**MINISTRY OF HIGHER EDUCATION AND SCIENCE AND INNOVATIONS OF THE REPUBLIC OF UZBEKISTAN**

**MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN**

**TASHKENT MEDICAL ACADEMY**

**DEPARTMENT OF PUBLIC HEALTH AND MANAGEMENT**

**ON THE SCIENCE OF PUBLIC HEALTH**

**EDUCATIONAL-METHODOLOGY COMPLEX**

**(FOR STUDENTS OF THE FACULTY OF MANAGEMENT, 3rd** **course**).

**Field of education: 410 000 – Business and Management**

**Direction of education: 60411200- Management: Healthcare management**

TASHKENT – 2023



**Content.**

**Educational materials**

**Lecture materials**:

Lecture #1................................................... ..........................

Lecture #2................................................... ..........................

Lecture #3................................................... ..........................

Lecture #4................................................... ..........................

Lecture #5................................................... ..........................

Lecture #6................................................... ..........................

Lecture #7................................................... ..........................

Lecture #8................................................... ..........................

Lecture #9................................................... ..........................

Lecture No. 10................................................... ........................

Lecture #11................................................... ........................

Lecture #12................................................... ........................

**Practical training**................................................ .

Practical exercise #1................................................... .........

Practical training #2................................................... .........

Practical training #3................................................... .........

Practical exercise #4................................................... .........

Practical exercise #5................................................... .........

Practical training #6................................................... .........

Practical exercise #7................................................... .........

Practical exercise #8................................................... .........

Practical exercise #9................................................... .........

Practical exercise #10................................................ .......

Practical exercise #11................................................ .......

Practical exercise No. 12................................................... .......

Practical exercise No. 13................................................... .......

Practical training #14................................................ .......

Practical training #15................................................ .......

Practical exercise #16................................................ .......

Practical training #17................................................ .......

Practical exercise #18................................................ .......

**Independent educational activities**…………………

**Glossary**................................................ ...................

This educational-methodological complex "determines the volume of practical and theoretical knowledge that students should acquire in the Department of Public Health and Management.

The educational-methodological complex was created taking into account the state standards of higher medical education of the Republic of Uzbekistan, the legal basis of health care, modern technologies in the organization of public health and health care.

**The goals and tasks of subject**

The main goal of subject “Public health” is preparing specialists, that has knowledge on health of the population, the risks influented to health, protection, strengthening and rehabilitation of the people. They can lead, manage and coordinate all the program in field.

The function of the module–methods of studying the health of the population and the impact of lifestyle and external environmental factors on it, developing measures to prevent external environmental factors that have a harmful effect on the population with the aim of further improving the health of the population, theoretical organization of health care to have sufficient knowledge and practical skills on the basics and principles of health care management and the organization of medical services for the population, the forms and methods of acquiring medical knowledge and hygienic skills among the population.

**Students' ideas, knowledge, skills, and competences requirements in subject**

A bachelor in the education process of the science of "Public Health" must to:

- have an idea about reproductive health; (knowledge)

- understanding the social determinants of health and equality for health and being able to use them in practice; (skill)

- have skills such as listening, understanding other people's needs, understanding the situation and the ability to express these understandings; (qualification competences)

- to have an idea about the design of healthcare systems; (knowledge)

- to be able to use the ability to identify alternative methods of solving problems; (skill)

**Interrelationship of the subject with other subjects in the curriculum and**

**methodological integrity**

Global health science is taught to students of the 3rd year of management faculties in 6-th semesters, it is required to have sufficient knowledge and skills in the subjects (hygienic, clinical, medical biological and social sciences) planned in the curriculum for the implementation of the program.

**The role of subject in science and health care**

The subject of public health takes the main place in the study of basic legal documents and laws of health care, public health and social hygienic factors affecting it. In particular, measures are planned and developed to reduce and prevent the main indicators of the population's growth, mobility, morbidity, and physical development, as well as social factors that negatively affect them.

**Modern innovative information and pedagogical technologies in teaching subject**

It is important to use advanced and modern methods of teaching, to implement new informational and pedagogical technologies for students' mastery of the science of "Public Health". Textbooks, educational and methodical manuals, lecture texts, handouts, computer programs, electronic materials are used in mastering the subject. Appropriate advanced pedagogical technologies are used in lectures and practical lessons.

1. **Teaching-methodical materials.**

Lecture texts:

Topic No. 1: Introduction to the public health subject, main tasks and methods.

Topic #2: The science of demography and its content

Topic #3: Population morbidity and methods of its study

Topic #4: The role of international classification of diseases in medicine

Topic #5: Methods of studying the disability of the population

Topic No. 6: Medical and social aspects of important non-epidemic diseases

Topic No. 7: Cardiovascular diseases as a socio-hygienic problem

Topic No. 8: Diabetes as a socio-hygienic problem

Topic No. 9: Oncological diseases as a socio-hygienic problem

Topic No. 10: Lifestyle. Forming a healthy lifestyle

Topic #11: Health. Health-related quality of life

Topic No. 12: Preventive trends in health care. Types of prevention.

**II. The main theoretical part (lecture sessions)**

**Topic #1: Introduction to public health science, main tasks and methods.**

The place of public health as a science within medicine, hygiene and social sciences. The formation and development of the science of "Public Health" in the Republic and in foreign countries. The composition of the global health organization, its main directions, their role and importance in solving various health issues. Legal basis of public health protection of the Republic of Uzbekistan.

**Topic #2: The science of demography and its content**

Demography, its role in medicine and health care. The science of demography and its content. Importance of demographic data in describing population health. Population statics and movement. Importance of census methods in public health and population health studies.

**Topic #3: Population morbidity and methods of its study**

The importance of state statistics in the study of population morbidity. Classification of diseases, injuries and causes of death. Methods and methods of studying population morbidity, expert assessment in studying morbidity, tasks of family physicians in studying the causes of population morbidity.

**Topic #4: The role of international classification of diseases in medicine**

Understanding of the International Classification of Diseases. The role of the 10th revised International Classification of Diseases in medical practice. Definitions of classes and nosological types of diseases in this classification.

**Topic #5: Methods of studying the disability of the population**

Concept of disability. Indicators depending on the degree of impairment of the organism's activity, their types, methods of determination and assessment: disorders of higher mental activity, disorders of sensory organs, movement disorders, defective disorders, disorders due to common causes. Types of body function disorders. Disability groups and their causes.

**Topic No. 6: Medical and social aspects of important non-epidemic diseases**

Types of non-epidemic diseases. The location of these diseases in the international classification of diseases. Concepts about diseases and their prevalence among the population. Group of factors that cause diseases and prevention of these diseases.

**Topic No. 7: Cardiovascular diseases as a socio-hygienic problem**

The position of cardiovascular diseases in the International Classification of Diseases and their significance in medical practice. Types of cardiovascular diseases and their prevention in maintaining and strengthening the health of the population. Risk factors of cardiovascular diseases.

**Topic No. 8: Diabetes as a socio-hygienic problem**

The position of diabetes mellitus in the International Classification of Diseases. Distribution of diabetes mellitus among the population. Prevalence of diabetes. Diabetes mortality rates. Diabetes risk factors. Prevention of diabetes.

**Topic No. 9: Oncological diseases as a socio-hygienic problem**

The position of oncological diseases in the International Classification of Diseases. Prevalence of dangerous tumor diseases among the population. Disability and death from malignant tumor diseases. The main causes of oncological diseases. Prevention of oncological diseases.

**Topic No. 10: Lifestyle. Forming a healthy lifestyle**

Definition of lifestyle and standard of living. Understanding of objects and events that determine life conditions. Definitions of a healthy lifestyle and its elements: negative factors of the external environment affecting the body, education of the population in terms of sanitation, prevention of harmful factors, physical training and sports, types of wellness and healthy lifestyle promotion directions.

**Topic #11: Health. Health-related quality of life**

Concept of health. Indicators that evaluate the health of the population. Types of health. Dependence of health on lifestyle. Risk factors and their levels. Concept of quality of life and their composition: concepts of creative life, consumer life, family reproductive life, socio-cultural life and spiritual life.

**Topic No. 12: Preventive trends in health care. Types of prevention.**

Prevention as the main focus of the healthcare system. Preventive activities of treatment-preventive institutions. Health protection. Prevention of diseases. Types of prevention: primary,

understanding of secondary and tertiary prevention, their components.

**Content of practical training:**

**Subject. "Public health and health management", its role in the development of medical science and practice**

In the Constitution of the Republic of Uzbekistan, the rights of citizens to use qualified medical services, health care and the protection of the population's health and the environment are given a wide place and state protection is noted.

In this regard, in the decrees and decisions of the President of the Republic of Uzbekistan (1998-2018), urgent tasks for the reform of the health care system in the Republic of Uzbekistan, its implementation and deepening of the reforms were determined.

Currently, health care, health indicators of the populationbringing it up to the levels of developed countries, improving the methods and forms of training and upgrading the qualifications of specialists in line with the requirements of the time to further increase the popularity, quality and efficiency of medical care, providing medical services to the population with a deep understanding of the biosocial principles of public health protection Training of active organizers and doctors who can organize according to the standards is one of the important tasks.

The subject "Public health and health care management" is one of the most complex subjects in medical education, and it is of great importance in the formation of a future doctor, a health organizer engaged in the protection of public health.

Fulfilling the tasks arising from the laws and programs adopted on health care in Uzbekistan, as well as in the future training of general practitioners, health managers - organizers, managers, masters "Public health and health management" science is important.

The science of "Public health and health care management" studies the influence of social conditions and external environmental factors on human health based on the characteristics of certain historical periods.

This science develops new forms and methods of medical service in order to protect the health of the population, prolong the average life of a person and maintain his active labor activity, and directly participates in the process of implementation.

The main tasks of the science "Public health and health management" are:

1) development of methods and methods of studying public health, study of public health and social conditions affecting it;

2) theoretical justification of the health care policy of the government of the Republic of Uzbekistan and development of new forms and methods of providing health care, medical assistance to the population, and their implementation;

3) development and improvement of the management system of health care;

4) improving the process of training medical workers in accordance with the requirements of the time.

Unlike clinical sciences, public health studies not the health of individual persons, but the health of a whole community, population, society (demographic processes, morbidity, disability, physical development) in connection with its lifestyle and conditions.

Health management is an integral part of public health and is considered to be its practical manifestation, so they cannot be interpreted and analyzed in isolation.

The science of "Public health and health care management" illuminates and scientifically substantiates the state of public health, morbidity, physical development of a person, demographic process and socio-economic factors affecting them. Develops and implements complex preventive measures to further improve the health status of the population.

Health care is a complex of medical and socio-economic activities carried out to maintain and improve the health of some individuals and the entire population.

**"Public health and health management" consists of the following components.**

* History of the health sector.
* Theoretical foundations, problems and concepts of the medical and health process.
* Methods of studying the health status of the population, medical statistics - basics of biostatistics.
* Population health, population living conditions and lifestyle, and other factors affecting it.
* Common non-epidemic diseases among the population and their prevention,
* Medical social protection. Social Security and Health Insurance.
* Organization of the system of providing medical services to the population.
* Leadership and management of health care.
* Health System Planning and Financing and Economics.
* Health care in foreign countries, evaluating their positive and negative situations.

The discipline of "Public health and health management" has interrelated research methods and techniques. Its methodological basis lies in the correct interpretation of the connection between public health and socio-economic relations in the society, the reasons for the interrelationship, that is, the interrelationship between social relations and biological processes in the society.

Population health is directly related to social factors, and social conditions are directly related to the structure of society, social, economic and political relations. Social under the influence of social conditionsfactors arise. They include labor and recreation, nutrition, education, cultural needs, living conditions, interpersonal relationships, and the quality of medical care. In addition, climate, geographical conditions, and meteorological factors affect the health of society.

The above changes are influenced by the social and political system of society, the level of development of production forces. They can have a positive or negative impact on public health.

"Public health and health management" has its own research methods, like other disciplines. They include:

1. Statistical method.
2. Historical method.
3. Expert evaluation method.
4. Method of economic research.
5. Experimental method.
6. Sociological method.

**1. Statistical method.**HAny public health research is done using statistical methods. The statistical method allows to objectively evaluate the health of the population and its changes, the activity of medical institutions and its effectiveness. In clinical, experimental scientific research, sanitary statistics reveals the nature and internal laws of the studied phenomena. One of the most important stages of the statistical method is the collection, analysis and evaluation of the obtained data.

The statistical method calculates and analyzes the research results, relying more on mathematical statistics. They include evaluation criteria such as relative values, mean values, standardization method, correlation analysis, dispersion analysis, etc.

**2. Historical method.** In public health and health management studies, the method of studying public health, the dynamics of the health care system, and the changes in political, social and economic conditions during the historical development of society is widely used.

**3. Expert evaluation method**based on the criteria and principles established in the evaluation of the quality and efficiency of medical care.

**4. Economic research methodin**economic categories such as efficient and effective use of funds allocated to the healthcare system, planning and production costs, profit and loss are used. The impact of socio-economic development on the health of the population is studied through the methods of economic research.

**5. Experimental method**- search for new rational forms and methods of providing medical care, creation of effective models of medical care, implementation of best practices, verification of results of projects and discoveries, creation of new medical institutions as an experiment and practical analysis of their activities.

**6. Method of conducting sociological research**- is of great importance in medicine and health care. This method is carried out by conducting a special questionnaire - survey, survey - interview. This method will be discussed separately in the following chapters.

All of the above methods are widely used in the process of studying issues related to public health and health management. It is advisable to use them not individually, but using several methods. As a result, the depth of the research, the sequence, and the accuracy of the obtained results are fully achieved. Anthropometric, physiological methods, materials of clinical sciences, ethnographic indicators, data on the geographical location of the population are also widely used in public health and health management research. These methods include health care planning, financing, management, scientific organization of labor, material andit is directly used in the study and development of certain issues of health care, such as the targeted and rational use of technical resources.

Demographic informationis the science of natural and mechanical movement of the population, the number and natural increase of the population, they help in drawing up health care plans for the near future (current planning) and for the long term (5-10-15 years) is used.

Depending on the purpose of the research, various sources are used in the study of public health.

State registration documents used in treatment - prevention, sanitation - epidemiology and other institutions are the main source of information in research. The level of reliability of these data is high, because they are based on the information of state documents, which are in a uniform form for all regions, districts. special observation, questionnaire and instrumental methods are used for study (study of atmospheric air, water, soil pollution by special methods, etc.).

In recent years, a special survey method (interview, questionnaire method) has been widely used to monitor certain individuals, certain groups of the population, or the family. It is possible to collect important information on economic, social, demographic issues with the help of survey-questionnaire, survey-interview methods.

**Public health, basic concepts. Determinants of population health.**

Medicine is a set of scientific knowledge and practical activities carried out for the purpose of maintaining, improving, prolonging the life of the population, preventing and treating diseases. Medicine is based on two main concepts: "Health" and "disease - illness".

It is very difficult to define these two concepts. That's why jBefore thinking about public health, it is important to have an understanding of human health and disease.

Personality, human health is not only the absence of illness, disease, or physical defects, but also the balance of the activities of all organs and systems of a person with the external natural and social environment, the harmony of a person's social, biological and mental state.

Health and illness are a product of the social environment, created under the influence of various conditions and factors.Health and illness are a product of human life activity, and the difference between them is the conditions that ensure this life activity. If such a condition is favorable for a person, for his life activity, for his feeling, this is health, but if it is limited, constricted, disturbed, disease will appear and lead to illness.

Therefore, it is wrong to look at human health and illness only from a biological point of view, but based on biological science, human health and illness should be considered as a product of social relations and social environment.

Health is the harmonious unity and harmony of biological and social qualities, which is innate and acquired or the product of the influence of social factors, and vice versa, the violation of this unity and harmony is a disease.

Since ancient times, philosophers and doctors have tried to study health and illness in connection with human nature, life activities, character, and lifestyle. Hippocrates, the father of medicine, said in his time: "As human activity is, so is he, his nature and diseases."

According to the definition of the World Health Organization (WHO): "Health is not only the absence of disease and physical infirmity, but also the possession of a healthy physical, mental and social state. This definition is contained in the WHO statute adopted in 1948.

In medical and social studies, when assessing the health of the population, it is appropriate to note its 4 levels:

1. Individual health is individual health.
2. Social and ethnic group health - group health.
3. Health of the population of the administrative region - regional or territorial health.
4. Community, population health - public health.

Group, region, community health – (taken in statics and dynamics) all individuals are seen as an integrated view of health status.

According to WHO experts, in medical and sanitary statistics, individual health means the absence of various disorders, diseases, and health at the population level means the process of reducing morbidity, disability, and death rates, as well as increasing the level of health.

* **Public health (public health as resource)**- the potential of the society leading to the provision of national security, is a medical and social resource.
* **Health of the nation**considered as a medical-demographic and social category, it is a positive reflection of the physical, mental, and social conditions of people performing their life activities at the level of certain social communities.

*Public health*(under the influence of the factors of the external environment and the lifestyle of the population) the important economic and social potential of the country, which provides people with optimal quality of life and life security.

**Indicators of disability**

-prevalence and structure in the elderly population

-prevalence and structure in children

**Physical development** indicators

* anthropometric
* somatoscopic
* functional

**Demographic indicators**

* static
* dynamics
* mechanical movement
* natural growth

**Disease indicators**

-distribution and structure of appeals

-distribution and structure of medical examination data

-causes of death and distribution structure

In medical and social studies in our country, it is recommended to use the following indicators in assessing the public health of certain groups and regions:

1. Demographic indicators.
2. Getting sick.
3. Disability.
4. Physical development.

Methods of studying these indicators characterizing the health of the population and information about them are presented in separate chapters.

 As much as it is difficult to evaluate and characterize the health of a concrete person, it is even more difficult to evaluate the health of society and the population.

Public health is not only a medical concept, but in many ways it is one of the categories of society, social, political and economic, and is the object of social policy, therefore, rather than its medical essence, it is more it is necessary to evaluate based on its social essence.

WHO documents repeatedly emphasize that people's health is a social quality, and it is recommended to use the following indicators for its evaluation:

* total expenditure allocated to health care from gross domestic products;
* popularity of primary medical and social care;
* coverage of the population with medical care;
* population vaccination rate;
* the level of examination of pregnant women by qualified specialists;
* nutritional status of children;
* child mortality rate;
* average life expectancy;
* hygienic literacy of the population.

Public health depends on the complex effects of socio-biological factors. When we talk about the social health of the population, it is primarily understood as dangerous social factors that affect it.

It is necessary to study the health of the population in connection with the medical statistical and demographic indicators that characterize it, with the socio-economic, natural, social and biological factors affecting them (Chart 2.2).

The drawing shows the dependence of the population's health, social conditions, social, economic and political development of society, social factors and natural conditions surrounding a person, external environment.

The external environment and socio-economic conditions, work and living conditions affect the health of the population. Also, the health of the population is affected by the activities of the health care system and medical sanitation service aimed at studying the health of the population and further improving it, in addition to many external environment and socio-economic factors that surround a person. shows.

General social and economic conditions

Natural environment

Meterological conditions

Hydrogeological conditions

Biological genetic factors

Population health indicators:

- demographic

- illness

- disability

- physical development

- disability

Working conditions

Living conditions

The state of medical services provided to the population

The main task of sanitary statistics is to develop methods of studying the health of the population, to study the main indicators of the population's health in connection with social, biological factors, external environment, concrete life, work, and living conditions. There is no science of hygiene that does not deal with public health statistics. That's why public health statistics, methods of its study, sanitary statistics are given a wide place. Currently, many studies attempt to provide a comprehensive assessment of public health.

Under the influence of complex factors, population health indicators can change dramatically. These changes are manifested in some youth, gender, social groups of the population, across time and space, have a regional character, and are subject to certain laws in terms of distribution, in other words, have their own epidemiology - epidemiological character .

In ancient Greece, the word "epidemic" meant a mass spread of infectious diseases. Epi- unusual, public; demic is derived from demos meaning people. So, an epidemic means that certain phenomena are widespread among the population. But until now, epidemiology has been understood as the laws of the spread and origin of infectious diseases. When we open all epidemiology books published to date, we see that they are written only about infectious diseases. But in many countries of the world, especially developed countries, epidemiology (epidemiology) in Western literature is understood as a science that studies the causes and distribution of pathological processes in order to develop optimal treatment of diseases and preventive measures against them.

But in our opinion, it would be wrong to understand only pathological processes by epidemiology. Because such a widespread birth rate, which characterizes the health of the population, also has its own laws. Therefore, from the point of view of studying public health, epidemiology is understood as a science that studies the physiological state or pathological processes of the community, the laws of the causes of the emergence and spread of diseases using epidemiological research methods.

Thus, epidemiology studies the physiological state of a person and the influence of various complex factors on the spread of various diseases (infectious and non-infectious), the formation of public health.

Among the methods of epidemiological research, epidemiological analysis occupies an important place. Epidemiological analysis means a set of methods of studying the causes and laws of origin of certain epidemiological processes in a certain area, region, in order to prevent them from spreading.

Epidemiological research methods are divided into several types depending on the purpose of their use in different areas of health care, in large populations: clinical epidemiology, epidemiology of non-infectious diseases, epidemiology of infectious diseases, pharmacoepidemiology, ecoepidemiology, etc. Let's talk about some of them.

*Clinical epidemiology*It is considered the basis (basis) of evidence-based medicine, in which it studies the clinical course of diseases with the help of clearly obtained scientific and research methods in order to assess the condition of a particular patient. The goal of clinical epidemiology is to create and apply clinical research methods that are error-free, objective, accurate, and help to draw conclusions.

*Epidemiology of non-infectious diseases*studies the prevalence and causes of diseases in order to reduce the prevalence of non-infectious diseases, prevent them and develop preventive measures against them.

*Epidemiology of infectious diseases*in order to eliminate infectious diseases, prevent them, and develop measures against them, studies their spread, causes of origin, and laws of epidemic processes.

*Public Health Epidemiology*Part of the science of "public health and management", it examines the patterns of distribution of health indicators among different population groups, in relation to the external environment, living conditions and lifestyle factors affecting them, over time and environment. learns "Public health epidemiology" (social epideitology) methods are used to assess public health. The purpose of public health is to develop political, economic, medical-social, organizational measures aimed at improving public health indicators.

**Topic: Importance of demographic science in defining population health.**

Demography - (Greek demos - population, graphia - study) is the science of population and its development.

Demographic statistics study the main facts about the number, composition, birth, death, reproduction, movement of the population. Demographic data are of great importance for meeting the population's need for medical care, in its planning (the number of places in a permanent hospital, positions in a polyclinic, states, the number of places in sanatoriums, the number of doctors and paramedics, pharmacies etc.). The population is the object of direct health care for health care institutions.

**Population statics and movement.**

 *Demography consists of two main parts:*

* Population statistics, in other words, information about the number, composition (gender, age, profession, occupation, family status, nationality, language, education), residence, geographical location, density of the population at a certain time. includes
* Population dynamics (movement) - population change. In turn, it is of two types:

a) mechanical movement;

b) natural movement (as a result of birth and death).

 The main source of information on population statistics is the population census conducted periodically by the state. During Tsarist Russia, the first population census was conducted in 1897. During the former Union, 1920, 1926, 1936, 1959, 1970. and in 1989, a state census was conducted. The last population census was conducted on January 12, 1989.

The population census is based on the momentary principle, it is conducted on a specific day and hour, when the population is least active, in December or January of the winter season, and it is based on the registration of all the population. Population registration is carried out on the basis of the same program and plan for all territories using direct survey methods. Population registration is usually conducted once every 10 years because it requires a lot of work, effort, and money. As of January 1, 1999, the population of Jagan was 5 billion 961 million 628 thousand people, of which the population of China was 1 billion 273 million 640 thousand (21.3% of the population of Jagan), the population of India was 276 million 218 thousand, Brazil - 167 million 988 thousand. , the population of Russia was 147 million 196 thousand people. As of January 1, 2003, the population of Uzbekistan was 25.4 million people, of which 50.1% were women and 49.9% were men. 36.7% of the population of Uzbekistan were children under the age of 15. and the number of rural population was 63.3%.

 Population density is the number of people per 1 km2 area.

 *Population dynamics (movement)*. Within the population, natural and mechanical (migration processes) movement is distinguished. The natural movement of the population means the change of the population in a certain territory as a result of the main demographic process, births and deaths.

 Migration means the mechanical movement of the population within one country or from one country to another. The different forms of migration are primarily external migration - interstate migration and internal migration - movement within one state. Internal migration is also of two types. For example: movement as a result of changing permanent residence and seasonal migration - movement of the population at a certain time (season), etc. Migration processes are of great socio-hygienic and epidemiological importance:

 a) the mechanical movement of the population leads to an increase in the number of the population in a certain territory, and to a decrease in another territory, to a change in the composition of the population in terms of age, gender, and profession. This, in turn, requires consideration of the health care facilities;

 b) the mechanical movement of the population, especially as a result of interstate migration, leads to the emergence of infectious diseases in one or another country.

 *Natural population movement*. A population is made up of people, and demographic phenomena are made up of characteristics that belong to people in the population. Hence, the number of observed events depends on the total population, as with other events occurring in society. That is why it is not enough to know the magnitude and intensity of the observed phenomenon. In order to get more accurate information about the processes taking place among the population, we need to compare these events to the environment in which they originated, that is, to the population.

 This requires the use of demographic indicators. But one important goal should not be forgotten here. The fact is that the number and magnitude of demographic processes correspond to a certain time interval. For example: the number of births can include: births in a year or in a month.

 The number of population is taken at the end or beginning of the year. Therefore, in order to be able to compare the demographic indicators, it is necessary to create the average population first. Often, half of the sum of its number at the beginning of the year (1.01) and at the end of the year (31.12) is taken as the average number of the population. After determining the annual average number of the population, the main medical-demographic indicators that make up the natural movement of the population by district, region, city, republic are:

1. Birth indicators

a) total birth = number of live births x 1000

indicator is the annual average number of the population

b) total fertility = number of live births x 1000

indicator is the number of women aged 15-49

c) married women - live births from married women -

fertility = gan number of children x1000

indicator is the number of married women aged 15-49

g) Female-age birth rate - this rate is studied for women aged 15-49 in one or five-year intervals. For example: the birth rate among women aged 20 to 24 is calculated as:

Number of children born alive to women aged 20-24 x1000

Number of women aged 20-24

2. Mortality rates

a) total mortality = number of deaths x 1000

indicator is the annual average number of the population

b) some young people died at the age of 20-24, for example

Death by = number x 1000

annual indicator of the population of the same age (20-24 years).

average number

c) mortality rate for specific diseases =

number of people infected with the disease x 1000

annual average population

g) the cause of death - those who died from an acquired disease

composition = number x 100

 total number of people

3. Natural population growth rate = total birth rate - total death rate.

 *Methods of calculating mortality rates of children under one year of age.*Different indicators are used to calculate the mortality of children under one year of age. The methods of their calculation are as follows:

|  |  |  |
| --- | --- | --- |
| The mortality rate of children under one year old is low | = | The number of children under 1 year old this year is x1000Number of live births this year |

It is recommended to use this method when the average number of live births in 2 years (last and current years) is the same. During the year, there may be children born last year as well as children born this year. That is why the I. Rats method is often used to accurately calculate the death rate of children under 1 year of age:

|  |  |  |
| --- | --- | --- |
| Mortality rate of children under one year of age | = | Number of children under 1 year x 1000 this year2/3 of live births this year + 1/3 of live births last year |

The mortality of children under one year of age is studied in the following periods.

1. Neonatal death- Death of children up to 1 month, more precisely, death in the first 28 days (0-27 days 11 hours).

The indicator is calculated as follows:

Neonatal mortality = 0-27 day old cubs x 1000

indicator is the number of live births

Due to the fact that the children who died in the first month are less adapted to the external environment and some of them were injured during childbirth, the death in the first month of life can be of different sizes in different periods. Therefore, the death of children in the first month is studied in two periods:

a) Early neonatal mortality rate =

0-6 days (168 hours) hatchlings x 1000

number of live births

b) Late Neonatal Mortality Rate =

Children born in 2-4 weeks x 1000

 number of live births

2. Postneonatal mortality includes the death of children aged one month to one year.

The indicator is calculated as follows:

Postneonatal death

indicator = number of children aged 1-12 months x 1000

live births - the number of children who died before the age of one month (0-27 days).

The perinatal mortality rate is not a simple sum of the stillbirth rate and the perinatal mortality rate, because different bases are used to calculate these rates.

The perinatal period includes the period from 28 weeks of gestation to 7 days of pregnancy.

Perinatal mortality = sum of stillbirths, single births, deaths in one week x 1000

number of live births and stillbirths

**Topic: Census methods in the study of population health**

**International classification of diseases**

The doctor who treats the patient and registers the disease uses the classification (classification) to determine the disease and make a correct diagnosis.

There is a classification of diseases, injuries and causes of death specially created for collecting primary medical data, calculating and analyzing the scientific statistical distribution of diseases among the population.

The doctor who treats the patient and registers the disease uses the classification to define the disease and make a correct diagnosis. Medical professionals studying diseases should be able to correctly group statistical materials using the currently used classification of diseases.

On August 21, 1900, the first international conference to review the classification of diseases and causes of death was held in Paris with the participation of delegates from 26 countries, and it approved the first classification, the conference decided to revise the classification every 10 years it has been. Currently, experts in the field of sanitary statistics of the World Health Organization are directly engaged in revising such a classification. The international classification and nomenclature of the causes of disease and death has been revised 10 times during the past periods.

The World Health Organization aims to revise the stable yet flexible International Classification of Diseases (ICD) every 10 years.

The 10th Revised ICD is actually called "International Classification of Diseases and Related Health Problems".

WHO-10 was revised in 1989 and adopted at the 1993 session of the World Health Assembly.

This classification covers not only the needs of users for diagnostic information, but also other information characterizing human health.

According to the order of the Minister of Health of the Republic of Uzbekistan (January 22, 2003, No. 31), the procedure and measures for the implementation of ICT-10 in our Republic are defined. The introduction of this order made it possible to move to a nomenclature that made it possible to compare the causes of diseases and deaths with all other countries. This, in turn, made it possible to improve the quality of statistical data, integrate health care management and the development of medical science. His Uzbek language edition was published for the first time in 2004.

In XKT-10, all pathological conditions of one type are divided into groups for the analysis of the obtained data. In ICD-10, all diseases are divided into classes, and the classes, in turn, are divided into blocks, blocks are divided into three-character columns, three-character columns are divided into four-character sub-columns. XKT-10 consists of the 3rd volume (Russian edition), its 1st volume (consists of 2 books), 3rd and 4th sub-columns, these symbols denote the names of diseases. Based on these indicators, all countries develop data on morbidity and mortality and submit it to the World Health Organization. In the first volume of XKT-10, there are provisions for determining and recording maternal and child deaths. The 2nd volume presents the purpose of the creation of the ICD-10, the scope of its application, relevant recommendations for its use, the rules for coding the causes of morbidity and mortality, and the history of the creation of the ICD. In the 3rd volume, there is a table of diseases, external causes of injuries, chemicals and drugs (about 5,500 names).

In ICD-10, compared to ICD-9, the class of diseases has increased (21 classes instead of 17). The class of diseases of the nervous system and sensory organs is divided into 3 classes; Class VI - diseases of the nervous system; Class VII - diseases of the eye and its accessory apparatus; Class VIII - divided into ear and mastoid diseases.

The auxiliary E-code is given in the form of an independent XX-class known as "Diseases and external causes of death", and the V-code is allocated to the XXI-class in the form of "Factors influencing the state of health and referral to health care institutions".

The total number of blocks of XKT-10 is 258. An English letter (the first character) and two numbers are used to encode (encode) the columns of diseases. All English spellings are used except for the letter u. The letter U is reserved for an additional class, which includes newly identified diseases and diseases of unknown etiology. This code can be used in scientific research conducted on the basis of special programs.

Changing the first character of the columns from a number to a letter made it possible to increase the group (number) of the studied diseases from 999 to 2600.

In some cases, one column constitutes one specific disease, in most cases, it includes a type of diseases with general characteristics. The sub-columns in HCT-10 are arranged one by one, taking into account the prevalence, importance and other characteristics of diseases in health care.

Registration of causes of death is still a problem for many countries. The proposed changes to the "certificate of the cause of death" are aimed at clarifying the causes. In this, the main attention is paid to the "certificate on the cause of perinatal death".

Currently, deaths from injuries and poisonings are 2-3rd in some regions of the world. That's why ICT - 10 is divided into re-groups - blocks according to their location (localization). The causes of injuries and the circumstances of their occurrence are grouped with great attention. The composition of drugs and chemicals that cause poisoning has been dramatically expanded (more than 5,000). The new classification even allows you to assess the severity of certain diseases, as they are coded based on the fact that they affect many organs and systems of a person.

The principle of 2-fold coding has been preserved, which allows conducting special studies of infectious and other diseases, depending on the degree of damage to human organs. In the new classification, a special column for recording undiagnosed, undiagnosed diseases has been preserved. This, in turn, helps the health care provider and the researcher to assess the quality of the diagnostic process. **Modern**XKT-10 was created for use in health care practice, therefore, in addition to classification, diseases are also divided into special groups:

* Epidemic diseases
* Constitutional or general disease
* Local diseases (by anatomical location)
* Diseases related to growth, development
* Injuries

Thus, ICT-10 was an important step towards further improvement of the methodology of population health studies.

Classification of diseases according to ICD-10:

* Class I - Some infectious and parasitic diseases
* Class II - Tumors
* Class III - Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
* Class IV - Endocrine system diseases, eating disorders and metabolic disorders
* Class V - Mental disorders and behavioral disorders
* Class VI - Diseases of the nervous system
* Class VII - Diseases of the eye and its accessory apparatus
* Class VIII - Diseases of the ear and mammary gland
* Class IX - Diseases of the circulatory system
* Class X - Diseases of respiratory organs
* Class XI - Diseases of digestive organs
* Class XII - Skin and subcutaneous tissue diseases
* Class XIII - Diseases of the musculoskeletal system and connective tissue
* Class XIV - Diseases of the genitourinary system
* Class XV - Pregnancy, childbirth and the postpartum period
* Class XVI - Certain conditions occurring in the perinatal period
* Class XVII - Congenital anomalies (developmental defects), deformations and chromosomal disorders
* Class XVIII - Symptoms, signs, abnormalities not identified in clinical and laboratory examinations, not classified in other columns
* Class XIX - Injuries, poisonings and some other consequences of external causes
* Class XX - External causes of morbidity and mortality
* Class XXI - Factors affecting the state of health and referral to health care institutions.

**Topic: ETHNIC COMPOSITION OF THE POPULATION.**

Uzbekistan is a multi-ethnic country. There are dozens of nationalities and peoples, including the inhabitants of the Central Asian region: Uzbeks, Karakalpaks, Tajiks, Turkmens, Kazakhs, Kyrgyz, Uighurs, Dungans; Western and Eastern Slavs: Russians, Ukrainians, Belarusians, Poles; Many diasporas in Uzbekistan are Koreans, Iranians, Armenians, Georgians, Azerbaijanis, Tatars, Bashkirs, Germans, Jews, Lithuanians, Greeks, Turks and many other nationalities.

The ethnic diversity of the population of Uzbekistan is connected with various historical events. During the Second World War, many representatives of the local peoples of the republics of the USSR (Russians, Tatars, Armenians, Belarusians, Ukrainians, Germans, Jews, etc.) were evacuated to Uzbekistan. During the years of Stalin's repressions, representatives of certain nationalities (Koreans, Crimean Tatars, Chechens, etc.) were deported from their permanent residences. Yes, migration was active in peacetime, especially for young people who took part in large-scale construction, development and development projects of new lands, and then stayed in their places of residence.

Uzbekistan is the most populous country in Central Asia and is the third most populous country in the CIS after Russia and Ukraine. The population of Uzbekistan exceeds 31.5 million people (as of January 1, 2016). About 80% of the current population of Uzbekistan are Uzbeks, more than 10% are representatives of other peoples of Central Asia (4.5% Tajiks, 2.5% Kazakhs, 2% Karakalpaks, 1% Kyrgyz, as well as Turkmens, etc.) constitutes .) ... Russians and other Slavic peoples (10%) remain one of the largest ethnic minorities.

Uzbeks are originally a Turkic people. Anthropologically, this is a people of mixed ethnogenesis with Caucasoid and Mongoloid components. The formation of the Uzbek nation is closely related to the ancient peoples of Central Asia - the Sogdians, Bactrians, Saco-Massagets and other tribes who have lived in Central Asian Mesopotamia and neighboring regions for centuries. However, this name itself - Uzbeks - appeared only at the end of the 15th - beginning of the 16th century. Today, the main population of Uzbekistan is made up of Uzbeks. Also, a large number of Uzbeks live in the neighboring republics of Central Asia, Afghanistan and the CIS countries. By religion, modern Uzbeks are Sunni Muslims.

The state language of Uzbekistan and the language of international communication is Uzbek. However, most of the population can also speak Russian. In some regions, for example, in Samarkand, Bukhara, the population speaks Tajik.

Due to the hot and dry climate, mountainous and desert landscapes in Uzbekistan, the population settled unevenly throughout the territory. The population is mainly concentrated in oases. The population density is very low in the desert areas of our republic. For example, in Karakalpakstan and Navoi region, there are only 7-9 people per square kilometer, while in Fergana Valley, the most densely populated region of Uzbekistan, there are 500 people per square kilometer. a close person is correct. This is the highest population density not only among the CIS countries, but also in the world.

The process of urbanization has led to an increase in the number of cities and an increase in the urban population in Uzbekistan. Today, more than 42 percent of the population of Uzbekistan lives in cities. Tashkent, the largest city of Uzbekistan, is the capital of the country with more than 2.5 million inhabitants. It is in Tashkent that many industrial enterprises of the republic are located, the administrative and business center of the country is located here, the offices of large companies are located here, the largest theaters, museums, parks and many other things have been built. Other major cities of Uzbekistan are: Samarkand, Bukhara, Khiva, Andijan, Fergana, Navoi, as well as Almalik, Angren, Zarafshan and Chirchik.

Uzbek families, as a rule, have many children, especially in the countryside: the average size of an Uzbek family is 5-6 people. In Uzbekistan, the family has been and remains one of the most important life priorities of the modern society in accordance with the centuries-old traditions and mentality of the Uzbek people.

The most numerous ethnic groups in Uzbekistan are Uzbeks, Tajiks, Kazakhs, Karakalpaks and Russians, according to the State Statistics Committee. The number of Uzbeks is more than 29 million (84.4%), which has doubled since 1989. The State Statistics Committee has published data on the ethnic composition of the permanent population in Uzbekistan at the beginning of the year. As of January 1, 2021, the permanent population was 34.6 million people. The largest ethnic groups are Uzbeks, Tajiks, Kazakhs, Karakalpaks and Russians.

Ethnic composition of the population:

• Uzbeks - 29.2 million people;

• Tajiks - 1.7 million people;

• Kazakhs - 821.2 thousand people;

• Karakalpaks - 752.7 thousand people;

• Russians - 720.3 thousand people;

• Kyrgyz - 291.6 thousand people;

• Turkmens - 206.2 thousand people;

• Tatars - 187.3 thousand people;

• Koreans - 174.2 thousand people;

• Ukrainians – 67,900 people;

• Azerbaijanis - 41.2 thousand people;

• Belarusians - 18,500 people;

• representatives of other nationalities - 426.4 thousand people.

According to the All-Union Census of the USSR in 1989, the population of the Uzbek SSR was 19.81 million. The most ethnic groups were Uzbeks, Russians, Tajiks, Kazakhs and Tatars. The number of Uzbeks was 14.14 million or 71.2 percent.

According to the "Ethnic Atlas of Uzbekistan" published in 2000 with the support of the Open Society Institute, the largest ethnic groups in the country were Uzbeks, Russians, Tajiks, Kazakhs and Karakalpaks. Uzbeks made up 77.4% of the total population.

As can be seen from the above data, the indigenous population of our country - Uzbeks - has doubled (107%) by 2021 compared to 1989. In addition, the number of Tajiks, Karakalpaks, Kyrgyz and Turkmens has increased significantly. At the same time, during this period, the share of the Russian population decreased by 1 million (-57.6%).

As of July 1, the number of permanent residents of Uzbekistan was 34.86 million people.We remind you that the 1989 population census was conducted last time in Uzbekistan. In February 2018, President Shavkat Mirziyoyev signed a decision to hold the country's population census in 2022. In November 2020, the government decided to move the population census to 2023 due to the coronavirus pandemic. did In November of this year, population census will be conducted as an experiment in two districts of Andijan and Tashkent regions, as well as in Khiva and Yashnabad district of Tashkent city.

**CALCULATION OF COMMON BIRTH INDICATORS.**

Population renewal is a process that replaces the population and indicates whether the current birth and death rates will support population growth, in other words, population renewal is the continuous renewal of human generations.

**Birth assessment.**

The problem of fertility is of the greatest importance in health care today. Birth is a birth that takes place in a group of people forming a generation or a group of generations - among the population. The biological basis of birth is the ability of a person to reproduce (fertilization, conception, and delivery of the fetus to term).

**The most commonly used fertility indicators are:**

The main medico-demographic total fertility indicators reflecting population growth are:

1. Birth indicators

a) total birth = number of live births x 1000

indicator is the annual average number of the population

*The total birth rate is the number of children born alive and registered in this year per thousand of the average annual population.*

b) total fertility = number of live births x 1000

indicator is the number of women aged 15-49

*Fertility rate is the average annual number of live births of women of childbearing age (15-49 years).*

The reproductive activity of the population is manifested in having children. Its characteristic is fertility. Birth depends not only on biological, but also on cultural, social, religious or even political factors.

The primary document in birth research is the "birth certificate" issued by the medical institution.

c) married women - live births from married women -

fertility = gan number of children x1000

indicator is the number of married women aged 15-49

g) Female-age birth rate - this rate is studied for women aged 15-49 in one or five-year intervals. For example: the birth rate among women aged 20 to 24 is calculated as:

INTERNATIONAL CRITERIA FOR LIVE BIRTH.

*A live birth*, refers to the complete expulsion of the fetus from the mother's body, regardless of the duration of pregnancy, while the fetus breathes after such a process or shows other vital signs, such as heartbeat, umbilical pulsation, or obvious movements of free musculature, whether or not the umbilical cord is cut and not. ldosh manifests regardless of separation. Such a birth of the fetus is called a live birth.

*Stillbirth*(stillborn fetus) regardless of the duration of pregnancy, the process until the fetus is completely removed or separated from the mother's body is death. The absence of other signs of life, such as certain movements, indicates that death has occurred.

 *Body weight at birth,*is the body weight recorded immediately after the birth of the fetus or infant.

*In live births*body weight should be measured in the first hours of life, until the body weight decreases significantly in the postnatal period. It is not necessary to group according to the weight of the body with the use of 500 g interval at the birth of the fetus accepted in statistics. The exact weight of the fetus should be recorded exactly as it was measured.

*"small", "very small", "extremely small" of the fetus*body weights differ.

*- "small" at birth*body weight less than 2500 gr (up to 2499 gr)

*- "very small" body at birth*weight less than 1500 gr) up to 1499 gr)

*- "extremely small" body at birth*weight less than 1000 gr (up to 999 gr).

*Pregnancy period*is calculated from the first day of the last menstrual period. The duration of pregnancy is determined in full days or full weeks (for example: events that occur between full days 280 and 286 after the start of the last normal menstrual period are considered to be in the 40th week of pregnancy) .

Gestational age, calculated from the date of the last normal menstrual period, is often a source of statistical errors. In order not to make a mistake, it is necessary to remember that the first day should be evaluated as day 0, not day 1. Days 0-6 make up the full zero week, days 7-13 make up the full first week, and accordingly, the 40th week of pregnancy is considered synonymous with the concept of "full 39 weeks". If the date of the last normal menstrual period is unknown, the duration of pregnancy should be determined based on the most reliable clinical data. In order to avoid misunderstanding, as a result of calculations in statistical tables, it is necessary to specify both weeks and days.

*Premature birth*delivery of less than 37 full weeks of pregnancy is less than 9259 days).

*Birth on the clock*Delivery between 37 full weeks and 42 full weeks of gestation (\*more than 294 days).

*Perinatal period*The period of the fetus in the mother's womb begins from the 22nd full week (154 days) and ends 7 days after birth.

*Neonatal period*begins at birth and ends exactly 28 days after birth.

*Neonatal death*(death during the first 28 full days of life among live births).

*Early neonatal death*that is, death within the first 7 days of life, late neonatal death, that is, death during the period from the first 7 full days of life to 28 full days.

*On the first day of his life*(0 days) in the record of the time of the child's death, the duration of life must be specified in full hours or minutes. If the child's death occurs in 2 days, the third day is the 92nd day) and the remaining 27 full days, the child's age is determined in days.

*Data recording criteria:*Legal requirements for recording stillbirths and live births can vary between countries and even within countries. Births of fetuses weighing less than 500 g, regardless of whether they are alive or dead, should be included in the statistics as far as possible. If the weight of the body at the time of birth is unknown, then it is necessary to apply the appropriate criteria for determining the duration of pregnancy (22 full weeks) or it is possible to aim for the length of the body - this is from the top of the clavicle. 25 cm to the heel. To answer the question of whether this event occurred in the perinatal period, the criteria should be applied in the following order:

1).Birth weight

2).Duration of pregnancy

3).The length of the body from the top of the pelvis to the heel. Increases the completeness of data on fetuses and babies born with a body weight of 500 g to 1000 g to the national statistics.

 A report on the statistics of stillbirths, perinatal, neonatal and infant mortality and deaths from birth defects shall, whenever possible, separate for live births and stillbirths and also It should be indicated separately for groups with a body weight of 500-999 g and a body weight of 1000 g and more. Deaths in the neonatal period as a result of birth defects should be recorded separately for the early and late neonatal periods. . Such information allows to shed light on the statistics of perinatal and neonatal mortality, taking into account the cases of deaths that occurred as a result of birth defects or without them. When analyzing data, the denominator of indicators should always be indicated in the coefficients, that is, the number of live births or the total number of births (live births + stillbirths). In our country, it is recommended to provide the following coefficients and indicators, or the data collector should provide them according to the capabilities of the existing system.

Death in the womb:

rate = number of stillbirths x 1000 number of live births

Stillbirth:

coefficient = number of stillbirths x 1000 number of all births

Stillbirth rate taking into account body weight =

Early neonatal death coefficient = number of deaths in the early neonatal period x 1000

 stay alivethe number of mourners

Perinatal death coefficient = stillbirths + deaths in the early neonatal period x 1000

number of live births

*Disclosure of information on the causes of perinatal death.*The form is from the certificate recommended for these purposes.

 Calculation of total mortality rates.

The first step in the analysis of mortality is the calculation of total mortality rates. The analysis of total mortality rates allows to obtain information about the death rate in the entire village and city.

1. Mortality rates

a) total mortality = number of deaths x 1000

indicator is the annual average number of the population

b) some young people died at the age of 20-24

Death by = number x 1000

annual indicator of the population of the same age (20-24 years).

average number

c) death rate for specific diseases =

g) cause of death - those who died from a disease acquired separately

composition = number x 100

 jnumber of dead

Overall mortality rates are an indicator of medical processes. In statistics, there are two different figures that are calculated based on the death rate. These are indicators of death and lethality. Lethality refers to the probability of death from that disease among patients who are sick with a disease. When calculating lethality, it is determined how often patients die from that disease. the ratio x 100 is understood.

Several factors can influence mortality rates, such as socioeconomic conditions, preventive measures, treatment methods, diagnostic criteria, or the degree of accuracy of information on death certificates. Declines in mortality may reflect changes in risk factors rather than disease incidence rates. For example: the decrease in the number of deaths from cardiovascular diseases is not the result of the incidence of them, but may also be the result of the introduction of preventive treatment measures.

 Country-level trends in mortality rates are important information on morbidity and epidemiological status, allowing comparison of studies at regional and international levels.

**Mortality of children under one year of age and its social hygienic significance.**

Death of children under one year of age is one of the main indicators of public health. It is a unique barometer-indicator showing the socio-economic development of the country, the sanitary-demographic condition of the population, the quality of medical services, the efficiency of sanitary-epidemiology, prevention and treatment. Analysis of under-one-year-old mortality, its causes and dynamics will arm health care institutions with the necessary information to improve child health.

Reducing the mortality of children under one year of age is one of the main factors that lead to a decrease in the total mortality rate of the population, an increase in the population, and an increase in life expectancy. Therefore, the death of children under one year of age is considered one of the most important social issues of the present time.

The death of children under the age of one year is 3-4 times higher than the general population death rate, and it is of great socio-hygienic importance. In the future, it is possible to reduce child mortality (under 1 year) by studying deep social hygiene research, developing and implementing comprehensive measures to improve the health of mothers and children.

Statistics on child mortality (under 1 year) are based on timely registration of death, medical death certificate and birth on birth certificate. The quality and accuracy of the received data depends on the staff of medical institutions and statistics departments and their qualifications. To emphasize to the public that medical institutions and their staff are responsible for timely registration and recording of stillbirths and deaths in the maternity hospitals, as well as direct analysis of the causes of each death. must

**Methods of calculating mortality rates of children under one year of agei.**Separate indicators are used to calculate the mortality of children under one year of age. The methods of their calculation are as follows:

Infant mortality rate =

the number of children who died under the age of one in the current year × 1000

 the number of live births in the current year

It is recommended to use this method when the average number of live births is the same between 2 years (past and current years).

Children who died under the age of 1 during the year may include children born in the current year as well as children born in the previous year. Therefore, to accurately calculate the death rate of children under 1 year old, many use the I. Rats method:

Mortality rate of children

under one year of age =

In the same way, it is possible to calculate the number of deaths from certain causes of child death, for example, from gastrointestinal diseases or measles. To do this, it is enough to count the number of children who died from the corresponding diseases on the picture of the decimal line.

Make a table of the mortality rates of children under one year of age with their sizes in each age range, compare and evaluate them, and see the difference between them.­it is possible to develop and, based on this, measures aimed at reducing the mortality of children under one year of age can be developed. An indirect method can also be used to compile the mortality rate table.

This method is much simpler than the direct method, in which it is not necessary to follow the children born in a certain cohort for 2 years. Perhaps the death of children of each age in one calendar year is studied, and their death rate is conditionally transferred to the total number of primary births. In this case, the mortality of each age is assumed to be equal to this calendar year, and the life series is drawn up against the child assumed to be 100,000. This, in turn, somewhat simplifies the use of Form 4a per calendar year, calculations and tabulation.

The method of compiling the mortality index table is mainly used in scientific works to determine various factors affecting child mortality (prematurity, month of birth, ethnicity, urban and rural child mortality).

Monthly rates of child mortality under one year of age­It is necessary to calculate and take into account that among the children (under 1 year old) who died in the current month, there are children who were born and died in this month as well as children born in previous months. In this case, past months can include 12 previous months. Therefore, looking at the monthly rate of under-one-year-old mortality as the ratio of children who died in the current month to children born in this month and calculating it in this way gives wrong results.

**Live birthh**refers to the complete release of the product of fertilization from the mother's body regardless of the duration of the pregnancy, while the fetus breathes after such a process or shows other vital signs such as a heartbeat, umbilical cord pulsation, or obvious movements of free musculature, whether the umbilical cord is cut or not. manifests regardless of qmi and placental separation; each product of such birth shall be deemed to be born alive.

**Stillbirth**(stillborn fetus) is death, regardless of the duration of pregnancy, until the fetus is completely expelled or separated from the mother's body; the absence of respiration or other signs of life, such as pulsation of the heart, pulsation of the umbilical cord, or certain movements of free musculature, after such separation of the fetus, indicates that death has occurred.

Birth weight is the body weight recorded immediately after the birth of a fetus or infant.

Body weight measurement in live-born babies should be carried out in the first hours of life, until the body weight decreases significantly in the postnatal period. Grouping by body weight is not justified by the use of 500 g interval at birth, accepted in statistics. The exact weight of the fetus should be recorded exactly as it was measured.

"Small", "very small", "extremely small" body weights of the fetus are not mutually exclusive categories. They are partially compatible with each other; The concept of "low" body weight includes the concepts of "very small" body weight and "extremely small" body weight, and the concept of "very small" body weight includes the concept of "extremely small" body weight. takes

* Low birth weight
* Body weight less than 2500g (up to 2499g).
* Very low birth weight.
* weight less than 1500g (up to 1499g)
* Very low birth weight
* Case weight less than 1000g (up to 999g)

**Pregnancyterm**is calculated from the first day of the last menstrual period. Gestational age is defined in full days or full weeks (for example, events occurring between the 280th and 286th full days after the start of the last normal menstrual period, events occurring at the 40th week of pregnancy is considered to be giving).

Gestational age, calculated from the date of the last normal menstrual period, is often a source of statistical errors. In order not to make a mistake, it is necessary to remember that the first day should be evaluated not as 1-day, but as 0-day. Days 0-6 make up the "full zero week", days 7-13 - make up the "full first week", and accordingly, the 40th week of pregnancy is synonymous with the concept of "full 39 weeks". If the date of the last normal menstruation is unknown, the duration of pregnancy should be determined based on the most reliable clinical data. In order to avoid misunderstandings, it is necessary to specify both weeks and days as a result of calculations in statistical tables.

*Premature birth:*

delivery of less than 37 full weeks of pregnancy (less than 259 days).

Birth on time:

Delivery at a gestational age of 37 full weeks to 42 full weeks (more than 294 days).

Perinatal period:

the perinatal period starts from the 22nd full week (154 days) of the period of the fetus in the mother's womb and ends after the 7th full day after birth.

Neonatal period:

the neonatal period begins at birth and ends exactly 28 days after birth.

Neonatal mortality (death during the first 28 full days of life among live births), first ne­neonatal death, i.e. death within the first 7 days of life, late neonatal death, i.e. death during the period from 7 to 28 full days of life.

In the record of the time of death of the child on the first day of life (day 0), the duration of life should be clearly indicated (full hours or minutes). The child's death is on the second day, on the third day (2ndday) and if it occurs during the remaining 27 full days, the child's age is determined in days.

**Data recording criteria.**Legal requirements for recording stillbirths and live births can vary between countries and even within countries. It is necessary to include in the statistics cases of births of fetuses weighing less than 500 g, regardless of whether they are alive or dead. If the weight of the body at the time of birth is unknown, then the appropriate criteria for determining the duration of pregnancy should be used (22 full weeks) or it can be aimed at the length of the body (25 cm from the top of the clavicle 'til the heel). To answer the question of whether this phenomenon occurred in the perinatal period, the parameters should be used in the following order: 1) body weight at birth, 2) gestational age, 3) length of the body from the top of the pelvis to the heel. It is recommended to include fetuses and babies born with a body weight of 500g to 1000g in the national statistics for this purpose, because these data have an independent nature, and in addition, fetuses and babies born with a body weight of 1000g and more are full. increases the completeness of information about

A report on the statistics of stillbirths, perinatal, neonatal and infant mortality and deaths from birth defects shall, whenever possible, separate for live births and stillbirths and also for births. It should be shown separately for groups with body weight of 500-999g and body weight of 1000g and more. Deaths in the neonatal period as a result of birth defects should be recorded separately for the early and late neonatal periods. Such information includes perinatal and neonatal deaths with or without birth defects.allows to illuminate statistical information about death.

In the printed coefficients, the denominator of the indicators should always be indicated, that is, the number of live births or the total number of births (live births + stillbirths). Provide countries with the following coefficients and indicatorsis recommended or the data collector should provide as per the availability of the existing system.

Maternal mortality rate =

Stillbirth rate =

Stillbirth rate

based on body weight =

Early neonatal mortality rate =

Early neonatal mortality rate

based on birth weight =

Perinatal mortality rate =

Perinatal mortality rate =

**Disclosure of information on the causes of perinatal death**

The perinatal mortality statistics from the certificate, which is recommended for this purpose, provides a full-scale analysis of the majority of the causes of all recorded cases. Where such an analysis is not possible, at least an analysis of the underlying disease or condition of the fetus or infant (section of the perinatal death certificate) and the underlying condition of the mother affecting the fetus or infant required (Section "S"). If you have to choose the only caseif there is (for example: if it is necessary to include deaths in the early neonatal period in the analysis table by the single cause of death in all age groups), the main disease or condition of the fetus or infant should be selected.

Grouping by birth weight for perinatal mortality statistics.

According to the weight interval of 500 g, that is, 1000 -1499 g.

Grouping by gestational age for perinatal mortality statistics.

1. up to 28 weeks (196 days)
2. 28-31 weeks (196-223 days),
3. 32-36 weeks (224-258 days),
4. 37-41 weeks (259-293day),
5. 42 weeks and more (294 and more).

**Maternal death**.Maternal death occurred due to pregnancy (regardless of the duration of pregnancy and its localization), related to pregnancy, aggravated by it or during its treatment, but due to an accident or accidental cause. pregnancy withoutis defined as the death of a woman that occurs after her period or 42 days after its end.

**Late maternal death.**Late maternal death occurring more than 42 days after delivery but within 1 year after delivery, directly or indirectly related to obstetric causes described as a femme fatale.

**Pregnancy-related death.**Pregnancy-related death is defined as the death of a woman during pregnancy or within 42 days after delivery, regardless of cause.

Cases of maternal death can be divided into 2 groups:

**Death directly related to obstetric causes.**Pregnancy conditions (i.e., pregnancy, delivery, postpartum period) as a result of obstetric complications, as well as procedures, omissions, improper treatment, or events from any of the listed causesdeath by chain.

**Obstetricsdeath indirectly related to the causes.**death as a result of a pre-existing disease or a disease that occurred during pregnancy, not directly related to obstetric causes, but aggravated by the physiological effects of pregnancy.

In order to improve the quality of data on maternal mortality and to implement alternative methods of data collection on pregnancy loss or related deaths, as well as obstetrics 42 after termination of pregnancy due to reasonsIn 1990, the 43rd session of the World Health Assembly adopted a recommendation to improve the recording of death after the death certificate, and according to it, countries should They should consider the issue of including points related to current pregnancy and pregnancy during the year.

**International report.**In order to make the International Book of Maternal Death, only cases of maternal death that occurred up to 42 days after childbirth should be included in the calculation of various coefficients and indicators, but recording of late maternal death is a national useful for level analysis purposes.

The denominator used to calculate maternal mortality should be defined either as the number of live births or as the total number of births (live births + stillbirths).

The results are the ratio of the speed to the denominator and itk(k 1000, 10000, 100,000to be andthishow in the denominatorDemandand acceptanceif done, that is can be) tointerpret in the form of a productcan be achieved.Soand mothersThe coefficient and indicators of death can be expressed as follows.

Maternal mortality rate =

Maternal mortality rate

after direct obstetric causes =

and live births

Maternal mortality rate

from causes related to =

pregnancy and live births

**Medical demographic indicators in Uzbekistan**

Uzbekistan is an independent sovereign state located in the heart of the Central Asian countries, located in the region between the two main rivers Amudarya and Syrdarya. The land area of ​​Uzbekistan is 448.9 thousand square kilometers.

According to the administrative territorial structure, the country is divided into 12 administrative regions (provinces) and the Republic of Karakalpakstan. Tashkent, the capital of Uzbekistan, is considered an independent administrative-territorial unit.

By January 1, 2019, the population of Uzbekistan was 33,254,100 people, of which 16 million 550 thousand people (49.5%) were rural residents (Table 1). For many years, a constant increase in the population has been observed. The average density of the population of Uzbekistan was 74.1 people per 1 sq.km.

Uzbekistan is one of the countries with a sufficiently high rate of natural population growth. The average annual growth of the country's population is 1.0 - 1.5%, in the last three decades - the population of Uzbekistan has increased by 60%, which is an absolute increase of 13 million. means more than According to the statistics of demographers and statisticians, the population of Uzbekistan will reach 50 million by 2040 if the rate of natural population growth remains at its current level. constitutes a person.

High numerical growth rate, total mortality rate, low infant mortality rate are considered positive. Decline in natural population growth in all cases is a sign of clear problems in the development of society.

Based on the above, the process of natural growth of the population of Uzbekistan can be assessed as a positive situation, because this process is based on low indicators of general mortality.

The main causes of maternal death: bleeding are internal toxicosis, septic complications and extragenital diseases. Prevention and reduction of maternal mortality is a leading task of the health care system.

For this reason, the Ministry of Health of the Republic of Uzbekistan has developed a number of measures aimed at preventing maternal illness and death. They consist of:

* improving the delivery of all reproductive health services and information to families and those in need;
* expand the involvement of all women of childbearing age in medical preventive examinations and create an effective treatment service;
* obstetrics - improvement of gynecological service;
* implementation of measures to improve the material and technical base of district hospitals and the qualifications of doctors;
* strengthening promotion and campaigning by engaging public organizations, publishing, radio and television, and strengthening public information about safe methods of contraception.

The significant reduction in maternal mortality over the last decade is certainly the result of programs implemented at the national level.

Along with the death of mothers, the death of children under the age of 1 (infant death) is an important indicator that determines the social and economic development of the country and the medical and biological development of the population. Infant mortality plays an important role in determining the quality of the health care system.

The decrease in infant mortality is due to the reduction of diseases that lead to the death of children, the improvement of the birth rate in the republic, the extension of the period between births, the increase in the use of contraceptives by women of childbearing age, and the decrease in the number of births of sick and vulnerable children. caused by factors such as

The decline in infant mortality in recent years has been driven by fewer births among young and older women. In women of optimal age, i.e. between 20-30 years, birth weight was 82.0-85.0%.

In Uzbekistan, women's understanding of contraceptives and methods can be assessed as high, regardless of their age, education and nationality.

Many women receive contraceptives through the public sector: inpatients, women's clinics, polyclinics and pharmacies.

The following factors determine the positive attitude of women of childbearing age towards the use of contraceptives:

* The desire to postpone the birth of a child for some time;
* Desire to limit to two or three children;
* The desire to stop childbirth when the number of children is several.

The main result of the work carried out on family reproductive health is the reduction of maternal and child mortality.

In the Republic of Uzbekistan, concern for a child's health begins long before its birth. In order to ensure the birth of a healthy child in every family, great attention is paid to strengthening the health of future mothers - girls and teenage girls. Special attention is paid to prevention of early marriages, conscious control of child birth in the family, involvement of men in reproductive health issues, adequate demographic development of the family, and measures aimed at improving its medical and biological condition. As a result of the medical-organizational and propaganda work carried out among the population with wide circles of the public and religious organizations, authorities and local government bodies of the republic, registration of marriages at an early age and between relatives - clans, births among older women have decreased, the period between each birth is longer. All this was reflected in the improvement of the health of women of reproductive age, leading to a decrease in maternal and infant mortality rates in the country as a whole and in its regions.

**Topic: Population morbidity and methods of its study.**

It is known that morbidity is one of the indicators that assess the level of health of the population.

According to the definition of WHO - Any objective or subjective deviation of the organism from its normal physiological state is called a disease. Thus, the concept of "illness" is somewhat broader than the concept of "disease".For health institutions, the study of incidences in certain places and at certain time intervalsis of great importance.

First: diseases are one of the main indicators of the health of the population, its sanitary condition.

Second: morbidity is the main criterion that shows the quality and efficiency of health care institutions.

Thirdly: the study of diseases and its reduction is one of the main tasks of health care, sanitary-epidemiology, treatment-prophylaxis institutions and all medical specialists.

Studying diseases in relation to the external environment, living and working conditions in certain territories is the main source for developing specific measures to improve the health of the population in this territory.

Fourthly: as a result of studying the dynamics of diseases, in-depth information is obtained about the changes in pathological processes among the population, and on the basis of this, the population's need for medical and sanitary assistance is determined in every way and leads to its reorganization. So, in some territories, information about the magnitudes and composition of population morbidity rates among age-sex groups is of great importance in planning medical measures to further improve the health of the population.

One of the initial and main sources of studying diseases among the population is the appeal of patients to treatment and prevention institutions for the purpose of receiving medical assistance.

 Information on total incidence is based on current registration of all incidences.

Primary referrals for each disease in the current year are considered as the unit of observation.The population can apply to preventive treatment institutions (DPM) not only because of diseases, but also in some other cases, for example: for the purpose of examination or inspection (entering certain jobs, to the "driving" board, passing laboratory tests, preventive vaccination, pregnancy monitoring, genetic counseling, etc.). That is why, when registering illnesses according to appeals, it is understood the case where illnesses were recorded for the first time in the relevant medical documents in this calendar year. Subsequent referrals should be understood as "visits", because after the patient's illness was recorded when he first contacted the DPM, he may attend the doctor several times regarding this illness.

It is called the primary morbidity indicator, if the new diseases, which have not been recorded anywhere before, are considered as intensive indicators.

The unit of observation is the first visit of the patient, regardless of whether the patient visits the treatment and prevention institutions several times during the year for the primary chronic disease. As a result of the recurrence of this disease, repeated appeals in the current year will not be added to the morbidity. A patient can get sick with acute diseases several times during the year, in such cases it is always recorded as a new disease.

In addition to primary diseases, all diseases spread among the population, that is, general diseases, are also studied. For this purpose, the number of diseases registered for the first time in the current year, chronic diseases were registered in previous years, if the patient applies to DPM for medical help for this disease in the current year, the above-mentioned chronic disease is added to the number of general diseases. will be added. Intensive indicators calculated from this sum are called total incidence or prevalence. Cases of primary diseases registered for several years (three, five years) are called cumulative diseases.

When analyzing the diseases studied as a result of the population's appeal to treatment and prevention institutions, it is necessary to take into account the factors that affect the completeness of the data: the proximity of medical care, the availability of doctors, the population's appeal to specialized medical institutions at the place of residence, the population's access to sanitary facilities the level of culture, their attitude to their own health (referring to minor diseases) and others.

One of the main sources of studying common diseases is preventive and targeted medical examinations and dispensary observations conducted among the population. Through this method, chronic diseases that are latent, unknown in advance or do not force the population to actively apply for medical care are detected.

Medical examinations can be preliminary, periodic and targeted, depending on the goal, task and the type of organizational technology used.

**Preliminary medical examination.**It is used to identify diseases that are repeated, develop, and worsen due to harmful factors related to the profession in the course of study and work conditions.

**Periodic medical examinations**its purpose is early detection of occupational diseases caused by harmful conditions, dynamic monitoring of workers' health due to harmful conditions and hazardous substances, identification of common diseases that are forbidden to work in any working conditions (requiring preventive, treatment and other measures).

There are 3 different types of preliminary and periodic medical examinations according to the contingent of persons to be examined:

* Conducting medical examinations among employees of institutions and organizations working in occupationally harmful conditions.
* Conducting a medical examination of persons causing the spread of diseases among the population due to their professional activities (catering, children and workers of some communal economic institutions)
* Conducting medical examinations among children of all ages, adolescents, students of higher and secondary special educational institutions.

**Targeted medical examinations,**it is usually held among various organized and unorganized populations in order to identify early forms of socially important diseases (malignant tumors, tuberculosis, diabetes, etc.).

The Ministry of Health of the Republic of Uzbekistan has established the rules for conducting preliminary and periodic medical examinations in production. Conducting medical examinations and their periods of conducting a list of hazardous substances at work, unpleasant production factors, and depending on them, the periods of conducting medical examinations are determined. The duration of examinations depends on the risk level of the influencing factors. The Ministry of Health has determined the number of specialists - doctors participating in the examination, the list of laboratory and functional tests, and the list of medical instructions on non-employment.

There are other types of medical examination in the health practice - one-time comprehensive medical examination - for private car drivers.

There are also ways to screen a large portion of the population at low cost with multiple tests. Such organizational forms of medical examination are called "screening". The word "screening" comes from English and means "dropping, extracting".

Screening is a method of identifying individuals suspected of having a disease or showing early signs of a disease and screening the population.

***The main purpose of screening***consists in forming a high-risk group for a specific disease, in-depth examination, primary selection of individuals who require consultation of specialists in a narrow field. This method of examination is more economical compared to other medical examinations.

There are two types of screening: single-site and multi-site screening.

One-field (targeted) screening - conducting a medical-organizational business system for the purposeful detection of a particular disease.

Multi-field (multi-purpose) screening - carrying out a system of medical organizational measures to detect a number of diseases. Both types of screening can consist of several stages - multi-stage screening.

One of the main sources of studying common diseases is preventive and targeted medical examinations and dispensary observations conducted among the population. Through this method, chronic diseases are detected, which were not known in advance or did not force the population to actively seek medical care. Examination data, together with the information obtained as a result of the appeal of the population, will further supplement the materials about the disease, add some precision to them and help to more fully illuminate the general diseases of the population.

Obtaining information about diseases detected as a result of medical examination among the population is called "pathological damage" or "diseases detected during medical examination" (point - prevalence).

Statistics of the causes of death are also of great importance in studying the prevalence of certain diseases, because in some cases, as a result of accidental death, pathologists identify new diseases that were not recorded during the patient's life, which, in turn, provide information about diseases. fills more.

It is difficult to make a comprehensive assessment of diseases when the information obtained by the population appeals, medical examination, and the analysis of the causes of death are studied individually. Therefore, in order to give a complete description of diseases in all aspects, the "true" (true) morbidity indicator is considered - this indicator - diseases detected according to complaints, diseases detected for the first time during a medical examination, about the causes of death consists of a set of indicators based on data (these diseases have not been previously recorded by health organizations).

|  |  |
| --- | --- |
| **The main sources of information on diseases** | **Types of diseases** |
| 1. Residents' appeal to medical institutions | Primary diseaseGeneral morbidityInfection with an infectious diseaseIncidence of important non-epidemic diseasesDiseases that cause temporary loss of working capacityDiseases of hospitalized patientsDisability |
| 2. Medical examination information | Morbidity based on the result of a medical examination |
| 3. Information obtained from the study of the causes of death | Morbidity based on the study of causes of death. |

In large cities, it is somewhat difficult to collect comprehensive information about common diseases, because the population can turn to other preventive treatment institutions (TSK, specialized medical centers) in addition to the polyclinic at the place of permanent residence for the purpose of medical care.

Therefore, at present, special observations are made to obtain more complete and accurate information about the general morbidity of the population. Regardless of the methods of collecting primary material and calculating it, as a result of the study of general diseases, information is obtained about the structure of diseases spread among the population, the level of distribution and their dynamics.

Data source and recording method

Population contingent

Class of diseases, group of diseases, individual diseases

Haqqani (chin) diseases

Diseases according to information on treatment and referrals to preventive institutions

Diseases based on medical examination information

Diseases based on cause of death data

Primary diseases

Common diseases

Cumulative diseases

- Occupational diseases

- Illnesses related to temporary incapacity for work

- Diseases of women of childbearing age

- Diseases of children up to school age

- Diseases of children of school age

- Adolescent diseases

By age:

- children's diseases according to some young people

- teenage diseases according to some young people

- diseases of the elderly

- infectious diseases

- incidences of socially important diseases

- tumor diseases

- circulatory system diseases

According to the place of registration:

- ambulatory - polyclinic

- stationary

By gender:

* men
* women

Using the data on the general diseases of the population, the following statistical indicators are presented:

**1. Primary diseases**

**2. Common diseases diseases**

**3. The above indicators can be calculated separately - by diseases, gender and age.**

**4. Structure of diseases (shares of certain diseases among total diseases, by classes, nosological forms)**

1. **The structure of diseases in certain groups of the population (by age, gender) is calculated in the same way as the indicator given in point 4.**
2. **Indicator of diseases detected during medical examination**

**Statistics of infectious diseases.**Infectious diseases pose a danger to the population, because if infectious diseases are not prevented in time, they can quickly spread and turn into an epidemic. In this regard, in order to control them, every infectious disease must be recorded in time and sent to the state sanitary epidemiology control centers of the district and city. urgent notification is required. Urgent reporting is mandatory when infectious diseases are detected or suspected.

All notifiable communicable diseases can be divided into the following groups:

1. Quarantine diseases (plague, cholera, small pox, yellow fever, relapsing typhus).

2. At the same time as the state sanitary-epidemiological control centers, in special specialized treatment and preventive institutions - diseases for which information is collected (tuberculosis, wound, smallpox, trachoma, fungal diseases, leprosy).

3. Diseases (influenza, upper respiratory tract infections) for which treatment and prevention institutions provide only collective information to the state sanitary-epidemiological control centers.

4. Specific information about each disease and disease (typhoid, paratyphoid, salmonellosis, enteritis, measles, whooping cough, meningitis, encephalitis, infectious hepatitis, scarlet fever, tetanus, poliomyelitis, rabies, rickettsiosis, measles) typhus, malaria, leptospirosis, sepsis in 1-month-old children, chicken pox, rubella, hemorrhagic fever, epidemic parotitis, ornithosis, etc.).

According to the current law on the above groups of diseases, any doctor or medical worker who first detects or suspects an infectious disease must send an urgent message to the state sanitary-epidemiological control centers (in accordance with form 058). Such a message is given to city and district DSENMs by employees of treatment and prevention institutions.

DSENM employees record the urgent message in a special "Infectious Diseases Movement" notebook and send a monthly report to their superior DSENMs through "Infectious Diseases Movement Report".

Treatment and prevention institutions report influenza and upper respiratory tract infections to sanitary-epidemiological stations through the 85-influenza form.

In the analysis of infectious diseases, in addition to the above report forms, the card "Epidemiological examination of an infectious disease center" (sh. 357) filled out by an epidemiologist as a result of an investigation in the center of infectious diseases is used.

As a result, weekly, 10-day, monthly, quarterly, half-yearly and annual indicators of infectious diseases are calculated and analyzed by sanitary epidemiology control centers of each district and city.

**Important non-epidemic diseases**. Non-epidemic diseases, which are serious in terms of transmission, dangerous for surrounding people and the future generation, are taken into account separately. Such diseases include tuberculosis, infectious, venereal diseases, fungal diseases, trachoma and malignant tumors. When doctors of any treatment-prophylactic institution detect such diseases, they provide information to specially specialized dispensaries by filling out the corresponding document (sh. 089-u, sh. 090-u). Once the diagnosis is confirmed, the dispensaries at the locations register and monitor the patient. After the disease is confirmed in the dispensaries, the report about the patient is sent to the relevant regional dispensaries, where a report is prepared every 6 months for some diseases, and once a year for other diseases. Based on the information in these report forms, the incidence rates for the region are calculated per 100,000 people.

**Diseases that cause temporary loss of working capacity**it is studied according to the sick sheets given to the patients by the doctors and it applies to the working part of the population. The disability certificate is simultaneously a statistical and legal document that confirms the employee's absence from work, as well as a financial document for the payment of benefits for temporary disability.

Cases of illness among workers are developed according to form 16-VN by enterprises and shops, depending on the sick sheets. Incidence data are then compiled by trade union statistics departments by industry. Relevant information is collected and produced in industries.

Illnesses that lead to temporary loss of work capacity are considered based on three main indicators:

1. The number of cases of

incapacity for work per 100 workers =

2. Number of days of incapacity for work per 100 workers =

3. The average duration of one case of incapacity for work =

In addition to calculating average indicators per 100 workers, it is important to take into account the contingent of patients in the study of diseases that cause temporary loss of working capacity. It is known in practice that a certain part of the workers are not sick at all: most of them get sick 1-2 times, and some workers get sick 4 times or more a year. However, the majority of sick leave cases and days are accounted for by the small number of workers who are sick so often and for such a long time.

*The main indicators used in the study of morbidity according to the patient contingent are:*

1. Health index (the percentage of workers who are not sick throughout the year in this team) =

2. Index of sick individuals =

**Sickness in hospital.**In determining the number of places in the hospital, the number of specialists, and planning the establishment of some specialized hospitals, the indicators of their illnesses, along with the number of patients treated in the hospital, are of great importance.

Currently, registration and study of hospital-acquired diseases is well established. Each hospital admission is a unit of observation. The statistical card of those discharged from the hospital (sh. 066) is filled out to the patient. The rate of hospitalizations is calculated per 1,000, 10,000 inhabitants by district, city, region of the republic. In addition, based on data from residential hospitals, we can determine the following additional indicators:

* The number of diagnoses, their size, character, main diseases, additional diseases, their complications.
* The quality of the doctor's diagnosis, their compatibility with polyclinic diagnoses and pathologoanatomical diagnoses in cases of death.
* Duration of treatment of patients in hospitals for various diseases.
* Timely hospitalization for certain diseases and their magnitude.
* Structure of patients in the hospital by age, gender, profession, clinical departments.
* The effectiveness of various treatment methods (surgical, therapeutic, medicinal, physiotherapeutic treatments).
* The consequences of hospital treatments are recovery, partial recovery, deterioration, and death.
* The number of re-admissions with a specific disease during a year.

*Morbidity of those admitted to a general hospital***-**the sum of the number of people admitted to the primary hospital for these diseases this year, regardless of what was recorded in the previous and current years, but these diseases were not recorded during the period of referrals to the outpatient clinic.

*Hospitalization rate***-**the sum of all hospitalizations for diseases and other reasons.

**Disability. Disability groups, causes of origin. Methods of calculating disability indicators**

Disability is a permanent (long-term) loss of working ability or reduced in many ways. The word "invalid" is derived from the Latin word "invalidus" which means weak, weak.

**Disability**It means a change in the function of the body, a permanent deterioration of health, requiring social protection due to diseases, injuries or certain deficiencies (anomalies).

It is described by various indicators depending on the degree of impairment of the body, types of functional disorders, methods of their detection and evaluation of the results:

* disorders of higher mental function (mental disorders, other mental disorders, speech, language disorders);
* disorders of sense organs (vision impairment, hearing and vestibular disorders, taste, smell disorders);
* movement disorders, visceral and metabolic disorders;
* defective breakdowns;
* disorders due to common causes

Taking into account the qualitative and quantitative aspects of various indicators, 3 types of levels of body function disorders are distinguished in the comprehensive assessment.

1st level - slight disorders of the body's function;

Level 2 - moderate disorders of body function;

Level 3 - severe, extremely severe disorders of the body's function.

From the above, it is known that disability is the limitation of life activities, in other words, the ability of a person to serve himself fully or partially, to move independently, to communicate, to control one's behavior, 'winter and loss of ability to work.

Thus, the following main criteria of life activity are distinguished when determining disability:

* self-service, or the ability to fulfill basic physiological needs, use of tools and equipment used in common life;
* the ability to move, walk, run, go somewhere, pass obstacles, control the body;
* the ability to receive education, receive and assimilate knowledge (general education, professional education), acquire skills (life, social, cultural);
* the ability to work, the ability to perform work activities that are suitable for healthy people in terms of complexity and volume;
* feeling, that is, the ability to feel and evaluate the situation in the environment with the help of the intellect of seeing, hearing, smelling, knowing, and thinking;
* the ability to communicate, or the ability to communicate with other people while understanding them, to exchange information;
* Self-control is the ability to control one's actions, or to consciously control one's behavior in everyday situations.

Disability groups are assigned to disabled persons depending on the degree of impairment of body function and limitation of life activities.

Three groups of disabilities are distinguished in Uzbekistan:

* Group I disability is granted to citizens who have completely lost their regular professional activities under normal conditions and are in constant need of the services (help) of others;
* Group II disability is given to persons who have permanently lost the ability to work, and who do not need the services of others;
* One of the conditions for determining group III disability is the inability to perform professional work. Usually, the cause of chronic diseases, anatomic deficiencies is given in cases of a sharp decrease in working capacity as a result of a violation of the body's function.

Disability of this group is given when the employee needs to be transferred to another, lighter job that does not require the same qualifications due to the health condition of the worker. In certain anatomical deficiencies, group III disability is established regardless of the nature of the work performed.

Depending on the severity (level) of the disability, the amount of allowance and the size of other social security and services are determined.

**Examination of children's disabilities**Based on the modern concept of WHO, disability in children is determined not directly by the type of disease or injury, but by the severity of their consequences, which lead to social deficiency and limitation of life activities through the violation of psycho-physiological or anatomic systems or functions.

congenital, hereditary diseases, as well as pathological conditions that appear as a result of diseases and injuries acquired during life are indications of disability in children.

Medical guidelines for determining disability in children are divided into 3 parts:

* Part 1 includes a list of pathological conditions that cause disorders of the functions of children's organs and organs, temporary social disadaptation of children, and limitation of life activities. In such cases, disability is determined from 6 months to 2 years.
* Part 2 includes the list of pathological conditions that lead to full or partial recovery of functional disorders of children's organs and organs, partial social disadaptation of children, and limitation of life activities. 2 groups of pathological conditions are distinguished: 2A - disability is determined for a period of 2-5 years, re-examination is carried out in 2-5 years. 2B - disability is determined for up to 5 years, re-examination is carried out in a period of not less than 5 years.
* Part 3 includes medical conclusions on pathological conditions that cause unspeakable disorders of the functions of children's organs and organs, social maladjustment of children and severe limitations of life activities, once up to the age of 16.

The establishment of disability in children not only gives the disabled child the right to social security and benefits, but also gives him and his family the right to receive medical care, education, social and professional support from the state. The nature of the disease, the child's age, the condition of the organism's functions, the condition of the compensatory mechanisms, the consequences of the disease, social adaptation and the possibility of meeting the needs by the forms and types of social security are taken into account.

According to the International Nomenclature of Social Disadvantages, Limitation of Life Activities, Disorders of Children's Development and Growth, Inability to Control Their Own Behavior, Inability to Serve Oneself, and Inability to Move from One Place to Another , children under 16 years of age with social maladjustment and severe limitation of life activities due to the inability to learn, communicate, and work in the future.

Medical social expertise is an assessment of the limitation of life activities of a person undergoing a medical examination due to a persistent violation of orgasmic functions, determining his need for social protection and rehabilitation.

Medical-social expertise is carried out by comprehensive assessment of the condition of the organism by analyzing the clinical-functional, social-life, professional work and psychological data of the person who is witnessing the state of the organism.

The following tasks are assigned to the state medical and social expertise service:

* to determine the group of disability, its cause, duration, the time of onset of disability, the need of the disabled person for various types of social protection;
* development of an individual rehabilitation program for the disabled;
* determining the level and causes of the prevalence of disability among the population;
* development of a comprehensive preventive program for medical and social rehabilitation of disabled people, social protection, prevention of disability;
* determining the level of unfitness for work of persons injured at work or suffering from an occupational disease;
* to determine the causes of death of a disabled person based on the circumstances in which benefits for the family of a disabled person have been established in the legislation of Uzbekistan;

Thus, the medical-social expertise service develops individual programs for the rehabilitation of disabled people.

Rehabilitation of the disabled is a set of socio-economic, pedagogical, psychological, medical systems and processes aimed at eliminating the limitation of life activity or restoring it as fully as possible, which has led to health deterioration due to a persistent impairment of the body's function.

The goal of rehabilitation is to restore the social status of the disabled person in terms of achieving material independence and social adaptation.

Rehabilitative potential is a social environment factors aimed at realization of a person's potential ability at one or another level and his complex biological-psychophysical characteristics.

Rehabilitation prognosis - probability of realization of rehabilitation potential.

Sanitation-hygienic, organizational, technical, technological, legal, economic, micro-social conditions are specially created for the realization of work, life, and collective activities of the disabled based on their rehabilitation potential.

Medical rehabilitation is a type of various treatment and preventive rehabilitation measures aimed at adapting a disabled person to life, useful team work, and restoring impaired functions.

Medical rehabilitation measures include:

* Conservative and operative treatment;
* Physiotherapy;
* Treatment is physical education;
* Mud treatment;
* General and special sanatorium - spa treatment;
* Prosthetics.

"Psychological rehabilitation" includes a type of activities aimed at restoring the way of active life (position) and labor activity in disabled people with the help of psychotherapeutic means.

Vocational rehabilitation - a set of activities aimed at the selection of a profession in accordance with the health status of a disabled person, retraining for the profession, suitable working conditions for labor activities, creation of a workplace. It includes adaptation to social environment and social life conditions.

Individual rehabilitation plan (IRR) - types of rehabilitation activities aimed at adapting the disabled person's health to life, community life and professional activities, based on the needs of the disabled person's somatic state, psychophysiological endurance, social status, his level of interest and taking into account the real social-environmental infrastructure . When developing the IRR, special attention is paid to the following:

* Rehabilitation - expert diagnosis;
* Determination of rehabilitation potential;
* Determining the type of activities (type of service, technical service) to restore the lost ability to lead a life, community and professional activity in a disabled person.

IRR is carried out by all organizations, institutions, educational institutions, state and non-state organizations engaged in the rehabilitation of disabled people, regardless of the form of ownership.

When implementing the IRR, special attention is paid to its integrity, complexity, and effectiveness. The effectiveness of the IRR is evaluated by special state medical and social expert organizations during the next examination of the disabled person.

After the disability groups are identified, they receive social protection.

**Social protection**- means the implementation of complex multi-level economic, legal, organizational, medical-social, pedagogic, psychophysiological and other types of activities aimed at ensuring the rights and freedom of a person, not only to adapt to living, but also to achieve a sufficient level of quality of life .

The main principles of social protection include:

* state character: providing legal, economic, and organizationally guaranteed types of social support;
* *distribution of powers***:**demarcation and division of social protection tasks within the district, region, republic, expanding the rights of local authorities in providing social protection;
* *popularity*- providing forms and types of social assistance to each disabled person based on his needs;
* *address*- providing social assistance to needy disabled people based on their individual situation;
* *differentiation of social protection*- taking into account various medical and social factors (age, gender, place of residence: city, village; loneliness, need for help, etc.);
* *complexity*- providing joint support of various types (financial, financial, material, medical, legal, etc.);
* *based on all possible funding sources*(republic, region, district, village, neighborhood, associations of disabled people, charitable funds, etc.);
* *public participation***-**in the formation of the state policy on the formation of social protection and its implementation;
* *joint action***-**joint action of state, religious and other organizations;

One of the main elements of social protection is the type of social assistance.

Social assistance (support) is guaranteed by the legislation of the state in terms of social security: money, funds, benefits and other types of expenses are provided to citizens in need of social protection, extra-budgetary and charitable funds of local authorities, organizations. means providing targeted, differentiated support.

In order to plan effective medical and social support for the disabled, it is necessary to have knowledge about the prevalence of disability, its trends among the population, its causes, and its eroding factors. In this regard, many intensive and extensive indicators characterizing disability are calculated:

* quota of primary disabled people registered in the administrative area during the calendar year (primary disability);
* the total contingent of disabled people among the population (total accumulated disabled people).

To assess the primary disability, the following are determined:

* primary registered number of disabled people (per 10,000 inhabitants);
* primary registered number of disabled people (10,000 people of working age);
* by classes (certain groups) of primary registered disability diseases (including causes of disability, by severity);
* by age, gender, disability groups, disease classes, etc.

According to UN experts and WHO, more than 10% of the world's population has limited opportunities due to their health, of which more than 100 million are children. According to WHO experts, the share of severely disabled children in the world is 1-2% of all children.

Among the main causes of disability among adults, common diseases are the first, injuries are the second, congenital anomalies are the third, accidents at work and occupational diseases are the fourth.

Among the primary disabilities, cardiovascular diseases are the first, malignant tumors are the second, the consequences of injuries and poisonings and external influences are the third, and mental illnesses are the fourth.

Among the causes of children's disabilities, diseases of the nervous system and sensory organs are the first, mental diseases (mental retardation) are the second, and congenital anomalies are the third.

Visceral and metabolic disorders, cardiorespiratory and genitourinary system disorders take the first three places in the structure of the main disorders leading to children's disability.

Among the disorders of the locomotor organs are disorders of the locomotor organs. Among the limitations of life activities, the main places are occupied by activities such as being able to keep oneself in one place, moving from one place to another, communicating with others.

Certain factors divide the medical and social factors that lead to the formation of children's disabilities into three groups: medical - biological; social - psychological; economic - legal.

The presence of a disabled child in the family causes many problems for parents:

* causes problems in the family due to the lack of information among parents about the etiology, course, consequences, treatment, pedagogical and psychological correctional institutions of the child's diseases, medical and social problems, low level of preparation for restoring the child's health at home;
* disagreements between parents aimed at finding the "culprit" in the family about the fate of the child and the consequences of diseases, the child's illness; lack of child care skills on the part of close family members and relatives, painful acceptance of sympathy from others, shyness in communication with work colleagues, friends, neighbors cause neuropsychological problems ;
* Many factors are low financial security, the difficulty of employing a mother of a disabled child in work based on reduced schedules, taking frequent unpaid work vacations, treating the child with consultation, rehabilitation, purchase of auxiliary equipment, putovkas. economic problems arising from associated costs;
* lack of support provided by community organizations to solve problems related to the purchase of personal vehicles, additional living space, auxiliary and special medical and technical equipment, vouchers, installation of a telephone at home lack of number of social security institutions (including for short and long-term care of children);
* pedagogical-educational problems (teaching cocktail skills) that arise due to the lack of specialized literature for the training of specialized disabled people, home schooling institutions, organizations;
* legal problems caused by the lack of number of legal service organizations dealing with contingents of disabled people, their low level of activity, and the fact that many families do not know their rights and privileges, and do not fully use them.

Thus, disability is an important medical and social problem in Uzbekistan today. Deep and comprehensive study of the prevalence, causes, and course of disabilities allows for the development of comprehensive measures to solve and reduce these problems.

**Indicators of disability**:

* **Primary disability indicator**
* **Primary disability structure (by diseases, age, gender, social origin)**
* **Sizes of primary disability by group**
* **Distribution of primary disability among disability groups**
* **Total disability index**

1.2.3.4.

* **Dynamics of disabilities (this indicator can also be calculated by some groups)**
* **Proportions of primary disabilities among all disabilities**
* **Among the total disabled, the shares of disabled from childhood**

**Important non-epidemic diseases and their prevention**

Chronic non-infectious diseases known as "diseases of civilization" currently determine the level of morbidity and mortality in developed countries. Such epidemiological conditions are also observed in many developing countries. The etiology of chronic diseases is extremely complex, so it is necessary to take into account a large number of risk factors in their prevention. Despite the complexity of the issue, significant progress has been made in reducing deaths from stroke and ischemic heart disease in many countries over the past 20 years.

The transition from infectious diseases to non-infectious diseases is one of the most common causes of premature death in the epidemiologic transition that began after World War II. The use of antibiotics, along with improved living conditions, improved sanitation, improved nutrition and drinking water, reduced mortality from infectious diseases and increased life expectancy. As a result, infectious diseases remained an important factor and did not determine the epidemiological conditions in developed countries; this process is also increasingly observed in developing countries. After non-infectious diseases began to dominate infectious diseases, the epidemiological situation underwent a radical change.

**Risk factors and etiology of chronic diseases**

Etiological criteria of infectious diseases are known as Cox-Henle postulates. These principles were also used to develop etiological criteria for chronic diseases and became known as the Evans criteria. They represent the relative role of predisposition and risk factors in the development of chronic diseases and play an important role in assessing the importance of various factors in the spread of this or that disease.

EVANS ETIOLOGY CRITERIA

1. The distribution of the predicted factor in the population should be the same as the distribution of the disease.
2. The incidence rate among individuals exposed to the presumed factor must reliably exceed the incidence rate among individuals not exposed.
3. In the anamnesis of persons suffering from this disease, the assumed factor should be found more often than in healthy people under the same influence of other factors.
4. In terms of time, the exposure to the suspected factor must precede the occurrence of the disease.
5. The more severe or persistent the suspected factor, the more likely the disease will occur.
6. For some diseases, the occurrence of a human biological reaction (from weak to pronounced) corresponds to the level of influence of the assumed factor.
7. The relationship between the presumed factors and the disease is observed in different groups of the population and with different methods of examination.
8. The relationship between the disease and the factor cannot be explained otherwise.
9. Eliminating or prolonging the suspected factor may lead to a reduction in the number of new cases.
10. In some cases, a change in the body's reaction to the influence of the assumed factor can lead to a decrease in morbidity.
11. Under experimental conditions, a population exposed to a presumed factor may have a higher incidence of disease than a control group.
12. All associations identified can be rationally explained biologically and epidemiologically.

The etiology of a non-infectious disease is usually extremely complex due to the presence of a large number of factors that cause its development; xro­There are very few cases where a single factor serves as a necessary and sufficient condition for the development of a disease. Risk factors for the development of chronic diseases are listed in the table below, published by the American Public Health Association on Epidemiology of Chronic Diseases. It should be noted that low socioeconomic status is a risk factor in virtually all studies of disease groups.

**Cardiovascular diseases and their prevention**

In the 21st century, non-communicable diseases are primarily one of the leading causes of morbidity, disability and death of the population.cancer and vascular diseasesposes a great threat to public health.At the beginning of the 20th century, cardiovascular diseases and diseases of the circulatory system represented only a few percent of the population's total diseases. In the 50s of the last century, it was ranked 10-11 in the ranking of world diseases. Later, as a result of industrialization, urbanization, changes in the way of life of the civilized society, the impact of mental and emotional stress, stress and other risk factors, as well as improved diagnosis of cardiovascular diseases, the share of circulatory system diseases increased dramatically.

Cardiovascular diseases are one of the main causes of loss of working capacity and increase in healthcare costs.

*Cardiovascular diseases include:*

* ischemic heart disease - diseases of blood vessels that supply blood to the heart muscle;
* Hypertension (hypertonia) disease;
* cerebrovascular disease - diseases of blood vessels that supply blood to the brain;
* diseases of peripheral arteries - diseases of blood vessels that supply blood to arms and legs;
* rheumocarditis - damage to heart muscles and heart valves caused by rheumatic attacks caused by streptococcal bacteria;
* congenital heart failure (porogy);
* deep vein thrombosis and pulmonary embolism.

**Prevalence of cardiovascular diseases**

Diseases of the circulatory system take the second place in the structure of general diseases, and the first place among the causes of death of the population. The incidence of this pathology is increasing sharply among the 40-50-year-old population.

*WHO Department of Cardiovascular Diseases*

* According to the information of the international medical team (2.3 thousand experts from 133 countries of the world), 1/3 of the total causes of death among the world's population are related to cardiovascular diseases.
* According to the statistics of 1990-2015, in 2015, 400 million people around the world had cardiovascular diseases, which caused the death of 18 million people.
* The highest death rate from these causes was recorded in Eastern Europe, Central Asia, the Middle East, South America, Black Africa and Oceania, and the lowest death rate was recorded in Japan, Andorra, Peru, France, Israel and Spain.
* According to the researchers, the average death rate decreased slowly between 1990 and 2010, but this process has slowed down in the last five years. For example: in 1990, the rate of death from cardiovascular diseases was 393 per 100,000 people, in 2010 it was 307, and in the next five years - 286.
* Scientists include the USA, Canada, Australia, New Zealand, Japan, South Korea and Western European countries among the countries where the rate of death from cardiovascular diseases has slowed down.
* In 2016, death from cardiovascular diseases was 48.7% in Russia, 29% in Great Britain, 22% in France and 35% in Germany. etot pokazatel nije.

***Basic information***

* Cardiovascular disease is the leading cause of death worldwide: more people die each year from cardiovascular disease than from any other cause.
* According to the WHO assessment, in 201617.9 million people died from cancer and vascular diseases worldwide, accounting for 31% of the total number of deaths, and 85% of them were heart attacks and strokes.
* 75% of deaths from cardiovascular diseases occurred in less developed countries.
* By taking steps to reduce risk factors such as smoking, unhealthy diet, obesity, alcohol consumption, and physical inactivity, many heart attacks can be prevented.cardiovascular diseases can be prevented.

Today, among the causes of disability, cardiovascular diseases occupy the first place. Among the causes of disability, ischemic heart disease, hypertension, cerebrovascular disease, rheumatism, rheumatism take the leading places.

**Heartrisk factors of vascular diseases**

Many risk factors for cardiovascular diseases can be divided into two groups. The first group of factors: Factors that cannot be changed, but can be influenced: This includes age, gender, and heredity.

*Second group: Modifiable risk factors. These include: smoking, excess body weight, drinking a lot of alcohol, low physical activity, etc.*

**HeartHow to reduce the risk of death from cardiovascular diseases:**

Heartif vascular diseases are suspected, the client should first contact his family doctor. These diseases can be prevented by following the doctor's advice, changing the lifestyle and following simple rules.

1. Quit smoking first.

2. Reduce the amount of table salt consumed daily to 6 g.

3. Reduce the consumption of fatty and sweet products (biscuits, candies, chocolate, ice cream).

4. Do at least 30 minutes of exercise every day. Your doctor will determine the level of physical exercise.

5. Always monitor your blood pressure. It is always 140/90 mm. sm.ust. try to be less.

6. Cut down on alcohol consumption or give it up altogether.

7. Periodically monitor the amount of cholesterol in the blood. If possible, its concentration should not exceed 5 mmol/l.

8. Periodically monitor the level of glucose in the blood.

Its concentration in the blood should not exceed 5 mmol/l.

**Heartactivity of WHO in the fight against cardiovascular diseases**

In 2013, under the leadership of the WHO, with the participation of its member countries (194), a mechanism for reducing the risk of non-communicable diseases was developed: "Global action plan for the prevention and control of non-communicable diseases in 2013-2020". This plan aims to reduce premature deaths from non-communicable diseases by 25% by 2025 by meeting 9 global goals. 2 of these Global Goals are directly aimed at preventing and combating cardiovascular diseases.

***Action Plan for the Sixth Global Goal on Noncommunicable Diseases***according to 25% reduction in blood pressure in the world (blood pressure ≥140/90 mm. cm. above). In 2014, around 22% of people aged 18 and older had high blood pressure. To achieve this goal, a nationwide public policy aimed at reducing lifestyle-related excess alcohol consumption, excess body weight, obesity, excess dietary salt intake, increasing physical activity, and ultimately reducing the prevalence of hypertension. intended to go.

***Action Plan for the Eighth Global Goal on Noncommunicable Diseases***according to at least 50% of people with appropriate indications should be treated with therapeutic treatment (with glycemic control) to prevent myocardial infarction and stroke.

**Oncological diseases and their prevention**

In the last century, the number of countries in the world increased almost four times, and today their number has reached 200. As a result, it led to a change not only in the demographic trend, but also in the oncological situation. By 2050, the number of people over the age of 60 is expected to be higher than the number of children under the age of 15 in the world and all its continents. This leads to the well-known "demographic shift" in many developing countries, which naturally occurs as a result of declining death rates and a somewhat slower decline in birth rates. According to forecasts, by 2030 the number of the world's population will be 8.3 billion. By the turn of the 21st century, the majority of the population over 75 years of age is expected to suffer from some chronic non-communicable disease, including cancer, and die at home.

**Prevalence of malignant tumors**

The spread of dangerous neoplastic diseases and deaths from them are of great socio-economic importance. Among the causes of death of the population, oncological diseases occupy one of the leading places and, in turn, lead to a decrease in the average life expectancy of the population and great economic damage. At the same time, the analysis of the spread of dangerous tumor diseases in relation to the environment is one of the important components of the fight against this disease. In addition, the study of the spread of malignant tumor diseases allows to determine the areas that attract the attention of medical personnel, the external environmental factors that cause the spread of malignant tumor diseases, the risk groups of the population, and the development of measures aimed at their recovery. will give.

Uzbekistan is located in the heart of Central Asia and is important for the social, ecological and economic stability of the region.

There are about two thousand large and medium-sized enterprises operating in the Republic of Uzbekistan, they have more than 70 thousand stationary sources that emit more than 150 harmful substances into the atmosphere, more than 50 of them are large is important.

The geographical location of the Republic of Uzbekistan, especially economic activity, is characterized by the prevalence of two main exogenous factors that lead to the growth of oncological diseases among the population: high solar radiation and chemical carcinogens.

**Disability from dangerous tumor diseases**

Disability from dangerous tumor diseases takes the second place after cardiovascular diseases. One of the main reasons for the increase in disability from dangerous tumor diseases is that they are detected late in outpatient clinics. First of all, this is due to the inattention of the population to their health, the fact that medical experts attach little importance to oncological diseases, pre-tumor chronic diseases, and the ineffectiveness of preventive examinations, dispensary monitoring and control, conducted among the population.

Currently, despite the high efficiency of treatment of patients with stage I and II cancer, the percentage of patients with early primary detection remains low. Every fourth patient is diagnosed with cancer after metastasis.

**Death from malignant tumor diseases**

Among the causes of death of the population, tumor diseases take the second place after cardiovascular diseases. Kak prichina smerti opukholevye zabolevaniya zanamiyut vtoroe mesto posle sredechno-sudistoy patologii. According to the World Health Organization, oncological diseases account for 13% of the causes of death of the population in the world, this figure is equal to 16% in the Russian Federation.

**Key facts and figures**

In 2012, 8.2 million people died of cancer worldwide.

60% of all primary detected oncological diseases are detected in African, Asian, Central and South American countries.

30% of cancer deaths are preventable.

According to statistics, by 2020, death from cancer is expected to increase twice, from 6 million to 12 million.

The main causes and risk factors of oncological diseases There is no single cause of cancer. In fact, there are many of them. Every day, thousands of people in the world find out that they are suffering from new extremely dangerous oncological diseases. By 2020, the number of oncological diseases is expected to increase twice, from 10 million to 20 million. It is difficult to say in one word that this or that is the reason for the appearance of any cancer. However, risk factors leading to the development of malignant neoplasms can be identified, including: hereditary factors, endocrine disorders, smoking, ultraviolet and other radiations, chemical carcinogens, dietary habits, environmental factors, etc.

The prevalence and "rejuvenation" of oncological diseases can be said to be a social problem at the state level. Currently, there are many different hypotheses about the occurrence of cancer, and in some cases, people themselves are the cause of their origin.

***The main causes of cancer are:***

* + Malnutrition;
	+ Obesity, sedentary lifestyle;
	+ Smoking, drugs, excessive alcohol consumption;
	+ External factors - the effect of radiation, industrial waste;
	+ Genetic predisposition;
	+ Viruses;
	+ Depression;
	+ Decreased immunity.

***Food carcinogens:***After all, the human body is what it eats. According to statistics, 1/3 of the causes of cancer are related to poor nutrition. That's why scientists consider the origin of oncological diseases to be the result of the effect of carcinogens that enter the human body with food.

When eaten irrationally, substances in many habitual foods can cause disease. First of all, they include simple carbohydrates, trans fats. That is why it is necessary to consume more plant products of adequate level - vegetables and fruits. But herbal products are not always safe, because they may contain nitrite, nitrate, which is considered a carcinogen, and benzapyrene, which is produced by smoking. Therefore, it is recommended to exclude products containing these harmful substances from the diet.

***Genetic predisposition.***One of the second causes of oncological diseases is genetic predisposition. People who do not belong to each risk group have a 20% chance of developing oncological diseases. And in the risk group, this probability is reliably high.

***Viruses.***In the history of cancer, it has been established that viruses are the cause of the spread of cancer. Papilloma virus has been proven in many scientific studies to cause cervical cancer in women. A rare aggressive form of leukemia has been found to develop in people infected with the T-lymphotropic virus; primary cancer of the liver can be explained by infection with viruses V and C, which cause various chronic hepatitis. So, viruses cause every 10th cancer.

***Harmful habits***- alcohol consumption and smoking. Many studies have found a fairly reliable link between smoking and cancer. This applies primarily to lung cancer. Smokers are more likely to develop cancer of the esophagus, larynx, oral cavity and other organs. About 1 in 5 cancer deaths are directly attributable to smoking. Excessive consumption of alcohol has also been found to cause cancer. Negative influence of the external environment. Many carcinogens in the environment can cause cancer. Examples of oncogenomes are the effects of many chemicals and radiation on the body. They include many household chemicals: asbestos, some plastics. Car smoke also contains many carcinogenic substances. Industrial waste: benzene, formaldehyde, dioxins can be added to the list of carcinogenic substances.

***Depression.***Currently, many scientists believe that prolonged depression and stress can lead to the development of oncological diseases. Although stress does not directly cause tumor diseases, strong and long-lasting stresses can weaken the body's immune status and sharply reduce the protection against tumors. .

Lack of physical activity due to diet, overweight and obesity. Proper nutrition is one of the most important approaches in the fight against cancer. Overweight, obesity, and many cancers: esophageal, rectal, breast, endometrial, and kidney cancers. Regular physical activity, a moderate body weight and a healthy diet reliably reduce the risk of developing cancer.

***Occupational carcinogens and radiation.***At present, more than 40 carcinogenic substances associated with professional activity have been identified. At the same time, ionizing radiation has been found to cause the development of certain cancers.

**Prevention of oncological diseases**

One in three cancers are preventable. Prevention is the most effective strategic "weapon" in the fight against cancer.

In modern medicine, 3 types of active prevention of cancer are distinguished: primary, secondary, tertiary prevention.

*Primary prevention*- primary prevention includes a healthy lifestyle, proper organization of a rational, healthy diet, raising the body's immunity, quitting smoking, not consuming too much alcohol, physical activity, body weight It includes measures such as keeping in moderation, preventing the effects of carcinogenic substances.

*Secondary prevention*- includes the fight against pre-cancerous diseases, implementation of preventive measures and early detection of cancer, its timely effective treatment.

*Tertiary prevention*- Prevention of relapses and recurrence of tumor disease.

**ORGANIZING MEDICAL ASSISTANCE FOR ALLERGIC DISEASES AND CHRONIC OBSTRUCTIVE LUNG DISEASES**

The concept of "allergy" was introduced in 1906 by the Viennese pediatrician Clemens Von Pirke. He found out that the symptoms observed in some of his clients can be triggered by certain substances-allergens present in the external environment. He noted that they can include dust, plant dust, and some types of food. For many years, it was assumed that hypersensitivity occurs as a result of a malfunction of E-immunoglobulins in the body, but later it was found that many symptoms described as "allergy" are caused by various chemical substances.

In the 21st century, a sharp increase in allergic diseases caused primarily by food products has been found. According to WHO data, the number of people suffering from allergic diseases has increased by 20% in the last ten years. In the West, 35% of the population is diagnosed with an allergic disease, in Moscow, 15% of the population suffers from allergies. 20-25% of bank employees have been diagnosed with allergic diseases, allergic rhinitis is the most common among them. If it is not treated effectively or at all in time, 65% of cases of bronchial asthma have been observed. 30-60% of the population of megacities have allergic diseases. Today, in European countries, 1 out of 3 children has an allergic disease, and 1 out of 10 people have symptoms of bronchial asthma. 30 years ago, allergic diseases were recorded in small numbers, but by the end of the 20th century, there were 300 million people on Earth. Bronchial asthma has been recorded in a person (how many are unknown). According to research conducted in different countries of the world, only 60% of people with allergic rhinitis turn to a doctor for medical help. WHO ranks allergy among the 6 most common diseases in the world. In addition, it is considered a chronic disease and occurs mostly in children.

Nowadays, allergy is defined as a change in the body's sensitivity to foreign substances. Damage to tissues and organs as a result of an allergic reaction is understood as the direct cause of an allergy, mainly due to the introduction of a substance of a protein nature into an organism with a high sensitivity to it. Conventionally, 2 groups of allergens are distinguished: allergens of the external environment (exoallergens) and allergens that appear in the body itself (endoallergens). Non-infectious exoallergens are important in causing allergic diseases in children. They, in turn, are divided into several groups: household (the most important of which is house dust), food products (plant and animal products), pollinating, epidermal, chemical. Infectious exoallergens include viruses, fungi and bacteria.

In addition to the effect of the allergen, the existence of a contributing factor and genetic predisposition is important for the development of an allergic disease.

Allergic disease can be caused by respiratory allergens in any part of the respiratory tract. Often they depend on the effect of non-infectious exoallergens. Household allergen (house dust) takes the leading place among them. In addition, respiratory allergies can be caused by plant dust, food, drugs, and fungi. In rare cases, respiratory allergies can be caused by infectious allergens

In order to prevent allergic diseases, first of all, it is necessary to prevent contact with allergens in the external environment. Compared to external environmental factors, people's lifestyle and habits play the most important role in the development of allergic diseases. That is why forming a healthy lifestyle, changing the external environment and harmful habits of people are among the most effective preventive measures to prevent allergies.

**Allergy Information:**

* 1 out of every 5 people feels the symptoms of allergy or bronchial asthma.
* 55% of the population is allergic to one or more allergens.
* Allergy ranks 5th among chronic diseases.
* $7.9 billion is spent annually in the United States to fight allergies.
* As a result of the increase in the pollination season in the last 10-15 years, global warming has increased by 4.
* If one of the parents has an allergic disease, the probability of the child getting this disease is 33%.
* 15% of the population has food allergies.
* 39% of families keep one or more dogs at home.
* 36% of families keep cats at home.
* The number of families with animal fur at home: 100%.

**Chronic obstructive lung diseases**

This includes a group of diseases of great importance. Chronic lung diseases are also characterized by the spread of life-threatening acute respiratory infections in the elderly.

**Chronic obstructive lung diseases-**usually due to the lack of air flow in the respiratory tract, it is progressive in nature and non-stopIt is an independent disease that has an increasing character and is caused by an anomalous cold reaction of the lung tissue due to various pathogenic substances and gases.

Chronic obstructive pulmonary disease is a collective concept that includes a group of diseases of the respiratory system. For example: chronic obstructive bronchitis, a severe form of bronchial asthma. About 10% of chronic obstructive lung diseases are bronchial asthma, the leading place is chronic obstructive bronchitis. Chronic obstructive pulmonary disease is chronic shortness of breath that develops slowly, does not recur, and is accompanied by bronchial obstruction.

**Basic information:**

* According to research, in 2016 there were 251 million in the worldlung lesions were noted.
* 3.17 million people died in the world in 2015who died from chronic obstructive pulmonary diseases, this indicator made up 5% of all deaths from diseases this year.
* 90% of deaths from chronic obstructive pulmonary disease occur in less developed countries.
* The main reason for the development of chronic obstructive pulmonary diseases is tobacco smoke.
* The level of air pollution in the room has a negative effect on the unborn baby and its growth in the future life.dramatically increased the risk of developing chronic obstructive pulmonary disease.
* In some cases, chronic obstructive lung diseases appear as a consequence of long-term disease with bronchial asthma.

|  |  |  |
| --- | --- | --- |
| **Importance of the risk factor** | **External factors** | **Internal factors** |
| **Determined** | Smoking tobaccoOccupational factors ([cadmium](https://ru.wikipedia.org/wiki/%D0%9A%D0%B0%D0%B4%D0%BC%D0%B8%D0%B9%22%20%5Co%20%22%D0%9A%D0%B0%D0%B4%D0%BC%D0%B8%D0%B9),[silicon](https://ru.wikipedia.org/wiki/%D0%9A%D1%80%D0%B5%D0%BC%D0%BD%D0%B8%D0%B9)) | α1-antitrypsin deficiency |
| **High** | Atmospheric air pollution (SO2, NO2, O3)Occupational injuriesLow socio-economic statusPassive smoking from childhood | Premature birth[IgE](https://ru.wikipedia.org/wiki/IgE)high level ofBronchial[hyperreactivity](https://ru.wikipedia.org/w/index.php?title=%D0%93%D0%B8%D0%BF%D0%B5%D1%80%D1%80%D0%B5%D0%B0%D0%BA%D1%82%D0%B8%D0%B2%D0%BD%D0%BE%D1%81%D1%82%D1%8C&action=edit&redlink=1)Family nature of the disease |
| **Probably not** | [Adenovirus infection](https://ru.wikipedia.org/wiki/%D0%90%D0%B4%D0%B5%D0%BD%D0%BE%D0%B2%D0%B8%D1%80%D1%83%D1%81%D0%BD%D0%B0%D1%8F_%D0%B8%D0%BD%D1%84%D0%B5%D0%BA%D1%86%D0%B8%D1%8F)s [Vitamin C](https://ru.wikipedia.org/wiki/%D0%92%D0%B8%D1%82%D0%B0%D0%BC%D0%B8%D0%BD_C)lack of | Hereditary predisposition (blood group A(II),[IgA](https://ru.wikipedia.org/wiki/IgA%22%20%5Co%20%22IgA)absence of) |

* In many countries, an increase in chronic obstructive pulmonary disease has been observed with the increase in tobacco smoking among the elderly population.
* In the prevention of chronic obstructive pulmonary diseases, smoking cessation and the fight against smoking are important
* Chronic obstructive pulmonary disease cannot be cured, but through treatment, its symptoms can be alleviated, the quality of life can be improved, and the risk of death can be reduced.

in Uzbekistan diagnosis of chronic obstructive pulmonary disease is not well established. According to the information of the Ministry of Health of Uzbekistan, chronic obstructive pulmonary diseases are recorded from 67 to 168 cases per 10,000 inhabitants in different regions.

***Major risk factors for chronic obstructive pulmonary disease (WHO)***

According to the European Respiratory Society, depending on the importance of risk factors:

**Chronic obstructive lung diseasesprevention**

*Quitting smoking is important.*Banning smoking in schools, public gatherings, and workplaces is supported by the community, health organizations, and the state.Chronic obstructive lung diseasesIn the prevention of smoking, quitting smoking is also of great economic importance.

According to the WHO, "smoking cessation is an important factor in reducing health risks." According to research data, 75-80% of smokers want to quit smoking. One in three of them has tried to quit smoking up to 3 times in their life. WHO urges individuals, families, schools, organizations, communities, and governments to help current smokers quit.

*Combating occupational risk factors that cause respiratory tract damage:*

* Reducing the concentration of harmful substances in workplaces by implementing various technological measures;
* Installation of effective ventilation devices;;
* Use of effective personal protective equipment.

Each of these methods prevents the entry of harmful substances into the human body and consequentlyohreduces the risk of developing chronic obstructive lung diseases.

**Diabetics and organization of medical care for them**

Diabetes mellitus is characterized by an increase in the amount of glucose in the blood (hyperglycemia) as a result of a violation of carbohydrate metabolism caused by the dysfunction of the insulin-producing pancreas. Diabetes is not only a serious disease, but it is an additional risk factor for cardiovascular diseases: ischemic heart disease, stroke and kidney disease, vision loss.

There are two types of diabetes that differ from each other while having similar aspects.

***Type 1 Diabetes***

Type 1 diabetes (formerly known as juvenile or juvenile or insulin-dependent diabetes) is caused by insulin being injected daily because the body does not produce enough insulin. Since the cause of this type of diabetes is still unknown, there is no way to prevent it. It is characterized by symptoms such as excessive urination (polyuria), thirst (polydipsia), constant hunger, weight loss, decreased vision, and fatigue. These symptoms appear suddenly.

***Type 2 Diabetes***Type 2 diabetes (formerly known as non-insulin-dependent or adult-onset diabetes) is caused by the body's inability to use insulin effectively. Most type 2 diabetes is caused by excess weight or physical inactivity. Symptoms are similar to those of type 1 diabetes, but these symptoms are not obvious at the beginning of the disease, so it is diagnosed late. Previously, this disease was recorded only in adults, but now it is also found in children.

***Gestational diabetes***

Gestational diabetes is a hyperglycemic disease that is mainly developed and diagnosed during pregnancy. Women suffering from this disease are characterized by a high risk of complications during pregnancy and childbirth.

**Prevalence of diabetes**

As an important public health problem, diabetes is interpreted as the 4th priority area among non-communicable diseases in the world. The prevalence of diabetes is increasing year by year. The fight against this disease is included in the WHO GLabal plan.

In 1980, the number of people with diabetes was 108 million. established, by 2015 their number will be 422 million. reached In other words, in 1980, the prevalence of diabetes among people aged 18 and older was 4.7%, and by 2015, this indicator reached 8.5%.

It is impossible to give a uniform answer to the question of how many groups of disabilities are assigned to a patient with diabetes. This disease cannot be completely cured. As long as you don't treat it, this disease will gradually get worse, so sooner or later any patient with diabetes can switch to a lighter work due to health or leave work at all and go to the disability group. A patient with diabetes is assigned a disability group depending on the severity of the disease, the presence of various complications - damage to the kidneys, retina, heart, blood vessels, nerves, brain and other complications.

**Deaths from diabetes**

According to WHO data, 1.6 million people died of diabetes in 2016. If a person died in 2012, 2.2 million people died due to high blood glucose levels. Almost half of people who die from high blood glucose are under the age of 70. According to the data of WHO, death from diabetes in 2016 took the 7th place among all causes of death.

**Diabetes risk factors**

Can lead to the development of diabetes:

*Genetic predisposition.*If the father has diabetes in the family, 5-10% of children, if the mother has this disease, 2-2.5% of children have a high probability of developing diabetes. If both the mother and father have diabetes in the family, the probability of their children developing diabetes after the age of 40 increases to 65-70%.

*Prevalence of diabetes and associated risk factors*

|  |  |  |  |
| --- | --- | --- | --- |
| **QD and risk factor** | **mujchiny** | **Ginseng** | **everything** |
| **Diabetes** | **8.3%** | **9.1%** | **8.7%** |
| **Excess weight** | **43.9%** | **48.7%** | **46.3%** |
| **Obesity** | **11.2%** | **17.4%** | **14.3%** |
| **Low physical activity** | **11.8%** | **24.1%** | **18.1%** |

* Excessive, incorrect and high-calorie diet. Sedentary lifestyle.
* Chronic stress..
* Long-term use of certain drugs (diuretic, hormonal, salicylates, cytostatics, etc.).

**Prevention of diabetes**

Preventive measures against diabetes can be carried out at the primary, secondary, and tertiary levels. They include: Improving community-level literacy of the population on diabetes and its complications. The main attention should be paid to persons with a high risk of spreading the disease, sick people and their family members.

***Primary prevention:***fight against excess body weight and promote rational nutrition.

***Secondary prevention***, will be aimed at getting rid of the serious complications of this disease: for this, measures such as regular monitoring of blood sugar levels, diet, physical exercise and hyperglycemic therapy are included.

***Tertiary prevention***includes constant monitoring of clients suffering from complications of diabetes, implementation of measures aimed at helping.

Taking simple steps to follow a healthy lifestyle can help reverse type 2 diabetes:

1. You should always try to keep your body weight in moderation;

2. Always be physically active - do at least 30 minutes of regular, non-stressful exercise almost every day.

3. Eat a healthy diet, reduce saturated fat and sugar intake.

4. Refrain from smoking.

**WHO measures to control diabetes**

WHO has planned to implement the following goals to fight and prevent diabetes and its complications:

- development of norms and standards for providing assistance in diabetes;

- raising awareness about the global epidemic of diabetes, conducting the International Diabetes Day (November 14) in cooperation with the International Diabetes Federation;

- establishing epidemiological control over diabetes and its risk factors;

In the "WHO Global Document on Diabetes" there are comments to individual, community of citizens, governments about the harm, complications of diabetes, preventive measures to fight against it. The WHO's Global Strategy on Nutrition, Physical Activity and Health focuses on the fight against diabetes, including by promoting healthy eating, regular physical activity, and reducing global obesity and overweight. .

Medical rehabilitation in diabetology, regular treatment by dispensary observation, control of carbohydrate-lipid metabolism; early detection of angiopathy, treatment in sanatoriums, formation of healthy lifestyle skills in patients.

**PREVALENCE OF BRONCHIAL ASTHMA AND TUBERCULOSIS AND THEIR PREVENTION**

In the world, bronchial asthma is a life-threatening, long-lasting, severe disease with suffocation attacks, severe respiratory failure, and therefore it remains one of the urgent problems of medicine. Despite the improvement of diagnosis and treatment methods of bronchial asthma, the rate of morbidity, disability and death from this disease is increasing year by year. In recent years, 5% to 10% of the world's population suffers from bronchial asthma. Currently, 300 mln. one person has bronchial asthma. Prognostic analyzes show that by 2025 this figure is expected to reach 400 million1.

At the threshold of the 21st century, 3 global problems about bronchial asthma are prominent in all potential studies. Firstly, this disease is extremely common and this trend will continue in the coming decades, secondly, the problem of bronchial asthma has gone beyond the scope of medicine and has become an extremely urgent socio-economic problem of national importance, and thirdly, in solving the problems of bronchial asthma the importance of epidemiological investigations is extremely great, and despite this, the number of such studies has sharply decreased worldwide, especially in the CIS countries.

Disability from bronchial asthma accounts for 8.3% of all allergic diseases and 70% of chronic lung diseases. The death rate from bronchial asthma has almost doubled in the last 30 years. That is why early detection of bronchial asthma, improvement of treatment and preventive measures is one of the urgent issues.

Heavy statistics forced the world's scientists to join forces to fight asthma. As a result, by the end of the 20th century, an international organization named "Global Initiative Against Asthma" was established. WHO declared May 4 as international asthma day. The prevalence of asthma varies in different countries. Bronchial asthma is most common in Scotland, where 18.4% of the population suffer from this disease. At first glance, the prevalence of bronchial asthma in Russia is very high, 2.2% (about 7 million people), but the death rate is much higher than that - 28.6 cases per 100,000 population. This means that about 43,000 people die from bronchial asthma in Russia. In terms of death from bronchial asthma, Russia ranks second in the world after China (36.7 cases per 100,000 population). The least deaths are in Finland and Canada (1.6 and 1.1 cases). In Uzbekistan, the incidence of bronchial asthma has increased by 17.5% in the last 5 years. Only 20% of the total recorded bronchial asthma is a mild form.

***Information about bronchial asthma***

* Today, bronchial asthma is the most common chronic disease among children in the world.
* Asthma-related deaths are highest in economically less developed countries.
* According to WHO, 383,000 people died from bronchial asthma in 2015.
* Asthma-related costsIt is equal to 6.2 billion US dollars.
* According to the World Health Organization, in 2015, school children aged 5 to 17 in the United States missed 10 million school days. It's because they didn't work for their parentsIt caused damage equal to 726 million US dollars.
* The biggest risk factor in the origin of asthma is the substances and particles that get into the body with breath and cause an allergic reaction.
* With the help of regular patient monitoring and medication, asthma attacks can be controlled and the quality of life of the client can be improved.
* Every year, 2 million patients with asthma in the world need treatment in intensive care units.
* In 3 out of 5 patients with bronchial asthma, the diagnosis is made in the last stages of the disease, as a result, only5-20% of clients are treated effectively.

**Risk factors of bronchial asthma**

Factors causing bronchial asthma are divided into 2 groups. 1- internal factors: specific characteristics of the organism. Group 2 includes environmental factors: allergens, infections, harmful occupational factors, smoking, atmospheric and indoor air pollution, etc.

***Internal factors.***Internal factors include hereditary factors, gender, obesity.

*Hereditary factors.*It has been found that the allergic form of bronchial asthma is more likely to be passed down from generation to generation. If one of the parents has bronchial asthma, there is a 25-30% chance of developing bronchial asthma in their children, if both parents have asthma, the risk of their children developing bronchial asthmawill be equal to 75%.

*Sex.*The prevalence of bronchial asthma in boys under 14 years is almost 2 times higher than in girls. As the age increases, the difference between the sexes in terms of prevalence disappears, and the prevalence of bronchial asthma is higher among older women than among men.

Obesity. In obesity, the exchange process of some biologically active substances, in particular leptin, is disturbed, which in turn causes chronic cold in the lung bronchi. The higher the level of obesity, the more severe the disease and the more frequent the recurrence of bronchial asthma attacks.

***External factors.***The most common environmental factors that cause the origin of the disease, exacerbation of bronchial asthma attacks include:Household allergens are the most common cause of non-infectious allergic bronchial asthma. House dust takes the leading place (62%) among household allergens. Domestic animals, including dog, horse epidermis, cat hair, poultry (chicken, duck, goose) feathers, some insects (wasp, cockroach) iz), rodents (mice, rats) also have allergenic properties).

Patients with bronchial asthma are highly sensitive to eggs, honey, fish, poultry, milk, nuts, yeast products, and some cosmetic and chemical products.

Non-allergic factors: smoking, atmospheric and domestic air pollution, colds, acetic acids are examples. 80% of indoor air pollution is caused by dusts formed by the migration of skin epidermis. According to scientists' calculations, we inhale 12,000 liters of air every day, as well as 6 billion dust particles equal to 2 tablespoons. According to ecologists, indoor air is 4-6 times more dirty and 8-10 times more toxic than the air outside.

**Prevention of bronchial asthma**

Based on a systemic approach to the prevention of bronchial asthma, comprehensive rehabilitation is carried out in 2 stages. At this stage, first of all, doctors in the health care institutions regularly actively increase their knowledge on early detection, diagnosis, treatment, and prevention of bronchial asthma and create a database on morbidity, disability, and death: persons belonging to the risk group of UASh and forms risk groups of patients; collects information about the persons in the risk group and the patient: economic and social status of the family, family structure, nature of work, harmful factors related to the profession, economic and household living conditions, harmful habits, medical knowledge and medical description of culture, physical and mental condition; determines the risk level of the disease and forms risk groups; risk factors that belong to the risk group form healthy lifestyle skills in existing individuals. Among these groups, the risk of developing bronchial asthma and disability is analyzed. Based on the obtained results, the level of medical services is planned: limiting contact with allergens, timely detection and treatment of upper respiratory tract ARVI, providing first aid to the patient and his family members and others in case of an asthma attack. formation of marriages, active dispensation of patients on time and monitoring plan will be drawn up, primary preventive measures will be developed. In stage 2, based on the database obtained in stage 1, risk groups leading to BA disease: persons with a genetic predisposition to the disease, frequent sufferers of upper respiratory tract ARVI, people in contact with occupationally harmful factors, harmful habits taking into account existing individuals, comprehensive health measures are developed and implemented. Family health schools are formed. Providing first aid to the patient and his relatives in case of asthmatic attacks, timely and correct administration of medicines, regular monitoring of his condition, as far as possible from the factors that cause asthmatic attacks staying longer, training in preventive skills, formation of the patient's medical activity, timely referral to medical services in severe attacks of the disease, psychosocial support, measures for secondary prevention of the disease are carried out and the active participation of patients is ensured in them. An individual step-by-step approach to the treatment and rehabilitation of patients with bronchial asthma: first in the conditions of QVP, OP, then in the TTB, ShTB, VKTTM, pulmonology and phthisiatry Republican scientific-practical centers a program of events will be developed.

**TUBERCULOSIS AND ITS PREVENTION**

The causative agent of tuberculosis is a bacterium (Mycobacterium tuberculosis), which mainly damages lung tissue. Tuberculosis is treatable and preventable. Tuberculosis is spread from person to person through airborne droplets. Inhalation of even small amounts of these bacteria through the air is sufficient for transmission to humans. Although the TB test will give a positive result after several weeks, the infection may be asymptomatic at first. When people are infected with tuberculosis bacteria, in 95% of cases, there is a long, sometimes lifelong latent period, and there is always a risk of transitioning to an acute form. An average of 5% of those affected can quickly develop pulmonary, sometimes other forms of tuberculosis (meningeal, bone, pleural and hakozos).

A quarter of the world's population has a latent form of tuberculosis. This means that despite being infected with TB bacilli, these people do not (yet) develop symptoms and do not spread the disease to others.

The lifetime risk of contracting TB bacteria is 5-15%. However, people with HIV, malnutrition, diabetes, and tobacco use are at risk of developing the disease due to a weakened immune system. \

When the active form of tuberculosis develops in humans, symptoms of the disease (cough, fever, night sweats, weight loss, etc.) may be moderate for several months. During a year, TB patients can infect up to 10-15 people with whom they are in close contact. On average, 45% of HIV-negative people and nearly all of HIV-positive people die without treatment.

**The prevalence of tuberculosis**

Tuberculosis mainly affects adults with high labor productivity. However, the disease threatens all age groups. More than 95% of morbidity and mortality occur in developing countries.

The development of an active form of tuberculosis in HIV patients increases 20-30 times. People whose immune system is weakened due to other diseases have a higher risk of suffering from an active form of tuberculosis.

Globally, in 2016, 10.4 million people were infected with TB and 1.7 million (including 0.4 million HIV-infected) died from this disease. In 2016, 1 million children (age 0-14) were infected with tuberculosis and 250,000 children died from this disease.

Tuberculosis bacteria are found all over the world. In 2016, the majority of new cases of tuberculosis were detected in Asian countries - 45% of new cases. African countries took the next place - 25%. 87% of newly diagnosed cases occur in the top 30 TB countries. 64% of newly diagnosed cases of tuberculosis occur in 7 countries of the world - India, Indonesia, China, Nigeria, Pakistan, Philippines and South Africa. The improvement of the situation of tuberculosis in the world is due to the progress of the prevention and treatment of tuberculosis in these countries.

Globally, the incidence of tuberculosis is decreasing by 2% every year. In order to reach the target by 2020 as part of the End TB Strategy, it is required to increase the rate of incidence reduction to 4-5%. According to data, from 2000 to 2016, the lives of 53 million people were saved as a result of diagnosis and treatment of tuberculosis.

The essence of the recently adopted sustainable development goal is that one of the important tasks facing the health system is to defeat the tuberculosis epidemic by 2030.

Disability or permanent decline in working capacity is usually observed in the elderly. Those disabled by tuberculosis are mostly middle-aged and even young. This is explained by objective reasons. This can be caused by inadequate or inadequate nutrition, alcohol abuse, drug addiction, migration processes, lack of housing or deprivation of liberty. Only a few people with TB have a permanent source of income. A certain part does not have the necessary conditions for living in general, and the main reason for this is hidden by their anti-social behavior.

Men (4-5 times more) get sick with tuberculosis compared to women, mainly because they, in turn, need to financially support the family. In most of them, the lack of family and financial opportunities deepens this process. A complete family exists only for people with disabilities, in more than half of cases they do not have the necessary means of living, in 40% of cases the income is below the subsistence minimum. 40-50% of patients are infected with tuberculosis from places of deprivation of liberty, after release they are considered disabled according to social guidelines due to lack of financial support.

A relatively small number of people with TB are medically disabled. Socially and materially well-off people suffering from this disease, working people have the right to free treatment for 10 months on the basis of a sick leave. If it is not possible to treat the disease within 10 months, this is the basis for sending the patient to a medical social examination in accordance with the law. Such disabilities make up 5% of patients.

**Death from tuberculosis**

Tuberculosis is one of the 10 leading causes of death worldwide. More than 95% of deaths from tuberculosis occur in low- and middle-income countries. Tuberculosis is the leading cause of death in HIV patients. In 2016, 40% of deaths among people living with HIV were caused by tuberculosis (WHO, 2016).

**Risk factors for the development of tuberculosis**

Anyone can get TB, but certain factors increase the risk. A healthy immune system usually effectively fights TB bacteria, but when the immune system is weakened, the body's defenses are ineffective. Certain diseases and medications weaken the immune system, including:

* HIV/AIDS
* Diabetes
* End-stage kidney disease
* Some oncological diseases
* Treatment of dangerous tumor diseases, chemotherapy
* Medicines used in organ transplants
* Medicines used to treat rheumatoid arthritis, Crohn's disease, and psoriasis
* Bad nutrition
* Younger or older.

**Prevention of tuberculosis**

Prophylaxis of tuberculosis consists of measures to prevent the transmission of tuberculosis bacilli. The main source of the disease is patients with an active form that secretes tuberculosis bacilli.

*Preventive measures against tuberculosis are carried out in the following directions:*

* Special microprophylaxis, which includes vaccination and revaccination. The main goal of special prevention is to create specific immunity. This is achieved with the help of the BCG vaccine. The biological activity of the BCG vaccine depends on its ability to live in the body, multiply at the site of vaccination, and produce an allergic response of the body, and this allows its use for the prevention of tuberculosis.

Vaccination is given to newborns on 2-5 days of life. After a few years, revaccination is carried out for the purpose of prevention.

* Prevention of tuberculosis in adults is primarily based on identification of patients and their proper treatment. Diagnosis is made by X-ray examination of the patient's chest. Every healthy person should undergo this examination twice a year. Fluorography allows to identify and treat the disease in the early stages in the preventive system of tuberculosis, and this is the main condition for success.
* Chemoprophylaxis - plays a key role in the prevention of tuberculosis. Chemoprophylaxis is an effective way to prevent disease in people at high risk of disease. Tuberculosis prevention through chemotherapy is divided into primary types, which are carried out in healthy people who are not infected with tuberculosis bacilli, but who are in contact with patients, and secondary types, which are carried out in people who have been infected with tuberculosis bacilli or have been sick before.
* Sanitary prevention includes disinfection of external environmental objects with various disinfectants, among which chemical disinfection aimed at eliminating the causative agent of the disease in external environmental objects important for the spread of the disease takes the main place. It is known that the successful conduct of chemical disinfection is directly related to following the instructions for the use of disinfectants, choosing an effective procedure (concentration, duration of action, and processing methods). 'liq.
* Social prevention is a set of measures aimed at strengthening people's health. Such measures include: improvement of people's living conditions; improving the quality of nutrition; fight against addiction to alcohol, drugs, toxicomania, smoking; teaching the population about personal hygiene rules; development of physical education and sports.

The purpose of these measures is to create unfavorable conditions for the spread of tuberculosis pathogens, to increase the natural non-specific resistance of the human body to tuberculosis bacilli.

Rehabilitation of patients with tuberculosis is an important medical and social problem, which is inextricably linked with medical and social work expertise in relation to other diseases. Medical rehabilitation is determined by the treatment of the patient and the restoration of the functioning of the respiratory and cardiovascular systems. Social-labor expertise involves restoration of working capacity, family members and colleagues' previous attitude towards the patient.

Tuberculosis belongs to the category of infectious diseases of social importance, therefore, in Uzbekistan, patients are treated for this disease free of charge. At this point, it is necessary to specify the amount of treatment paid by the state. Free diagnosis and establishment of medical supervision is provided and guaranteed by the state. The DOTS strategy has been implemented in Uzbekistan since 2005.

**WHO on tuberculosis**

Country TB data are generated automatically based on country-provided data and stored in the WHO TB Global Database. Countries can update data at any time through the WHO TB data collection system (or, for European countries, through the Collaborative Epidemiological Surveillance System). Therefore, the information shown may differ slightly from the information at the time of writing the Global TB Control Report.

In the fight against tuberculosis, WHO has six main tasks:

1. to provide global leadership on the need for critical issues in the field of tuberculosis;

2. development of policy, strategy and standards in the field of prevention of this disease on the basis of valid data and monitoring of their implementation;

3. providing technical assistance to member states, accelerating changes and creating sustainable capacity;

4. global monitoring of tuberculosis, assessment of growth in treatment, control and financing of tuberculosis;

5. to help and participate in the formation of cooperation in the fight against tuberculosis.

WHO's TB Eradication Strategy is a concept adopted by the World Health Assembly in May 2014 to end the TB epidemic by reducing TB incidence, mortality and costs. This includes the global targets of reducing TB deaths by 90% and new TB cases by 80% between 2015 and 2030, and ensuring that no family is wasted due to TB. 'includes providing.

In the recently adopted Sustainable Development Goals, one of the main goals in the health sector is to end the TB epidemic by 2030. Not limited to this, the WHO has set itself the task of reducing TB mortality by 95% and the incidence rate by 90% by 2035, which corresponds to the current situation in countries with low TB incidence.

In the strategy, 3 main components necessary for effective fight against the epidemic have been formed:

1. Component No. 1 – Comprehensive patient-centered treatment and prevention

2. Component #2 is a strong policy that supports the system

3. Component #3 – acceleration of research and innovation.

The success of the strategy depends on countries implementing the following 4 principles in each component during the implementation of the measures:

State strategic leadership and accountability, evaluation and monitoring;

close cooperation with public organizations and local residents;

protection of human rights, compliance with ethical standards and principles of justice;

adaptation of the strategy and its tasks at the country level in global cooperation.

**List of used literature**

**Main literature:**

1. Epidemiology in Public Health Practice. Annemien Haveman-Nies. ISBN : 9086861407/ https://renosf.org/book/public-health-practice/2010.
2. Principles of Public Health Practice. F. Douglas Scutchfield,William Keck. ISBN : 1418067253/2009.
3. Epidemiology for Public Health Practice. Robert H. Friis,Thomas Sellers. ISBN : 9781284221701/2020.

**Additional literature**

1. Mirziyoev Sh.M. Critical analysis, strict order, discipline and personal responsibility should be the daily rule of every leader's activity. 2017, 104 pages, "Uzbekistan" publishing house of the Press and Information Agency of Uzbekistan.
2. Mirziyoev Sh.M. We will build our great future together with our brave and noble people. 2017, 488 pages, "Uzbekistan" publishing house of the Press and Information Agency of Uzbekistan.
3. Mirziyoev Sh.M. Together we will build a free and prosperous, democratic country of Uzbekistan. 2016, 56 pages, "Uzbekistan" creative house of the Press and Information Agency of Uzbekistan.
4. Decrees and Decisions of the President of the Republic of Uzbekistan
5. Orders of SSV of the Republic of Uzbekistan
6. Primenenie metodov statisticheskogo analiza dlya izucheniya obshchestvennogo zdorovya i zdravookhraneniya. Uchebnoe posobie / pod ed. VZ Kucherenko.M.: GEOTAR - Media, 2011. - 256 str.: il..
7. Mamatkulov BM, LaMort, Rakhmanova N. Clinical epidemiology and basic evidence-based medicine, T., 2008.
8. Sh.T. Iskandarova, NM Makhmudova, GADjalilova, The main issues of public health and health care organization training manual, 2011.
9. TI Iskandarov, AA AbdufattaevPublic health andhealth care, Tashkent – 2008
10. Mamatkulov B. Public health and health management. Tashkent, "ILM ZIyo", 2013.- 576 p.
11. Mamatkulov BM Basics of Medical Statistics (Biostatistics), Tashkent, 2005, -132 p

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	2. Info@tma.uz
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