и тенденций распространённости заболеваний. Результаты исследования показали, что уровень общей и первичной заболеваемости болезнями мочеполовой системы имеет тенденцию к снижению после периода их роста, обусловленного ограничением профилактических осмотров и повышением числа хронических инфекций. Выявлены выраженные гендерные различия, при которых женщины чаще страдают воспалительными заболеваниями, а мужчины – патологиями предстательной железы и мочекаменной болезнью. Сделан вывод, что систематический мониторинг и анализ структуры урологической заболеваемости имеют важное значение для совершенствования профилактических мероприятий, повышения доступности медицинской помощи и разработки региональных программ по охране здоровья населения. Проведённый анализ показал, что после пикового уровня общей заболеваемости в 2021 году (45 870 на 100 тыс. населения) к 2024 году наблюдалось её снижение до 33 240 случаев, а первичная заболеваемость уменьшилась с 22 480 до 17 210 на 100 тыс. населения. Установлено также, что в структуре заболеваний доминируют болезни почек и мочевыделительной системы (67,5 %), среди которых хронический пиелонефрит составляет 26,9 %, а уровень заболеваемости у женщин в среднем в 2,1 раза выше, чем у мужчин. Полученные результаты могут быть использованы при планировании региональных программ профилактики, оптимизации маршрутизации пациентов и повышении эффективности урологической помощи в медицинских учреждениях Ошской области

Ключевые слова: урологические патологии; инфекции мочевых путей; нефрологические нарушения; структура распространённости; популяционный анализ; динамика урологических заболеваний; санитарно-демографические особенности