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I would like cordially welcome the readers, authors and publishers of the new journal “**Medical Journal of Young Scientists**”.

Since the first years of its existence, the Tashkent Medical Academy has been training highly qualified medical personnel. Moreover, today this direction remains the main one. The content of the training has changed qualitatively. The world is changing rapidly today. In Uzbekistan, there is an urgent need for the formation of medicine – knowledge, leadership and innovation, which is based on the integration of both education, science and medicine.

Having completed fundamental professional training at TMA, the student becomes a highly qualified specialist. A wide profile of training, acquired practical skills allow him to constantly improve in the course of his work and master additional specialties.

The main purpose of the scientific journal is to study the intellectual potential of young people, analyze and systematize scientific achievements in the field of medicine. The journal will present both the results of experimental studies and publications on clinical topics in various fields: therapy, surgery, pediatrics, endocrinology, neurology, obstetrics, hygiene, social medicine and health management.

Current issues of modern medicine will be published in the materials. Tashkent Medical Academy opens up wide opportunities for everyone who crosses its threshold. The TMA is for those who believe in themselves and strive for success.

I wish all enrollees, students, postgraduates, professors and staff of TMA successful implementation of their goals, creative success in their studies and work, new achievements for the benefit of medicine.



**Rector of Tashkent Medical Academy,**

**Doctor of Medical Sciences**

**A.K.Shadmanov**



## Tashkent Medical Academy «Medical Journal of Young Scientists»

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## DISEASES OF MODERN CITIES AND POPULATION

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**Abstract.** *At present, the number of cities in the world is growing, and this process has been going on since the industrial revolution of the XVIII century. According to the calculations of the United Nations, 3,9 billion people live in urban centers. However, the rate of urbanization is not the same in different countries, and developed countries are already an indicator of cities, but it is expected that the urban population will increase in Asia and Africa in the next 30 years. Urbanization brings many challenges to the epidemiology of Health and Infectious Diseases on a global scale. New megapolises can become incubators of new epidemics, and Zoonoses can spread more quickly and threaten the whole world. Rational planning and epidemic control of cities can be powerful tools to improve health globally and reduce the burden of infectious diseases.*

**Key words:** *cities, urbanization, diseases, infectious diseases caused by it.*

## ЗАМОНАВИЙ ШАҲАРЛАР ВА АҲОЛИ КАСАЛЛАНИШИ

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**Аннотация.** *Ҳозирги даврда дунёда шаҳарлар сони ортиб бормоқда ва бу жараён XVIII асрнинг саноат инқилобидан бери давом этмоқда. Бирлашган Миллатлар ташкилотининг ҳисоб-китобларига кўра, шаҳар марказларида 3,9 миллиард одам яшайди. Бироқ, шаҳарлашни тезлиги турли давлатларда бир хилда эмас ва ривожланган мамлакатлар аллақачон шаҳарлардан иборатдир, аммо келгуси 30 йил ичида Осиё ва Африкада шаҳар аҳолисининг кўпайиши кутилмоқда. Урбанизация глобал миқёсда саломатлик ва юқумли касалликлар эпидемиологияси учун кўплаб муаммоларни келтириб чиқаради. Янги мегаполислар янги эпидемияларнинг инкубаторларига айланиши мумкин ва зоонозлар эса тезроқ тарқалиб, бутун дунёга таҳдид солиши мумкин. Шаҳарларни оқилона режаслаштириши ва эпидемиологик назорат глобал миқёсда саломатликни яхшилаши ва юқумли касалликлар юқини камайитириши учун кучли воситалар бўлиши мумкин.*

**Калит сўзлар:** *шаҳарлар, урбанизация, касалликлар, келиб чиқадиган юқумли касалликлар.*

## СОВРЕМЕННЫЕ ГОРОДА И ЗАБОЛЕВАЕМОСТЬ НАСЕЛЕНИЯ

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***Аннотация.** В настоящее время количество городов в мире растет, и этот процесс идет со времен промышленной революции 18 века. По подсчетам ООН, в городских центрах проживает 3,9 миллиарда человек. Однако темпы урбанизации неодинаковы в разных странах, и развитые страны уже являются индикатором городов, но ожидается, что в ближайшие 30 лет городское население Азии и Африки увеличится. Урбанизация создает множество проблем для эпидемиологии здоровья и инфекционных заболеваний в глобальном масштабе. Новые мегаполисы могут стать инкубатором новых эпидемий, а зоонозы могут распространяться быстрее и угрожать всему миру. Рациональное планирование и борьба с эпидемиями в городах могут стать мощными инструментами для улучшения здоровья во всем мире и снижения бремени инфекционных заболеваний.*

***Ключевые слова:** города, урбанизация, болезни, вызываемые ею инфекционные заболевания.*

### MATERIALS AND METHODS

Literature sources were carried out using Web of Science, Scopus, DBLP, Medline bibliographic databases. In the selection of sources, attention was paid to experimental articles, literary reviews and the number of their instructions for the past year.

The industrial revolution of the XVIII century led to the emergence of large cities with great potential for the growth and development of Man and society. Living in the city can give us several advantages, namely the opportunity to get a higher education, find a new highly profitable job, the reliability of quality medical services and the safety of social services, etc.

According to UN estimates, in 2020, 54% of the world's population, that is, 3.9 billion people lived in urban centers [6]. The economic growth of countries is associated with urbanization, and countries with high per capita incomes are among the most urbanized countries [8]. Financial and political power is

often concentrated in cities, opportunities for quick actions are created when necessary.

When we say the process of urbanization, it is understood that in urban conditions people move and move from places. However, the meaning of the word "city" does not have a universal definition. In different countries, many different interpretations can be seen, and they often do not give the same concept. There are different options: living in the capital, economic activity in the region, population or even population density. The non-availability of the universal definition makes it difficult to compare different countries and cities in terms of population health, as well as the burden and impact of infectious diseases [3].

In most of the studies conducted, the differences between urban and rural areas were examined and different urban conditions were not compared. In this particular environment, it can be difficult to get a full understanding from a global perspective and better understand the burden of infectious diseases. Cities in the world can be very diverse, and even very large differences can be observed in local dis-

eases and health problems. Problems for one city can be completely unusual for another.

Urbanization is one of the leading secular trends of the 21<sup>st</sup> century and has a significant impact on health. 55% of the world's population lives in cities, and this number is expected to increase by 2050 to 68%. In the future, the growth of cities occurs mainly in developing cities, in the world today there is an opportunity to focus on urbanization and other important development areas of cities to protect and strengthen health. This is because the health and well-being of the citizens is probably the most important aspect of the city's attention. However, the majority of 4,2 billion people living in urban areas – half of humanity – suffer from inadequate housing and sanitation, poor sanitation and waste disposal, as well as contaminated air that does not comply with the WHO guidelines. In addition, other forms of pollution, such as noise, water and soil pollution, hot spots in the city, and lack of space for walking and biking and an active lifestyle, can also represent cities as an epidemic of non-communicable diseases, and an epicenter of climate change as a driving force.

The population of today's and Future Cities is suffering from infectious diseases such as HIV/AIDS, tuberculosis, pneumonia, dengue and diarrhea; non – communicable diseases such as cardiovascular disease, stroke, asthma and other respiratory diseases, cancer, diabetes and depression; violence and injuries, including road traffic injuries. While cities can come up with a lot of challenges, they can open up opportunities to improve mobility in relation to health, clean environment and climate. Urban policy should be in line with such calls, because health is essential to ensure a high income for living in cities, to create manpower for production, to create a viable and dynamic community, to develop mobility, to promote social interaction and to protect the needy groups of the population. Cities should also

take advantage of the opportunity provided by a single body under the leadership of the municipal governorship, which has the authority to make decisions on urban planning, utilities systems, procurement, energy, water and sanitation, as well as the network on Waste Management [3].

Strategic urban planning remains the key to creating a conducive environment for health from the point of view of planning, investing and integrating political decision making in matters of Health and fairness at the local level.

The structure and level of morbidity is the most important component of a comprehensive assessment of the health of the population. Morbidity data are needed to base management decisions at the federal and municipal level of health care. Based on the study of the current situation associated with the disease of the population and the forecast of its change in the future, it is possible to base the adequate planning of the network of medical organizations and the need for other types of health resources.

According to the State Statistics Office of the Republic of Uzbekistan, the average annual population of the Republic is growing. In particular, the total population in 2021 year amounted to 34 131 615 people, which was more than 5 383 263 compared to 2011, the growth rate was 18.7%. The process of urbanization and the change in the distribution of the population of the Republic between rural and urban areas are relevant for Uzbekistan. In accordance with the agrarian orientation of the network structure of the economy, a significant predominance of the rural population was observed. In 2011, the share of the rural population was 57,3%. After organizational and administrative measures were taken to accelerate urbanization processes, consisting in the transformation of a number of rural population points into urban settlements, the percentage of rural population decreased. However, in the following years, mainly due to



the ongoing differences in fertility in the village and the city, as well as migration, the share of the urban population gradually decreased [1, 4, 7].

Thus, in 2021, the share of the 82utria82-tion of the city of the Republic decreased slightly, but steadily, and in 2011 amounted to 57,3%, in 2021 50,8%.

Analyzing the dynamics of the disease in the last 10 years of the population of the Republic of Uzbekistan, the General disease is characterized by a gradual increase in the incidence due to the increase in diseases of the ear and mucous membranes (VIII), respiratory organs (X), eyes and its formations (VII), the musculoskeletal system (XIII) and the circulatory system (IX), digestive organs (XI), nerves (VI) and At the same time, the prevalence of diseases of the organs of blood and blood formation, mental disorders, congenital anomalies is decreasing. The level of primary morbidity in 2020 year reached 19367987.

In the second place in the composition of the common disease are diseases of blood and blood-forming organs, the average value of which was 15692,05 per 100 thousand inhabitants. At the same time, over the years, there was a uniform decrease in morbidity, and in 2021 year the rate of decline was 22,7%. The share of diseases of blood and blood-forming organs in the composition of the general population is 19% and is formed mainly on the account of anemia (98%). The number of cases of primary infection with diseases of blood and blood-forming organs is 6365.33 for every 100 thousand inhabitants, with a total incidence of 40,6%.

The Incidence of diseases of the digestive system has increased by 20% over the past 5 years, taking the average 9817,74 over the 100 thousand inhabitants and the third place in the overall incidence structure; the share of the main disease is 64,5%. The main nosologies that make up this group of diseases are gastritis and duodenitis (11,9%), gall bladder and bili-

ary tract diseases (4,7%), stomach and duodenitis (3,6%). Diseases of the circulatory system take the fourth place in the overall morbidity structure of the population and are characterized by high blood pressure and ischemic heart disease (40,3 and 18%, respectively). The growth rate (22,14%) of diseases of the circulatory system is characterized by the greatest dynamic changes in the direction of growth. For five years, the average value of primary morbidity was 34.2%, while the number of 100 thousand population was 5935,62. The most common group of diseases is the IV class (diseases of the endocrine system, eating disorders, metabolic disorders), characterized by relatively the same dynamics over the past five years: the growth rates are increasing (up to 3.4%), but remain below the Republican indicators (up to 7.7%).

The ranking of the indicators of the general morbidity of the population by Regions made it possible to determine the regions that are leading by the level of the general morbidity of the Republic. Thus, the highest rate of general morbidity among the population of Tashkent (129231,12±63,2), Fergana region (98480±9,6), Karakalpakstan Republic (93959,36±3,1), Khorezm (91466,62 ± 6,6), Navoi (90031,96±14,3) regions was recorded.

Analysis of the structure of the General disease showed that among the inhabitants of Tashkent City this structure is mainly determined by diseases of the respiratory system (23.8%), digestive system (18.6%), blood and blood-forming organs (8.6%), circulatory system (6.2%) and endocrine system (6.2%), together they constitute 63.3% of the total structure of the city population. The population of the city of Tashkent has the highest growth rate of the General disease compared to other regions – 40% [1, 4].

The health of the population, which is the most important economic and social potential of the country, is determined by the complex influence of socio-economic and biological

factors and is assessed by a number of indicators such as demographic indicators, physical development, disease and disability. The issues of ensuring the quality of life of the population are of particular importance for Uzbekistan, a country with advanced economic development. The state reforms carried out have a positive impact on the development of social infrastructure in the regions of the Republic [2, 5, 8].

Timely and qualitative Diagnostics, which is one of the main tasks, along with the socio-economic development of the regions, the rapid development of primary medical care, the provision of medical care at the level of district medical associations and district medical diagnostic centers of rural medical units, is of particular importance for the regions of the Republic. Improvement of medical care in rural areas of the Republic is becoming increasingly relevant. Analysis of the disease of the population in the regions of the Republic allows to identify the shortcomings and needs for the improvement of the health system and to develop socio-hygienic and therapeutic-prophylactic measures aimed at improving the health of the population [5].

## CONCLUSION

According to the State Statistics Office of the Republic of Uzbekistan, the average annual population of the Republic is growing. In 2021, the total population of the Republic was 34 131 615 people, which was more than 5 383 263 compared to 2011, the growth rate was 18.7%. In 2011-2021, the overall incidence of the population of the Republic of Uzbekistan increased by 7.7%. Among the population of the Republic, the leading pathology is Diseases of the respiratory system (23%), blood and blood-forming organs (19%), digestive organs (11.9%), circulatory system (7.2%) and endocrine system diseases and disorders of 83 utria-

tion, metabolic diseases (7%), which account for 68% of all diseases of the 19 classes.

Urbanization is now a continuous process in the world, but the pace of this process is not the same. Developed countries, which are traditionally considered high-income countries, have already been urbanized and there is a rapid recovery in developing countries. Infectious diseases continue to have a huge impact on health globally, and urbanization is changing the characteristics of these diseases. Living conditions in urban areas are generally better than in rural areas; the improvement of housing conditions, sanitation, ventilation and social services play an important role in the improvement of this living environment.

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