Methodical instructions for independent work of students during the preparation for the practical (seminar) class and at the class

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Social medicine, public health</th>
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</thead>
<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>The topic of the lesson</td>
<td>Public health, functions and services</td>
</tr>
<tr>
<td>Course</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>training foreign students (medical)</td>
</tr>
</tbody>
</table>

Poltava
I. Relevance of the topic:
IN THE system of values that any civilized nation holds, a special place is given to human health. Throughout the centuries-old history of mankind, great attention has always been paid to the study of health at different stages of society. Representatives of various sciences and professions have been trying to get into the mystery of the health phenomenon, to determine its essence in order to learn how to manage it, to economically use health throughout life and to find means for its preservation.

Modern physician training aims to form a specialist who is able to organically combine theoretical knowledge and practical skills in both clinical and prophylactic medicine.

Therefore, medical education, irrespective of its nature, level and orientation, must promote the formation of a young specialist in social and hygienic thinking, understanding of the role of environmental factors and social conditions of life in the emergence of various shifts in the state of health and disease, ability and illness. identify and implement various prevention measures in daily life.

2. Specific objectives:
2.1. To acquire knowledge about the health of the population, the factors that determine it.
2.2. To acquire knowledge about health statistics as a scientific discipline, its purpose, tasks, components, the value of knowledge of medical statistics for doctors of different profiles.
2.3. To get acquainted with the methodology of statistical research and the procedure for its implementation.
2.4. Be able to lay out table layouts.

3. Basic knowledge, skills, skills required to study the topic (multidisciplinary integration):

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>Obtained skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sociology</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>2. Medical biology</td>
<td>Identify basic concepts, research methods and tools used to study environmental factors and their effects on the body and health `I.</td>
</tr>
<tr>
<td>4. Anatomy</td>
<td>Identify relationships between natural phenomena.</td>
</tr>
<tr>
<td>5. Normal physiology</td>
<td>Analyze the activities of clinical departments</td>
</tr>
<tr>
<td>6. Pathomorphology</td>
<td></td>
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<tr>
<td>7. Microbiology</td>
<td></td>
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<tr>
<td>8. Pharmacology</td>
<td></td>
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<tr>
<td>9. Propedeutics of internal medicine</td>
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</tbody>
</table>

4. Tasks for independent work preparation for the class.
4.1. List of basic terms, parameters, characteristics that a student must learn in preparation for the class:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social medicine</td>
<td>a science that studies the state of health of the population and the factors that shape it, as well as substantiate the medical and social measures of the state, society and health care system in the direction of preserving, promoting and restoring health.</td>
</tr>
<tr>
<td>2. Health (WHO)</td>
<td>a state of complete physical, mental, biological and social well-being, when the functions of all organs and systems are balanced with the social environment, not just the absence of disease and physical defects.</td>
</tr>
<tr>
<td>3. Public health</td>
<td>science that studies the patterns of population health formation, organization and activities of health care organizations to develop methods to ensure the high potential of public health as a decisive factor in the development of society.</td>
</tr>
<tr>
<td>4. Evidence-based medicine</td>
<td>this is a section of medicine based on objective, scientifically substantiated facts that provide for the search, comparison, generalization and wide dissemination of the evidence obtained for use in the interests of the patient.</td>
</tr>
<tr>
<td>5. Health functions</td>
<td>provides the level of human activity in each specific period of life; creates a reserve for old age, when the adaptation and the perfection of regulation mechanisms are reduced; contributes to the harmonious functioning of the body, which manifests itself in a state of comfort.</td>
</tr>
<tr>
<td>6. Service</td>
<td>it is a particular consumption value of the labor process, expressed in a beneficial effect that satisfies the needs of the individual, the collective and the society.</td>
</tr>
<tr>
<td>7. Medical service</td>
<td>is a type of professional or economic activity of medical institutions (organizations), private entrepreneurs engaged in private legal practice, which includes the application of special health measures (which result in improvement of the general condition, functioning of individual organs or systems of the human body) or directed to achieve certain aesthetic changes in appearance.</td>
</tr>
</tbody>
</table>

4.2. Theoretical questions to the class:

1. Definition of "social medicine"?
2. Defining the concept of "public health"?
3. Definition of "health"?
4. The main tasks of social medicine?
5. What are the public health method?
6. What are the operational functions of the GZ. How much does the FGHF count?
7. Describe the function of surveillance and evaluation of the health and well-being of the population?
8. Describe the function of disease prevention, including early detection of health disorders?

4.3. Practical work (tasks) performed in class:

Contents of the topic.

Social medicine is the science of the laws of public health, the object of which is the study of the system "man-society-environment". The subject of social medicine is public health. Public health has two semantic aspects: medical and moral. The first is the priority for social medicine.

The subject of social medicine is specific living people with all social attributes: position in society, occupational employment, marital status, etc.

The main objectives of social medicine are to study the patterns of influence of socio-economic conditions, factors and lifestyle of people on the health of the population, as well as its individual groups and theoretical substantiation of an effective system of state and public measures, ways and methods aimed at eliminating the impact of harmful environmental factors, ensuring the high level of health of all members of society, increasing the period of their active creative longevity.

Public health is a science that studies the patterns of public health formation, organization and activities of a health organization to develop methods for ensuring the high potential of public health as a decisive factor in society's development.

Public Health Methods:

1. The epidemiological method is a set of methodological methods by which the causes, conditions (risk factors), mechanisms of morbidity formation among the population (aggregate, by groups, territories and time) are studied in order to substantiate preventive measures and evaluate their effectiveness.

2. Statistical method - studies the quantitative characteristics of public health, the development of public health, studies the impact on them of socio-economic factors, as well as justifies the use of statistical methods for processing and analysis of laboratory and clinical research results.

3. Historical method - allows you to study the evolution of the phenomena being studied, compared and predicted.

4. Experimental method - it is used to test new forms of health care, new types of health care facilities.

5. The method of expert assessments is the use in the study of the quality and effectiveness of medical care.

6. Sociological method - a method of obtaining sociological information, a means of object-practical transformation of the object according to the hypothesis, in controlled and controlled conditions.
7. Modeling is a method of studying phenomena and processes based on the change of a particular object of research (original) to another, similar to it (model).

8. Method of system analysis and system approach - methodology of complex system study.

*Evidence-based medicine is a section of medicine based on objective, scientifically substantiated facts that provide for finding, comparing, generalizing and widely disseminating the evidence obtained for use in the interests of the patient.*

**The Public Health Guidelines of the European Action Plan.**

Guidelines The European Action Plan (ENP) on strengthening the capacity and services of the public health system across Europe is not just a technical document. It is an action-oriented initiative, and its design and implementation reflect the values and principles that underpin Health 2020, outlining the vision and direction of health policy in Europe in the 21st century. Both the Health 2020 Fundamentals and the ENP call for a commitment to improving health and reducing inequalities through a nationwide and community-wide approach. That is, the task of improving public health involves appropriate mechanisms of strategic management, and the decision-making process is based on basic principles of human rights, social justice, partnerships and sustainable development. The ENP is one of the fundamental components of the Health 2020 policy. Key areas of activity are to strengthen and further develop and support the existing capacity and services of the public health system to improve health and reduce inequalities by influencing the social determinants of health. The unifying principle of the public health system is its inherent social character, as well as the fact that it is mainly focused on the health of the population as a whole. The public health system can be understood as a key aspect of the wider health care system and can play an important role in increasing the efficiency and effectiveness of the health care system. It is proposed to maintain the definition of "health care system", which was approved by the Tallinn Charter in 2008: "Within the political and institutional boundaries of each country, the health care system is the totality of all public and private organizations, institutions, resource structures whose purpose - improve, maintain or restore human health. Health systems include the provision of both individual and public services, as well as actions to influence the policies and activities of other sectors, with a view to giving due consideration to the social, environmental and economic determinants of health. " The health system plays a central role in managing public health and providing public health services. Thus, public health is also directly relevant to health systems, and these systems, in turn, can only be effective if they have a strong component associated with public health services. Basic Operational Functions of Public Health (FGHZ). The ten FGHFs are proposed in the form of a comprehensive list to assess the potential and services of the public health system and the actions needed to improve them. They are one of the most important public health services in the FGHZ 1–5 public health system, and cover all aspects of the FGHZ 6–10 and contribute to the FGHZ 1–5 implementation. The FGHM is not expected to be considered as 10 separate services. They can be adapted according to different
conditions and performed in groups or blocks. For example, OFHZ 1 and 2 are mainly dealing with analytical information on public health, which can be used in the process of solving problems concerning the protection and promotion of health and prevention of diseases OFHZ 3-5, while OFHZ 6-10 designed to help improve the provision of services as a whole.

The ten FGHF's are proposed in the form of a comprehensive list to assess the potential and services of the public health system, as well as the actions required for them

improvements. They are one of the most important services of the public health system (FGHZ 1–5), and they cover all aspects (FGHZ 6–10) and contribute to the implementation of FGHZ 1–5. The FGHM is not expected to be considered as 10 separate services. They can be adapted according to different conditions and performed in groups or blocks. For example, FGHZ 1 and 2 mainly relate to analytical information on public health that can be used in the process of health and disease prevention and promotion (FGHZ 3–5), whereas FGHZ 6–10 are intended to facilitate improving service delivery as a whole.

**The ten basic operational functions of public health are**:

1. Surveillance and evaluation of the health and well-being of the population.
2. Monitoring and responding to health hazards and during health emergencies.
3. Health protection, including environmental, labor, food safety and more.
4. Health promotion, including the impact on social determinants and reduction of health inequalities.
5. Disease prevention, including early detection of health disorders.
7. Provision of sufficient publicity to the public health sector.
8. Creation of stable organizational structures and ensuring their financing.
9. Outreach (advocacy), communication and social mobilization for health.
10. Promote the development of health research for the scientific substantiation of relevant policies and practices. OFGZ

Particular attention should be paid to two functions such as the surveillance and evaluation of the health and well-being of the population and the prevention of diseases, including the early detection of health disorders.

Surveillance and evaluation of health and well-being of the population
Description of the operational function: creation and maintenance of surveillance systems to monitor the incidence and prevalence of diseases, as well as health information systems for quantitative assessment of morbidity and health indicators. Other components of this operational function include assessing the health of local communities, identifying problems and inequalities in the health of specific populations, identifying needs and planning actions based on objective data. (Surveillance in the field of demographic statistics. Surveillance for infectious diseases. Surveillance for non-communicable diseases. Surveillance of social and mental health. Surveillance for maternal and child health. Surveillance in environmental hygiene. traumatism and violence - Surveillance of hospital-acquired infections - Surveillance of antibiotic resistance - Surveys of health and behavioral
aspects of health. Systematic description (mapping) revealed the inequalities in health. Integration and data analysis (including evaluation of the health of local communities) to assess needs, identify risk groups and monitoring progress in solving the problems of health care. The publication reported data for different audiences.

Health promotion, including the impact on social determinants and reduction of health inequalities. Description of Operational Function: Promoting health is the process of empowering people to increase control over their health and its determinants and thus improve their health. The process of health promotion influences the determinants of both infectious and non-communicable diseases and includes the following activities:

- Promoting a change in lifestyles, habits and environmental and social conditions to develop trends among individuals and communities, improve the health system and reduce health inequalities across the social gradient;
- Educational activities and social communication, adapted to the needs of specific socio-economic groups and designed to promote the improvement of the way of life and behavior of the population and the environment;
- Reorientation of health services to activities aimed at developing models of assistance that promote health and ensure equal access to health services;
- Analyzing the underlying causes of social inequalities in health care, including such factors as social exclusion, low income and poor access to health care and social support services;
- Development of measures of influence on social determinants of health;
- Cross-sectoral partnerships for more effective action to promote health;
- Assessing the impact of public policy on health;
- Risk communication.

Health inequities are the result of the conditions in which people are born, grow, live, work and age, that is, the social determinants of health. These include factors such as conditions in early childhood, educational attainment, economic status, employment, working conditions, housing, and the environment, as well as the availability of effective disease prevention and treatment systems. The impact on these determinants of health for both vulnerable groups and the general population is crucial to creating an inclusive, equitable, economically productive and healthy social environment.

Ways to achieve this include measures to improve health, covering all population groups with increased risk of adverse health effects in areas such as sexual health, mental health, behavior related to HIV, the fight against abuse of psychoactive substances, alcohol control, physical activity, prevention of obesity, nutrition, food safety, health threats related to work performed, prevention of injury, occupational health and the environment. Broader health promotion activities include counseling policy makers to manage health risk factors, monitor health and meet health needs, and develop strategies for different settings. These activities also include accounting for the determinants of health, especially social or socio-economic conditions that cause poor health.
A. Formation and strengthening of resilience of communities to external influences.
   4.A.2. Developing cross-sectoral partnerships with civil society to harness human capital and available material resources.
   4.A.3. Identify community resources for collaborative health promotion.
B. Health promotion measures for the entire population or for groups at increased risk of adverse health effects.
   4.C.1. Actions and services aimed at healthy eating, physical activity, the fight against obesity and its prevention.
   4.C.2. Tobacco control activities and services.
   4.C.3. Actions and services aimed at combating alcohol abuse.
   4.C.4. Actions and services aimed at and fight against substance abuse in its prevention.
   4.C.6. Activities and services related to sexual and reproductive health.
   4.C.7. Prevention and control of occupational and work-related health hazards, including measures to promote health at the workplace.
   4.C.8. Environmental hygiene activities and services.
   4.C.10. Teaching of dental hygiene rules, as well as oral care activities and services.
C. Impact on social determinants of health.
   4.C.1. Develop comprehensive cross-sectoral public health strategies that influence the social, economic, environmental and behavioral determinants of health.
   4.C.2. Strategies to reduce social inequalities in health care by influencing social determinants.
   4.C.4. Accumulation of knowledge about the links between social determinants and ultimate health outcomes, including evidence of successful interventions.
   4.C.5. Developing the capacity and competences for social inequalities in health care in the structures of the public health system.
A. Intersectoral actions
   4.O.1. Policies, strategies and special measures to facilitate the choice of a healthy lifestyle.
   4.O.2. Structures, mechanisms and processes that provide opportunities for cross-sectoral action.
   4.O.3. Assessing the health implications of the activities of all other sectors, with a view to involving them in the overall process and taking into account their contribution to health and ensuring social justice in health; the impact of all policies on health.
   4.O.4. Cross-sectoral actions, including the leadership of the Ministry of Health in ensuring that the "Consideration of Health Interests in All Strategies" approach, in
collaboration with the following Ministries: Ministry of Education; the Ministry of Transport and the Environment; Ministry of Industry; the Ministry of Labor; Ministry of Finance; the Ministry of Agriculture; other relevant ministries.

Prevention of diseases, including early detection of health problems Description of operational functions of preventing diseases targeted both communicable and non-communicable diseases and includes specific steps undertaken mostly at the individual level. This term is sometimes used in addition to operational health and promotion functions. Although the components of the content and strategies of these functions are often the same, the definition of disease prevention is given separately. Primary prevention services include the vaccination of children, adults and the elderly, as well as the vaccination or post-contact prevention of persons at risk of contracting an infectious disease. Primary prevention measures also include: providing information on behavioral or health risks to health, as well as providing counseling and action to reduce these risks at the individual and community levels; supporting systems and procedures for the inclusion of primary health care and specialized care in disease prevention programs; production and procurement of vaccines for children and adults; the creation of the necessary reserves of vaccines; production and purchase of necessary nutritional supplements. Primary prevention, related to lifestyle factors and socio-economic determinants of health, is considered within the framework of the FGH. Health promotion, including the impact on social determinants and reduction of health inequalities. Secondary prevention includes activities such as the implementation of evidence-based screening programs for early diagnosis of diseases, maternal and child health programs that provide for screening and prevention of birth defects; production and purchase of chemoprophylaxis; production and procurement of screening tests for early diagnosis of diseases; capacity building to meet both current and future needs. Tertiary prevention includes rehabilitation of patients with already developed diseases in order to minimize residual disabling consequences and complications, as well as to maximize the life of a full life, improve the quality of life of the patient, even though it is not possible to recover completely. In this context, disease prevention is seen as an activity aimed at individuals and populations that exhibit different types of risky behavior.

Primary prevention:
   a) vaccination programs for the following groups: children; adults; seniors; vaccination or post-contact prophylaxis for those at risk of contracting an infectious disease.
   b) providing information on behavioral and medical health risks.
   c) systems and procedures for the inclusion of primary health care and specialized care in disease prevention programs.
   d) the availability of sufficient facilities to produce and purchase vaccines for children and adults, as well as iron preparations, vitamins and food supplements.
   e) behavior change campaigns and social marketing.

Secondary prevention:
a) scientifically sound screening programs for early diagnosis of diseases, including programs for screening and prevention of birth defects.

b) availability of adequate facilities for the production and procurement of screening tests.

Tertiary prevention:
   a) rehabilitation programs and knocking chronic pain.
   b) the availability of patient support groups.

Outreach (advocacy), communication and social mobilization for health.

Description of the Operational Function: Communication in the health sector is aimed at improving health literacy and improving the health of individuals and the general population. It is the art and technique of informing, influencing and motivating individuals, audiences, organizations on important issues and determinants (factors) of health. Communication is also intended to increase the ability to access, understand and use information to reduce the risk of disease emergence and prevention, health promotion, guidance in and use of health services, promotion of health policies and wellbeing, quality of life and improving the health of people within the community.

Health communication covers a range of areas, including journalism, entertainment, education, interpersonal communication, media outreach, organization-level communication, risk and crisis communication, social communication and social marketing. It can take many forms, such as multimedia and interactive (including mobile and online) communications, as well as more traditional communications using different channels depending on the cultural characteristics of a particular society (interpersonal communication, mass channels or covering only small groups, radio, television, newspapers, blogs, bulletin boards, video sharing, mobile phone posts, and online forums). Health communication enables society to counteract the active promotion of harmful products (such as tobacco) and unhealthy lifestyles. It is a two-way information sharing activity that requires the ability to listen, gather information and find out how people perceive and formulate health messages in order to convey information in a more accessible and compelling way. An element of communication in the field of public health is also the transparency necessary for the public to understand what is being done and what is being done on its behalf.

9.1. Provide strategic and systematic healthcare communication, taking into account the perceptions and needs of different audiences across the social gradient.

9.2. Risk communication.

9.3. Informed dialogue between different audiences on the use of available formats and channels of communication.

9.4. Outreach (advocacy) aimed at the development and implementation of policies that take into account health interests, as well as the environment - across all public sectors (taking into account health interests in all strategies).

9.5. Training of public health communication personnel and capacity building of relevant organizational and human resources.

9.6. Evaluation of communication in the field of public health.
9.7. Exchange of experience between countries.
9.8. Evidence to support outreach.
9.9. Communicate policy options.

**Materials for self-control:**
Self-control tasks:
1. Choose the characteristic that best describes public health:
   (a) Public health takes care of health at a population level that includes different populations;
   (b) public health takes care of individual health;
   (c) public health is exclusively concerned with infectious diseases such as HIV/AIDS and tuberculosis;
   (d) Public health is one of the areas of medicine exclusively concerned with surveillance.
   e) public health at all probable levels.
2. Public health approaches include the following:
   a) a description of the problem and identification of the cause and the choice of the best solutions to solve the problem;
   b) a description of the reasons;
   c) a description of the problem;
   d) a description of the problem and the underlying cause;
   e) none of the above answers.
3. Choose the term until the next definition in the Concept of development of the public health system of approved CMU Order №1002 from 11/30/16
   a) the principle of joint and several liability;
   b) the interdependence and accountability of certain territorial communities, communities, families and individuals for their activities or inactions in achieving and maintaining the highest level of health;
   c) the principle of achieving fairness in health;
   d) the principle of a holistic approach to health;
   e) the principle of fairness;
4. In accordance with WHO's 2020 Health Strategies, select the priorities that are the priority for achieving the goal of the Health for All strategy:
   a) addressing the most pressing problems of the region, both infectious and non-communicable diseases;
   b) establishment of stable organizational structures;
   c) ensuring the safety of the environment;
   d) health research;
   e) all the answers given above;
5. Which of the following definitions was proposed by Charles Winslow in 1920?
   (a) Public health is the science and art of preventing disease, continuing life and promoting health through the organized efforts of society;
   b) public health is first and foremost the health of the entire nation;
c) Public health - defined as a set of tools, procedures and measures implemented by public and non-governmental institutions to promote public health.

6. What are the main operational functions of public health?
   a) 10
   b) 12
   c) 8
   d) 13
   e) 7

7. The principles of public health system formation, including the principles of achieving health justice, are defined in Ukraine in:
   a) the concept of development of the public health system;
   b) the Law of Ukraine “On the Public Health System”;
   c) the law of Ukraine “on ensuring the sanitary and epidemiological well-being of the population”;
   d) the law of Ukraine “the basics of healthcare legislation”;
   e) the concept of social development.
Ministry of Health of Ukraine
Ukrainian Medical Stomatological Academy

Approved at the meeting of the Department of Social Medicine, Public Health, Healthcare Organization and Economics, with medical expertise «08 » January 20 20 r. Minutes № 13 of "08" January 2020 y. head. departments ___________ Golovanov IA

Methodical recommendations
for independent work of students to preparation
for a practical lesson and on the lesson

<table>
<thead>
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<th>Educational discipline</th>
<th>Social medicine, public health</th>
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<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>Topic</td>
<td>Public health. Assessment of the health and welfare of the population. Methods of studying and assessing factors affecting the health of the population</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
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</tbody>
</table>

Poltava-2020
1. **Relevance of the topic** The problem of preserving and strengthening the health of the population has always been one of the key issues in society. The health of a nation is an indicator of the state’s civilization, reflecting the level of its socio-economic development, the main criterion of expediency and effectiveness of all spheres of human activity. Now in Ukraine, the trend of deterioration in the health of the population has become an alarming level. This is due to the impoverishment of a significant part of the population, environmental degradation, the spread of health, destructive behavioral stereotypes, a decrease in the availability of high-quality medical services, and the health of the costs of the modern education system. Of particular concern is the state of health of children, school and student youth.

2. **Specific goals:**
   Know
   • essential characteristics of health;
   • individual health assessment criteria and public health indicators;
   • disease risk factors;
   • basics of modern health theory;
   Be able:
   • to calculate medical and demographic indicators, morbidity and disability indicators;
   • assess the state, patterns and dynamics of public health;
   • evaluate key indicators of public health;
   • assess the impact of socio-economic and biological determinants on health, their trends across different populations, and identify risk;
   • identify health inequalities caused by social determinants and develop appropriate measures to reduce them.
   Own:
   • systematic approach to solving health problems;
   • skills in researching medical and social problems in modern society.

3. **Basic knowledge necessary for studying the topic (interdisciplinary integration)**

<table>
<thead>
<tr>
<th>Disciplines</th>
<th>Acquired knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medical biology</td>
<td>Conduct an analysis of sociological research Identify the basic concepts, methods and means of research that are used to study environmental factors and their effects on the body and human health. Conduct a statistical study. Identify links between natural phenomena. Analyze the activities of clinical departments</td>
</tr>
<tr>
<td>Biological physics and chemistry.</td>
<td></td>
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<tr>
<td>Normal physiology</td>
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<tr>
<td>Morphology</td>
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<td>Propedeutics of internal diseases</td>
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</table>
Hygiene and ecology

Information communication in the system "Public Health - Environment" to identify the relationship between natural phenomena.

Social medicine and health care

Organization of dental care to the public. Communication of public health risk factors with observed actual characteristics of individual and public health. Evaluate the organization of health care and its performance. Assess the relationship of the clinical and organizational aspects of public health services in health care facilities.

### 4. Tasks for independent work of preparation for the occupation.

#### 4.1. The list of key terms, parameters, characteristics which the student needs to learn while preparing for the class:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1. Health</td>
<td>a state of complete social, mental and biological well-being, and not only the absence of disease and physical defects.</td>
</tr>
<tr>
<td>2. Risk factors</td>
<td>These are potentially hazardous factors of behavioral, biological, genetic, ecological, social, environmental and occupational factors that increase the likelihood of developing diseases, their progression and adverse outcome.</td>
</tr>
<tr>
<td>3. Types of risk factors</td>
<td>endogenous, controlled, exogenous, uncontrollable</td>
</tr>
<tr>
<td>4. Medical factors</td>
<td>vaccinations against infections, medical examinations, quality of treatment</td>
</tr>
<tr>
<td>5. Socio-economic</td>
<td>working conditions, level of qualification, income, its size, level of education, recreation, etc.</td>
</tr>
<tr>
<td>6. Human Development Index</td>
<td>integral indicator calculated annually for cross-country comparison and measurement of the standard of living, literacy, education and longevity as the main characteristics of the human potential of the study area</td>
</tr>
</tbody>
</table>

### 4.2. Theoretical questions to the lesson:

1. Define the concept of "health" of a person
2. Individual approach in terms of the health of the individual.
3. An integrated approach to the definition of the concept of "health" of the population.
4. The complex of medical indicators characterizing the health of the population
5. Risk factors floating on human health.

### 4.3. Practical tasks that are performed in the lesson:

A task
Make a chart of the following.
Typical diseases of students in grades 6-9 (%):  
Caries - 20.4-22.4  
Violation of posture - 11.4-1.2  
Injuries, burns - 4.6-5.7  
Diseases of the nervous system - 1.8-3  
Visual impairment - 18  
ORVI -30  
Overweight – 38

Content:  
Human health in the WHO charter is treated as a state of complete social, mental and biological well-being, and not only the absence of diseases and physical defects.

Human health is determined by a complex of biological (hereditary and acquired) and social factors. The latter are so important in maintaining the state of health or in the emergence and development of the disease, in the preamble of the statute of the World Health Organization it is written: "Health is a state of complete physical, spiritual and social well-being, and not just the absence of diseases and physical disabilities." This definition of the concept of "health" is the most clear, understandable, complete and contains, above all, the biological, social and psychological aspects of this problem. The definition of health is broad and cannot be covered by one indicator. On the positive side, public health can be estimated in terms of life expectancy at birth (or upon reaching any age) — the number of years a child will live if the level of mortality in age groups does not change. The average life expectancy depends on the gender of the person - the biological discrepancy between men and women is 4-5 years. The problem of preserving human health has been given great attention by scientists throughout the history of mankind. In ancient times this work was devoted to the works of Hippocrates, Democritus, Aristotle, Galen and other scientists.

The origins of the concept of health lie in the depths of the centuries. Even in ancient times, our ancestors, distinguishing the state of health and disease, in every way sought to preserve health and avoid disease. Hippocrates (the founder of scientific medicine), in addition to physical exercises, widely used massage, water procedures, diet food in its activities. The priority principles in the activities of Hippocrates was the use of recreational means of nature.

Another ancient Greek scientist, Aristotle, taught that human health depends on the placement of the dense and indivisible parts that make up the body. Based on his considerations, Aristotle created a solidary theory of health. Reflecting on health, Socrates concluded that health is not everything, but everything without health is nothing.

It should be noted that in the history of the development of knowledge about health and methods for improving it, two directions can be traced, which differ significantly in both the theoretical basis and the methodology. One of them is characteristic of the western, the second - for the eastern civilization.
From the point of view of individual health, that is, an individual approach, there can be two options.

The first is a theoretical one, if one defines health as a theoretically possible ideal to which one should strive, but in fact it is difficult to achieve. In this regard, the definition given by the World Health Organization (WHO) is the most appropriate: “Health is a state of complete social, biological and psychological well-being, when the functions of all organs and systems are balanced with the environment, there are no diseases, illnesses and physical defects.”

The second option is practical when it is necessary to give an answer, a healthy or sick one or another person. The main thing is the ability of the body to fully perform its biological and social functions."

When it comes to population health I, that is, the health of the population and its individual groups, we must bear in mind that there is no single criterion by which to determine the health status of the population, for example, region, country, city, district, region. In this case, in world statistics it is customary to use an integrated approach to the definition of the concept of "health" of the population. By this they understand a conditional statistical concept, it is quite fully characterized by a set of indicato demographic (fertility, mortality, average life expectancy);

1. physical development;
2. morbidity;
3. disability;
4. frequencies of prenosological conditions.

The risk factors for public health occurring in the environment of Ukraine are diverse. The health effects of many pollutants can be linked to other factors (smoking, alcohol, economic problems). This negative impact on health is not always sufficiently studied, but today there is no doubt that environmental pollutants can increase the number of diseases of the respiratory system organs, tumors of various localization, some congenital anomalies, etc., and also worsen state of health. It is known that in order to assess the effects of the adverse effects of environmental factors on health, the following are taken into account: - the biological effect of the harmful factor; - the degree of distribution; - factor stability in the time space; - The size of the population groups, which in varying degrees, are under negative influence.

For a comprehensive assessment of the health status of the population, as a rule, generalized health indices are used, which integrate a number of indicators. The use of indices makes it possible to quantitatively describe the state of public health, taking into account various aspects and factors influencing its formation. The essence of the comprehensive health index is that the numerous isolated indicators characterizing the health of the population are replaced by one. Ideally, a comprehensive population health index should include information on all aspects of health and factors influencing its formation. As a rule, a number of the following requirements are included in the calculation of complex population health indicators: 1) data availability (the more complex and informative the indicator, the more problematic is the formation of the required database); 2) quality, which must be guaranteed by the reliability and completeness of the data used to calculate the index;
3) reproducibility by different specialists; 4) specificity (display of changes only in those phenomena, the reproduction of which) 5) sensitivity to changes (with time, the importance of the influence of various factors changes) 6) hierarchy (a single principle for all hierarchical levels).

To characterize health use three main groups of health indicators:
- The first group is medical records.
- The second group - indicators of social well-being.
- The third group - indicators of mental well-being.

The first group, that is, the group of medical indicators include the following:
1) incidence;
2) mortality (total and infants)
3) physical development;
4) disability.

The second group - indicators of social well-being includes:
1) the demographic situation;
2) the state of the environment;
3) lifestyle;
4) the level of medical care;
5) social and hygienic indicators.

The third group - indicators of mental well-being include: 1) the incidence of mental illness;
2) the frequency of neurotic states and psychopathy;
3) psychological microclimate.

It should also be noted that the World Health Organization (WHO) has developed a list of criteria for social well-being. This list includes:
1) the percentage of gross national product that is spent on the needs of health care;
2) the availability of primary health care;
3) coverage of the population with safe water supply;
4) the percentage of people who were immunized against six infectious diseases that are particularly common among the population: diphtheria, whooping cough, tetanus, measles, polio, and tuberculosis.
5) the percentage of women serving qualified personnel during pregnancy and childbirth;
6) the percentage of children born with low birth weight (less than 2500 g);
7) average life expectancy;
8) the level of health literacy of the population.

Integral assessment of the health status of the population involves conducting research in several stages.

At the first stage, we obtain information on indicators characterizing the state of health of the population (for example, on the level of morbidity, mortality, disability, or physical development) from various sources of information.
These sources of information can be:
1. official reports of medical, sanitary and preventive institutions, health authorities, social welfare, state statistics, civil status registration office (ZAGS)
2. the results of retrospective and prospective studies in medical institutions;
3. data of medical examinations of the population;
4. results of medical and sociological research - surveys, population surveys;
5. the results of mathematical modeling and forecasting.

At the second stage - it is necessary to give an integral assessment of the level of health, summarizing all the indicators.

To do this, conduct a conceptual (qualitative) analysis and mathematical-statistical (quantitative) analysis.

A consequence of the conceptual analysis is the distribution of the population into health groups.

The criteria for dividing into health groups are as follows:
1. the presence or absence of a chronic disease;
2. body resistance;
3. level of physical development;
4. compliance with morpho-functional parameters.

For example, the distribution of the population according to its state of health, which was developed at the Institute of Social Hygiene and Public Health Organization named after MA Semashko, associated with the registration of the presence or absence of chronic diseases during the inspection, the following: The first group is healthy people.

The second group is healthy people with functional and some morphological abnormalities.

The third group - patients with a long course of chronic disease while maintaining the functional capabilities of the body (compensated state).

The fourth group - patients with a long course of a chronic disease or a person with physical disabilities, developmental defects, a consequence of injuries, with reduced functional capabilities of the body (subcompensated state).

The fifth group - seriously ill (decompensated state).

Assessment of the health status and trends of the population is a prerequisite for effective scientifically based health system activities, serves as a basis for planning treatment and preventive measures, developing organizational forms and methods of work of health authorities and institutions, as well as for monitoring the effectiveness of their activities in maintaining and promoting health. population. All this leads to the inextricable link of health indicators with the volume and nature of health care to the population and ultimately making adequate management decisions.

So-called risk factors play an important role in shaping the level of public health. The risk factor for illness or death is an endogenous or exogenous adverse effect on the body, increasing the likelihood of a disease or death. These factors are quite numerous, conditionally they can be divided into endo and exogenous.

Factors affecting health can be divided into 4 large groups:
- Lifestyle;
- biological;
- state of the environment;
- volume and quality of medical

The intensity of the impact of these groups of factors varies considerably

1. Lifestyle - smoking, unhealthy diet, alcohol abuse, harmful work, stress, physical inactivity, poor life, drugs, incomplete or large families, hyper-urbanization - the percentage of influence on human health in percent is 51-52%

2. Environment - polluted air, water, food, soil, radiation level, electromagnetic fields - the percentage of influence on human health is 20-21%

3. Biological factors of heredity, constitution, gender, age - the percentage of influence on human health in percentage is 19-20%

4. Medical factors of vaccination against infections, medical examinations, quality of treatment - the percentage of influence on human health in percentage is 8-9%

The first place on the impact on the health of the population in modern conditions is played by lifestyle factors, they account for more than 50 percent. Such ways as the standard of living (structure, level of material security per person), quality of life (measured parameters characterizing a person’s material security), lifestyle (psychological, individual behavioral characteristics), lifestyle (national, social order, life, culture). Among the leading factors of lifestyle that adversely affect health, the following should be mentioned: smoking, unhealthy diet, alcohol abuse, harmful working conditions, stress, physical inactivity, poor material and living conditions, drug use; fragile, incomplete or large families; excessive levels of urbanization and the like.

Biological factors (gender, age, heredity, constitution) are in second place in terms of their impact on health. They account for about 20 percent. The third place is occupied by environmental factors (air, water, food, soil, radiation level). The impact of these factors is about 20 percent. Finally, purely medical factors - treatment-and-prophylactic and sanitary-anti-epidemic measures (vaccinations against infectious diseases, quality of treatment and examination of patients, etc.) - determine the state of health by 10 percent
Materials for self-monitoring:

A. Materials for self-monitoring:
   1. Of the following categories of lifestyle to a greater extent affects individual health:
      A. Living conditions;
      B. Quality of life;
      C. Lifestyle;
      D. Purpose of life;
      E. Longevity.
   2. Which of the following groups are related to physical factors affecting the state of human health:
      A. Air pollution, water, soil, food, noise, electromagnetic fields, radiation;
      B. Labor, family, personal, cultural relations, psycho-emotional effects;
      C. Political change, unemployment, lack of time;
      D. Burdened heredity, malformations;
      E. Social and family relationships.
   3. Which of the following groups are related to social factors affecting the state of human health:
      A. Air pollution, water, soil, food, noise, electromagnetic fields, radiation;
      B. Labor, family, personal, cultural relations, psycho-emotional effects;
      C. Political change, unemployment, lack of time;
      D. Burdened heredity, malformations;
      E. Family Relations.
   4. Social health is:
      A. The state of the organism, which determines the ability of a person to contact with society;
      B. The state of the body, providing adequate intellectual, emotional and conscious-volitional interaction of the organism with the environment;
      C. The state of the organism, in which the indicators of the basic physiological systems lie within the physiological norm;
      D. The state of the organism, in which the indices of the main physiological systems change adequately when a person interacts with the external environment;
      E. no right answer.
   5. The general definition of "individual" health (according to WHO) corresponds to the following definition:
      A. The state of complete physical, mental and social well-being, not only the absence of disease,
      B. A condition characterized by the absence of disease, physical defects and premorbid conditions,
      C. State of well-being, due to the absence of diseases and pathological conditions,
      D. A condition characterized by the absence of disease
      E. Lack of pathological conditions of the body while maintaining well-being

B. Tasks for self-control:
One cigarette destroys 25 mg of vitamin C. It is known that if a person has been in a smoky room for 1 hour, then this is equivalent to 4 smoked cigarettes. How many people lost vitamin C if he stayed in a smoke-filled room for 2 hours?
Answer: 200 mg
Methodical instructions for independent work of students during the preparation for the practical (seminar) class and at the class

<table>
<thead>
<tr>
<th>Educational discipline</th>
<th>Social medicine. Health care organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>Topic</td>
<td>Subject and the contents of demography, parameters of health</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Departmen</td>
</tr>
</tbody>
</table>

Poltava
1. Relevance of the topic
Medical demography - examines the relationship of reproduction of the population with social and hygienic factors and develop on this basis, medical and social measures aimed at ensuring the most favorable development of demographic processes and improve public health.

Population (population) - a set of people united by a common living within a given territory.

The statistical study of population conducted in two main directions:
1) the population at some point in time, ie, its static (structure of the population being studied on such basic characteristics as gender, age, occupation, marital status, nationality, language, education, etc.)
2) changes in the number of the population, ie its dynamics, movement.

2. Specific objectives:
Mastering the methods of calculation of demographic indicators, the analysis of the demographic situation and the development of measures for its improvement

3. Basic knowledge, abilities, skills, necessary for studying the topic (interdisciplinary integration):

<table>
<thead>
<tr>
<th>Names of disciplines</th>
<th>These skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of medicine</td>
<td>Stages of development of medical knowledge</td>
</tr>
<tr>
<td>Sociology</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>Medical biology</td>
<td>Identify basic concepts, methods and research tools that are used to determine the factors affecting the body and health.</td>
</tr>
<tr>
<td>Biophysics and biochemistry</td>
<td>Identify and analyze the relationship between natural phenomena.</td>
</tr>
<tr>
<td>Health</td>
<td>Know Classification of Diseases ICD-10.</td>
</tr>
<tr>
<td>Normal physiology</td>
<td>Knowing the structure of hospitals and health care volume which is therein</td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td></td>
</tr>
</tbody>
</table>

4. Tasks for independent training to employment

4.1 A list of key terms, parameters, characteristics that share-wives know the student in preparation for the class:

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statics population</td>
<td>The population at some point in time</td>
</tr>
<tr>
<td>Present population</td>
<td>Persons in time of the census in the territory.</td>
</tr>
<tr>
<td>Resident population</td>
<td>Persons permanently residing in the territory.</td>
</tr>
<tr>
<td>Population dynamics (movement)</td>
<td>Changing the number of population</td>
</tr>
<tr>
<td>Demographic burden</td>
<td>It determines the number of different ratios of aggregated age groups: children (0-14 years old), the elderly and old (60 years and older), able-bodied (conventionally 15-59).</td>
</tr>
<tr>
<td>Migration</td>
<td>Movement of people associated with the location change.</td>
</tr>
<tr>
<td>The annual birth rate</td>
<td>The ratio of the number of live births per year to the total population;</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The annual mortality rate</td>
<td>The ratio of the number of deaths for the year to the total population.</td>
</tr>
<tr>
<td>Rate of natural increase</td>
<td>The ratio of the difference between the number of births and deaths for the year to the total population (or the difference between the birth rate and mortality rate);</td>
</tr>
<tr>
<td>Gross ratio</td>
<td>The number of girls born per woman on average, for the entire fertile period of life.</td>
</tr>
<tr>
<td>Net factor</td>
<td>– net reproduction rate of the female population, showing the average number of girls born per woman during her lifetime, have survived to the age of the mother at the time of their birth while maintaining at each age level fertility and mortality rates of the period.</td>
</tr>
<tr>
<td>Live-born</td>
<td>A fruit weighing 500 grams or more at birth (which corresponds to approximately 20 weeks of pregnancy) with any of the following signs of life: respiration, heartbeat, pulsation of the umbilical cord, muscle contraction of voluntary movements.</td>
</tr>
<tr>
<td>Antenatal period</td>
<td>With 22 weeks (154 hours) of fetal development before birth.</td>
</tr>
<tr>
<td>Intrapartum period</td>
<td>Delivery period.</td>
</tr>
<tr>
<td>Postnatal</td>
<td>The first 168 hours of life (Week)</td>
</tr>
<tr>
<td>Perinatal period</td>
<td>With 22 weeks of fetal development up to seven days of life</td>
</tr>
</tbody>
</table>

**4.2. Theoretical questions to the lesson:**
1. What studies demography
2. What indicators characterize static population
3. What indicators characterize the natural movement of the population?
4. birth statistics (indicators).
5. Mortality statistics (indicators and benchmarks).
7. Types of migration.
8. The method for calculating the coefficients of the natural movement of the population.
9. Types of population
10. The types of infant mortality

**4.3. Practical tasks are performed in class:**
A task. According to the situational problem to analyze demographics.
5. CONTENT OF THE TOPIC:

Among public health parameters of the most important place is occupied by medical and demographic indicators that best represent the range of affect population health factors, socio-economic, political, behavioral, natural-climatic and environmental origin, and therefore are the most adequate measuring instruments of national well-being and public health. Analysis of the dynamics of demographic processes suggests a negative and tense situation in the beginning of the new century in the country and the Stavropol region. Under these conditions, physicians need to be able to analyze the root causes of the current demographic situation and develop measures to improve it.

Demographics - the science of population.

Population (population) - a set of people united by a common living within a given territory.

The statistical study of population conducted in two main directions:

1) population at some point in time, ie, its static (structure of the population being studied on such basic characteristics as gender, age, occupation, marital status, nationality, language, education, etc.)

2) changes in the number of the population, ie its dynamics, movement.

There are: - mechanical movement of the population (under the influence of changes in migration processes), and the natural movement of population (changes in the population of the territory as a result of interaction between the main demographic phenomena. By birth and death rates are vital as marriage and divorce).

Statics population.

The main source of information on the size of the population census are (complete count of the population). In the period between the censuses conducted random socio-demographic research.

The age structure of the population, corresponding to the three types

<table>
<thead>
<tr>
<th>Type of the age structure</th>
<th>The proportion of the age group in the general population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>to 14 years</td>
</tr>
<tr>
<td>Progressive</td>
<td>30</td>
</tr>
<tr>
<td>Station</td>
<td>25</td>
</tr>
<tr>
<td>Regressive</td>
<td>20</td>
</tr>
</tbody>
</table>

Demographic burden

There are the following demographic load indicators: the ratio of the number of children or the elderly (or the total number of children and the elderly) to the number of people of working age; the ratio of the number of old people and children.

Classification societies depending on the degree of population aging

<table>
<thead>
<tr>
<th>Group</th>
<th>the proportion of persons aged 60 years and older</th>
<th>group characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To 8</td>
<td>demographic youth</td>
</tr>
<tr>
<td>2</td>
<td>8-10</td>
<td>threshold of aging</td>
</tr>
<tr>
<td>3</td>
<td>10-12</td>
<td>proper aging</td>
</tr>
<tr>
<td>4</td>
<td>12 and larger</td>
<td>demographic aging</td>
</tr>
</tbody>
</table>
Population dynamics.
Mechanical movement of the population is a result of migration. Migration - a movement of people associated with the change of residence. Migration is divided into irrevocable (with the constant change of permanent residence), temporary (resettlement for a limited time), seasonal (move in certain periods), the pendulum (commuting to work, school). Also isolated - internal migration or emigration and immigration - external migration. External migration is associated with crossing the state border.

Medical value:
- Urbanization alters the structure of morbidity and mortality, impact on the epidemic situation leads to illegitimate births;
- Commuting increases the number of contacts that contribute to the spread of infectious diseases, leading to increased stress diseases, injuries;
- Seasonal migration leads to uneven seasonal load of health care institutions;
- Indicators of the health of migrants differ from indicators of health of the indigenous population.

Natural movement of population.
Indicators of the "natural" movement, usually expressed per 1000 population, are:

Fertility rate
Among the factors that have an impact on fertility, are: social status of women, their employment in production, the level of material well-being, cultural level, housing, pensions, national characteristics, psychological and religious factors, the demographic policy of the state.

\[
\text{Birth Rate} = \frac{\text{the number of live births per year}}{\text{average annual population}} \times 1000
\]

For in-depth you need to know the characteristics of the birth rates of overall and age-specific fecundity (fertility). fertility rate is the ratio of live births to the number of women of childbearing age (15-49 years), multiplied by 1000.

\[
\text{Fertility Rate} = \frac{\text{the number of live births per year}}{\text{the number of women aged 15 to 49 years}} \times 1000
\]

The mortality rate - the ratio of the number of deaths for the year to the total population;

\[
\text{the number of dying per year}
\]
Mortality among the most important demographic indicators characterizing the health status of the population. Medical causes of death registration is the responsible doctor's function. In our country, in the cities introduced compulsory registration of causes of death. Medical death certificate is a legal and medical document certifying the fact and cause of death.

In recent years, the overall mortality rate tends to increase. Noteworthy is the sharp increase in the death rate of men of working age. In the analysis of mortality rates, along with the general, special factors are calculated taking into account age, gender, profession, and so on. D.

Rate of natural increase - the ratio of the difference between the number of births and deaths for the year to the total population (or the difference between the birth rate and mortality rate);

\[
\text{RATE OF NATURAL INCREASE} = \text{BIRTH RATE} - \text{MORTALITY}
\]

Maternal mortality - mortality is caused by pregnancy, irrespective of the duration and location of death occurring within 42 days of pregnancy and after her graduation from any cause related to pregnancy or aggravated by its management.

The number of deaths of pregnant women, pregnant women who gave birth within 42 days after delivery

\[
\text{Maternal mortality} = \frac{\text{the number of live births}}{100000}
\]

**Exemplary levels of fertility, general and infant mortality rate (per 1,000 population)**

<table>
<thead>
<tr>
<th>Indicator <code>level</code></th>
<th>Birthrate</th>
<th>Coefficient of total mortality</th>
<th>The infant mortality rate per 1,000 live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>To 10</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>11-15</td>
<td>До 10</td>
<td>До 14</td>
</tr>
<tr>
<td>Below the average</td>
<td>16-20</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>21-25</td>
<td>10-15</td>
<td>15-50</td>
</tr>
<tr>
<td>Above average</td>
<td>26-30</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>31-40</td>
<td>16-20</td>
<td>51-75</td>
</tr>
</tbody>
</table>
Very high | 41 and more | 21 and more | 76-100  
---|---|---|---
Extremely high | - | - | 101 and more

Child mortality:

<table>
<thead>
<tr>
<th>Mortality</th>
<th>period of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant mortality (The most sensitive indicator of the demographic)</td>
<td>early neonatal</td>
</tr>
<tr>
<td></td>
<td>late neonatal</td>
</tr>
<tr>
<td></td>
<td>neonatal</td>
</tr>
<tr>
<td></td>
<td>postneonatal</td>
</tr>
<tr>
<td>Perinatal mortality</td>
<td>perinatal period: antenatal (with 154 hours of intrauterine life before birth), intrapartum (childbirth), postpartum (the first 168 hours of life)</td>
</tr>
<tr>
<td>Dead birth</td>
<td>antenatal +intrapartum</td>
</tr>
</tbody>
</table>

1. Clinical formula for calculating the infant mortality rate =

   \[ \text{The number of children who died in the first year of life} \times 1000 \]
   
   \[ \text{The number of live births} \]

2. Mladenets mortality WHO formula =

   \[ \text{The number of children died at the first year of the generation of current year} + \frac{\text{the number of children who died in the first year of life}}{\text{the number of live births this year}} \times 1000 \]
   
   \[ \text{Number of live births last year} \times \frac{\text{the number of children who died in the generation last year}}{\text{Number of live births last year}} \]

EXAMPLES OF CALCULATION OF INDICATORS:

Task №1.
In the city and in 2005 population of 60,000 people.
born 1200 people.
360 people died.
The fertility rate = \( \frac{1200 \times 1000}{60000} = 20\% \)
Mortality rate = \( \frac{360 \times 1000}{60000} = 6\% \)
Rate of natural increase = \( \frac{(1200-360) \times 1000}{60000} = 14\% \)
(20% 0 - 6%)
MATERIALS FOR SELF-CONTROL:
1. Tests (presented in Appendix).
2. Control questions.
3. Case studies (presented in Appendix).
Methodical instructions
for independent work of students during preparation
to practice and to class

<table>
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<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>Topic</td>
<td>Maternity and children’s hospitals:</td>
</tr>
<tr>
<td></td>
<td>organization, working content, analysis</td>
</tr>
<tr>
<td></td>
<td>and accounting of activity</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department</td>
</tr>
</tbody>
</table>

Poltava
1. Relevance of the topic:
Maternity homes are designed to provide qualified inpatient care for women during pregnancy, during labor and delivery, postpartum, gynecological diseases and to care for newborns during their stay in the maternity hospital. It is necessary to elaborate on the hygienic requirements for their planning, equipment, and content.

It should be noted that the structure, equipment and organization of maternity must strictly comply with the requirements for health facilities.

It is hard to overestimate the importance of proper planning of generic contracts and evaluation in order to optimize the provision of care for women and newborns.

2. Specific objectives:
2.1. Know the objectives, structure, content and organization of prenatal and maternity hospital.
2.2. To be able to calculate and analyze the performance of the women's consultation and maternity hospital.

3. Basic knowledge, abilities, skills, necessary for studying the topic (interdisciplinary integration):

<table>
<thead>
<tr>
<th>Names of disciplines</th>
<th>These skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of medicine</td>
<td>Stages of development of medical knowledge</td>
</tr>
<tr>
<td>Sociology</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>Medical biology</td>
<td>Identify basic concepts, methods and research tools that are used to determine the factors affecting the body and health.</td>
</tr>
<tr>
<td>Biophysics and biochemistry</td>
<td>Identify and analyze the relationship between natural phenomena.</td>
</tr>
<tr>
<td>Health</td>
<td>Know Classification of Diseases ICD-10.</td>
</tr>
<tr>
<td>Normal physiology</td>
<td>Knowing the structure of hospitals and health care volume which is therein</td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td></td>
</tr>
</tbody>
</table>

4. TASKS FOR INDEPENDENT TRAINING TO EMPLOYMENT
4.1. A list of the main terms of parameters, characteristics which the student need to learn

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternity hospital</td>
<td>Therapeutic and preventive uchre-occur during the Ministry of Health system that provides obstetric and gynecological care for pregnant women, new mothers and medical assistance conditional, but the births of children. Maternity hospitals in the cities have obstetric and gynecologic hospital and antenatal clinic.</td>
</tr>
<tr>
<td>suckling</td>
<td>Age 1 year of life index</td>
</tr>
<tr>
<td>The neonatal period</td>
<td>The period from birth up to 28 full</td>
</tr>
</tbody>
</table>
The early neonatal period
- The period for the first 7 days or 168 hours after birth

intrapartum period
delivery period

antenatal period
- From 28 weeks of pregnancy until the onset of labor

States obstetricians and gynecologists
- One post doctor at the 3300 female population

Child
- The age from birth to 17 years, 11 months and 30 days

Suckling
- Age 1 year of life index

The neonatal period
- The period from birth up to 28 full days after birth

Early neonatal period
- The period for the first 7 days or 168 hours

4.2. Theoretical questions to the lesson
1. Which institutions provide medical care for pregnant women?
2. Officials who carry out management of the maternity home. The functions and responsibilities.
3. The main objectives of the women's clinic
4. Division of antenatal
5. The contents of medical care gynecological patients
6. The structure of the hospital maternity ward
7. The main duties of the midwife
8. The main duties of the head of the hospital and doctor's obstetric (gynecological department)
9. Basic Documentation antenatal clinic and hospital
10. Main indicators of women's clinic and hospital.
11. Which institutions provide medical and preventive care for children?
12. The main objectives of the district pediatrician
13. The medical care in school establishments
14. The essence of the preventative work
15. Features of the structure of children's hospital
16. The main accounting and reporting documentation
17. Main indicators of child health clinics
18. The main indicators of the children's hospital activities
19. Child Health Groups
20. Features of the organization of follow-up.

4.3. Practical works that are performed in class:
A task. Post an integrated assessment of the maternity hospital:
- Compute performance antenatal clinic and hospital ro-spinning home;
- To assess the performance indicators in points and defects of the maternity hospital operations.
- Assess the activities according to the model of end results and draw a conclusion.

5. CONTENT OF THE TOPIC:
Excerpt from "On the maternity ward," the Ministry of Health of Ukraine

1. Maternity Hospital is an independent treatment and prevention institution to ensure the provision of obstetric neonatalogicheskoy gynecological and hospital care.
2. Maternity is subject to the territorial authority Health.

The main tasks of the maternity hospital:
Provision of skilled inpatient treatment and diagnostic care for pregnant women, women in labor, childbirth, neonatal and gynecological patients according to the "standards of inpatient obstetric and neonatalogicheskoy help."
Providing patients emergency obstetric and neonatalogicheskoy help.
Providing patients qualified anesthesia and intensive care.
Timely referral when necessary patients to a higher level of medical care according to certain levels of the organization of obstetric care in Ukraine.
Implementation of measures for the prevention of nosocomial infections.
Organization of treatment and diagnostic assistance for reproductive health issues to spouses, persons who are getting married in the hospital.
The organization and provision of specialist advice to patients maternity hospital.

Conduct of cytological screening for cervical abnormalities in all patients who sought medical help for the first time during the reporting year.
Organization of the general stay of mother and newborn in accordance with the requirements of applicable industry regulations.
Examination of temporary disability of patients. Analysis and development of measures to reduce it.
Ensuring the link and continuity in the work station with fast medical care, antenatal clinics, outpatient clinics and children's polyclinics, specialized health facilities (hospitals dermato, TB dispensary, etc.).
Providing information on all cases of hospital-acquired infections, maternal mortality, accidents and emergencies territorial health authorities.
Ensuring the organization of the post-mortem examination in accordance with current legislation, the participation of professionals involved in providing medical care to patients who died.
Organizing and conducting health education work among the population on the preservation and promotion of reproductive health; prevention of complications of pregnancy and childbirth; STI and HIV / AIDS; family planning; primary prevention of congenital non-wealth development; prevention of cancer and other.

Subdivisions maternity hospital:
receiving and the inspection department;
Department of Pathology of pregnancy;  
maternity department of physiological individual maternity rooms and prenatal chambers (individual delivery rooms without prenatal chambers in the presence of conditions);  
postnatal physiological separation from the general stay of mother and baby beds; (With a total stay of the mother and child)  
neonatal care and treatment of newborns;  
observational unit with individual rooms and maternity prenatal chambers (individual delivery rooms without predrodilnyh chambers in the presence of conditions), with boxes;  
Department of Anesthesiology with intensive care beds (for women);  
neonatal intensive care unit;  
Department of Transfusion;  
delivery room of family type;  
Department of operative gynecology;  
conservative gynecology department;  
Women's consultation;  
medical-diagnostic department with studies of ultrasound diagnosis, X-ray department (cabinet);  
laboratory;  
day care;  
organizational and methodical department with the office accounting and medical statistics hundred-equipped with modern means of obtaining and transmitting information;  
- pharmacy;  
- The central sterilization unit with disinfection department;  
- Maintenance department (laundry, catering department, warehouses);  
- Medical file;  
- Medical Library.  
Registration-reporting documentation:  
- Individual map pregnant and new mothers (f 111 / o.)  
- Medical records outpatient (f 025 / o.)  
- Control card dispensary observation (f 030 / o.)  
- Exchange card Maternity Hospital, the maternity department of the hospital (f 113 / o.)  
- Logbook receiving pregnant, pregnant women (p 002/0).  
- A medical card of the inpatient (f 003 / o.)  
- Medical records of abortion (p 003-1 / o).  
- Childbirth journal entries in a hospital (f 010 / o.)  
- Birth records log house (f 032 / o.)  
- A doctor's certificate translated pregnant and other work (084 p / a.)  
- History of delivery (f 096 / o.)  
- Development of the newborn card (f 097 / o.)  
- Branch Journal (Chamber) Baby (f 102 / o.)
Performance prenatal and ancestral home hospital

1. Performance antenatal
   - Completeness of the doctors:
     Number of occupied posts x 100%
     The number of staff positions

   - Average load obstetrician-gynecologist:
     Number of visits to obstetrician-gynecologists =
     Number of occupied posts

   - The percentage of visits in order to prevent:
     Number of visits to prevent x 100 =
     Number of settlements

   - Prevalence of diseases among women:
     The number of registered diseases x 1000 =
     The number of women aged 15 years

   - The structure of registered diseases:
     The number of inflammatory diseases of the uterus and appendages x 100 =
     The number of all registered diseases

   - Completeness of coverage dispensary:
     The number of women in the dispensary x 100 =
     The number of women who need the dispensary supervision

   - The timely capture of pregnant women taken to the dispensary registration:
     Number of pregnant women taken to register up to 12 weeks of pregnancy x 100 =
     The total number of pregnant women who were registered

   - Later taking on dispensary registration:
     - The average number of visits by pregnant obstetrician gynecologists before delivery:
     - The average number of visits by pregnant obstetrician gynecologists after Po-ing:
     - Timely examination of pregnant therapist:
     - The proportion of pregnant women surveyed therapist twice:
     - The proportion of pregnant women who carried out laboratory tests on Wasserman:
     - On rhesus affiliation:
       Number of pregnant women tested for Rh accessories x 100 =
       Number of women who completed pregnancy childbirth and abortion in the current year
- **HIV / AIDS:**
  Number of pregnant women tested for HIV \( \times 100 = \)
  Number of women who completed pregnancy childbirth and abortion in the current year

- **The proportion of normal births:**
  The number of normal births \( \times 100 = \)
  The total number of received delivery

- **The proportion of pregnancies that resulted in the birth date:**
  The number of pregnancies that ended in childbirth period \( \times 100 = \)
  The total number of received delivery

- **The proportion of pregnancies that resulted in premature birth:**
  The number of pregnancies that ended prematurely \( \times 100 = \)
  The total number of received delivery

- **The proportion of pregnancies that ended belated birth:**
  The number of pregnancies that ended too late births \( \times 100 = \)
  The total number of received delivery

- **The proportion of late toxicosis:**
  Number of late toxicosis \( \times 100 = \)
  The number of women who are pregnant
  It ended with childbirth and abortion in the current year

- **Abortion:**
  The number of abortions per year \( \times 100 = \)
  Number of women 15 years and older

- **The proportion of extragenital diseases:**
  Number of diseases of the circulatory system in pregnant women, etc. \( \times 100 = \)
  Number of women who have a pregnancy ended in childbirth and abortion in the current year

- **Complaints from the public:**
  Number of substantiated complaints \( \times 10,000 = \)
  Number of women
1. Performance hospital maternity hospital
   Obstetrical department:
   - Average annual employment beds
   The number of bed days, the actual conduct of women giving birth in hospital =
   Average number of beds

   - Bed turnover
     The number of women giving birth =
     The average number of hospital beds

   - The average length of stay in hospital childbirth
     The number of bed days spent =
     Number of pregnant women who dropped out

   - The share of complications during childbirth (bleeding)
     The number of cases of bleeding x 100 =
     This level of delivery

   - Early neonatal mortality:
     The number of children who died within the first 7 days x 1000 =
     The number of live births

   - Perinatal mortality:
     The number of deaths in the first 7 days plus the number of stillborn × 1000
     The number of children who were born alive and dead

   - Maternal mortality:
     The number of deaths of women during pregnancy or after delivery 42 days x
     10,000 =
     The number of live births

Gynecology department:
   The average annual occupancy rate
   The number of bed days =
   The average number of beds

   turnover beds
   Number of prescription + = dead
   The average number of beds

   The average length of hospital stay
   The number of bed days spent =
   Number of prescription + dead
The proportion of discharged with recovery:
Quantity discharged with recovery \times 100 =
The number of women discharged

The proportion of discharged with improvement:
Quantity discharged with improved \times 100 =
The number of women discharged

The proportion of patients who are discharged without any changes:
Quantity discharged unchanged \times 100 =
The number of women discharged

- Overall mortality:
The number of women who died \times 100 =
Number of prescription + dead

- The coincidence of the clinical and pathologic diagnoses:
The number of the dead, whose diagnosis coincided \times 100 =
The number of the dead, which was carried out by a section

Materials for self-control
A. Tasks for self-control (see. Annex 1)
   1. Provide an integrated evaluation of the United Children's Hospital:
      - Compute performance clinics and hospital
      - An assessment in points of performance indicators and activities of defects
      - Calculate the rate of progress
      - An evaluation of the model for the final results

One of the most important issues of modern pediatrics in our country - is a children's health, which is based on the general principles of therapeutic and preventive care: accessibility, free of charge, the district medical care, application of follow-up, the sequence of outpatient and inpatient care, phasing medical support.

The basis of the district division of the principle laid in settlements in the area so that in one section of a population of no more than 800 children under the age of 15 years, including up to 100 children of 1st year of life. Medical care for children is the district pediatrician and a nurse.

Stages and sequence of medical support - is to provide medical care to children in a specific order. First, examine the child's local doctor with the assistance (if necessary consultation) specialists narrow profile. For further examination and treatment of the child is sent to the district or the city hospital, then - to the regional hospital. If necessary, medical care can be provided in maternal health and child
health centers and research institutes. The last step is to care for children's rehabilitation and health facilities (health centers and spas).

In our country for medical care, a powerful network of children's health care institutions. In all regional centers and big cities of the children receive a general and multi-profile support in children's hospitals. The structure of these hospitals include cardiology, pulmonology, gastroenterology, nephrology and other departments, as well as the intensive care unit, neonatal pathology, department of nursing preterm infants, etc.

The lead agency in providing medical and preventive care for children is the Children's Clinic. Powered by district-based health center. Job doctor and nurse on site includes a continuous dynamic monitoring of the child from birth, care for children with acute and chronic diseases, medical examinations of children at risk, children who had acute illnesses, and children with chronic diseases.

Paediatricians carry out preventive and anti-epidemic measures aimed at ensuring the proper physical and neuro-psychological development of children, to reduce morbidity and mortality, the preparation and conduct of vaccinations. In addition, an important aspect of the activities of a pediatrician and a nurse is the health education and legal protection of children.

Effective preventive measures at the site begins before birth. Public health nurses provides prenatal pregnant for 10 days after being notified of the pregnant women's clinic. She holds a conversation about the importance of the mode of the day and the power of women to the development of the fetus and the birth process. Secondary nurse visits the expectant mother in the 32nd week of pregnancy to determine the family's preparedness for a baby, there is needed to care for a newborn, she tells about the peculiarities of his behavior, feeding and development. Pediatrician visits pregnant late in pregnancy only if necessary.

Of great importance in reducing morbidity and child mortality has a child care organization after being discharged from the maternity ward. The first nursing newborn baby pediatrician and a nurse carried out for the first 3 days after the receipt of the notification. The purpose of the first visit - to determine the state of health of the child, to assess his physical and psychological development. After a thorough examination of the child assess its condition, specify the health group, scheduled recreational activities, make a plan to follow-up the child. Also during the first visit is necessary to introduce the rules of mother feeding, bathing and newborn care, breast care, breast milk pumping techniques. Within 1 month pediatrician should examine three newborn and child at risk - at least 4 times. Repeated visits to a newborn baby district pediatrician and a nurse convinced of the right of development.
Particular attention should be paid to children: premature, the twins; children who are bottle-fed; children undergoing asphyxia, birth trauma; sick rickets, malnutrition, anemia, diathesis; children who often suffer from acute respiratory infections. These children are at increased risk shall be subject to a clinical examination, together with specialists (neurologist, ophthalmologist, surgeon, otolaryngologist and others.) As an individual schedule.

The clinic is made to the child "Map of individual development of the child", which is conducted prior to the age of 15 years. It notes the date of visits, the child's age, the dynamics of physical and mental development, especially feeding disorders care about the disease data.

Further follow-up of healthy children of 1st year of life, the district pediatrician and a nurse in the clinic on a monthly basis. The doctor evaluates the physical and psychological development of the child, the child's body the status of various functional systems. Assigns activities to prevent the most common diseases (rickets, anemia, etc.). Healthy children aged 1 to 2 years, 1 pediatrician examines every quarter, from 2 to 3 years - 1 time in 6 months.

In the future, regular medical examination is carried out in a planned clinics. Based on survey data, anthropometric indicators and laboratory research doctor determines for each child's health group, because it affects the amount of necessary medical and rehabilitation measures. Distribution of children by groups of health as follows:

• The first group includes children who do not have abnormalities in the functional state of the main organs and systems. Acute diseases they are rare and have an easy move. Physical development of children his age.

• The second group includes children with functional changes from one organ or system as well as the children of 1st year of a life burdened with obstetric history (preeclampsia complicated by the process of delivery, multiple pregnancy, etc.), prematurity without overt signs of immaturity, unfavorable during the early neonatal period. These children often suffer from acute illness, the healing process is protracted. Basically they have a normal physical development, but there may be slight variations in the form of a deficiency or excess body weight. The likely lag neuropsychological development.

• The third group includes children with chronic diseases or congenital abnormalities of organs and systems in the stage of compensation. Available functional and pathological changes of organs and systems, but with no clinical manifestations. Children rarely suffer from intercurrent disease, but during their complicated by a slight worsening of underlying chronic disease. The physical and
psychological development of these children corresponds to the age, there may be a deficit or excess body weight, poor growth.

- Children of the fourth group have chronic diseases or malformations in the stage subcompensation, functional impairment of one or more of pathologically altered organs or systems. When intercurrent disease occurs aggravation of underlying chronic disease with impaired general condition and state of health or protracted period of convalescence. Children can fall behind in neuro-psychological and physical development.

- The fifth group includes children with chronic diseases or congenital malformations in the stage of decompensation, resulting in the child's disability. Available congenital functional disorders of abnormal organs or systems. Observed frequent exacerbations of underlying chronic disease.

The district pediatrician establishes the timing of prophylactic vaccination and immune-biological samples according to the latest instructions. It is important to select the children to carry out preventive vaccinations. Before the vaccination pediatrician should carefully collect the history and examine the child and, if necessary, carry out preparation of the child for vaccination.

Clinical examination of older children - a dynamic observation and organization of therapeutic interventions in children with diagnosed pathology. All data on the detected pathology physician enters in the "control card dispensary observation", it outlines the amount and nature of the necessary measures to prevent recurrence of disease, fixes the number of inspections during the year.

In the pediatric area a lot of attention is paid to health education, which includes individual and group talks about the education of a healthy, harmonious development of the child, regular sanitary education of parents and other family members, promotion of healthy lifestyles.

Registration-reporting documentation:
- Report of the therapeutic and prophylactic institutions for the year (f №20.);
- Report on medical aid to children (f №31.);
- Report on the population of children and adolescents vaccinated against infectious diseases (f №6.);
- Report on the number of diseases reported in patients who live in the service area of a medical institution (f №12.);
- Historical development of the child (f 112 / o.);
- Medical inpatient card (f 003 / o.);
- Child Health Card (for school, boarding school, school-lyceum, orphanage, kindergarten) (f 026 / o.);
- Control card dispensary (f 030 / o.);
- Clinical examination of accounting Map (f 031 / o.);
- Statistical patient chart that was out of the hospital (f 066 / o.);
- Exchange card Maternity Hospital, the maternity department of the hospital (f 113 / o.);
- Map of preventive vaccinations (f 063 / o.);
- Immunization Card (f 063-1 / o.);
- Journal of Accounting preventive vaccinations (f 064 / o.).
- Coupon of ambulatory patient

**Performance indicators of child health clinics**

**Staffing doctors:**
Number of occupied posts of doctors x 100%
The number of established posts of doctors

**Staffing pediatricians:**
Number of occupied posts pediatricians x 100%
the number of staff positions pediatricians

**The proportion of visits for checkups:**
Number of visits to prevent x 100%
Total number of visits

**Infant mortality:**
The number of children dying in the first year x 100%
the total number of live births

**The incidence of primary (incidence):**
The number of diseases detected for the first time x 100%
Average number of children population

**Morbidity, prevalence (total incidence):**
The number of all registered diseases x 100%
Average number of children population
respiratory diseases x 100%
All registered the disease
Children's Health Index under the age of 1 year and other age groups:
The number of children without a history of over 1 year of age x 100 =%
Number of children who have reached 12 months

Coverage of newborn medical patronage in the first 3 days after discharge from the hospital:
Number of newborns, visited a doctor in the first 3 days x 100%
Number of infants who received a surveillance clinics

The average number of visits to pediatricians in the first year of life:
Number of visits to the doctor in the first year x 100 =%
Number of children who have reached 12 months of age

The proportion of children of 1st year of life who were breast feeding of:
Number of children, breast-feeding of x = 100%
Number of children who have reached 12 months of age

The proportion of children 1 year of age who received immunizations in accordance with the planned schedule
Number of immunized children 1 year of life x 100 =%
Number of children who have reached 12 months of age

The ratio of children, taken in a timely manner under the dispensary observation:
The number of patients who took dispensary observation with newly diagnosed this year's 100
Number of patients with newly diagnosed to be dispensary

The coverage of children with preventive examinations (calculated separately, and by age groups):
Number of children examined x 100 =%
The number of children who are subject to routine inspections

The proportion of diseases revealed during preventive examinations (this figure is calculated separately for each disease separately among children of different age groups):
The number of diagnosed diseases x 100 =%
Number of examined children
The coincidence of outpatient and inpatient diagnoses:
Number of outpatient diagnoses matched with diagnoses of hospital x 100 =%
The number of hospitalized cases

The number of registered complaints about the sound of 10,000 child population:
The number of complaints x 100 =%
Average number of children population

Mortality from pneumonia at home:
The number of children who died of pneumonia at home × 1000 ‰ =
The average annual mortality of children
Performance hospital Children's Hospital
child population with beds
Number of beds x 1000

Average annual population
- The annual average bed occupancy
The number of bed days = days
The average number of beds

- Bed turnover
Number of prescription + = dead
The average number of beds

The effectiveness of treatment in hospital
Quantity discharged with recovery x 100%
The number of all prescription

- Overall mortality:
The number of children who died in the hospital's 100%
Number of prescription + dead

- Matches the clinical and pathologic diagnoses:
The number of the dead, whose diagnosis coincided x 100%
The number of the dead, which was carried out by a section
The number of registered complaints about the sound of 10,000 child population:
Number of substantiated complaints × 100%
The average annual number of hospitalized

The number of nosocomial infections of children with viral hepatitis and other diseases by 1000 hospitalized
The number of hospital-acquired infections × 1000‰
The number of hospitalizations
Approved
at the meeting of the Department of Social Medicine, Public Health, Healthcare Organization and Economics, with medical expertise «08 » January 20 20 r.
Minutes № 13 of " 08" January 2020 y.
head. departments ___________ Golovanov IA

Methodical instructions
for independent work of students during preparation
to practice and to class

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Social medicine, public health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>2</td>
</tr>
<tr>
<td>The topic of the lesson</td>
<td>Methods of study and evaluation of indicators of general morbidity</td>
</tr>
<tr>
<td>Course</td>
<td>4</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
</tr>
</tbody>
</table>

Poltava
1. Relevance of the topic: Epidemiology, as a science of the laws of the spread of infectious and other diseases in human society, methods of preventing and eliminating them, is a rapidly developing section of medicine. On the one hand, it presents new hypotheses and theories that should explain the new facts, and on the other - there is a tendency to widen the boundaries of epidemiology and to bring into its sphere new objects related to public health.

2. Specific goals:
   - To master the modern principles of evidence-based medicine
   - To acquire methodological and theoretical bases of formation of statistical collections for their further adequate analysis
   - To analyze epidemiological methods of research
   - Know the design of epidemiological research in medicine

3. Basic knowledge, skills, skills required to study the topic (interdisciplinary integration)

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>Skills learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sociology</td>
<td>Have an idea about the method of conducting a sociological survey</td>
</tr>
<tr>
<td>2. Medical biology</td>
<td>Identify basic concepts, research methods and tools used to study environmental factors and their effects on the body and health</td>
</tr>
<tr>
<td>3. Biostatistics</td>
<td>Conduct a statistical survey</td>
</tr>
<tr>
<td>4. Propedektika inside shnoy medicine</td>
<td>Have an idea of standards of care</td>
</tr>
<tr>
<td>5. Social medicine</td>
<td>To analyze indicators of activity of health care establishments</td>
</tr>
</tbody>
</table>

4. Tasks for independent work during the preparation for the class and at the class
   4.1. The list of basic terms, parameters, characteristics that the student must learn in preparation for the class

<table>
<thead>
<tr>
<th>Terms</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population morbidity</td>
<td>Collected concept, which includes a performance, which characterize the level of various diseases and their structure of the whole population or certain of its group in this area</td>
</tr>
<tr>
<td>General incidence</td>
<td>into account the prevalence of all diseases among the whole population in general and specific illnesses in certain of its group in this area based on the results of appeals</td>
</tr>
<tr>
<td>Total zahvoryuva ness or disease prevalence (P r e v a l e p e c e )</td>
<td>the level of all reported diseases in the calendar year: acute and chronic (registered at the first treatment in the current year, and detected in both the current and previous years)</td>
</tr>
<tr>
<td>Primary morbidity (Ipsi d epse)</td>
<td>according to WHO, the rate of the first recorded disease per calendar year in the territory; all acute and first-time chronic illnesses established during the year are taken into account.</td>
</tr>
<tr>
<td>Risk group</td>
<td>A group of people who, because of their biological, social status, behavior or environmental conditions are more prone to</td>
</tr>
<tr>
<td>Risk factors</td>
<td>Factors of living conditions that pose a threat to health or disease. They can have a generalized or specialized effect, that is, an effect on the whole organism or on a specific system, for example, cardiovascular, digestive, sexual, nervous. The impact can be acute or chronic. Socio-economic status, biological status, stereotypes of behavior, or environmental conditions that are associated with increased susceptibility to a particular disease or cause health or injury. Potentially harmful health, behavioral, biological, genetic, environmental, and social factors; environmental and industrial environments that increase the likelihood of disease progression, progression and adverse outcome.</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Epidemiology</td>
<td>In a narrow sense, epidemiology is the study of the statistical frequency and statistical distribution of diseases among the population, as well as the factors that determine the incidence of diseases. In a broad sense, the term &quot;epidemiology&quot; is used in relation to other medical science issues, to which the method of empirical social research is the statistical method. Epidemiology is considered to be a major area of public health, since this field of medicine (as opposed to clinical) is not focused on the individual in need of medical care, instead the focus is on the entire population or individual groups. Based on the facts collected by the epidemiology, suggestions for improving public health can be developed. Science that studies the patterns of distribution and the determinants of health status or events in a population using research findings to control health problems</td>
</tr>
<tr>
<td>Epidemiology (as a science)</td>
<td>The science of the emergence and spread of diseases in the human population. Modern epidemiology studies as infektsinnye and non-communicable diseases and their distribution patterns and methods to combat them</td>
</tr>
</tbody>
</table>

4.2. Theoretical questions to the class.
1. Population morbidity, its medical and social importance.
2. Methods of studying the morbidity of the population, their advantages and disadvantages.
3. The main types of morbidity.
4. Factors that affect the incidence of the population.
5. Principles on which the International Classification of Diseases of the ICD-10 is based.
6. Records for the registration and study of general morbidity.
7. Indicators characterizing the overall morbidity.
8. What information is needed to calculate the disease prevalence rate.
9. What information is needed to calculate the primary incidence rate.
10. Accounting documentation for registration and study of infectious, hospitalized, important non-epidemic morbidity, incidence of temporary disability.

Contents of the topic

Population morbidity is a collective term that includes indicators that characterize the level of various diseases and their structure among the entire population or individual groups within a given territory.

In the complex of medical indicators of health, morbidity holds a special place. Its medical and social importance is determined by the fact that the disease itself is the main cause of death, temporary and permanent disability, which in turn leads to large economic losses of society, a negative impact on the health of future generations and population decline.

Materials on the level and structure of the incidence in different regions, as well as in specific sex and age groups, especially in the dynamics for a number of years, are necessary for purposeful development of programs for promoting the health of the population, in particular when planning the development of a network of medical establishments and preparation of medical frames.

It is also important that the incidence rate is one of the most informative criteria for the activities of health authorities and institutions and the effectiveness of medical, preventive, social and other measures.

The morbidity statistics largely complement the mortality statistics in assessing the health of the population and have an important advantage over it, namely the efficiency. However, unlike demographic phenomena that are easily identifiable, the study of morbidity is fraught with considerable difficulties. The disease may have an uncertain start and an equally uncertain time end. Can be observed "erased" forms of the disease, bacilli, it is difficult to distinguish the disease from morphological changes and the like.

In addition, the population does not always seek medical help. For the most part, the disease becomes available for registration only when the patient goes to the doctor. As a result, the completeness of the incidence data depends primarily on the volume and nature of the care, its availability and quality.

Population morbidity is influenced by the following factors:
- heredity and genetic fund;
- a particular way of life of the population (smoking, alcohol, drugs, malnutrition, stress, harmful work, poor living conditions, hyperurbanisation, hypodynamia, poor social and living environment);
- demopopulation loads (life expectancy, average age of population, mortality rate, gender and age structure of population, activity of migration processes);
- level of development of the medical system and public health protection (provision of medical infrastructure and medical specialists, quality and physical and economic availability of medical services);
- the state of the environment (air pollution by stationary and mobile sources, pollution of soil, surface and groundwater, waste management);
- the level of socio-economic development of the territory and the standard of living of the population (specialization of regions, levels of unemployment and
employment of the population, income and expenditure of the population, the spread of poverty among the population, the formation of the middle class); managerial decisions on health care development (timely implementation of medical reforms, effective management of the medical sphere, training of personnel for health care, public financing of the medical sphere).

The following **negative prerequisites for the dynamics of population morbidity** are characteristic of Ukraine:

- intensive aging of the population,
- number of young people traveling abroad,
- low incomes and the spread of poverty among the population,
- the middle class is uniformed,
- low level of economic availability of quality medical services,
- low level of economic and physical accessibility of rural health services,
- lack of qualified medical staff,
- high levels of air pollution,
- poor drinking water quality.

The aggregate of such factors adversely affects the level and incidence of the incidence of different species among the population of the regions of Ukraine. Positive factors are the acceptable changes in certain demographic indicators (mortality and birth rate, increase in life expectancy), prospects for effective new medical reform and modernization of the economy through the use of environmentally friendly production technologies. It is advisable to carry out a regional analysis of the incidence of the population of Ukraine on the following five indicative indicators: the spread of socially vulnerable diseases; morbidity of working age population; child morbidity; infant mortality; disability of the population.

The main **methods of studying the incidence** are methods that involve the use of the following data:

- applying for medical help to medical institutions;
- medical examinations of particular groups of the population;
- causes of death;
- population survey;
- special sampling studies.

Each method has its advantages and disadvantages, which need to be known and taken into account in practice. Neither of them gives an exhaustive idea of the population's morbidity. Only using them in combination allows you to obtain fairly complete information.

The most appropriate method is to study the incidence of **medical treatment**. It is connected with obligatory registration of diseases, which is carried out in state medical-preventive establishments. However, the completeness of data on the morbidity of the population by the method of treatment may be limited:

- lack of access to medical care (eg in rural areas);
- low level of medical culture of the population;
- Insufficient authority among the population of the medical institution as a whole or of individual doctors, etc.
The study of morbidity according to the data of appeals allows to take into account the so-called "acute" diseases most fully. This method requires no extra money.

In the study of morbidity according to medical examinations, the completeness of the information on the incidence depends on:

- their systematic conduct;
- participation of doctors of necessary specialties;
- sufficient diagnostic support;
- control of timeliness and completeness of reviews.

Using this method provides the most complete account of previously unknown chronic diseases, or those for which the population does not actively go to medical institutions. The advantage of this method is also the detection of the initial forms and stages of the disease, clarifying the diagnosis of some chronic diseases, etc.

The study of morbidity by cause of death is an additional method to the above two. It is especially relevant for accounting for those diseases that can only be registered when applying for a medical certificate of death (referring to patients who did not go to medical institutions and died at home), as well as sudden illnesses that give high mortality and have not been detected both first methods (heart attacks, strokes, injuries, etc.).

The advantage of the survey method is the ability to account for diseases that the population did not seek medical care for one reason or another, as well as to clarify a person's opinion about their disease.

At the same time it is inherent to some extent subjectivity associated with self-diagnostics of diseases, as well as a significant number of false messages to the questionnaire.

Studying the incidence using each of these methods separately does not give an idea of the true comprehensive prevalence of the pathology. Special-purpose, in-depth research is more responsive to this task. In their conduct, determine the regional, age-specific features of morbidity at different levels of health care.

It is known that there are about 5000 diagnostic terms used by doctors in practice. Statistical development of morbidity data is not possible without rationally constructed grouping, ie classification and nomenclature of diseases.

The International Statistical Classification of Diseases of the Tenth Review (ICD-10) was approved by the forty-third WHO Assembly on 1 January 1993. According to the Assembly's decision, the document is renamed "International Statistical Classification of Diseases and Related Health Issues", though the convenient abbreviation for ICC is retained.

The basic principles of building the International Classification of Diseases, Injuries and Causes of Death are the commonality of the etiology or pathogenesis of diseases, or the combination of locally-etiological and locally-pathogenetic principles.

Each class of diseases is divided into groups and groups into headings. For example, Class IV disease of the endocrine system, eating disorders and metabolic disorders has 6 groups:
• Thyroid disease;
• diabetes;
• disorders of other endocrine glands;
• malnutrition;
• obesity and other types of over-nutrition;
• metabolic disorders.

For example, a group of thyroid diseases has 5 headings:
• congenital iodine deficiency syndrome;
• thyroid diseases associated with iodine deficiency and similar conditions;
• hypothyroidism;
• thyrotoxicosis (hyperthyroidism);
• thyroiditis;
• other forms of thyroid disease.

**International Classification of Diseases of the Tenth Review (MKH-10)**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
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<td>I</td>
<td>Infectious and parasitic diseases</td>
</tr>
<tr>
<td>II</td>
<td>Neoplasm</td>
</tr>
<tr>
<td>III</td>
<td>Diseases of the blood and hematopoietic organs and some disorders involving the immune mechanism</td>
</tr>
<tr>
<td>IV</td>
<td>Endocrine diseases, eating disorders and metabolic disorders</td>
</tr>
<tr>
<td>V</td>
<td>Mental and behavioral disorders</td>
</tr>
<tr>
<td>VI</td>
<td>Diseases of the nervous system</td>
</tr>
<tr>
<td>VII</td>
<td>Diseases of the eye and its appendix</td>
</tr>
<tr>
<td>VIII</td>
<td>Diseases of the ear and mastoid</td>
</tr>
<tr>
<td>IX</td>
<td>Diseases of the circulatory system</td>
</tr>
<tr>
<td>X</td>
<td>Respiratory diseases</td>
</tr>
<tr>
<td>XI</td>
<td>Digestive diseases</td>
</tr>
<tr>
<td>XII</td>
<td>Diseases of the skin and subcutaneous tissue</td>
</tr>
<tr>
<td>XIII</td>
<td>Diseases of the musculoskeletal system and connective tissue</td>
</tr>
<tr>
<td>XIV</td>
<td>Diseases of the genitourinary system</td>
</tr>
<tr>
<td>XV</td>
<td>Pregnancy, childbirth and the postpartum period</td>
</tr>
<tr>
<td>XVI</td>
<td>Separate conditions occurring in the perinatal period</td>
</tr>
<tr>
<td>XVII</td>
<td>Congenital malformations, deformities and chromosomal abnormalities</td>
</tr>
<tr>
<td>XVIII</td>
<td>Symptoms, signs and abnormalities found in clinical and laboratory studies not elsewhere classified</td>
</tr>
<tr>
<td>XIX</td>
<td>Injuries, poisonings and some other effects of external factors</td>
</tr>
</tbody>
</table>

In addition to the 19 classes of diseases, the MKH-10 includes two additional sections:

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>XX</td>
<td>External causes of morbidity and mortality</td>
</tr>
<tr>
<td>XXI</td>
<td>Factors affecting public health and access to health care facilities</td>
</tr>
</tbody>
</table>

The main innovation of MKH-10 is the use of alphanumerical coding (replacing the previous digital one), when two letters of the code are indicated by a certain letter of the Latin alphabet, and if necessary more detail of the heading - its third digit.
For example, the class of diseases of the endocrine system, eating disorders and metabolic disorders is indicated by a three-digit code from E00 to E90. In turn, thyroid diseases have codes from E00 to E07, diabetes mellitus - E10-E14 and so on.

WHO Member States on 25 May 2019 at the World Health Assembly agreed to adopt the eleventh revised version of the International Statistical Classification of Diseases and Health (ICD-11), which will come into force on 1 January 2022.

In the study of morbidity according to the requests for medical help distinguish the following types:

1. The **overall incidence** - a record of all diseases (acute and hronich them) registered in the population of a certain area for a certain period;

2. **infectious disease** - specific accounting acute infectious diseases, associated with the necessity of surgical protypedonomous activities;

3. the **incidence of major non-epidemic diseases is** subject to special accounting due to their epidemiological and social significance (malignancies, tuberculosis, venereal, psychiatric diseases, etc.);

4. **hospitalized or "hospitalized" morbidity** makes it possible to study the composition of patients treated at the hospital;

5. **morbidity with temporary disability of workers and employees** is distinguished due to its social and economic importance.

Each of these types of morbidity is studied according to specific accounting documents and is evaluated on different indicators.

**The main sources of information and indicators that characterize certain types of morbidity**

<table>
<thead>
<tr>
<th>No</th>
<th>Methods of study, types of morbidity</th>
<th>The main sources of information</th>
<th>The main indicators</th>
</tr>
</thead>
</table>
| 1.1 | General incidence | Statistical coupon for registration of final (refined) diagnoses (ф.№ 025-2 / o)  
Outpatient ticket (ф. № 025-6 / y; 025-7 / o)  
Log Ambula, Ulcinj disturbance patients (p. Number 074/0). | General incidence (prevalence)  
Primary incidence  
Structure of general and primary morbidity |
| 1.2 | Infectious morbidity | Emergency notification of infectious disease, food, acute occupational poisoning, unusual response to vaccination (ф. 058 / o) | Level and structure of infectious morbidity |
| 1.3 | Important non-epidemic | Report on important non-epidemic diseases:  
Notice of a patient with newly Ms TTI diagnosed that active tuberculosis or relapse (f. №089 / o)  
Report of a patient with a first-ever | Level and structure of non-epidemic morbidity |
<table>
<thead>
<tr>
<th>1.4</th>
<th>Hospital (hospitalized) morbidity</th>
<th>Card of the patient who left the hospital (f. № 066 / o)</th>
<th>Level and structure of morbidity of hospitalized patients</th>
</tr>
</thead>
</table>
| 1.5 | Incidence of temporary disability (TH) | Work incapacity certificate | The number of cases of TH per 100 employees  
Number of TN calendar days per 100 employees  
The average duration of one case of TH  
Structure of the incidence of TN |
| 2.  | According to medical examinations (target, on ne Ref, periodic medical examinations) | List of persons to be examined | Pathological lesions for various diseases, dental morbidity (prevalence of dental diseases) |
| 3.  | According to the causes of death | Medical Certificate of Death (f. № 106 / o)  
Perinatal death certificate (f. № 106-2 / o)  
Medical Assistant Death Certificate (f. No. 106-1 / o) | Indicators of the level and pattern of morbidity that led to death |

**General incidence**

*Overall morbidity* takes into account the prevalence of all diseases among the population as a whole and individual diseases in certain groups in the territory in the territory by the results of treatment.

The overall morbidity rates make it possible to estimate the incidence rates detected and registered in outpatient facilities during the calendar year.

The overall morbidity is studied on the basis of current registration of **all primary treatment patients**.

The primary treatment in *chronic* diseases is considered to be the *first* treatment in a *given year*.

For *acute* illnesses, which can occur several times during the year, the first treatment for each case is taken into account.

The unit of observation in the study of general morbidity is the case of the disease or trauma, about which the patient went to the hospital.

The source of information on general morbidity is the forms of primary accounting records:

"Statistical coupon for registration of final (specified) diagnoses" (f.№ 025-2 / o)
"Outpatient card" (f. № 025-6 / y; 025-7 / o) 
"Journal of outpatient registration" (f. № 074/0).

In every case of acute illness filled separate "Statistical coupon for registration of final (specified) diagnoses" in item nachkoyu "+". In the "Outpatient Coupon" for acute diseases, the code "1" is indicated next to the name of the diagnosis. Thus, one person may have multiple cases of acute illness during one year.

Diagnosis of chronic diseases is recorded only once during the year. If the diagnosis is made for the first time in the life of the patient, make a "+" in the "Statistical coupon for registration of the final (specified) diagnoses" or the code "2" in the "Coupon of the ambulatory patient." If the diagnosis of a chronic disease has been established earlier, the first time a doctor visits each subsequent year, the "Statistical coupon for registration of the final (specified) diagnoses" is marked "-" or code 3 in the "Patient card". The information in the above mentioned accounting documents is the basis for the preparation of the "Report on the number of diseases registered in patients living in the area of service of the hospital" (f. No. 12).

There are the following main indicators of overall morbidity:

- **primary morbidity (actual morbidity)** - the level of first registered diseases for a calendar year in this territory; all acute and first-time chronic illnesses established during the year are taken into account:

  Number of diseases reported in the current year (all acute + first detected chronic) x 1000

  primary incidence =

  Average annual population

- **the overall incidence or prevalence of all registered diseases** - the level of all reported diseases in a calendar year: acute and chronic (registered in the first appeal in the current year, and reveal them as the current and previous years):

  Number of all diseases reported in this year (acute + chronic, detected in current and previous years) x 1000

  overall incidence =

  Average annual population

- **structure of primary and general morbidity of the population.**

  The use of "Outpatient Coupon" extends the possibility of analyzing the incidence. With this document you can also determine the rates of exacerbation of chronic diseases, separately the level of first-time reported acute and chronic diseases, etc.

  According to public appeals for medical care over the past decade prevalence of all diseases range from 1100 to almost 1500 cases per 1000 population levels of primary morbidity respectively 600-800% .

  **Primary incidence rates in Ukraine**
Of the individual diseases, the highest prevalence rates are found in diseases of the circulatory system, respiratory and digestive organs.

The three classes mentioned above account for 55% of all reported diseases.

Respiratory, nervous, and sensory, trauma, and poisoning diseases have the highest levels of disease registered for the first year.

The following groups of regions of Ukraine can be distinguished on the basis of a point evaluation of the trends of dynamics of different types of diseases of the population:

- regions with *predominance of positive features of population morbidity* (except for malignancies, cardiovascular diseases and HIV / AIDS) - Vinnitsa, Volyn, Dnipropetrovsk, Donetsk, Zakarpatska, Zaporizhia, Ivano-Frankivsk Odesa, Poltava, Rivne, Sumy, Ternopil, Khmelnytsky, Cherkasy, Chernivtsi, Chernihiv regions and Kyiv, characterized by reduction of tuberculosis, infectious and parasitic diseases plowing, respiratory diseases and rising incidence of malignancies, cardiovascular disease and HIV / AIDS;

- regions with *predominance of negative features of population morbidity* (except for active tuberculosis and infectious diseases) - Zhytomyr, Kirovograd, Mykolaiv, Kharkiv, Kherson regions, which are characterized by an increase in the incidence of malignant neoplasms, heart disease and a slight reduction in the incidence of infectious diseases and tuberculosis.
Materials for self-control.

A. Test tasks:
The medical and social significance of morbidity as an indicator of health is determined by:

A. Leading role in mortality, temporary and persistent disability, negative impact on the health of generations, the need for medical care
B. According to the structure of causes of death
C. Expenditure on hygienic education of the population
D. Socio-economic conditions of society
E. Expenditures on public health services

The pediatrician was instructed to analyze the structure of the child morbidity at the subordinate site and compare it with the indicators of Ukraine. In the structure of the overall incidence of children in Ukraine, the first three places are diseases:

A. Respiratory, digestive, nervous and sensory organs
B. Malignant, endocrine, circulatory systems
C. Circulatory systems, breathing, digestion
D. Endocrine, respiratory and circulatory systems
E. Digestive system, circulatory system, endocrine
Methodical recommendations
for independent work of students
during preparation of practical (seminar) classes

<table>
<thead>
<tr>
<th>Educational discipline</th>
<th>Social medicine. Health care organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>Topic</td>
<td>Methods of studying and evaluation of indicators of non-communicable morbidity for socially significant diseases</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
</tr>
</tbody>
</table>

Poltava
1. RELEVANCE OF THE TOPIC:
Epidemiology, as a science of the laws of the spread of infectious and other diseases in human society, methods of preventing and eradicating them, is a rapidly developing section of medicine. On the one hand, it presents new hypotheses and theories that should explain the new facts, and on the other, it tends to expand the boundaries of epidemiology and to bring into its sphere new objects that are relevant to public health.

2. SPECIFIC OBJECTIVES:
- To master the modern principles of evidence-based medicine
- To acquire methodological and theoretical bases of formation of statistical collections for their further adequate analysis
- To analyze epidemiological methods of research
- Know the design of epidemiological research in medicine

3. BASIC KNOWLEDGE, ABILITIES, SKILLS, NECESSARY FOR STUDYING THE TOPIC (INTERDISCIPLINARY INTEGRATION):

<table>
<thead>
<tr>
<th>Names of disciplines</th>
<th>These skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of medicine</td>
<td>Stages of development of medical knowledge</td>
</tr>
<tr>
<td>Sociology</td>
<td>Conduct analysis of sociological research</td>
</tr>
<tr>
<td>Medical biology</td>
<td>Identify basic concepts, methods and research tools that are used to determine the factors affecting the body and health.</td>
</tr>
<tr>
<td>Biophysics and biochemistry</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Identify and analyze the relationship between natural phenomena.</td>
</tr>
<tr>
<td>Normal physiology</td>
<td>Know Classification of Diseases ICD-10.</td>
</tr>
<tr>
<td>Pathology</td>
<td>Knowing the structure of hospitals and health care volume which is therein</td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td></td>
</tr>
</tbody>
</table>

4. TASKS FOR INDEPENDENT TRAINING TO EMPLOYMENT
4.1. A list of the main terms of parameters, characteristics which the student need to learn

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population morbidity</td>
<td>A collective term that includes indicators that characterize the level of various diseases and their structure among the entire population or individual groups within a given territory.</td>
</tr>
<tr>
<td>The overall incidence</td>
<td>takes into account the prevalence of all diseases among the population as a whole and of individual diseases in certain groups in this territory by the results of the appeals.</td>
</tr>
<tr>
<td>General incidence or prevalence of diseases</td>
<td>level of all reported diseases per calendar year: acute and chronic (registered at the first treatment in the current year, and detected in the current and previous years).</td>
</tr>
<tr>
<td>(Revalepce)</td>
<td>Primary incidence (Ipsideps)</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Risk group</td>
<td>A group of people who, due to their biological, social status, behavior, or environmental conditions, are more likely to be ill or ill at health than the rest of the population.</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>In a narrow sense, epidemiology is the study of the statistical frequency and statistical distribution of diseases among the population, as well as the factors that determine the incidence of diseases. In a broad sense, the term &quot;epidemiology&quot; is used in relation to other medical science issues, to which the method of empirical social research is the statistical method. Epidemiology is considered to be a major area of public health, since this field of medicine (as opposed to clinical) is not focused on the individual in need of medical care, instead the focus is on the entire population or individual groups. Based on the facts collected by the epidemiology, suggestions for improving public health can be developed. Science that studies the patterns of distribution and the determinants of health status or events in a population using research findings to control health problems.</td>
</tr>
<tr>
<td>epidemiology (as a science)</td>
<td>The science of the emergence and spread of disease in the human population. Modern epidemiology studies both infectious and non-infectious diseases, as well as patterns of their spread and methods of combating them.</td>
</tr>
<tr>
<td>Risk factors</td>
<td>Factors of living conditions that pose a threat to health or disease. They can have a generalized or specialized effect, that is, an effect on the whole organism or on a specific system, for example, cardiovascular, digestive, sexual, nervous. The impact can be acute or chronic. Socio-economic status, biological status, behavioral stereotypes, or environmental conditions that are associated with increased susceptibility to a particular disease or cause health or injury. Potentially harmful health, behavioral, biological, genetic, environmental, and social factors; environmental and industrial environments that increase the likelihood of disease progression, progression and adverse outcome.</td>
</tr>
</tbody>
</table>

4.2 Theoretical questions:

Theoretical questions to the class:
1. What non-communicable diseases are socially significant and why.
2. What is infectious morbidity, methods of its registration and study, main indicators.
3. What is hospital (hospitalized) morbidity, methods of its registration and study, main indicators.
4. What is important non-epidemic morbidity, methods of its registration and study, main indicators.
5. The incidence of the population for cardiovascular disease.
6. The incidence of the population for malignant neoplasms.
7. HIV / AIDS incidence of the population.
8. Diabetes mellitus of the population.
9. The morbidity of the population for mental disorders.

**CONTENT OF THE TOPIC:**

**Incidence of the population for cardiovascular disease**

One of the most important medical, biological and social problems in Ukraine and in the world is the incidence and prevalence of cardiovascular disease among the population. Cardiovascular disease is associated with pathology of the heart or blood vessels (circulatory system). The reasons for their emergence and dissemination are non-observance of a healthy lifestyle and aging of the population. Regional cancellations of morbidity and the spread of cardiovascular disease are determined, first of all, by the age structure of the population, life expectancy, the spread of social problems, lifestyle, quality of life. The incidence of cardiovascular disease in Ukraine in 2015 was 4.3 thousand patients per 100 thousand population. In the structure of the population morbidity in 2015, cardiovascular diseases accounted for more than 30% of all diseases, including among working age population - 24%, persons of retirement age - 50%. The structure of diseases of the circulatory system of the adult population in Ukraine in 2015 was as follows: 40% - hypertension, 27% - coronary heart disease, 16.5% - cerebrovascular diseases, 16.5% - other diseases of the circulatory system. In the period 2001-2015, the incidence of cardiovascular disease in general decreased by 11%, with a jumping dynamics. The highest incidence rates are typical for Mykolaiv and Ivano-Frankivsk regions (more than 6 thousand patients per 100 thousand population), and the lowest - for Lugansk, Zaporizhia, Kherson, Volyn and Chernivtsi (less than 4 thousand patients per 100 thousand population). In Fig. 13.1 reflects the territorial differentiation and dynamics of the incidence of cardiovascular disease in the regions of Ukraine. 4.5 thousand children with congenital heart defects are born every year in Ukraine. In 2015, the incidence of children with cardiovascular disease in the age of 0-14 years was 692 patients per 100 thousand population.

Cardiovascular disease is a leading cause of death in patients. Every year in Europe, more than 7 million people die from ischemic heart disease, more than 6 million die from stroke or any other form of cerebrovascular pathology. 8 million children under the age of 5 die from cardiovascular disease in Europe, with 99% in middle- and low-income countries. Cardiovascular disease is a major cause of mortality in Ukraine. Every year 426 thousand Ukrainians die from cardiovascular diseases. 22 patients with acute myocardial infarction die in the hospital every day in Ukraine. In 2015, in Ukraine, the rate of in-hospital mortality from cardiovascular disease was 3.6%. It ranged from 5.4% in the Luhansks region (data from the territory controlled by Ukraine was taken before the analysis) to 1.6% in the Chernivtsi region of the relevant age. The highest rates of morbidity among children are recorded in...
Kharkiv, Rivne, Mykolaiv, Zhytomyr regions (more than 1 thousand patients per 100 thousand), and the lowest - in Lviv and Kherson regions (less than 400).

The incidence of the population for malignant neoplasms

According to WHO, about 10 million people are diagnosed with cancer each year in the world. In Ukraine, more than 170,000 people annually know that they are cancer patients, about 90,000 people die, 35-37% of them are of working age. Every day in Ukraine, 470 people are diagnosed with cancer, of whom 250 die. More than 20 new cases are reported every hour in Ukraine, with 10 people dying from cancer. Malignancies in Ukraine affect every fourth man and every sixth woman. Oncological morbidity is steadily increasing every year by 3% and cancer is getting worse. In terms of the spread of cancer, Ukraine ranks second in Europe.

In 2015, the incidence of malignancies in Ukraine was 313 patients per 100,000 population. Almost 30% of cancer patients (from 19% in Dnipropetrovsk region to 58% in Kyiv) were found at professional examinations. The incidence of malignancies in the urban population is much higher than in the rural. Thus, in 2015, the incidence rate of urban residents was 319.5 patients per 100 thousand population, and rural - 300.6 patients per 100 thousand population. The maximum values of the cancer incidence rate were in Kirovograd and Sumy regions (over 400 patients per 100 thousand population), while the minimum values were in western Transcarpathian, IvanoFrankivsk, Chernivtsi, Rivne and Volyn and 100 Luhansk districts (280 Luhansk region). The maximum incidence rate exceeded the minimum almost twice. It is quite difficult to determine what factors influence the territorial differentiation of the incidence and spread of malignancies in Ukraine. This is influenced by the heredity, age structure and life expectancy of the population, given that older people are diagnosed with the disease more often. Undoubtedly, a factor such as quality of life also has an impact. In terms of the incidence of malignancies, five groups of regions are identified: - with the lowest incidence of malignancies (less than 280 patients per 100,000 population): Transcarpathian, Ivano-Frankivsk, Chernivtsi, Rivne, Volyn, and Volyn; - with an average level of morbidity of the population for malignant neoplasms (280-340 patients per 100
thousand population): Donetsk, Ternopil, Lviv, Zhytomyr, Kharkiv regions; - with higher than average rate of morbidity of malignant neoplasms (340-370 patients per 100 thousand population): Odesa, Kyiv, Vinnytsia and Chernihiv regions; - with high incidence of malignancies (370-400 patients per 100 thousand population): Poltava, Khmelnitsky, Dnipropetrovsk, Zaporizhia, Kherson, Mykolaiv, Cherkasy regions and Kyiv; - with the highest incidence of malignancies (more than 400 patients per 100 thousand population): Sumy and Kirovograd regions.

In 2015, the prevalence of malignancies among the population of Ukraine was 2.3 thousand patients per 100 thousand population. From 2001 to 2015, it grew almost 1.4 times. In 2015, the minimum cancer incidence rates were in the Transcarpathian, Ivano-Frankivsk and Rivne regions (less than 2,000 patients per 100,000 population). The worst situation was in the territory of Sumy, Kyiv, Mykolaiv regions and Kyiv (more than 2.8 thousand patients per 100 thousand population). In 2015, the incidence of malignancies in malignancies was 14.6 patients per 100 thousand children. Somewhat lower, but not significantly, this figure is among girls. The highest incidence of malignancies in children was in Chernivtsi, Khmelnytskyi, Cherkasy and Sumy regions (over 17 sick children per 100,000 children), and the lowest in Kherson and Kharkiv regions (less than 10). The maximum incidence rate exceeded the minimum twice. Regional differentiation and dynamics of the incidence of malignancies in children are presented in Fig.

In 2015, the death rate from malignancies was 172.8 cases per 100,000 population. The highest rates of cancer mortality were characteristic of Kirovograd, Poltava and Sumy regions (more than 200 cases), the lowest in the Western Transcarpathian, Rivne and Volyn regions, and also in the Odessa region (less than 150 cases). The maximum death rate from cancer exceeded the minimum twice. In 2015, the rate of infant mortality from malignancies was 3.8 deaths per 100,000 children (3.9 among boys and 3.6 among girls).

The effectiveness of the treatment of patients with malignant tumors is evaluated by the percentage of patients who have not lived for one year since the diagnosis. In 2015, the proportion of such patients was 31% and varied from 23% in the Odessa region to 36% in the Transcarpathian region.
Mental disorders.

Mental health protection is one of the most pressing problems of every state. This is due to the fact that it is the mental health of their citizens that determines the national security of the state.

Mental health promotion includes actions that enhance psychological health. These may include creating an environment that supports mental health.

An atmosphere in which respect for and protection of fundamental civil, political, socio-economic and cultural rights is ensured is the basis of mental health. In the absence of security and freedom afforded by these rights, it is difficult to maintain a high level of mental health.

Specific ways to promote mental health include:

- Early childhood activities (for example, creating a stable environment that meets the needs of children in terms of health and nutrition, providing protection from dangerous factors and opportunities for early learning and communication with others on the principles of responsiveness, emotional support and stimulating impact on development);
- support for children (for example, skills programs, programs for the development of children and young people);
- providing socio-economic opportunities to women (eg improving access to education and micro-credit schemes);
- social support for the elderly (for example, a dating organization initiative, local day care centers for the elderly);
- programs targeting vulnerable people, including minorities, indigenous peoples, migrants and people affected by conflict and disaster (such as psychosocial disaster relief);
- measures to promote mental health in schools (eg programs that support environmental change in schools);
- measures to promote mental health in the workplace (eg stress prevention programs);
- Housing strategies (eg, improving living conditions);
- programs to prevent violence (for example, restricting access to alcohol and weapons);
- community development programs (e.g., Care Society Initiatives, Integrated Rural Development);
  - Reducing poverty and social protection for the poor;
  - anti-discrimination laws and campaigns;
  - Strengthening and caring for the rights and opportunities of persons with mental disorders.

Mental health problems are common across the world:
- More than 40% of the globe population has one or more mental disorders at one point in their lives;
- Mental disorders account for 13.1% of the total years of life of the disabled.

The social consequences of mental illness include:
- Decrease in life expectancy of patients with mental and behavioral disorders by 10 years;
  - Social maladaptation;
  - Suicidal behavior;
  - Socially dangerous behavior
  - Deterioration in the quality of life of patients and their relatives.

**Materials for self-control.**

Test tasks of the entrance level of knowledge.

1. What is not included in the indicators that characterize hospitalized morbidity:
   A. prevalence of diseases
   B. structure of hospitalized morbidity
   C. the average duration of treatment.

2. What information is not needed to determine the structure of hospitalized morbidity:
   A. population
   B. number of hospitalizations for individual diseases
   C. number of hospitalization cases by disease classes.

Tasks.

1. Be able to complete the documentation for the study of morbidity.
2. Know the method of calculating the indicators of infectious disease analysis.
3. To know the method of calculating indicators of hospital morbidity analysis.
Ministry of Health of Ukraine
Ukrainian Medical Stomatological Academy

Approved
at the meeting of the Department of Social Medicine, Public Health, Healthcare Organization and Economics, with medical expertise «08» January 20 20 r.
Minutes № 13 of "08" January 2020 y.
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Methodical recommendations
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Poltava
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Epidemiology, as a science of the laws of the spread of infectious and other diseases in human society, methods of preventing and eradicating them, is a rapidly developing section of medicine. On the one hand, it presents new hypotheses and theories that should explain the new facts, and on the other, it tends to expand the boundaries of epidemiology and to bring into its sphere new objects that are relevant to public health.

2. SPECIFIC OBJECTIVES:
- To master the modern principles of evidence-based medicine
- To acquire methodological and theoretical bases of formation of statistical collections for their further adequate analysis
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- Know the design of epidemiological research in medicine

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4. TASKS FOR INDEPENDENT TRAINING TO EMPLOYMENT
4.1. A list of the main terms of parameters, characteristics which the student need to learn

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<td>is subject to special consideration due to their epidemiological and social significance (malignancies, tuberculosis, sexually transmitted diseases, mental illness, etc.</td>
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<td>Hospitalized incidence</td>
<td>makes it possible to study the composition of patients treated in the hospital</td>
</tr>
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<td>Risk group</td>
<td>A group of people who, due to their biological, social status, behavior, or environmental conditions, are more likely to be ill or ill at health than the rest of the population.</td>
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<td>Topic</td>
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</tr>
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<td>Epidemiology</td>
<td>In a narrow sense, epidemiology is the study of the statistical frequency and statistical distribution of diseases among the population, as well as the factors that determine the incidence of diseases. In a broad sense, the term &quot;epidemiology&quot; is used in relation to other medical science issues, to which the method of empirical social research is the statistical method. Epidemiology is considered to be a major area of public health, since this field of medicine (as opposed to clinical) is not focused on the individual in need of medical care, instead the focus is on the entire population or individual groups. Based on the facts collected by the epidemiology, suggestions for improving public health can be developed. Science that studies the patterns of distribution and the determinants of health status or events in a population using research findings to control health problems.</td>
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<td>Epidemiology (as a science)</td>
<td>The science of the emergence and spread of disease in the human population. Modern epidemiology studies both infectious and non-infectious diseases, as well as patterns of their spread and methods of combating them.</td>
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<td>Risk factors</td>
<td>Factors of living conditions that pose a threat to health or disease. They can have a generalized or specialized effect, that is, an effect on the whole organism or on a specific system, for example, cardiovascular, digestive, sexual, nervous. The impact can be acute or chronic. Socio-economic status, biological status, behavioral stereotypes, or environmental conditions that are associated with increased susceptibility to a particular disease or cause health or injury. Potentially harmful health, behavioral, biological, genetic, environmental, and social factors; environmental and industrial environments that increase the likelihood of disease progression, progression and adverse outcome.</td>
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**4.2 Theoretical questions:**
1. What infectious diseases are socially significant and why.
2. The population's incidence of tuberculosis.
3. The incidence of the population for hepatitis.
4. The incidence of the population for sexually transmitted diseases.
5. The morbidity of the population for diphtheria.
6. The incidence of the population in measles.
7. The population's incidence of parasitic diseases.
8. What is infectious morbidity, methods of its registration and study, main indicators.
9. What is hospital (hospitalized) morbidity, methods of its registration and study, main indicators.
10. What is important non-epidemic morbidity, methods of its registration and study, main indicators.

**CONTENT OF THE TOPIC:**
Infectious disease - a special account of acute infectious diseases associated with the need for prompt anti-epidemic measures.

In terms of infectious disease, Ukraine is one of the first places in Europe, and mortality from it is growing rapidly.

There is a real risk of worsening of the epidemic situation regarding the specific infection control due to inadequate vaccine supply, practically no stock of immunobiological preparations in the regions, a large number of unjustified medical leads, incompetent media appearances. The role of infectious agents in the formation of chronic human pathology has become important. The number of chronic diseases caused by infectious agents (HIV infection; hepatitis, etc.) is increasing every year. Chronic diseases, in turn, lead to a reduction in human life expectancy, an increase in mortality rates, temporary and permanent disability.

In the modern period, the fight against infections has not only not lost its relevance, but on the contrary, has become even more significant. Socio-economic and environmental factors have a negative impact on infectious morbidity in Ukraine.

The observation unit for the study of infectious disease is every case of illness or suspicion.

“Emergency Report on Infectious Disease, Food, Acute Occupational Poisoning” is filled in (f. №058 / 0). Filled by a doctor at a polyclinic or other health care facility, by an ambulance doctor, in the countryside by a FAP manager.

It is registered in the logbook of infectious diseases. Must be sent to a sanitary and epidemiological station within 12 hours.

The following indicators are used for the analysis of infectious morbidity:

- Frequency of the detected diseases (ratio of their number and population of the territory; indicators are calculated per 100 thousand population);
- Seasonality (based on the data on the number of diseases by months, seasonal fluctuations - the ratio of data per month to the average);
- Frequency of hospitalization and completeness of coverage (in the first case - the ratio of the number of hospitalized to the population, in the second - to the number of detected diseases, in percentage);
- Frequency of diseases by age, gender, occupation (ratio of the number of diseases in the respective group to the population of the given group);
- Number of detected bacilli carriers per 1000 surveyed.

Example:

Frequency of detection of infectious diseases in this territory:

The number of detected infectious diseases ____ x 100,000;

Average population size in this territory

Frequency of hospitalizations infectious patients:

Number of hospitalized infectious patients
Average population size

2. The incidence of major non-epidemic diseases is subject to special consideration due to their epidemiological and social significance (malignancies, tuberculosis, sexually transmitted diseases, mental illness, etc.);

There are two main documents for the registration of important non-epidemic diseases:

1. Report on a patient who is diagnosed with active tuberculosis, sexually transmitted diseases, mycosis, mental illness for the first time in his life (f. No. 089/0).

2. Notification of a patient with a first-ever diagnosis of cancer or other malignancy (f. No. 090/0).

Observation unit for detection of important non-epidemic diseases - each patient with a first established diagnosis (active tuberculosis, venereal diseases, trichophyta, scabies, trachoma, cancer, etc.)

3. Hospital or "hospitalized" morbidity makes it possible to study the composition of patients treated at the hospital;

   The observation unit in the study of hospital morbidity is every case of hospitalization of the patient for the disease.

Source of information - "Statistical card of the patient who left the hospital".

This document is to be filled in by the attending physician at the time of issue of the Medical Card for the Inpatient Patient on the day of his discharge or in case of death. Information on the incidence of hospitalized patients allows to make conclusions about its timeliness, duration and results of treatment, the amount of hospital care provided, etc.

Data on “hospitalized” morbidity are taken into account when planning a bed fund, determining the need for different types of inpatient care.

The incidence of hospitalized patients is studied by the following indicators:

Frequency of hospitalization (the ratio of the number of hospitalized for a particular disease or all hospitalized based on the population living in the territory);

Level of hospitalization by age, sex, place of residence (ratio of the number of hospitalized patients of this group based on the population of this group);

Structure of hospitalization (the share of each disease among the total number of hospitalized patients; it is possible to calculate the structure of the hospitalized by age, sex, place of residence);

The average duration of treatment (the ratio of the number of bed-days spent by patients in hospital to the number of patients left); it is appropriate to correlate this indicator with the patients' age, diagnoses, treatment results and analyze them separately for inpatients and deceased patients.

The main sources of information on particular types of morbidity

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<td>occupational poisoning, unusual response to vaccinations (f. 058 / o)</td>
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<td>Hospital morbidity</td>
<td>Card of the patient who left the hospital (f. № 066 / o)</td>
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**Materials for self-control.**

A. Test tasks:
- The medical and social value of morbidity as an indicator of health is determined by:
  - A. Leading role in mortality, temporary and persistent disability, negative impact on the health of generations, the need for medical assistance
  - B. Corresponding to the structure of the causes of death
  - C. Costs of hygienic education of the population
  - D. Socio-economic conditions of society
  - E. Costs for public health services

The pediatrician was instructed to analyze the structure of the child morbidity at the subordinate site and to compare it with the indicators of Ukraine. In the structure of the overall incidence of children in Ukraine, the first three places are diseases:
- A. Respiratory, digestive, nervous and sensory organs
- B. Malignant, endocrine, circulatory systems
- C. Circulatory systems, breathing, digestion
- D. Endocrine, respiratory and circulatory systems
- E. Digestive system, circulatory system, endocrine
Ministry of Health of Ukraine
Ukrainian Medical Stomatological Academy

Approved
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<td>The overall incidence</td>
<td>takes into account the prevalence of all diseases among the population as a whole and of individual diseases in certain groups in this territory by the results of the appeals.</td>
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<td>General incidence or prevalence of diseases (Revalepce)</td>
<td>level of all reported diseases per calendar year: acute and chronic (registered at the first treatment in the current year, and detected in the current and previous years).</td>
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<td>Primary incidence (Ipsideps)</td>
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### 4.2 Theoretical questions:

1. The main trends in the state of health of the population at the present stage.
2. Medical and social significance of morbidity with temporary disability
3. Methods of studying the morbidity with temporary disability, their advantages and disadvantages.
4. Morbidity analysis based on temporary disability
5. Analysis of morbidity based on periodic medical examinations
7. Basic indicators of morbidity with temporary disability.
8. Records for the study of morbidity with temporary disability

10. The main indicators of general disability, the method of their calculation.

**CONTENT OF THE TOPIC:**

Morbidity with temporary disability

The incidence of temporary disability is studied among workers and takes into account cases of illness resulting in absenteeism. This type of morbidity accounts for 25 to 75% of primary care requests.

The level and nature of morbidity of employees depending on age, sex, length of service, profession, season of the year is determined in order to identify the unfavorable influence of factors of the production environment on the health of workers, improving working conditions and prevention of occupational and unprofessional pathology. Detection of long-term and frequently ill persons in the case of material analysis makes it possible to ensure their timely medical examination and proper employment.

Morbidity is analyzed by quantitative (number of cases and days of disability, duration of one case) and qualitative (morbidity structure) indicators.

There are three methods of studying morbidity: according to data of temporary disability in connection with a disease; according to medical examinations; according to the causes of death. The most informative and widely recognized are the first two methods.

The analysis of morbidity according to the data of temporary disability is carried out on the basis of statistical processing of sheets of disability and gives only a general characteristic of the intensity and structure of morbidity of workers of the enterprise, helps to identify especially widespread forms of diseases. An in-depth analysis of the incidence of workers with temporary disability is carried out according to the personal incidence records ("by sick persons"). Each employee is provided with a special accounting card, which records the incidence data with temporary disability. At the end of the year, only those workers who have worked for this company for at least one year are subject to card processing. This method makes it possible to analyze the incidence by sex, age, occupation, experience, individual nosological forms, etc., as well as to identify persons who are long and often ill and subject to systematic medical control. In addition, it is effective in analyzing occupational morbidity and determining the relationship of chronic disease to the profession. This relationship can be established on the basis of the inconsistency of the number of reported cases of disability with the number of sick workers, since temporary dismissal from work due to the exacerbation of a chronic disease may be obtained several times a year by the worker.

The morbidity of the workers leads to considerable economic losses of the society, which causes the great socio-economic importance of this problem.

The unit of account is the case of disability. The accounting document for the registration of each case of temporary disability of the employee during the year is a sheet of disability.
To find out the impact of working conditions on the health of workers, assessing the effectiveness of wellness measures mainly in large enterprises conducted an in-depth account of morbidity with temporary disability.

It is based on a special accounting of diseases of employees, which provides for the introduction of a card for each worker, containing information about all incidents of disability during the year with their main characteristics: diagnosis, duration, place of issue.

Such records allow you to obtain additional information about:
- the proportion of people who were ill during the year;
- the proportion of employees who did not fall ill during the calendar year (health index).

The following criteria are used in the selection of a group of patients who are often and long-term sick:
- etiological factor;
- the number of incapacitation cases;
- the number of days of disability.

The group of frequently ill persons is defined in the presence of 4 or more cases of etiologically related diseases or, 6 or more cases of etiologically related diseases for the current year.

Persons with long-term illness include those who have had hospital leaves for more than 40 days due to etiologically related diseases, or 60 days or more due to etiologically unrelated diseases, during the current year.

The current state of health of the population of Ukraine, which significantly reproduce the incidence rates, is characterized by the following main trends:
1. The prevalence and primary incidence of most classes is increasing diseases.
2. The frequency of transition of acute diseases to chronic increases.
3. Chronic non-infectious diseases, especially diseases of respiratory organs, circulatory system, digestive organs, dominate the structure.
4. The incidence of birth defects and hereditary diseases is increasing.
5. The infectious morbidity increases, especially tuberculosis, intestinal infections, diphtheria, viral hepatitis.
6. The prevalence of socially conditioned diseases, especially sexually transmitted diseases, AIDS, and tuberculosis, is increasing.
7. There is a differentiation of the incidence levels in the main social groups, in particular, their increase among the poor.

The trends discussed above reflect the deterioration of the socio-economic and environmental situation in our country, as incidence rates are the most sensitive indicator of changes that are taking place.

The analysis of materials of incidence with temporary disability is carried out, as a rule, using the following statistical indicators (total and by individual forms and groups of diseases in the shop, at the enterprise for a month, quarter, year):

The main indicators of morbidity with temporary disability:

Indicator of calendar days of temporary disability (TN) per 100 employees:
Calendar days indicator = \( \frac{Абсолютное число календарных дней TH \times 100}{\text{Average number of employees}} \)

Indicator of cases of temporary disability per 100 employees:
Indicator of cases of TN = \( \frac{\text{The absolute number of cases of TN} \times 100}{\text{Average number of employees}} \)

Average duration of temporary disability:
The average duration = \( \frac{\text{Number of calendar days TH}}{\text{Number of cases of TH}} \)

The indicator of the structure of morbidity with temporary disability:
Indicator of the structure = \( \frac{\text{Number of cases of TH on this disease} \times 100}{\text{The number of cases of TH in all diseases}} \)

Study methods and criteria for disability

**The concept of disability is closely linked to performance criteria.**

Unlike morbidity with temporary disability, disability is characterized by persistent (permanent or long-term, at least one year) disability or its significant decrease, ie complete or partial inability to continue occupational activity due to health.

Disability as a statistical concept is a set of indicators that characterize the frequency of permanent disability of the population and the composition of persons with disabilities in the territory by age, groups, causes, etc.; it is also called morbidity with persistent disability.

Disability is one of the most important indicators of the health of the population, which has not only medical but also socio-economic importance.

Criteria for establishing disability groups (MOH Order No. 561 of 14.11.2011)

They are determined by the degree of restriction of categories of life, such as the ability to self-care, movement, orientation, control their behavior, communication, training and performance of work.

The first disability group

The basis for establishing the first group of disabilities is persistent, severe functional disorders in the body caused by disease, trauma or birth defect, which lead to a significant limitation of human life.

Subgroup A of the first disability group includes persons with exceptionally high rates of loss of health, extreme dependence on permanent third-party care, assistance or supervision of others and who are effectively incapable of self-care.

Subgroup B of the first disability group includes persons with a high degree of loss of health, significant dependence on others for the provision of vital social and household functions and who are partially capable of performing certain elements of self-care.

Establishment criteria for disability group I:
• inability to self-care or complete dependence on others;
• inability to move independently or completely dependent on others;
• inability to orient (disorientation);
• inability to communicate;
• failure to control their behavior.
The second group is disability
The basis for the establishment of the second group of disabilities are persistent, definite difficulty functional disorders in the body, caused by disease, trauma or birth defect, which lead to a significant limitation of human vitality, while maintaining the ability to self-care, but not in need of care or care.

Criteria for establishing group II disability:
• the ability to self-service with the use of aids and (or) with the help of others;
• the ability to move independently using aids and / or with the help of others;
• inability to work or the ability to perform work in specially created conditions with the use of aids and (or) specially equipped workplace, with the help of other persons;
• inability to study or ability to study only in special educational institutions or at special programs at home;
• the ability to orient in time and space that needs the help of others;
• the ability to communicate with the use of aids and / or with the help of others;
• the ability to partially or completely control their behavior with the help of outsiders.

Group II disability may also include persons who have two or more illnesses that lead to disability, the consequences of trauma or birth defects, and combinations thereof that, in the aggregate of functional disorders, lead to a significant limitation of human life and work capacity.

The second group is defined for the disabled from childhood (pupils, students) for the period of study; upon graduation, a certificate of their suitability for employment as a result of their occupation is provided.

People with disabilities of the II group can perform this or that work in specially created conditions: in special workshops for the disabled, where the organization of a special mode of work is ensured (reduction of working day, individual working standards, additional breaks in work, strict observance of sanitary and hygienic standards, medical supervision and systematic medical assistance, etc.), at specially created workplaces, at home with an individual rhythm of work without mandatory production norms, with delivery of raw materials to the home in necessary cases, etc. yymannyam home finished products.

**Third group of disabilities**
The reason for the establishment of the third group of disabilities is persistent, moderate functional disorders in the body caused by disease, consequences of traumas or birth defects, which have led to a moderately pronounced limitation of life, including work capacity and need for social assistance.

Criteria for establishing a disability group III:
• ability to self-service with the use of aids;
• the ability to move independently with greater time, partial movement and shortening of distance;
• the ability to study in general-type schools while adhering to the special regime of the educational process and (or) using ancillary means, with the help of other persons (except the teaching staff);
• the ability to orientate in time, in space provided the use of aids;
• ability to communicate, characterized by slowing down, reducing the volume of assimilation, retrieval and transmission of information.

A moderately pronounced limitation of life is determined by the partial loss of opportunities for full-fledged work activity (loss of profession, significant decrease in qualification or decrease in the volume of work activity; significant difficulty in acquiring a profession or employment): a significant decrease (more than 25%); loss of profession or significant loss of qualification; considerable difficulty in acquiring a profession or in employing a person who has never worked or had a profession before.

Each disability group is identified for a specific period, with a retest period. Re-certification of persons of working age can be in 1-3 years. Referral to a predefined deadline can only be directed if the group needs to be revised in the event of a change in health and performance.

Without specifying the period of re-certification, ie a permanent disability group is established in the case of:

Anatomical defects and related conditions;
• the retirement age of a disabled person in men after reaching sixty years, women - fifty-five.
• persistent irreversible morphological and functional disorders;
• ineffectiveness of rehabilitation measures;
• unfavorable clinical and work prognosis.

The procedure and conditions for determining disability needs shall be established on the basis of the conclusion of medical and social expertise and taking into account the abilities for professional and everyday activities of the disabled person.

Types and volumes of necessary social protection of a disabled person are provided in accordance with the individual program of medical, social and labor rehabilitation and adaptation at the expense of the state budget, including the Fund of social protection of disabled persons, local budgets (the provisions on the individual program of rehabilitation of the disabled are approved by the Cabinet of Ministers Decree 23 May 2007 N 757)

"Individual Disability Rehabilitation Program" (IPR) - a complex of optimal types, forms, volumes, terms of rehabilitation measures with determination of the order and place of their implementation, aimed at restoration and compensation of impaired or lost body functions and abilities of the disabled person.
An individual program for adults with disabilities is developed by the MSEC, for children with disabilities - LKC health care facilities at the registered place of residence or treatment of the disabled.

The individual program is developed within one month from the date of the referral of the disabled person to the MSEC, and the legal representative of the disabled child to the LCC for the determination of disability.

An individual program is developed with the participation of a disabled person or legal representative of a disabled child by experts from MSEC or LCC with the involvement of specialists of health care institutions, social protection bodies, state employment service, bodies of the Pension Fund of Ukraine, Social Security Fund with temporary disability social insurance against industrial accidents and occupational diseases, the Social Security Fund for the Disabled and other bodies active in the field of rehabilitation stations of the disabled.

Habilis (Lat. Habilis - be able). The term is used mainly for young children with developmental disabilities, as opposed to rehabilitation - the restoration of the ability to skills lost through illness, trauma and the like.

Habilitation is a system of medical and pedagogical measures aimed at the prevention and treatment of pathological conditions that lead to a permanent loss of opportunities to learn, to be fully functional in young children who have not yet adapted to the social environment.

Rehabilitation is a system of medical and pedagogical measures aimed at the prevention and treatment of pathological conditions that lead to temporary or permanent disability. The purpose of rehabilitation is to maximize the ability to live and work in society.

It is very closely related to the morbidity of the population and in fact is always its result. The same applies to the disability of children due to anatomical defects and birth defects.

The most important indicators of disability and their calculation method:
General disability (disabled contingents):
General disability = \( \frac{\text{Number of persons receiving disability pensions}}{\text{Total population}} \times 1000 \) (10,000)

Contingent structure (calculated by age, group, type of disability, cause of disability (diagnosis)):
Contingent structure = \( \frac{\text{Number of persons with disabilities (specific groups, types, causes)}}{\text{Total number of persons receiving disability pensions}} \times 100 \)

(100)

Primary disability or disability (incidence of primary disability):
Disability = \( \frac{\text{Total number of persons first recognized as disabled}}{\text{Total population}} \times 1000 \) (10,000)

Structure of primary disability (by diseases, age groups, disability groups, etc.):
Structure of primary disability = \( \frac{\text{Number of persons first recognized as disabled}}{\text{specific group, species, causes}} \times 100 \)
Total number of persons first recognized as disabled

Change of disability group at re-certification:

Change of disability group = Number of people who changed their disability group at re-certification

\[ \text{Total number of disabled persons who have been retrained for the year} \]

Movement of the disabled during the year:

Movement of the disabled during the year = Number of handicapped persons at the beginning of the year + number of disabled persons recognized for the first time - number of disabled persons discarded = number of disabled persons at the end of the year

Childhood disability rate:

Childhood disability rate = \( \frac{\text{Total number of disabled children}}{\text{Total population}} \times 1000 \) (10000)

The share of children with disabilities among the initially recognized disabled:

The share of children with disabilities = \( \frac{\text{Total number of disabled children}}{\text{among the initially recognized disabled}} \times 100\% \)

Mortality among the disabled:

Mortality among the disabled = \( \frac{\text{Number of disabled persons who died}}{\text{Number of persons first recognized as disabled}} \times 100\% \)

Performance Indicators for Rehabilitation Programs:

Performance Indicators for RP = Number of persons with disabilities who have a disability group or are recognized as able to work x100%

Number of disabled people undergoing rehabilitation programs

Of the above indicators, the two most important are:

• general disability (contingents of the disabled);

• disability (primary disability).

Detailed information on the composition of persons receiving a disability pension in the territory can be obtained from the annual reports of district (city) social security departments.

Data on the number of persons first recognized as disabled by reason are obtained from the annual reports of the ISEC.

If necessary, more detailed information on persons who are first recognized as disabled, the nature of the disease and the types of disability, use the primary documents:

• Act of inspection at the MSEC;

• a statistical coupon for the survey act at the MSEC.

The study of disability is an important medical and social problem, especially in the current context, due to the ongoing aging of the population and the increasing number of older people with chronic diseases that lead to disability.

In addition to demographic and environmental factors, the status of this indicator is significantly influenced by the socio-economic conditions of life and social policy of the state regarding the disabled.
The rate of primary disability of adults in the dynamics since 1992 has increased from 49.3 to 53.5 cases per 10 thousand population in 2007.

Primary disability of all categories of population is 87.1% due to disability from the general disease (37.2 cases per 10 thousand population), 2.0% - disability of military personnel (1.0 cases per 10 thousand population), 7.6% - disability since childhood (1.8 cases per 10 thousand population), 3.3% - disability from work injury and occupational diseases (1.5 cases per 10 thousand population), 2.5% - disability due to the accident on ChNPP (1.1 cases per 10 thousand population).

Among adults, in the structure of its causes, diseases of the circulatory system occupy the first place - 26.7%, among the population of working age - 20.4%.

17.8% of adults with disabilities are neoplasms (second place), 11.2% are injuries (third place), 10.6% are diseases of the musculoskeletal system (fourth place).

The main causes of general and primary childhood disability are three classes of diseases: the nervous system and sensory organs, congenital anomalies, and mental disorders.

Among certain diseases, the most common causes of childhood disability are childhood cerebral palsy, mental retardation, ear and pelvic disease, eye disease and its appendages. Disability of children in Ukraine is largely due to the deterioration of the environmental and economic situation, living conditions and health of parents.

Materials for self-control.

Situational problem
The number of employees is 3000 people
The number of reported cases of TH - 110
Number of days of temporary disability - 980, including about respiratory diseases - 450
Calculate incidence rates with temporary disability

Test tasks
When studying the incidence of temporary disability of workers of the machine-building plant, the average duration of one case was 20 days. What diseases have affected the magnitude of the indicator?

A. Chronic diseases
B. Difficult to determine
C. Antecedents
D. Sharp
E. With a subacute course

In the study of morbidity with temporary disability, the following indicators are calculated
A. All of the above
B. Morbidity pattern in cases, in days
C. The incidence rate in cases per 100 employees
D. The incidence rate in days per 100 employees
E. Average duration of 1st case
Approved at the meeting of the Department of Social Medicine, Public Health, Healthcare Organization and Economics, with medical expertise «08 » January 20 20 r.
Minutes № 13 of "08" January 2020 y.
head. departments ___________ Golovanov IA

Methodical recommendations
for independent work of students
during preparation of practical (seminar) classes

<table>
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<tr>
<th>Educational discipline</th>
<th>Social medicine. Health care organization</th>
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<tbody>
<tr>
<td>Module №</td>
<td>2</td>
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<tr>
<td>Topic</td>
<td>Methodological bases of disease burden research. The value of outcomes to the public health system</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
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Poltava
1. RELEVANCE OF THE TOPIC:
Epidemiology, as a science of the laws of the spread of infectious and other diseases in human society, methods of preventing and eradicating them, is a rapidly developing section of medicine. On the one hand, it presents new hypotheses and theories that should explain the new facts, and on the other, it tends to expand the boundaries of epidemiology and to bring into its sphere new objects that are relevant to public health.

2. SPECIFIC OBJECTIVES:
- To master the modern principles of evidence-based medicine
- To acquire methodological and theoretical bases of formation of statistical collections for their further adequate analysis
- To analyze epidemiological methods of research
- Know the design of epidemiological research in medicine

3. BASIC KNOWLEDGE, ABILITIES, SKILLS, NECESSARY FOR STUDYING THE TOPIC (INTERDISCIPLINARY INTEGRATION):

<table>
<thead>
<tr>
<th>Names of disciplines</th>
<th>These skills</th>
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<tbody>
<tr>
<td>History of medicine</td>
<td>Stages of development of medical knowledge</td>
</tr>
<tr>
<td>Sociology</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>Medical biology and biochemistry</td>
<td>Identify basic concepts, methods and research tools that are used to determine the factors affecting the body and health.</td>
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<tr>
<td>Health</td>
<td>Identify and analyze the relationship between natural phenomena.</td>
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<tr>
<td>Normal physiology</td>
<td>Know Classification of Diseases ICD-10.</td>
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<tr>
<td>Pathology</td>
<td>Knowing the structure of hospitals and health care volume which is therein</td>
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<tr>
<td>Microbiology</td>
<td></td>
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<tr>
<td>Internal medicine</td>
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4. TASKS FOR INDEPENDENT TRAINING TO EMPLOYMENT

4.1. A list of the main terms of parameters, characteristics which the student need to learn

<table>
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<tr>
<th>Terminology</th>
<th>Definition</th>
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<tr>
<td>Health index</td>
<td>- an indicator that reflects the percentage of the population or part of the group in which the disease is not fixed.</td>
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<tr>
<td>Life expectancy/average life expectancy</td>
<td>is the average number of years a child will live, provided that the structure of causes of death and the mortality rate observed in the year of birth do not change during his life.</td>
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<tr>
<td>Life expectancy at birth</td>
<td>is the number of years on average a certain generation of born people will have to live, provided that throughout the life of this generation (when it passes from one age to another), the mortality rate is equal to the mortality rate of the population in certain age groups. It is calculated by calculating mortality tables and life expectancy.</td>
</tr>
<tr>
<td>Life expectancy of a person’s</td>
<td>is an indicator of demographic statistics that characterizes the expected duration of a person’s healthy life in that segment of life,</td>
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The healthy life, which, in accordance with generally accepted norms and ideas, as well as the conclusions of specialists, is associated with health and well-being or with the absence of any disorders, diseases and disabilities. In particular, indicators of life expectancy for a healthy person include indicators such as life expectancy without disability (DALY) and life expectancy, adjusted for quality (QALY), which mainly reflect the period in an individual’s life that is not burdened with disability, disorders and / or chronic diseases.

Supportive environment - an environment that supports health, allows people to protect it from a possible threat and to expand their potential capabilities and greater reliance on their own strengths in relation to health. In the health sense, both physical and social aspects of the environment, which include: places of residence of people, local community; their home and family; places where they work and relax. A supportive environment also includes a framework that defines access to livelihood resources, as well as opportunities for growth and development. Thus, activities and actions aimed at creating a supportive environment have many dimensions and parameters: physical, social, spiritual, economic and political. Each of these aspects is inextricably linked with others in the framework of dynamic interaction.

The global burden of disease (the burden of disease) - one of the most popular is the index proposed by experts of the World Development Bank in a report for 1993 to assess the effectiveness of investments in healthcare. The indicator quantifies the loss of years of life with a high quality (healthy life) due to illness; expressed in years of life, adjusted for disability and quality of life (DALYs and QALYs), the incidence, mortality, and working capacity (presence at work, at school, etc.) are taken into account in the measurement. For diseases, the losses due to premature death are taken into account, which is defined as the difference between the actual age at the time of death, the expected life expectancy at this age and the loss of healthy life years due to disability.

**4.2 Theoretical questions:**
1. What are Health Resources?
2. What is health potential.
3. What is a health balance?
4. List the health indicators of the population.
5. Discover the essence of a comprehensive health index.
6. What is Integral Health?
7. Expected life expectancy index
8. Quality of life adjusted for quality of life
9. What are the most commonly used metrics?
10. Disability-adjusted life expectancy

**CONTENT OF THE TOPIC:**
The global burden of disease is defined as an indicator that calculates the loss of a healthy life from illness, measured in years of life, adjusted for disability. DALYs is a unit of measure for both the global burden of disease and the impact of health interventions, as an indicator of a reduction in the burden of disease. Calculation of GTH allows you to evaluate the importance of various diseases, substantiate the priorities of health care and compare the effectiveness of medical measures by the level of expenses for a year of life without diseases.

Health is an integral indicator of the success of a society. It is recognized as an inalienable human right, an indispensable component of well-being, a global public good. The beginning of the 21st century was marked by an epidemiological transition from an infectious to a predominantly non-infectious type of pathology, an increase in the burden of diseases and the need for collective and individual health services. The main achievements in the healthcare sector of the third millennium can be considered: an increase in average life expectancy, overcoming many infectious diseases, the development of preventive technologies, the emergence of gene medicine, the creation of new generations of drugs, an increase in the share of GDP for healthcare, the development of modern medical (including information) technologies, high professionalism of medical personnel, improving living standards in general. In modern conditions of existence, the problem of preserving and strengthening the health of the population as a fundamental value, a strategic goal and a criterion for the success of a society's activity is of particular importance. Achieving a high quality of public health is possible only under the condition of effective prevention of its negative violations, elimination of the causes of ill health and risk factors. A decisive role in ensuring healthy living, working, studying, and resting conditions is played by preventive measures aimed at increasing the health potential and counteracting risk factors for diseases. It is known that, in contrast to the direct causes of diseases and their consequences, which directly or indirectly cause pathological changes in the body, risk factors create a negative background that contributes to the onset of diseases. Risk factors are phenomena of various nature, including adverse living conditions, including production factors, environmental pollution, as well as inherited and acquired deviations during metabolic and regulatory processes, etc.

Numerous studies have identified the most common diseases and causes of death worldwide. Over the past 3 years, The Lancet Magazine has published annual reports of the Global Burden of Disease (GBD) international research project sponsored by the Institute for Health Metrics and Evaluation (IHME) at the University Washington (Seattle, USA) with financial support from the Bill & Melinda Gates Foundation. Currently, this study estimates the loss of a healthy life due to more than 330 diseases and pathological conditions due to 68 environmental factors, as well as behavioral and metabolic risk factors for 195 countries and territories. About 2500 laboratories from 130 countries of the world take part in the project. Therefore, on September 12, 2017, The Lancet magazine published the next results of the global health assessment for 2016.
According to the State Statistics Service of Ukraine, in our country the average life expectancy, for the first time exceeding the pre-crisis rate of 1990 (70.42 years) in 2010 (70.44 years), in 2016 reached 71.68 years. In just 1 year, from 2015 to 2016, Ukrainian life expectancy immediately increased by 0.30 years, while increasing for women from 76.25 to 76.46 years, or 0.3%, and for men from 66, 37 to 66.43 years, that is, 0.5%. According to the GBD 2016 project, the lion's share of the increase in life expectancy should be attributed to the reduction of mortality from infectious diseases, as well as child and maternal mortality, the rate of which, however, is very high in our country, and in this regard, by the way, Ukraine proposed ways reduce maternal mortality. Significant progress in reducing mortality from external causes should also be noted.

Through a faster decline in mortality among children under 5 years old and due to infectious diseases and external causes, the role of noncommunicable diseases has increased unprecedentedly in shaping the life expectancy of Ukrainians. According to the GBD project, in Ukraine, as well as around the world, the circulatory system diseases, including coronary heart disease, pose the greatest threat. In 2016, this disease resulted in more than 270 thousand deaths, or 46% of all Ukrainians deaths for this period. In the second place in the number of deaths, malignant neoplasms are stably located, especially cancer of the lung, stomach and rectum. It is unfortunate that now we often cure breast cancer in Ukraine by the number of claimed lives since 1990, and to this day is kept in the top ten most dangerous noncommunicable diseases.

In general, significant changes occurred in the structure of mortality from noncommunicable diseases in Ukraine from 1990 to 2016: obstructive pulmonary diseases, diabetes mellitus, rheumatic heart disease, leukemia, cervical cancer, and congenital anomalies receded into the background. But the causes of death associated with the use of alcohol (mental alcohol disorders, alcoholic liver cirrhosis, alcoholic cardiomyopathy) and narcotic drugs (mental and somatic diseases associated with drug use, liver cirrhosis induced by hepatitis C and B) gained more weight.

The reasons for such changes are corresponding changes in the structure of risk factors. According to the GBD project, in comparison with 1990 in 2016 in Ukraine, the proportion and absolute number of deaths associated with environmental factors (air, water, soil pollution, insufficient supply of clean drinking water and imperfect sewage, as well as occupational risks) decreased. At the same time, the proportion and number of deaths from behavioral and metabolic risk factors increased.

Among the behavioral factors, it is encouraging to reduce smoking-related deaths from 127.2 thousand in 1990. Up to 96.5 thousand in 2016, however, over the indicated period, the number of deaths associated with alcohol abuse increased from 50.8 to 78.7 thousand; with the use of psychoactive substances - from 5.6 to 11.0 thousand; with low physical activity - from 27.2 to 34.0 thousand. According to GBD experts, the most dangerous risk factor in Ukraine, as in most economically developed countries, is unbalanced nutrition: in 2016, this risk factor caused 262.6 thousand deaths versus 230.6 thousand in 1990. It turned out that in 2016, Ukrainians
were most often sick and were dying from diseases associated with an excess of salt in the daily menu and a lack of fruits, whole foods containing omega-3 fatty acids, whole foods grains, nuts and seeds.

**Metabolic risk factors** are considered to be functional disorders that arise as a result of interruptions in metabolic processes of various etiologies. Within GBD, 6 such disorders are analyzed: high glucose and cholesterol levels, high body mass index, high blood pressure, low glomerular (glomerular) filtration rate and bone density. The most dangerous is the so-called deadly quartet (high glucose and cholesterol in the blood, high body mass index and high blood pressure), or the metabolic syndrome preceding almost every cardiovascular disease, as well as a number of malignant neoplasms and other diseases. Losses of human lives associated with this syndrome in Ukraine in 2016 amounted to 279.7 thousand against 238.0 thousand in 1990. The low glomerular (glomerular) filtration rate and renal failure took 45.3 thousand Ukrainian lives in 2016 compared to 36.4 thousand in 1990., and 1.7 were associated with low bone density (the main cause of bone fractures) in 2016 thousand deaths against 1.8 thousand in 1990.

A prolonged **medical and demographic crisis** has thrown Ukraine far into the margins of epidemiological progress. Ukraine is trying to control child mortality and mortality from infectious diseases, but due to the lack of control over cardiovascular morbidity and mortality, it is still at the third stage of the epidemiological transition. At the same time, most European countries have already overcome the barrier of the fourth stage, and the fight against cancer is coming to the fore.

According to WHO, the average life expectancy (SCL) over the past 100 years has increased significantly. So, in 1900 it averaged 35 years, in 2000. - 65.4, in 2010 - 67.7, in 2050 it is planned 75 years. But in some countries, now SOTZ reached 82 years. The world has seen a significant increase in population over 65: in 1990. Its share was 6.7%, and now it is 17% in the EU countries. That is, there is a significant aging of the population, forcing to spend more on health care, as the number of requests for medical care increases several times.

Today the world is experiencing a real epidemic of chronic non-communicable diseases associated with an unhealthy lifestyle, an unbalanced diet, low physical activity and the like. Often, along with the term “cause of the disease”, the term “risk factor” is used, which can act both as the cause of the disease and as favorable conditions for its development. These categories are so closely intertwined and so integrated that, as a rule, in fact, there is a whole chain of cause-effect relations when the cause is a consequence of a risk factor, and also, on the contrary, when a cause can create a risk situation for a given disease. The term "risk factors" is most often interpreted as potentially hazardous to health factors of behavioral, biological, genetic, ecological, social nature, the environment and the work environment, which increase the likelihood of the development of diseases, their progression and adverse outcome. Attention to risk factors is associated with the fact that many diseases are polyetiological, so it is difficult to establish the significance of each of the possible immediate causes. At the same time, there is the possibility of using knowledge of risk factors in practice for prevention, predicting the occurrence, characteristics of the
course of diseases and in the diagnostic process. A study of risk factors shows that many of them increase the likelihood of illness of various nosological forms. It has been established that the role of individual risk factors in the occurrence and development of specific diseases is not the same: according to experts, of the more than 20 known risk factors for the occurrence of the most common cardiovascular pathology, hypertension, smoking, hypercholesterolemia, overweight, and insufficient physical activity are of decisive importance. The significance of individual risk factors depends on the severity and duration of each of them, their combined effects, and also on the conditions.

The World Health Report 2002. Leading health risk factors identified. For developing countries, there is poverty, low body weight, dangerous water, poor hygiene conditions, dangerous sex, iron deficiency anemia, indoor smoke from burning solid fuels. For economically developed countries, the risk factors range from high blood pressure, high blood cholesterol, tobacco use, alcohol abuse, obesity, and low physical activity. These risk factors, which are associated with wealth and affluence, are also spreading today in developing countries, creating a double burden of ill health.

Many countries have made exceptional strides in preventing child mortality. As a result, the impact of disease is largely determined by disability, rather than premature mortality. In the countries of the European Region, an analysis of the disease burden using the DALY indicator indicates that almost 60% of the total disease burden in this WHO region is attributed to seven leading risk factors: high blood pressure (12.8%), tobacco (12.3%), alcohol (10.1%), elevated blood cholesterol (8.7%), overweight (7.8%), inadequate consumption of fruits and vegetables (4.4%), a sedentary lifestyle (3.5%). Each of these leading risk factors is associated with at least two leading diseases. But each of the leading diseases is associated with two or more risk factors. Most diseases have a multifactorial etiology and develop as a result of a complex interaction between individuals and their environment under the influence of determining determinants, and also depend on the possibilities of improving health and reducing vulnerability to risk factors.

The most important causes of the burden of disease in countries in the WHO European Region are noncommunicable diseases (77.0%), external causes, injuries and poisoning (14.0%) and infectious diseases (9.0%). In general, noncommunicable diseases caused 86% of the 9.6 million deaths and 77% of the 150.3 million DALYs. The basis of these diseases is a complex interaction of behavioral, genetic, environmental factors, the fight against which requires long-term planning and effective treatment and preventive work.

The use of well-known technologies for the prevention of risk factors can largely prevent the development of these socially significant diseases and their spread. In the United States, doctors also ranked the top killers of humanity. Scientists at George Washington University had to analyze the latest data on the causes of death in 108 countries. Based on the study, it was possible to compile a report “The global burden of disease”, which presents data on the main causes of deaths of both women and men.
1. High blood pressure (hypertension). High blood pressure kills more people. Therefore, those people whose relatives suffer from hypertension should be sure to regularly measure blood pressure and be examined by a cardiologist. Risk factors for developing hypertension include obesity, a tendency to abuse alcohol, and living under conditions of constant stress and nervous tension.

2. Nicotine addiction. Smoking kills about five million people each year. Scientists have come to the conclusion that until 2035, this figure will be double that. Smoking causes cardiovascular and oncological diseases.

3. Obesity. In developed countries, the number of obese people is increasing every year. Increased body weight makes the heart work in an enhanced mode, which can lead to the development of cardiovascular diseases. In addition, with obesity, joints suffer, the risk of developing diabetes, varicose veins and atherosclerosis.

4. Hunger and malnutrition. If the consequences of obesity claim the lives of people in developed countries, then the population of the Third World countries runs the risk of dying from chronic hunger. Hunger is not always the immediate cause of death. Chronic malnutrition depletes a person and makes her susceptible to serious illnesses.

5. Diabetes mellitus. The already mentioned obesity can lead to the development of diabetes, hereditary factors also play a large role in its occurrence.

6. Excessive salt intake. High dietary intake of common table salt can lead to the development of hypertension, stomach cancer, and kidney disease. Inadequate intake of fruits. Together with fruits, a person receives the necessary vitamins and minerals, so their regular consumption can be a preventive measure for the development of many diseases.

7. The environmental factor. Poor environment, unsatisfactory quality of drinking water, food, etc. cause a powerful adverse effect on human health and life expectancy.

8. Elevated cholesterol. When you consume a large amount of fatty foods in the vessels, cholesterol plaques form, causing cardiovascular disease.

9. Alcohol addiction causes not only serious illnesses directly related to alcohol abuse (for example, cirrhosis), but also significantly increases the frequency of death from external causes (trauma, poisoning, car accidents) and risky behavior, including suicide.

According to Ukrainian researchers, in Ukraine, the leading risk factors forming the global burden of disease, men have tobacco smoking (20.2% DALY), alcohol abuse (18.3%), high blood pressure (13.9%), high cholesterol (12.7%), insufficient consumption of fruits and vegetables (7.6%), high body mass index (7.2%), insufficient physical activity (4.9%), drug abuse (4.1%), lead (1.2%), unsafe sex (1.1%). Among women, a significant role in the formation of the disease burden is played by high blood pressure (20.3%), high cholesterol (16.6%), high body mass index (11.4%), and insufficient consumption of fruits and vegetables (8, 6% ), inadequate physical activity (6.4%), alcohol (4.3%), tobacco (3.0%), unsafe sex (2.3%), drugs (1.7%), smoke from combustion rooms solid fuel (1.5%) [12].
Studying the contribution of specific risk factors to the formation of the associated pathology is the best method for revealing the general features of the epidemiological process, their prognostic trends and substantiating the directions of prevention. So, among the risk factors for the most common pathology - cardiovascular diseases - the leading role is played by arterial hypertension, high blood cholesterol and smoking, studies of the spread of which and their impact on the onset and course of diseases are important for developing modern strategies to prevent this socially significant pathology, minimizing its negative consequences. High blood pressure leads to the appearance of 2/3 of all diseases of the circulatory system. Every year in the world it causes 7 million deaths, 12.8% of the total disease burden of the population in Europe and 13.9% in Ukraine. Among the world's population, the spread of this risk factor reaches 15-30%, in Europe and the USA - 25%. High blood pressure increases the risk of death from cardiovascular disease by a factor of three [9]. In Ukraine, 13.4% of the population have high blood pressure, according to appeals to health facilities, and 44.2% according to epidemiological studies. Arterial hypertension occurs in one third of the population, more often in men. Even in the years 25-34, an increase in blood pressure is found in every sixth man, in 35-44 years - in every third, and in 45-54 years - in every second. Among women aged 25-34, arterial hypertension was recorded in every twentieth, in the future the dynamics of its prevalence is similar to that in the male population. Monitoring of the epidemic situation over 25 years shows that the spread of arterial hypertension in the male population increased by 9%. Among women, the spread of this risk factor remained at the same level [3]. The problem of combating arterial hypertension is relevant for Ukraine. Every year, more than 5 million appeals are made to health care facilities for hypertension, the spread of which was during 1991-2007. Increased 2.9 times [6, 7]. The standardized mortality rate from cardiovascular disease in Ukraine is one of the largest in Europe (801.6 per 100 thousand), which is twice the average European level and three times the EU [8]. Control of arterial hypertension in a population is considered one of the main areas in the system of treatment and preventive measures for cardiovascular diseases. The world has accumulated a significant amount of scientific data on high blood pressure and ways to control it. In the USA, after the introduction of government programs aimed at improving the quality of control of arterial hypertension, it was possible to triple (from 10 to 34%) the number of patients with target blood pressure values.

In Ukraine, among urban residents, 81% of patients are aware of an increase in their blood pressure, and 48% of people take antihypertensive drugs. However, treatment is effective only in 19% of patients. With age, patient awareness of the presence of arterial hypertension and the coverage of drug treatment are gradually increasing, while the effectiveness of treatment remains almost unchanged. The situation for controlling this pathology is more unfavorable in men. Over the course of 25 years, the situation for the control of hypertension in Ukraine has improved significantly, although optimal results have not yet been achieved.

Also one of the leading risk factors for many chronic diseases is smoking, which today is one of the largest public health disasters. It is known that tobacco kills
half of those who consume it. Only during the twentieth century, the tobacco epidemic claimed 100 million lives. About 5 million people die every year from smoking in the world. If no action is taken, then by 2030, the annual number of deaths associated with this risk factor will exceed 8 million a year, of which a large percentage will be in developing countries. In countries in the WHO European Region, where 15% of the world's population lives, the global burden of tobacco-related diseases is 1/3 of the world. According to forecasts, by 2020, the death rate from smoking can reach 2 million, which is 20% of all deaths in the region. One of the leading places on the continent in the prevalence of this bad habit is Ukraine. According to epidemiological studies, the spread of smoking in Ukraine reaches 45% among men and 16% among women. With age among men, the prevalence of this bad habit decreases from 52% in 18-24 years old to 31% in 55-64 years old, which is mainly associated with the deterioration of health and the occurrence of diseases. Among women, the greatest prevalence of smoking (28%) is observed in the age group of 25-34 years, and subsequently its frequency also decreases. The problem of smoking of women in Ukraine is of particular relevance due to the growing prevalence of this bad habit and its importance in the occurrence of cardiovascular diseases. It was found that a significant contribution to the development of coronary heart disease in women under 55 years old is made by such factors as smoking in combination with hyperglycemia, deviations in the lipid profile, gynecological diseases and thyroid diseases. In the XXI century. One of the most serious public health problems is obesity. Its significance is due to the significant spread of this health risk factor among the population, unfavorable trends towards an increase in the formation of the overall burden of disease.

Obesity is one of the manifestations of the diseases of civilization, which is caused by excessive, irrational, unbalanced nutrition, on the one hand, and low energy consumption due to the widespread introduction of mechanization, automation, a decrease in physical activity, and a change in lifestyle to a less mobile one on the other. That is, the main cause of obesity and overweight is the energy imbalance between calories consumed and spent. There are close causal relationships between obesity and the incidence of type 2 diabetes, cardiovascular diseases (myocardial infarction, ischemic stroke, etc.). Other medical consequences of obesity include diseases of malignant neoplasms of various localization, the formation of gallstones, narcolepsy, increased use of drugs for chronic diseases, reproductive dysfunction, asthma, cataracts, and musculoskeletal system lesions. It is this risk factor that is an urgent problem for many regions of the world. Among the adult population of the United States, one out of five inhabitants has excess body weight, every third has the UK, every second has Germany. The prevalence of overweight according to national representative samples varies in European countries from 32% to 79% in men and from 28% to 78% in women. The highest prevalence of overweight among adults is observed in Albania, Bosnia and Herzegovina, Great Britain, the lowest - in Turkmenistan and Uzbekistan [10]. This problem did not bypass the population of Ukraine. Overweight in 14.8% of Ukrainian men and 29.7% of women. According to statistics, 30% of the population aged 25-30 years suffer
from this pathology and almost 50% aged 45-50 years. This is due, on the one hand, to the fact that in the majority of the population the diet consists of cheap, but not healthy, carbohydrate-rich food, and on the other hand, to pathological disorders of the central nervous system, with hormonal changes (the number of which has increased significantly after the Chernobyl disaster), with a sedentary lifestyle, with a genetic predisposition to fullness. Consequently, in modern conditions of increasing the scale of the negative impact of risk factors on public health and the emergence of new global threats, the development and implementation of comprehensive regional programs for the protection and promotion of public health, which should be based on the adoption of a healthy lifestyle for every person and society as a whole.

Programs for the prevention and promotion of public health should be developed on the basis of world best practices, based on national capabilities (financial, economic, sociocultural, political, etc.) and implemented within the framework of national strategies based on an integrated intersectoral approach.

In modern conditions, the world has become more vulnerable. This is due to the proliferation of numerous behavioral risk factors and the emergence of new threats to public health. WHO is directing its policy to support research projects to assess existing risk factors and determine the effectiveness of actions to address them. The main goal of this policy is to provide informational and methodological assistance to national governments in developing national action plans to overcome and reduce the negative impact of health risk factors. The strategic guidelines for the countries of the European Region in solving the problem of the prevention of chronic noncommunicable diseases are determined by the European strategies for the prevention and control of noncommunicable diseases (2006). The main objective of the strategy is to prevent premature mortality, significantly reduce the burden of disease associated with noncommunicable diseases, increasing the quality of life of people and ensuring a more even distribution of indicators of expected healthy life both among the countries of the European Region and in each of them. The current burden of premature mortality, morbidity and disability can be significantly reduced through comprehensive measures to eliminate or reduce the leading factors that determine them. Investing in prevention and a more effective fight against noncommunicable diseases will significantly improve the quality of life and improve the well-being of people and society.

Materials for self-control.

**Situational problem**
The number of employees is 3000 people
The number of reported cases of TH - 110
Number of days of temporary disability - 980, including about respiratory diseases - 450
Calculate incidence rates with temporary disability

**Test tasks**
When studying the incidence of temporary disability of workers of the machine-building plant, the average duration of one case was 20 days. What diseases have affected the magnitude of the indicator?
In the study of morbidity with temporary disability, the following indicators are calculated:

A. All of the above
B. Morbidity pattern in cases, in days
C. The incidence rate in cases per 100 employees
D. The incidence rate in days per 100 employees
E. Average duration of 1st case
Methodical instructions
for independent work of students in preparation
to practice and to class

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Social medicine. Health care organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>2</td>
</tr>
<tr>
<td>The topic of the lesson</td>
<td>Information and roses’ yasnyuvalna activity (anddvokatsiya) as part of the medical prevention</td>
</tr>
<tr>
<td>Course</td>
<td>4</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
</tr>
</tbody>
</table>

Poltava
1. Relevance of the topic.

Advocacy has been, is and always will be one of the priority areas of activity of civil society organizations. Its essence is to work with authorities at all levels and with a wide range of stakeholders (stakeholders) to represent and promote the interests of certain social groups, as a rule, unprotected, vulnerable, inactive, insufficiently organized.

And a dowry is an action aimed at achieving a certain goal. One of the definitions of a lawyer can be formulated as - the basis of public activism, a process by which ordinary citizens learn to participate in decision-making at all levels. It is the process of asserting the rights and interests of a particular social group (or groups) through a positive change in relevant public policy, legislation, public administration practices, social processes and phenomena through purposeful influence. And a dowry is also a process of empowering citizens.

Advocacy is a call for support, an influence on decision-making by society. Advocacy is a social change that opens up democratic space by mobilizing society and raising public awareness.

Advocacy requires coordination, mobilization of the public and the efforts of many people at once. Advocacy is connected with public policy, not behind the scenes of the games. Advocacy is part of lobbying.

2. Specific goals:
   - You analyze the types of advocacy;
   - Define the purpose of the advocacy campaign;
   - Classify the successive steps of planning an advocacy campaign;
   - To interpret the basic concepts and terms regarding the topic of the lesson;
   - Be able to build an effective advocacy campaign (by example).
   - Be able to separate the concepts of "advocacy", "communication", "intervention".
   - Know prevention programs and strategies for disease prevention
   - To master technicians in informing, influencing and motivating people

3. Basic knowledge, skills, skills required to study the topic (interdisciplinary integration).

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>Skills learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sociology</td>
<td>Conduct analysis of sociological research</td>
</tr>
<tr>
<td>2. Medical biology</td>
<td>Identify the basic concepts, methods and means of research that are used to study environmental factors and their effects on the body and human health.</td>
</tr>
<tr>
<td>3. Normal physiology</td>
<td>Conduct a statistical survey.</td>
</tr>
<tr>
<td>4. Pathomorphology</td>
<td>Identify links between natural phenomena.</td>
</tr>
<tr>
<td>5. Microbiology</td>
<td>Analyze the activities of clinical departments.</td>
</tr>
<tr>
<td>6. Propedeutics of internal diseases</td>
<td></td>
</tr>
</tbody>
</table>
4. Tasks for independent work during the preparation for the class and in class.

4.1 List of basic terms, parameters, characteristics that a student should know when preparing for class:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>And a two-stroke</td>
<td>comes from the English word &quot;advocacy&quot;, which in turn leads to Latin for &quot;ad - to&quot; and &quot;voca - call&quot;, that is, the word &quot;advocacy&quot; can be translated as &quot;call to action&quot;.</td>
</tr>
<tr>
<td>Prevention</td>
<td>system of state, social, medical, hygienic measures aimed at ensuring a high level of health and preventing the development of the disease.</td>
</tr>
<tr>
<td>Mr Lobbying</td>
<td>promotion decisions important for ordinary citizens, communities and society predstavlyennya interest along those individuals and social groups that do not have direct access to decision-making</td>
</tr>
<tr>
<td>A two-campaign campaign</td>
<td>a set of advocacy measures combined by a common purpose is also a set of interrelated and time-bound influences on specific target groups to encourage them to adopt new behaviors (not to do what they did before, to do something new) or do something different</td>
</tr>
<tr>
<td>P redmet advocacy</td>
<td>a specific right or interest that is protected or asserted during an advocacy campaign</td>
</tr>
<tr>
<td>Public Advocacy</td>
<td>means speaking on behalf of, representing, and protecting the rights of a broad category of people, the entire community, or society. Public Advocacy focuses on representing interests and protecting the rights of the general public.</td>
</tr>
<tr>
<td>Targets in advocacy</td>
<td>Official or person from whom depends the decision, the position, policy making and service activities that affect the protection of rights and interests of the target group implementation of advocacy</td>
</tr>
<tr>
<td>Official targets</td>
<td>Heads of authorities (in many cases, the same as the main target) to which they are formally addressed and who sign the relevant documents</td>
</tr>
<tr>
<td>In-house advocacy</td>
<td>conferring authority on a small number of decision-makers</td>
</tr>
<tr>
<td>External advocacy</td>
<td>involves the mobilization of a large number of people and the creation of public pressure groups</td>
</tr>
<tr>
<td>Monitoring</td>
<td>an ongoing process whereby stakeholders are informed of progress in achieving their goals and objectives.</td>
</tr>
<tr>
<td>META advocacy campaign</td>
<td>a positive change in the status of the subject of advocacy</td>
</tr>
<tr>
<td>C ilova advocacy group</td>
<td>a target group whose rights and interests are protected or defended</td>
</tr>
<tr>
<td>C subject of advocacy</td>
<td>the person, team, or organization running the advocacy campaign</td>
</tr>
</tbody>
</table>
4.2 Theoretical questions to the class:
1. Define the concept of advocacy.
2. Define the concept of a two-campaign.
3. Differentiate between external and internal advocacy.
4. What are Advocacy Campaigns for?
5. Determine the sequence of campaign planning steps
6. give Mr ryklady advocacy
7. Collate three principles (pillars) with pryannya health.
8. Identify the fundamentals Mr. and SMART-criteria objective.

4.3. Practical work (tasks) performed in class: (See appendices):
Examine the different types of advocacy through examples.

Contents of the topic. In 2012 g. Regional Office for Europe of the World Health Organization 'i (WHO) adopted the document "European Action Plan on capacity building and public health services" (ERA), who became a guide in the development of public health in the European Region. D For evaluating potential and public health services and actions required to improve them, it was suggested Dr. esyat basic operational functions of public health:
1. Surveillance and evaluation of the health and well-being of the population.
2. Monitoring and responding to health hazards and during health emergencies.
3. Health protection, including environmental, labor, food safety and more.
4. Health promotion, including the impact on social determinants and reduction of health inequalities.
5. Disease prevention, including early detection of health disorders.
7. Provision of sufficient publicity to the public health sector.
8. Creation of stable organizational structures and ensuring their financing.
9. Outreach (advocacy), communication and social mobilization for health.
10. Promote the development of health research for the scientific substantiation of relevant policies and practices.

Information and awareness activities (advocation) in the interests of health
Center for Public Health 'I have to date developed a strategy for promoting health 'I, on the individual level (training of health 'I, or health education, information on health 'I, or communication, social marketing) and interpersonal level (self-help and mutual aid). Education (health education) and information (communication) on the health of the population are included in information and public awareness work or advocacy.

Social lobbying or advocacy is defined as an act aimed at changing the policies, positions, or programs of any type of institution. Social lobbying is about defending or defending an idea in front of other people. This action, which draw attention to the problem and encourage continuous political figures in to solve it.

Advocacy was born in ancient Rome and Greece, when widely recognized speakers acted as advocates or wrote speeches specifically to appeal to one's affairs...
and beliefs. Such figures as Cicero and Caesar were considered to be some of the finest lawyers and lawyers in all of Rome.

Advocacy in a broad sense is working with other people and organizations to drive change.

Advocacy requires its participants to thoroughly prepare and design a social lobbying campaign.

Advocacy has been, is and always will be one of the priority areas of activity of civil society organizations. Its essence is to work with authorities at all levels and with a wide range of stakeholders (stakeholders) to represent and promote the interests of certain social groups, as a rule, unprotected, vulnerable, inactive, insufficiently organized.

Advocacy can be political (that is, lobbying for a specific law), but most often advocacy is public and intellectual, and focused on delivering opinions on behalf of those who have no right to vote.

Advocacy is a method and process of influencing decision-makers and public opinion on problematic issues. It aims to mobilizuyetsiyu public action to achieve changes in society, including the legal and policy CHN's reforms to solve the above problems.

Advocacy is a process designed to change the policies, laws, and practices used by influential people, groups, or institutions. Advocacy is a political process designed to influence policy decisions at national and international levels. Activities in which citizens and non-governmental organizations express concern about the violation of their rights and take proactive steps to protect them. Advocacy consists of organized efforts and actions based on the real state of affairs. These organized actions raise hidden issues, previously ignored, in order to influence public opinion and politics in order to make society fairer and more worthy. Advocacy aims to deliver results that give people access to and influence decision-makers that affect their lives. This means countering violations by the authorities that affect people's lives.

Communication is a plan of interconnected activities that are being developed and implemented.

It is the process of exchanging information (facts, ideas, views, emotions) between two or more persons, communicating through verbal and non-verbal means in order to transmit and receive information. The different types and modes of communication can be divided into three groups: oral, written and visual. In turn, communication itself can be divided into verbal, non-verbal and written communication. Non-verbal communication includes: body language, visual contact, sign language, etc. In today's environment, the role of network communication is growing.

K omunikatsiya health care aimed at improving health literacy and improving the health of individuals and the population as a whole. It is the art and technique of informing, influencing and motivating individuals, audiences, organizations on important issues and determinants (factors) of health. Communication is also intended to increase the ability to access, understand and use information to reduce the risk of disease emergence and prevention, health
promotion, guidance in and use of health services, promotion of health policies and wellbeing, quality of life and improving the health of people within the community.

An intervention is an intervention at the level of a specific individual or small group (up to 20 people) with risky behaviors to achieve specific changes in their behavior and/or health status. A register of HIV/AIDS prevention interventions in Ukraine with a certain level of evidence was created by a team of national and international experts in 2013. Its purpose is to summarize many years of experience and evidence on effective bio-behavioral and structural interventions implemented in Ukraine, taking into account the specifics of the development of the HIV epidemic and the local context.

One of the advocacy tools is lobbying. It is necessary to distinguish lobbying in advocacy from so-called commercial lobbying when promoting the business interests of individuals or companies. The difference between lobbying in advocacy (civic lobbying) is that, firstly, it is not the commercial interests of individual companies that are promoted, but the decisions that are important to ordinary citizens, the community and society. Second, advocacy always represents the interests of those individuals and social groups who do not have direct access to decision-making.

Usually, advocacy is in the form of campaigns. A campaign should be understood as a set of interrelated and time-bound actions to influence specific target groups in order to encourage them to adopt new behaviors (not to do what they did before, to do something new, or to do something differently).

Information campaigns are designed to raise awareness of actions on certain issues, drawing attention of the community and/or society to certain issues.

Public or public advocacy means speaking on behalf of, representing, and protecting the rights of a broad category of people, the entire community, or society. Public Advocacy focuses on representing interests and protecting the rights of the general public.

Internal Advocacy - Achieving changes to the existing regulatory and legal framework within the system, involving professional lobbyists, loyal officials and businessmen. Such a strategy is based on the principle of empowering a small number of decision-makers.

External advocacy, on the contrary, involves unifying and strengthening initiatives coming out of the people - so-called initiatives from below - from groups of people who are not indifferent to the problem, or those who are directly affected by the violation of their rights. Unlike the internal advocacy strategy, this method involves mobilizing the efforts of a large number of people and creating public pressure groups.

Promoting Health 'I help governments, communities and individuals to solve individual problems with health' pits by creating healthy public policy, creating supportive of ENVIRONMENT and strengthening community action and every individual.
There are **three principles (pillars)** with pryyannya health: 1) - literacy on health, 2) - tools that are aimed at creating and maintaining the environment safe for life, 3) - COMMON ' I'm all policies.

1. **Literacy** - achieved learning strategies on health ' and forming habits to reduce risk factors for health 'i.

2. **Create and support and environment safe for life** - implemented through the creation of a healthy environment, as an example, the concept of " schools promoting health ' I " , "hospitals promote health ," healthy city, healthy nation and so on. The principle of 'health ' I for all and all for health "helps the government, the community, each individual achieve equality and fairness in the right to health ' I'm using different strategies to promote health .

3. The **principle of health in all policies** is implemented through the creation of sound public policies. The prerequisites for understanding the need to develop healthy public policy was to investigate the factors that influence the health of ' I'm population. Public economic, environmental factors that are beyond individual control have a significant impact on health . The need for policy development is aimed at protecting and maintaining public health . State of health ' I population depends on individual decisions everyday. How people behave depends on the availability of resources. In most cases, people choose the behavior that fits the simplest option, such a lifestyle that is cheaper and requires the least effort. But the policy of a solid organization can affect the daily choices of people.

The main idea behind the concept of " **sound public policy**" is to make healthy personal choices as well as create a healthy environment the simplest and cheapest human choice through political measures.

Ottawa Health Promotion Charter states that people create and maintain health ' I, where they spend their daily lives, study, work, have fun. In these cities, and should create favorable to health ' I environment. Family doctors may be the providers of measures aimed at promoting health ' I am an individual from the first days of his life.

The question is: " **What do advocacy campaigns require ?** " When dealing with complex social and medical problems, such as , for example, zhyvannya drugs and drug addiction, it is important to go beyond the provision of services. If we manage to change the general approaches to health care, housing, work , advocacy campaigns for systemic and political change. The process of making fundamental, systemic changes is slow and requires a great deal of dedication on the part of those who seek such change. Systems and humans change very slowly, but they change if we persistently force them to move in a certain direction. However, before pursuing an advocacy campaign, you must acquire a lot of skills and learn a lot of tools that can help you analyze, plan, and implement a specific advocacy strategy.

Communities of people who have the same problems with health ' pits about " are united behind to draw attention to their problems and get the possibility to solve these problems. In particular, activists for HIV infection, health advocates ' I women and the fight against breast cancer and more.

Examples of advocacy
H and The given there Advokatsiyny center of the Ukrainian Helsinki Human Rights Union (UHHRU), which oversees compliance with the treaty campaign, on human rights violations in the territory temporarily occupied Crimea and the area ATO, on anti-corruption legislation, reform of justice and lyustratsiyinoho law, the protection of public activists, helping to uphold children's rights at the level of access to education, etc.

- Developing changes in smoking behavior in the country. Initially, the problem was not fully understood until some time (until the 2000s). Then people are aware of the problem and need to do something about it. Therefore, activists are working to overcome this problem through an awareness-raising (advocacy) anti-tobacco campaign.

  - Introducing a workplace smoking ban.
  - Mandatory 'compulsory vaccination against seasonal flu all employees.
  - Provide up to 5 servings of vegetables and fruits per day in the workplace. On the recommendation of WHO consumption of 400 gr. Fresh fruits and vegetables per day helps reduce the risk of serious health problems, including cardiovascular disease, strokes, cancer. The pace of life of a modern person does not always make it possible to follow these recommendations. Therefore, the introduction of a "vitamin day" by the employer on a regular basis is an effective measure of the organizational level, which will promote the health of workers and increase their working capacity.

  - Regular use of the required rate of water per day. The culture of drinking water is still underdeveloped in our society. Therefore, workplace coolers will provide regular access to drinking water.

  - Analysis of the regulatory framework or public policy and its impact. As an example, studies of the legislation governing the operation of programs for primary care in Ukraine to determine whether programs can be expanded in the regions without changing existing legislation.

  - Working within the system involves engaging experts to put pressure on key civil servants, law enforcement officials and healthcare professionals.

  - Presentation and presentation as an example - presentation of problems in a specific region during a national or international conference on HIV / AIDS.

  - Persuading the audience through street actions, protests. As an example, the Freedom March for Drug Reform and Decriminalization of Drug Use has been held in Ukraine annually since 2005.

  - Conducting information campaigns on the Internet, on television, through print media, through posters, billboards and more.

  - Organizing a press conference, press tour or roundtable, and more.

A dvokatsiyna work with leaders and members of companies and business associations are an 'yemn th work of all professionals of the public health ' me. To solve social problems fu ' related to health ' pits population, advocacy campaigns involving entire communities as well, and individuals.

The success of an advocacy campaign depends largely on its planning. You need to involve an external consultant in the awareness campaign to diagnose the
problem and plan your change strategy. Strategic campaign planning is one of the most important steps to ensure effective and productive work. A **media campaign** is a tool they use to broaden the vision and strategy of the advocacy campaign. To plan an effective media campaign that will ch ryamovana on the chosen problem and strengthen Mr. Ashi advocacy goals, do the following steps. **Campaign planning involves a series of sequential steps.**

1. **Defining the theme of advocacy.** Advocacy usually begins when a person or a group of people is dissatisfied with a certain state of affairs. This means that there is a problem that can become a topic for advocacy, but it must first be formulated correctly.

2. **Defining the purpose and objectives of the advocacy campaign.** The analysis of the causes of the situation helps to determine the purpose and objectives of the future advocacy campaign. The goal should reflect those intermediate and long-term results (positive changes in the situation) that we want to capture during the campaign. You value of purpose is based on a formidable theme of advocacy. **The goal must meet the requirements of SMART:**
   - **S** (specific, significant).
   - **M** (measurable, meaningful, motivational) - measurable, meaningful, motive.
   - **A** (attainable, agreed upon, action-oriented) - achievable, consistent, focused on specific actions.
   - **R** (realistic, relevant, reasonable, rewarding, results-orientated) is realistic, relevant, useful, results-oriented.
   - **T** (time-based, timely, trackable) - time-limited, timely, trackable. Tasks are sequential steps that must ensure that the goal is achieved. They must also meet the requirements of SMART.

3. **Analysis of the goals of the advocacy campaign.** Advocacy campaigns involve representatives of central government or local self-government when making certain decisions. Officials of the persons directly affected by the decision-making are called *targets* in advocacy. It must be remembered that targets are always people, officials, but not authorities, because it is people who make the decisions.

   There are **5 categories of targets** in advocacy:
   - **The principal** are the persons on whom the decision depends. Depending on the situation, these may be: the mayor, where the local council and other officials are confused.
   - **Alternatives** are those who also have the capacity to make a decision, for example the deputy mayor or the chairman of the relevant council committee. An alternative target is a kind of "B" plan for our campaign. If there are complications with the primary target, we will need another official who has enough leverage to ensure that the necessary decision is made.
   - **Officials** - Heads of authorities (in many cases, the same as the main target) to whom they formally contact and sign documents.
   - **Accesses** are those who can give us access to the main target. This person can be an assistant, secretary, head of department or even the driver of the primary target.
Supporters are other officials who may also be interested in making the appropriate decision (for example, heads of social departments protection, health, education, culture, etc.).

4. **Stakeholder analysis**. In addition to targets, advocacy stands out for another category of community representatives - stakeholders, that is, people who arerelevant and relevant to a particular problem.

5. **Preparation and transmission of the key message**. Each person (target and stakeholder) we deal with during the advocacy campaign needs an individual approach. This means that in each case, the motivation to induce a person to act or, conversely, not to act, will be different. One of the important advocacy tools is the development of customized key messages.

6. **Prepare an advocacy campaign plan**.

7. **Risk** analysis or problem analysis. In order to anticipate possible scenarios, a risk analysis should be carried out. Possible risks should be analyzed in accordance with the objectives.

8. **Campaign monitoring and evaluation plan.** Monitoring is an ongoing process whereby stakeholders are informed of progress in achieving their goals and objectives. An evaluation is a measurement of completed or actual activity to determine the level of achievement of the set goals and to make appropriate decisions.

9. **Resources for an advocacy campaign**. Running any campaign requires certain resources: financial, material, human, etc. It is important at the planning stage of the campaign to determine exactly how much and how much resources will be needed, plan and take timely action to attract them. Otherwise, you may be faced with a lack of resources, which in turn may prevent the campaign as a whole.

   Advocacy is not a simple matter. This is a long process that includes updating themes that can last for years, building partnerships, Mr idtrymky, communication with members, roztlumachennya importance to society.

In order to build an effective advocacy campaign, it is necessary to formulate the problem and its solution as clearly and as simply as possible. One key question should be highlighted, which should underpin advocacy and, if possible, reflect what changes we propose to address the issue. After analyzing the situation and identifying the key issue, we will be able to identify the circle of those who can influence the changes we require.

Using media is one way we can make our campaigns more people-centric, as well as provide the voices of those who need change.

Effective communication is your key to changing your perception and achieving any change in society. Communication for advocacy purposes is not the same as general communication - newsletters, fundraising materials or general information about your work. Defining communication for advocacy is that it focuses on influencing a specific audience and using a specific message to change policy or put it into practice. Usually successful communication for advocacy purposes requires clear tasks, knowledge of the target audience, language that is clear to them, and concise, specific and relevant content.
Each media campaign has its own face and voice, personalized by campaign speakers, video footage, or featured in photos, drawings, symbols, and more. Visual elements help create a captivating message and evoke emotions in the audience. Each type of visual media serves a specific purpose. A logo, or just a logo, is a small picture or picture that symbolically reflects the mission of the organization or the main message of the campaign. Logos are important for increasing the visibility of an organization, campaign, or movement. A bright logo can become a brand that carries certain values and mission of the community and will be easily recognized by journalists and the public. Logos are usually posted on all official documents - statements, petitions, press releases, leaflets, website and T-shirts and more.

Ref ary and banners - from glossy billboards on the streets to homemade banners and placards, activists prepared for street action. In all cases, banners and posters have one function - to convey a message or slogan to the target audience. Posters most often contain one or more large photographs or drawings and slogans or short text, as well as campaign or organization contact information or other additional information. Posters are posted on the walls of homes or in rooms where people are most likely to gather to read our message.

Photos and videos, and other videos are some of the most powerful advocacy tools. With photos and videos, we can illustrate the problem as we see it, show the situation in real life and evoke real emotions for the viewers. Videos and photo stories are more eloquent than a written report. Through video, interest groups can express their views and make arguments for or against certain practices.

Regardless of which advocacy approach we choose, it is important to understand the core tenet of activists who are fighting for social justice: we need to stay in touch all the time and be accountable to those whose interests we protect. Therefore, a people-centered advocacy campaign not only provokes necessary changes, but also produces new indifferent activists who work to continue the change and to bring about other changes.

WHO Regional Office for Europe and partners in March ut assume such functions as:
• Provide publicly available and reliable health information, helping policy makers in all sectors and their audiences to rationally analyze information and use it for healthaction. Information needs to be transformed into action that requires an appropriate level of motivation and often changes in behavioral and work stereotypes;
• Take all measures to raise the level of health literacy of people, systems and leaders and their involvement in the development and implementation of sound and effective strategies in response to health challenges and opportunities.

Materials for self-control:
A. Knowledge test tasks:
1. Give the definition of advocacy
   A . action to change the policies, positions, or programs of any type of institution.
B. interventions at the level of a specific individual or small group (up to 20 people) with risky behavior to achieve specific changes in their behavior and / or health status.

C. making individual decisions by representatives at the individual level.

D. the process of exchanging information between two or more persons, communicating by means of verbal and non-verbal means for the purpose of transmitting and receiving information.

E. actions that will never attract attention and encourage political leaders as to its solution.

2. An advocacy campaign is:

A. a set of measures that share a common purpose, interrelated and time-bound measures to specific target groups with a view to encouraging them to adopt new behaviors.

B. a set of activities aimed at the exchange of information between two or more persons, communication by means of verbal and non-verbal means for the purpose of transmitting and receiving information.

C. it is an intervention at the level of a particular individual or small group with risky behaviors to achieve specific changes in their behavior and / or health status.

D. a set of measures aimed at improving health literacy and improving the health of individuals and the general population.

E. a set of measures aimed only at protecting the environment

3. The main strategy of internal advocacy is:

A. mobilizing the efforts of a large number of people and creating public pressure groups.

B. to achieve changes in the existing regulatory and legislative framework within the system.

C. achieving learning strategies on health 'I' and the formation of habits to reduce risk factors for health 'me.'

D. creating sound public policy.

E. creating a healthy environment.

4. How is civic lobbying different from commercial lobbying?

A. It is not the commercial interests of individual companies that are promoted, but decisions that are important to ordinary citizens, the community, and society.

B. promoting the business interests of individuals or companies.

C. the interests of the individual, the individual are promoted

D. spread the business interests of the whole country

E. no shyryuyut business interests only the head of the association.

5. What does not belong to the categories of targets in advocacy?

A. additional

B. basic

C. access

D. support

E. official.
6. What does not apply to the SMART goal criteria?
A. is not limited in time
B. specific
C. realistic
D. achievable
E. measures at

7. What is of Yisheng in advocacy?
A. Officials directly responsible for the decision.
B. Officials who are not directly affected by the decision
C. Persons providing publicly available and reliable health information
D. Every average citizen of the country.
E. Health center 'I

8. Determine what constitutes a “target” in advocacy?
A. Officials whose service activities depend on the protection of the rights and the realization of the interests of the advocacy target group.
B. Officials who are not directly affected by the decision
C. General practitioners-family medicine
D. Communities of people who have the same problems with health 'pits.
E. Persons providing publicly available and reliable health information.

9. What is a logo?
A. A symbol that symbolically represents the mission of the organization or the main message of the campaign.
B. Mr. Lyantsev and billboard and on city streets, which manufac and activists for street action.
C. Pam 'GUIDE, to study risk factors of disease
D. Brochure on the study of risk factors for morbidity
E. Sanitary bulletin for information support.

10. Define the subject of advocacy:
A. a specific right or interest that is protected or asserted during an advocacy campaign
B. a specific right or interest that is being discussed
C. common interests of the community
D. a specific right or interest that will never be discussed
E. human right to vote.

**APPENDICES**

Examples of advocacy

- Advocacy Campaign "For Safer Roads" was initiated jointly with partners - NGOs Vision Zero and U - cycle (Association of Kyiv Cyclists) in November 2016. The main purpose of the campaign was to reduce mortality and injuries on the roads of Ukraine by advocating changes in state policy and conducting awareness-raising campaigns to support and implement such changes.
- Developing changes in smoking behavior in the country. Initially, the problem was not fully understood until some time (until the 2000s). Then people are
aware of the problem and need to do something about it. Therefore, activists are working to overcome this problem through an awareness-raising (advocacy) tobacco campaign. In partnership with the Coalition For Smoke Free Ukraine, Ukraine has succeeded in pushing for the adoption and further implementation of laws banning tobacco advertising and banning smoking in cafes, bars and restaurants. We advocated these two laws primarily to reduce the level of smoking in Ukraine and protect the health of people (especially children and young people) from the harmful effects of smoke - and at the same time to prevent them from smoking under the influence of advertising.

- Conducting information campaigns on the Internet, on television, through print and media, through posters, billboards and more. On December 1, every year, on International AIDS Day, national and international organizations take numerous steps to demonstrate the attitude of our society to the problem of AIDS and HIV-positive people, including more than half of those who are injecting drug users. December 1, 2008 was a special day for a small community of drug users united by our Drop & n Center Foundation - this day we launched the Right to Support information campaign to inform ordinary Ukrainians of what replacement therapy is, and the need for its introduction in Ukraine. It was an annual information campaign that included information materials, media events, public events. We planned this campaign throughout the year, wrote the strategy, the concept of media events, because we wanted to move away from the standard ways of informing and do something extraordinary.

- At the beginning of 2010, a campaign against discrimination against women using drugs by health workers continued and in Ukraine, to improve access for women to medical services in maternity hospitals and women's consultations. Accordingly, the target audience of the campaign was primarily physician and obstetricians and gynecologists. Health Right Ukraine, together with one of the leading advertising agencies, has developed a series of posters to support women's access to substitution therapy programs, particularly in maternity hospitals. The posters were distributed throughout Ukraine and housed in health care facilities, social services facilities and organizations implementing harm reduction programs for drug users.

- Persuading the audience through street actions, protests. As an example, the Freedom March for drug policy reform and decriminalization has been taking place in Ukraine annually since 2005.

- In October 2009, the All-Ukrainian Association of Participants in Substitution Maintenance Therapy was established with offices in 16 regions of Ukraine. Among the main advocacy goals of the association are cooperation with the Ukrainian government aimed at expanding substitution therapy programs, improving the quality of medical services and social support, taking a personal approach to dispensing drugs, being able to obtain substitute prescription drugs and ensuring integration of substitution therapy programs into the overall health care system. I am in the hospital, tuberculosis dispensaries, maternity hospitals and other medical institutions.
• At this time, there Advokatsinyy center of the Ukrainian Helsinki Human Rights Union (UHHRU), which oversees compliance with the treaty campaign on human rights violations in the territory temporarily occupied Crimea and the area ATO regarding anti-corruption legislation, reform of justice and lyustratsiyinoho law, protection of civil activists, help to uphold children's rights at the level of access to education, etc.

• Provide up to 5 servings of vegetables and fruits per day in the workplace. On the recommendation of WHO consumption of 400 gr. Fresh fruits and vegetables per day helps reduce the risk of serious health problems including cardiovascular disease, strokes, cancer. The pace of life of a modern person does not always make it possible to follow these recommendations. Therefore, the introduction of a "vitamin day" by the employer on a regular basis is an effective measure of the organizational level, which will promote the health of workers and increase their working capacity.

• Regular use of the required rate of water per day. The culture of drinking water is still underdeveloped in our society. Therefore, workplace coolers will provide regular access to drinking water.

• Analysis of the regulatory framework or public policy and its impact. As an example, studies of the legislation governing the operation of programs for primary care in Ukraine to determine whether programs can be expanded in the regions without changing existing legislation.

• Working within the system - involving experts pressure on key government officials, heads of law enforcement agencies in and health workers.

• Preparation and presentation, as a model - presented problems in a particular region at a national or international conference in IL / AIDS.
Methodical instructions for independent work of students during the preparation for the practical (seminar) class and at the class

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Social medicine, public health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module #2</td>
<td>Public health</td>
</tr>
<tr>
<td>The topic of the lesson</td>
<td>Prevention. Health promotion. Types, forms and methods.</td>
</tr>
<tr>
<td>Course</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign students training department</td>
</tr>
</tbody>
</table>

Poltava
1. Relevance of the topic:
Promotion (strengthening) of the population's health is a prerequisite for the comprehensive development of human life, the achievement of active longevity and full implementation of social functions, for active participation in labor, community, family, and leisure forms of life.

The urgency of health promotion is caused by the increasing and changing nature of the loads on the human body in connection with the complication of social life, increasing risks of man-made, environmental, psychological, political and military nature that provoke negative shifts in health.

2. Specific objectives:
2.1. To acquire knowledge about the health of the population and ways of its promotion and preservation.
2.2. Explore historical trends in health promotion.
2.3. Familiarize yourself with the types of prevention (types and types).
2.4. Be able to distinguish and choose prevention programs.

3. Basic knowledge, skills, skills required to study the topic (multidisciplinary integration):

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>Skills learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>Medical biology</td>
<td>Identify basic concepts, research methods and tools used to study environmental factors and their effects on the body and health.</td>
</tr>
<tr>
<td>Biological physics and chemistry</td>
<td>Conduct a statistical survey.</td>
</tr>
<tr>
<td>Anatomy</td>
<td>Identify relationships between natural phenomena.</td>
</tr>
<tr>
<td>Normal physiology</td>
<td>Analyze the activities of clinical departments</td>
</tr>
<tr>
<td>Pathomorphology</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td></td>
</tr>
<tr>
<td>Propedeutics of internal medicine</td>
<td></td>
</tr>
</tbody>
</table>

4. Tasks for independent work preparation for the class.
4.1. List of the basic terms, parameters, characteristics that the student must learn in preparation for the class:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health promotion</td>
<td>a process that allows the population to increase control over their health and improve their health.</td>
</tr>
<tr>
<td>2. Medical prevention</td>
<td>system of preventive measures implemented through the health care system.</td>
</tr>
<tr>
<td>3. Prevention is primary</td>
<td>complex of medical and non-medical measures aimed at preventing the</td>
</tr>
<tr>
<td>4. Secondary prevention</td>
<td>complex of medical, social, sanitary-hygienic, psychological and other measures aimed at early detection and prevention of exacerbations, complications and chronicity of diseases, limitations of life activity that cause maladaptation of patients in society, disability, including disability and disability.</td>
</tr>
<tr>
<td>5. Prevention is tertiary</td>
<td>complex of medical, psychological, pedagogical, social measures aimed at eliminating or compensating for limitations of vital functions, lost functions with the purpose of possible full restoration of social and professional status, prevention of relapses and chronic diseases.</td>
</tr>
<tr>
<td>6. Preventive program</td>
<td>specially designed complex (system) of preventive measures aimed at preventing a specific social problem (or several related problems), negative phenomenon, difficult life circumstances</td>
</tr>
</tbody>
</table>

### 4.2. Theoretical questions to the class:

1. Definition of the term "health promotion".
2. Investigate the evolution of the issue of health promotion?
3. Consider a national plan of action on noncommunicable diseases?
4. Identify WHO health promotion criteria?
5. Define the concept of medical prevention.
6. Determine the levels of medical prevention?
7. Determine the types of medical prevention?
8. To define the concept of "prevention programs"?
9. Types of prevention programs.
10. Types and characteristics of prevention models.

### 4.3. Practical work (tasks) performed in class:

**Contents of the topic.**

The problems of the quality of health of the population of different countries are constantly the focus of attention of scientists and politicians all over the world. The United Nations Universal Declaration of Human Rights, adopted in 1948, stated that “everyone has the right to the standard of living, including food, clothing, medical care and social services, that is necessary to maintain health and well-being, her and his family ... ”.
In 1986, the World Health Organization (WHO) adopted the Ottawa Charter for the Promotion (Further Improvement) of Health, which emphasized that "good health is a major resource for social and economic development as a whole, so is the individual and is the most important criterion for quality of life."

The need for health is of a general nature and is characteristic not only of individual individuals but also of society as a whole. Being the most important property of labor resources, public health has a great influence on socio-economic development, acquiring along with such qualitative characteristics of the workforce as education, qualification, and the role of a leading factor of economic growth.

Health promotion (strengthening, maintaining health, promoting health) is a process that allows the population to increase control over their health and improve their health.

Health promotion is a comprehensive social and political process encompassing not only actions aimed at strengthening the skills and capacities of individuals, but also actions aimed at changing social, environmental and economic conditions in order to facilitate their impact on society and individual health.

Maintaining health is a process that allows people to increase control over the determinants of health and, thereby, improve their health.

In 1986, the Ottawa Charter on Health Promotion was adopted, which outlined the 3 main strategies for maintaining health:

- health protection to create the most basic, most significant health conditions;
- empowering all people to reach and fully realize their health potential;
- uniting the various interests of society in achieving health.

These strategies are supported by the 5 Priority Actions for Health Promotion:

- development of "sound public policy";
- creation of favorable conditions and environmental factors for health;
- strengthening public activity at the communal level in the interests of health;
- development of personal skills and abilities;
- reorientation of health services.

Health promotion evaluation is an assessment of the extent to which health promotion actions and measures contribute to achieving the estimated end result.

The extent to which health support enables individuals to exercise control over their health is a central element of health support assessment.

In many cases, it is difficult to trace the path that binds specific health support actions to the end result.

Health promotion results in changes in personal characteristics, skills and/or social norms and actions, and/or organizational practices and public policies related to health promotion activities.

The effects of health promotion are immediate health support outcomes, usually aimed at changing the determinants of health that can be modified. These include awareness of health issues and the formulation of appropriate public health policies.

The purpose of health care is to identify the specific steps that can be taken to achieve the objectives. Defining targets also provides a unified approach to assessing
the progress of a particular health policy or program, by determining the reference point from which progress can be measured. Setting a task requires having an appropriate health indicator and information on the distribution of that indicator in the population. It also requires an assessment of future trends.

In July 1997, the WHO adopted the Jakarta Declaration on Continued Health Promotion in the 21st Century and confirmed that these strategies and activities are relevant to all countries.

The Jakarta Declaration identifies five priorities for health promotion and promotion:
- enhancing social responsibility for health;
- increasing investment in health care development;
- expansion of partnerships and contacts for the purpose of maintaining health;
- increasing the potential of communities and empowering individual citizens;
- providing the necessary infrastructure to maintain health.

Goals are usually based on specific and measurable changes in final or intermediate outcomes to achieve health.

Ukraine has adopted a National Non-communicable Disease Action Plan, a long-running national campaign to prevent non-communicable diseases. The implementation of this plan will allow:

- by 2030 reduce by one third the premature mortality from noncommunicable diseases: cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, and others;
- reduce alcohol abuse by at least 10%;
- reduce the incidence of low physical activity by 10% ;
- reduce salt consumption by 30%;
- reduce to 18.5% the prevalence of tobacco consumption by the population over the age of 15;
- stop the increase in the incidence of obesity and diabetes;
- reduce road accident mortality by 25%.

The approval of the National Plan is foreseen within the framework of the implementation of the Association Agreement between Ukraine and the EU.

In addition, the MOH of Ukraine, together with partners, including WHO and non-governmental organizations, has developed tobacco control bills, healthy nutrition recommendations and a draft law banning industrial fats and trans fats. The timely adoption and implementation of these legislative initiatives in Ukraine will ensure the country’s progress towards the Sustainable Development Goals by implementing the WHO Framework Convention on Tobacco Control, Transformation of the Mental Health System and Other Measures.

Hospitals and schools that promote health

In 1991, WHO adopted the Budapest Declaration on Health-promoting Hospitals for the following purposes:
- creating conditions for hospitals and patients to stay in hospitals;
- implementation of rehabilitation programs;
- encouraging the interaction of health professionals and staff;
- dissemination of information and advice on health.

Hospitals that promote health not only provide high quality of different health care services, but also develop a corporate style that incorporates health goals, develops organizational structures and culture of healthy lifestyles, promotes health, and creates a supportive environment for active engagement with the local community, including the active involvement of patients and staff in the process.

The WHO Committee of Experts' report (1997) identifies schools that promote health; they are constantly developing and enhancing their potential as institutions that provide healthy living and learning opportunities and opportunities.

To achieve this, a health promotion school engages education and health professionals, teachers, students, parents, and community-level leaders in health promotion activities.

The WHO Committee of Experts' report (1997) identifies schools that promote health promotion; they constantly develop and enhance their potential as institutions that provide healthy living and learning opportunities and opportunities.

To achieve this, a health promotion school engages education and health professionals, teachers, students, parents, and community-level leaders in health promotion activities.

The WHO Committee of Experts reports identifies 12 WHO criteria for a health promotion school, including:

1) to enhance the self-esteem of all students through the ability of everyone to contribute to the life of the school;
2) the development of good relations between teachers and students, between students in the daily life of the school;
3) clarifying staff and students about the school's social goals;
4) stimulating all students through a wide range of activities;
5) using every opportunity to improve the physical environment of the higher education institution;
6) developing good links between school, home and society;
7) developing good links between primary and secondary schools for the sake of planning consistent health support;
8) active promotion of healthy lifestyles and health of the school;
9) determining the role of teachers in addressing health problems;
10) determining the additional role of school meals (if any) in the health curriculum;
11) realizing the capacity of specialist services to support training in health care;
12) development of educational capacity of school health services.

Health support infrastructures are those human and material resources, organizational and administrative structures, laws, rules, and incentives
responsible for organized efforts that help to ensure that health is responsive, responsive, and public health.

Such infrastructure may consist of various organizational structures, including the primary health care sector, governmental bodies, public and private sectors, non-governmental organizations, self-help organizations, and health support organizations and funds.

*Partnership to promote health.* A health partnership is a voluntary agreement between two or more partner countries with one another for overall health outcomes.

Such partnerships may form part of cross-sectoral health cooperation or the basis of health promotion alliances.

The basic principle of health care is its prophylactic orientation in order to promote healthy lifestyles among the population.

**Medical prevention**

Medical prevention is a system of preventive measures implemented through the health care system.

Medical prevention in relation to the population is defined as:

- individual and sub-individual - preventive measures conducted with individual individuals;
- group - preventive measures, carried out with groups of persons who have similar symptoms and risk factors (target groups);
- regional - preventive measures are carried out at the level of the region (region, district) taking into account the peculiarities of the infrastructure and the prevalence of certain risk factors and diseases;
- population (mass) - preventive measures covering large groups of the population (population) or the whole population. The population level of prevention is usually not limited to medical interventions - these are local prevention programs or grassroots campaigns to promote health and prevent disease.

In addition, prevention is divided into primary, secondary and tertiary.

**Primary prevention** is a complex of medical and non-medical interventions aimed at preventing the development of health disorders and diseases common to the whole population, individual regional, social, age, occupational and other groups and individuals. Examples of such prevention are vaccination, smoking control, and the like.

**Primary prevention** includes the following four areas:

1. Measures to reduce the impact of harmful factors on the human body (improving the quality of atmospheric air, drinking water, structure and quality of nutrition, working conditions, life and leisure, the level of psychosocial stress and others affecting the quality of life), environmental and sanitary-hygienic control.

2. Measures to promote healthy lifestyles, including:
- creation of an outreach system of raising the level of knowledge of all categories of the population about the negative impact of risk factors on health, the possibility of its reduction;

- health education;

- measures to reduce the prevalence of smoking and consumption of tobacco products, reduction of alcohol consumption, prevention of drug and drug use;

- assistance to the population in conducting a physically active lifestyle, physical culture, tourism and sports, increasing the accessibility of these types of health.

3. Measures to prevent the development of somatic and mental illnesses and injuries, including occupationally-caused, accidents, disability and non-natural mortality, traffic injuries, etc.

4. Detection of health factors, including behavioral ones, during preventive medical examinations, to take measures to eliminate them in order to reduce the level of influence of risk factors.

**Secondary prevention** - a complex of medical, social, hygienic, psychological and other measures aimed at early detection and prevention of exacerbations, complications and chronicity of diseases, limitation of life activity, which cause maladaptation in society, decrease in the rights of the person, decrease disability and premature mortality. Examples of secondary prevention measures include timely detection and treatment of diabetes and prevention of eye and heart disease, renal failure, and the like.

Secondary prevention includes:

1) targeted sanitary and hygiene education, including individual and group counseling, training patients and their family members in the knowledge and skills associated with a particular disease or group of diseases;

2) conducting dispensary medical examinations in order to assess the dynamics of health status, the development of diseases to determine and conduct appropriate health and medical measures;

3) conducting courses of prophylactic treatment and targeted rehabilitation, including therapeutic nutrition, therapeutic physical training, medical massage and other therapeutic and prophylactic methods of rehabilitation, sanatorium and spa treatment;

4) carrying out medico-psychological adaptation to change of a situation in a state of health, formation of the right perception and attitude to needs and possibilities of an organism which have changed;

5) carrying out measures of state, economic, medical and social nature aimed at reducing the level of influence of modifiable risk factors, preserving working capacity and opportunities for adaptation in the social environment, creating conditions for optimal support of life of patients and disabled persons (for example: production of medical nutrition, implementation of
architectural planning decisions and creation of suitable conditions for persons with disabilities, etc.).

**Tertiary prevention** - rehabilitation (Rehabilitation) - a complex of medical, psychological, pedagogical, social measures aimed at eliminating or compensating for limitations of vital functions, lost functions with the purpose of full restoration of social and professional status, prevention of relapses and chronic diseases. Examples of tertiary prevention measures are rehabilitation of patients after stroke, follow-up of patients with heart failure, after myocardial infarction, and the like.

Important when conducting medical prevention are screening, which are divided into:

- **preliminary medical examinations** conducted for the purpose of examination of the population at hiring, training, daily admission to the work of drivers, pilots, at registration and conscription of conscripts, etc.;

- **periodic examinations** aimed at the early active detection of various diseases and pre-zoological conditions among the population (review of professional groups (decreeed contingents) catering, trade, childcare facilities, students, etc.) to prevent the spread of a number of diseases;

- **targeted medical examinations** conducted to identify specific significant diseases in the early stages (tuberculosis, neoplasms, etc.).

**Preventive programs**

In modern conditions, real success in the fight against various diseases and human conditions can only be achieved through the implementation and implementation of local, regional, national and international departmental and intersectoral programs.

**Prevention program** - a specially designed set (system) of preventive measures aimed at preventing a specific social problem (or several related problems), negative phenomenon, difficult life circumstances.

Preventive programs allow the full and comprehensive delivery of social services at the level of citizens, groups of people in difficult life circumstances caused by disability, age, health, social status, homelessness, restraint or imprisonment. certain term, etc.

Currently, there are the following types of progressive prevention programs to ensure public health:

- vertical;
- horizontal;
- global, comprehensive integrated programs.

Vertical programs are autonomous, self-contained prevention programs that address specific health issues through the use of specific measures.

Horizontal or integrated programs are aimed at addressing common societal problems on a long-term basis through health services.

Global, common integrated programs - provide activities against the background of the combination of vertical and horizontal prevention programs.
Models and components of prevention programs. Every year, there is increasing evidence that the ability of medicine to treat and save from death does not lead to dramatic changes in the state of health of the population. It has been proved that human health depends on lifestyle 55% and only 8-10% depends on the organization of medical care. Therefore, there is an urgent need for implementation among the population, especially children and young people, of prevention programs.

Unfortunately, both in our country and abroad, there are cases of development of preventive measures without sufficient treatment of their managerial and social-psychological-pedagogical grounds, without taking into account the political situation, subjective aspects of those to whom they are directed, etc.

On the other hand, the analysis of prevention work (based on E. Charlton's research) identifies five main types (models) of prevention programs (or programs for healthy lifestyle training), which are presented below.

**Medical Model** - Young people are informed about the dangerous consequences of a particular phenomenon. It should be noted that such a model is not effective enough because it does not take into account the socio-psychological characteristics of the young person, and therefore it can sometimes lead to the opposite effect.

**Educational model** - is an action directed at an individual, allows him to make his own decisions. But this model does not take into account the preventive situation, the formation of public opinion about a particular crisis situation and ways to overcome it.

**Socio-political model** - lobbying for the necessary decisions, advertising in the media. The advantage of this model is that it is an effective means of forming public opinion, takes into account socio-territorial features, social time and thus eliminates the disadvantages of the educational model.

The first three models are still widely used for crisis prevention. But the most effective prevention models currently used in prevention programs among young people in Europe are the following two:

**Co-Gain Model** (combines the main features of the three previous models in combination).

**The model of "action for the benefit of health"**, which also takes into account the impact on young people, his social environment (reference group). The “health benefits” models operate in two ways - by persuasion and by raising relevant motives (for example, tobacco or alcohol price increases, which are associated with material losses of smokers). Persuasion is used in public education and health promotion or enhancement programs.

Strategies for reducing the incidence of noncommunicable diseases.

To reduce the level of development of noncommunicable diseases, three strategies are proposed: *population* - the impact on those lifestyle and environmental features that increase the risk of noncommunicable diseases among the general
population; *high risk* - identifying and reducing levels of risk factors in people at increased risk of developing these diseases; *Secondary prevention* - prevention of their progression, detection of persons with early stages of the disease and / or carrying out appropriate preventive and curative measures. Strategies for reducing the burden of noncommunicable diseases should be comprehensive, long-term and implemented by different sectors of society. The key to the success of such strategies can be state (regional, local) policies and adequate funding.

The task of the state is to formulate a consistent and long-term policy aimed at shaping and maintaining a healthy lifestyle, promoting health and preventing non-communicable diseases. The involvement of various public and private institutions (institutes), public and other organizations representing civil society is required in the formulation of policies at different levels. Decisions on the prevention of noncommunicable diseases should be reflected in the relevant legislative and regulatory acts, programs with a certain degree of responsibility for their implementation. In making such decisions, it is necessary to recognize that the prevention of non-communicable diseases, especially the general population, is a problem not only for health care institutions, but for the entire health care system, the entire state.

There is no doubt the need for the creation and implementation of the relevant standards that contribute to creating an enabling Environment higher to maintain and promote health, improve the quality and extend the life of the population.

The main areas of development and improvement of the legislative and regulatory framework for the prevention of non-communicable diseases and their risk factors should include:

- development and implementation of effective measures for tobacco and alcohol products, including beer;
- compliance with the ban on the sale of tobacco and alcohol to persons under 18 years of age;
- ban on all types of advertising of tobacco and alcohol products, unhealthy food in mass media, public places;
- ban on smoking and drinking alcohol in public;
- strict control over the composition of foodstuffs sold through the trade network (for example, reducing the content of animal fat and salt), encouraging food manufacturers to replace "unhealthy" foods or their ingredients with "healthy" ones;
- adaptation of urban road infrastructure to pedestrian and bicycle traffic rather than road traffic.

It should also be noted that in western countries, after the change of legislation aside, unfavorable for tobacco companies, alcohol producers and the food industry, these corporations have relocated their territories to eastern countries without such legislative protection. That is why it is important for Ukraine to amend its legislation in accordance with international regulations, to participate and to support international legislative and regulatory initiatives.

One of the necessary conditions for the implementation of effective measures for the prevention of noncommunicable diseases, health promotion and preservation
is adequate funding. The sources may be: public investment; investments of insurance companies; investments of public organizations; investments of business companies; private investment; investments of international organizations.

Participation of the health care system in strategies for the prevention of noncommunicable diseases.

Strategy for the conservation and promotion of health, prevention of noncommunicable diseases ought not to be developed by the Ministry of Health and Ministry of Social Development of Ukraine and carried out in an effective partnership health systems with other governmental and non-governmental organizations, research institutions and professional by scientific societies, public organizations and with the participation of the population itself. Such strategies should include:

- ensuring interaction with different sectors and institutions of medical and non-medical profile dealing with health promotion and disease prevention;
- development and implementation of national and regional programs for preservation and promotion of health, prevention of non-communicable diseases for different target groups of the population;
- determination of professional, technical and financial resources for carrying out measures on preservation and promotion of health, prevention of noncommunicable diseases;
- Continuing education in the system of pre- and post-graduate training of personnel capable at the present level to undertake measures for preservation and promotion of public health, prevention and reduction of non-communicable diseases and their risk factors;
- expert evaluation of modern technologies of preservation and promotion of health, prevention of noncommunicable diseases, including educational aids, medicines and equipment, ensuring their accessibility for the population;
- liaising with the public, the media, non-governmental non-governmental organizations, international organizations;
- development of standards for the prevention of noncommunicable diseases, treatment of tobacco and alcohol dependence, prevention of alcohol abuse and their inclusion in the list of mandatory medical services;
- research in the field of applied epidemiology, including improvement of monitoring health status indicators, strategies for the conservation and promotion of health, prevention of noncommunicable diseases and their risk factors.

At present, much attention should be paid to the development and implementation of measures to control the risk factors for noncommunicable diseases, including smoking, excessive alcohol consumption, blood pressure, hypercholesterolemia, overweight and obesity, type 2 diabetes. In addition, the work of tracking patients with a high risk of noncommunicable diseases and those requiring active treatment plays an important role.
To carry out such activities in Ukraine, health centers should be established and their activities are aimed at achieving the following goals:

- identification of factors of development of noncommunicable diseases among the population;
- forming groups at high risk of developing non-communicable diseases among the population and, if necessary, referring them to the appropriate specialists;
- conducting preventive measures to reduce the level of noncommunicable diseases;
- conducting mass actions aimed at forming a healthy lifestyle and preventing non-communicable diseases.

Logistical support for health centers requires constant methodological support and support. To fulfill these tasks at the regional level, a special coordination center should be established with the following functions:

1) development and organizational and methodological support on the implementation of scientifically sound methods and technologies for the detection and prevention of non-communicable diseases, their factors of development among the population of different categories (organized and unorganized);

2) reviewing and scientific examination of educational materials on prevention of noncommunicable diseases and their factors of development;

3) participation in the development of a regulatory framework regulating the activity of health centers and interacting with them primary health care (PHC) on the prevention of non-communicable diseases and their risk factors, including the development of indicators and evaluation criteria for their activities;

4) development of methodological materials (guidelines, recommendations, manuals, standards, directories) for the provision of preventive assistance to the population;

5) participation in the development of educational standards and training of specialists in the problems of prevention of noncommunicable diseases and factors of their development at pre- and postgraduate levels;

6) participation in the development and evaluation of targeted federal and regional prevention programs;

7) development and / or expert evaluation of educational materials to raise public awareness of health promotion and preservation, ways to prevent non-communicable diseases and their factors of development;

8) participation in training and certification of scientific and practical personnel, training of scientific workers and specialists of medical and prophylactic establishments, medical centers for prevention of non-communicable diseases and factors of their development (cycles of thematic improvement, training at the workplace) together with educational institutions and specialized research institutes distance and field training);

9) organizing and conducting sample surveys and sociological surveys of the population to evaluate the effectiveness of the activity of health centers and related structures of PHC on the prevention of non-communicable diseases and their development factors;
10) formation of a single database on reporting and results of activity of health centers for prompt decision-making on improvement of preventive assistance to the population.

Primary health care activities today are more focused on therapeutic and diagnostic functions. At the same time, primary care services, working at the individual or group / family levels, should put in place practical measures for maintaining and promoting health, prevention of non-communicable diseases and their risk factors. Modern treatments for the most common pathologies, especially in the early stages, have a good effect and significantly prolong the life of patients. However, in most of these patients, the levels of risk factors remain high, leading to disease progression, complications, and premature death. Therefore, the task of primary care physicians should include the correction of risk factors before the onset of disease symptoms (for the purpose of its prevention) and their intensive correction after the emergence of clinical signs of the disease (in order to prevent its progression).

Identification of high-risk groups, early diagnosis, timely treatment and monitoring of the effectiveness of treatment for hypertension, hypercholesterolemia, diabetes can reduce mortality from circulatory system diseases. Therefore, it is necessary to improve the methods of prevention of noncommunicable diseases. Combining population- based disease prevention strategies with high-risk prevention and secondary prevention strategies will certainly lead to improved public health.

**Materials for self-control:**

Self-control tasks:

1. The prevention program is:
   a. specially designed complex of preventive measures
   b. a plan of action by the patient to prevent the risk factors
   c. research into the major risk factors present in the region
   d. plan of interaction of health professionals on health promotion
   e. a list of preventive issues for the primary care physician

2. At the reception, the general practitioner of family medicine determines the harmful factors in the patient and carries out preventive work on these factors. What is the level of prevention?
   a. individual
   b. subindividual
   c. regional
   d. group
   e. population

3. At the reception, the general practitioner of family medicine determines the harmful factors in the patient and carries out preventive work on these factors. What kind of prevention is this?
   a. - primary
   b. secondary
   c. tertiary
   d. preschool
4. Primary prevention is:
   a. complex of medical and non-medical measures aimed at preventing the
development of diseases
   b. complex of medical, social and other measures aimed at early detection
   and prevention of exacerbations and chronicity of diseases
   c. complex of medical, psychological and other measures aimed at
   eliminating or compensating for limitations of vital functions and lost functions
   d. preventive measures taken with groups of people who have similar
   symptoms and risk factors
   e. preventive measures covering large populations or the whole population
5. Secondary prevention is
   a. complex of medical, social and other measures aimed at early detection
   and prevention of exacerbations and chronicity of diseases
   b. complex of medical and non-medical measures aimed at preventing the
   development of diseases
   c. complex of medical, psychological and other measures aimed at
   eliminating or compensating for limitations of vital functions and lost functions
   d. preventive measures taken with groups of people who have similar
   symptoms and risk factors
   e. preventive measures covering large populations or the whole population
Methodical instructions for independent work of students during the preparation for the practical (seminar) class and at the class

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Social medicine, public health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module №</td>
<td>1</td>
</tr>
<tr>
<td>The topic of the lesson</td>
<td>Communication and social mobilization for health. Press release and media relations.</td>
</tr>
<tr>
<td>Course</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign students training department</td>
</tr>
</tbody>
</table>

Poltava
I. Relevance of the topic:

In the system of values that any civilized nation treasures, a special place is given to human health. Throughout the centuries-old history of mankind, great attention has always been paid to the study of health at different stages of society. Representatives of various sciences and professions have been trying to get into the mystery of the health phenomenon, to determine its essence in order to learn how to manage it, to economically use health throughout life and to find means for its preservation.

Modern physician training aims to form a specialist who is able to organically combine theoretical knowledge and practical skills in both clinical and prophylactic medicine.

Therefore, medical education, irrespective of its nature, level and orientation, must contribute to the formation of a young specialist in social and hygienic thinking, understanding the role of environmental factors and social conditions of life in the emergence of various shifts in the state of health and disease, ability and illness. identify and implement various prevention measures in daily life.

2. Specific objectives:

2.1. To acquire knowledge about the health of the population, the factors that determine it.

2.2. To acquire knowledge about health statistics as a scientific discipline, its purpose, tasks, components, the value of knowledge of medical statistics for doctors of different profiles.

2.3. To get acquainted with the methodology of statistical research and the procedure for its implementation.

2.4. Be able to lay out table layouts.

3. Basic knowledge, skills, skills required to study the topic (multidisciplinary integration):

<table>
<thead>
<tr>
<th>Names of previous disciplines</th>
<th>obtained skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social iohiya</td>
<td>Conduct analysis of sociological research.</td>
</tr>
<tr>
<td>2. Medical biology</td>
<td>Identify basic concepts, research methods and tools used to study environmental factors and their effects on the body and health `I.</td>
</tr>
<tr>
<td>4. Anatomy</td>
<td>Identify relationships between natural phenomena.</td>
</tr>
<tr>
<td>5. Normal physiology</td>
<td>Analyze the activities of clinical departments</td>
</tr>
<tr>
<td>6. Pathomorphology</td>
<td></td>
</tr>
<tr>
<td>7. Microbiology</td>
<td></td>
</tr>
<tr>
<td>8. Pharmacology</td>
<td></td>
</tr>
<tr>
<td>9. Propedeutics of internal medicine</td>
<td></td>
</tr>
</tbody>
</table>

4. Tasks for independent work preparation for the class.
**4.1.List of the basic terms, parameters, characteristics that the student must learn in preparation for the class:**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communication</td>
<td>it is the interaction between different actors in which information is exchanged. It involves dynamically changing the stages of formation, transmission, reception, decryption, and use of information in both directions in the interaction of communicators.</td>
</tr>
<tr>
<td>2. Interpersonal communication</td>
<td>is a direct contact of people.</td>
</tr>
<tr>
<td>3. Group communication</td>
<td>called the type of communication when in situations people enter into communication in small groups (the number of their members can be from 3 to 20-30 people).</td>
</tr>
<tr>
<td>4. Mass communication</td>
<td>it is a process of disseminating information and influence in society through special means, printing, television, radio, cinema, etc., resulting in a message reaching large groups of people.</td>
</tr>
<tr>
<td>5. Communication channel</td>
<td>it is a real or imaginary line of communication along which messages move from the communicator to the recipient.</td>
</tr>
<tr>
<td>6. Natural communication channels</td>
<td>these are channels that use native, naturally occurring homo sapiens to convey meaningful messages in physical space.</td>
</tr>
<tr>
<td>7. Non-verbal channel</td>
<td>the oldest of the communication channels that emerged in the course of biological evolution long before the appearance of man, is actively used in the process of microcommunication between humans, and we will specifically consider its features.</td>
</tr>
<tr>
<td>8. Verbal canal</td>
<td>accessible only to the human race, possessing a linguistic capacity, ability to use natural language.</td>
</tr>
<tr>
<td>8. Oral communication</td>
<td>which uses, as a rule, simultaneously and in unbroken unity, natural non-verbal and verbal channels; its emotional and aesthetic influence can be enhanced by the use of such artistic channels as music, dance, poetry, rhetoric. Oral communication includes travel with a cognitive purpose - expedition, tourism.</td>
</tr>
<tr>
<td>9. Document communication</td>
<td>using artificially created documents, first - iconic and symbolic, and then writing, printing and various technical means to convey meaning in time and space.</td>
</tr>
<tr>
<td>10. Electronic communication</td>
<td>based on space radio, microelectronic and computer and technology, optical recording devices.</td>
</tr>
</tbody>
</table>
4.2. Theoretical questions to the class:
1. The value of communication in preserving and promoting health?
2. Components of communication strategies?
3. Forms of communication?
4. Levels of communicative influences in the public health system?
5. Communication channels?
6. The importance of public relations and media. Problems and possible mistakes?
7. Evaluation of the results of the communication campaign?
8. Press release in public health - an important form of communication to the general public: rules for compilation and use?

4.3. Practical work (tasks) performed in class:
Contents of the topic.
While developing methodological approaches to providing outreach, communication and social mobilization for the benefit of the public health within the public health system, health communication covers a range of areas, including journalism, entertainment, education, interpersonal communication, media outreach, communication at the organizational level, risk communication and in times of crisis, social communication and social marketing.

Initially, a methodology for preparing and conducting communications within the public health system was developed. In it consists of the following stages:
- situation assessment and problem identification;
- setting goals; planning and programming;
- search at all levels of supporters for the solution of the set goals and training of specialists for conducting communication programs;

1️⃣ ★⇒selection of target groups of communication influence;
2️⃣ ★⇒selection of channels and mechanisms of mass communication and techniques of influence;
- budget planning;
- practical actions within the approved communication program; evaluation of performance and results.

Assess the situation and identify the problem. Experience in conducting communication campaigns at the country level shows that without a clear definition of the problem it is impossible to come to the right solution, and it is important to determine the level of the problem of the present time, not its origins.

At the national level in Ukraine, a global problem in the public health system is:
- unsatisfactory health of the population with a tendency to deteriorate;
- high mortality rate of working-age population and mortality of children with over- mortality of working-age men;
- low level of health literacy of the population and responsible attitude to one's own health;
- a high level of prevalence of factors of the development of chronic diseases and a negative impact on the health of social determinants;
- untimely application for medical care, which leads to chronicity of diseases, treatment in case of neglect of the patient and high level of disability of the population;
- lack of conditions that ensure a healthy lifestyle;
- inefficiency of the structure of the public health system and low level of interest of decision-makers at all levels of government in its development.

At the regional and local levels, a detailed analysis should be carried out including the health status of the population and the causes of health inequalities among different population categories, the state of resources and technological support for the public health system, the accessibility (physical, financial) and quality of services public health, the level of impact of the public health system on the health and demographic situation in the region.

Another important component of assessing the situation of the communicative aspect of the issue is knowing the opinions of all sections of the population, including health professionals and decision-makers at all levels of government, about their attitude to the situation in the public health system, satisfaction with the level public health services. For this purpose it is important to carry out independent representative sociological research with the involvement of progressive public organizations and / or non-governmental institutions, journalists. The results of the assessment of the situation at all levels of government and the provision of public health services and the identified problems are the basis for planning a communication strategy in the public health system in the country at all levels of government. Defining goals. At this stage, goals are identified that are aimed at solving the identified problems and should be achieved in the course of strategic communication: at the central level (Cabinet of Ministers of Ukraine and Ministry of Health of the country), levels of regions (oblast / city state administrations), local level (local governments and public health institutions).

At the same time, the goals set at the lower levels of government should be consistent with those set at the central level of government and supplement and refine them taking into account the specificity of the region and the local level. The goals set must be in line with technological and financial capabilities.

Planning and programming. Strategically, communications in the public health system, aimed at achieving the set goals, are complex and multilevel. In this connection, it is necessary to talk about the development of the state strategic program of communications in the public health system. Detailed planning - it is always a complex process that requires time and resources. It is necessary to know that the winner who correctly develops the strategy of his actions wins.

In the course of public health communications, communicators should provide:
- creation of the main source of information calculated at all levels of management and different goals and groups of communicative influence;
- communicating differentiated information to the goals of their communicative influence groups;
- formation of public opinion and behavior of the population regarding responsible attitude to personal health, elimination of factors of negative impact on health and timely return to medical care;
- Coordination of activities to influence the population, as well as decision-makers at all levels of government, to build a positive attitude and support the development of public health capacity.

This stage should answer the question:
- the purpose of the communication program (what the organizers want); the target audience (who should be impacted);
- requirements (to be achieved when communicating with each group of communicative influence);
- forms of influence (mass media, individual forms of work);
- levels of influence (central, regional, local). Such planning is necessary to bring about changes in public behavior towards preserving and promoting health through changes in public opinion.

Selection of target groups for communication. This stage is complex and important in building a communication system in the public health system, as each target group requires the development of specific information for it, the use of forms of its presentation and selection of communicators. In addition, each target group has its own level of impact on public health. The general audience of the communication process and communication influence is the entire population of the country. Target audiences at different levels of government will be different, but in general they can be divided into the following groups:

- decision makers;
- media workers;
- employees of the education system;
- NGOs and informal leaders;
- heads of enterprises of different forms of ownership;
- union activists and more.

Search at all levels of public health advocates and train specialists for communication programs. Of course, supporters of the system of protection of public health in the country a lot. First of all, it is the specialists who developed its strategy, officials of all levels and medical professionals who are not satisfied with the state of the medical and demographic situation in the country, scientists. Some of the supporters of the development of the public health system are known. But they are needed at all levels of government and at all levels of system development. They should become public health leaders in society. You can identify supporters in different ways: when conducting various mass events (conferences, meetings of associations, seminars, round tables, sociological surveys, etc.). Proponents he ozvytku system of public health first be thoroughly informed about the objectives and
functions of public health. For this purpose, appropriate educational and communication sessions are organized in the Ministry of Health, regional health administrations, at the departments of health care organization of higher medical educational establishments.

Such classes should be planned and regular. Selection of channels and mechanisms of mass communication and technology of communication influence. At the time of the present step is necessary to solve the issue of channels, mechanisms and forms of mass communication, which will be used during the communication campaign. These communications are developed for each level. In today's context, the following communication channels are widely used: television, radio, Internet, open telephone lines, mass culture actions, actions involving celebrities and informal leaders, information on different media, individual and group conversations. Such a form of communication as a lecture loses its value and is ineffective.

We have identified the following levels of communicative influence.

The first is the central bodies of legislative and executive power.
Third: regional authorities and local self - government.
Fourth: the media.
Fifth: all sections of the population.
Sixth: NGOs and NGOs.
The main users of communicative information are:
- decision makers at all levels of government;
- organizers of the system of public health and health care, medical associations and organizations of professional self-government, medical workers;
- media workers;
- public organizations and associations of citizens;
- individual citizens;
- sick and their families.

It is necessary to define not only channels and forms of information submission, but also the complexity of their use and regularity of information submission.

Actions within the program for omunikatsiy. The main condition for the successful operation of the public health system in the country is coordination with the use of communication tools of the actions of all its participants. At the same time, according to the rules of communicative influence, it is necessary to ensure the position of the communicator and groups of communication influence, and in our case it is the entire population of the country, because only in this case can we achieve maximum success.

For this, American PR specials offer the following technique:
1. Use mass media, most close to the position of the audience.
2. Use communicative source, that the most trusted audience in this matter.
3. Avoid making any difference between the position of the communicator and the audience.
4. Find places to share with the audience in the words and events you mention.
5. Formulate position com unikatora as the position of the majority.
6. Use group identification links (social, professional, religious, age, etc.) if they can help you.
7. Modify the message to achieve the goal of communication.

Organizers of the communication program must know the standard requirements that are used in working with the media. These standards are as follows: messages should be up-to-date, understandable, specific to the audience, place and time. Thus, this section includes the following elements: action strategies, communication strategies, plans for the implementation of the program of creation and effective functioning of the country's public health system.

To evaluate the results of a communication campaign that reflects the success of the public health system, both in general and in its individual areas at central, regional and local levels, it is necessary to set up monitoring and evaluation teams / centers at all levels of government. The main criteria in their activities should be developed evaluation indicators that meet the objectives set for each level and region / locality and have specific timelines and indicators of achievement of the goal. The results of the assessment should be based on real data obtained from reliable sources. The monitoring / evaluation centers / teams should include non-dedicated professionals with experience in monitoring and evaluation and with experience in other countries.

The evaluation of results according to the system approach consists of two directions:
- an evaluation plan that includes criteria and timing for evaluating future actions;
- feedback and a flexible program review plan at all levels of management, which provides for variations according to the results of the evaluation.

This is an important part of the program because its implementation allows you to respond promptly to problems that may arise during the course of an activity over time. Thus, it can be stated that methodological approaches to communication during the creation and operation of the public health system have been developed.

Methodologically, the structure of preparation and conduct of a communication campaign consists of the following stages: situation assessment and problem identification; setting goals; planning and programming; search at all levels of reform advocates and training of specialists for communication programs; selection of target groups for communication; selection of channels and mechanisms of mass and individual communication, techniques of influence; budget planning; actions within the communication program; evaluation of results. A comprehensive model of methodological approaches to communicative activities in the public health system has been developed and proposed that defines tasks and functions; levels, object, tool of influence; forms of communication implementation; necessary resources; monitoring and evaluation is shown in the figure.

The main features of the proposed model are:
- Advocacy among decision-makers, including heads of local self-government bodies and representatives of the deputy corps and heads and enterprises and
organizations of various forms of ownership, in order to solve problematic issues related to the organization and effective functioning of the public health system;

- advocacy at the cross-sectoral level to create the conditions for overcoming inequalities in health indicators among different categories of the population and overcoming the negative impact on the health of the population of social determinants;
- Advocate for measures to ensure the safety of the environment, labor, food, etc.;
- forming a population responsible attitude to their own health and determine their own health as the highest priority that;
- ensuring health literacy of the population, including informing the population on the prevention of infectious and non-communicable diseases, the basics of a healthy lifestyle;
- formation of adherence of patients with chronic diseases to medical examination and fulfillment of doctor's appointments;
- training the families in which they live and disabled patients on chronic diseases, basics of caring for them and tactics of action the deterioration of health;
- informing the population of the need to receive medical assistance within the therapeutic window and the place of receiving the necessary help in acute conditions.

Public, collective and group levels of communicative influence are highlighted in the public health system. The level of communication activity depends on the task to be solved by the method of communicative influence.

The subject of influence. The subject of the impact of a proposed model act as organizers and practical workers of the system of public health. When solving certain tasks communicative impact communicators can act as family physicians and family health nurse. It should be noted that to training programs for specialists of public health included specific sections of their preparation to this activity.

Object of influence. The main object of communicative influence in the public health system is the entire population of the country. At the central level, the subject of communicative influence is the representatives of the legislative and executive branches of decision-making on public health. In the intersectoral plan, the subject of communicative influence at the regional and local levels are employees of local self-government bodies, centers of social protection of the population, heads of organizations, institutions, enterprises, social services, and churches. Special objects of communicative influence are the leaders and employees of organized groups: educational establishments, organizations, institutions and enterprises of different forms of ownership, volunteers.

In dealing with the provision of medical care to the public, communication is conducted with the heads of health care institutions, the main specialists in the profile of the patient's disease, and the employees of the health care departments.

Form of implementation. Organizational forms of communicative policy implementation may include group, collective consultations, presentation of information during mass sports and cultural events, student and student youth during the educational process, parishioners during church services and confessions, and
distribution of information materials through the media, etc. For a more effective communication impact, Health Schools can be organized for specific target groups of communicative exposure with targeted sessions and trainings, and functioning of health feedback sites.

An important form, especially in critical situations, is the organization of offices and round-the-clock Dovira hotlines. Resource. Some resources and tasks are required to accomplish certain tasks and functions. These include: training professionals to use modern communication methods in their professional activities; the availability of information materials content and submissions are designed for different target groups of information impact; access to channels and media.

Considering the current world and domestic experience, the components of communication systems in public health have been developed. These components are aimed at solving the tasks set for the creation of a system of communication in public health. Such tasks are: communication policy strategy, communication technologies, target groups communication impact, system resources, monitoring and evaluation of communication activities. The necessary conditions for the effective functioning of the communication system are those that are consistent with the public health system as a whole. These conditions include regulatory support, availability of the required organizational, human, material, financial resources, authority definition, information support, modern technologies, effective management, cross-sectoral approach, monitoring and evaluation of activities. Thus, measures to create a communication system must be comprehensive, covering all components of the public health system. Introducing components of healthcare communication systems. Legislative support of the system. The main legislative document on the organization of activity of the system of communications in public health should be the sectoral comprehensive program of communications in public health. For the purpose of this targeted program, Annual Planned Communication Measures are developed and approved. These plans include objectives, areas and levels of communication, sources and amounts of funding, criteria for evaluating the effectiveness of communication activities. Given that public health communications should cover the entire population of the country with a focus, depending on the purpose of the communication, the target groups of communication impact, the system can be considered intersectoral. In order to effectively ensure cross-sectoral interaction and coordination of communication activities, it is recommended that interagency councils be set up at all levels to coordinate communication policies in public health and communication activities.

With the pantry system is a scientific and methodological support for its activities. In this direction, it is recommended to conduct scientific research on topical issues of communication policy in public health, development and implementation of modern technologies and means of communication, as well as methodological and analytical materials. The organization of effective business communication system is impossible without her information. Components of informatization of the communication system are computerization of public health institutions with access to the Internet and creation of sites of public health
institutions, use of modern information technologies in communication activities. It should be noted that effective communication activities can be ensured through the use of:

- modern communication technologies in the overall strategy of "public relations";
- methods of individual and mass information of the population on topical issues of public health;
- timely submission of necessary information;
- study, through conducting sociological research, the needs of the population and individual target groups in the information of preventive, medical, organizational, legislative nature;
- Predicting the positive and negative reaction of the population or individual target groups to certain information and the form of its presentation.

Ensuring effective communication activities is possible in the presence of complete information on the subject of communication and for the purpose of ambiguous interpretation of certain definitions and information, organization of explanations or consulting of specialists.

Developed and offered methodological approaches to the system of public health of Ukraine on issues of information and education activities, communication and social mobilization in the interests of public health, recommended to use in practice. Effective use of integrated communications in the business system of protection of public health will contribute to the improvement and strengthening of public health and increase its level of prosperity.

A press release is a short document that should not exceed one page of A-4 format. Hundreds of press releases from various organizations come daily to the media. And, as a rule, those that are of the specified size are usually read first, since the time for correspondence media workers is very limited. When all information is presented on a single page, the experienced worker does not need to make any extra effort to understand it. He is able to understand immediately what is the matter.

The press release should have news and only one information reason. Several informational motives are focusing and not concentrating on the main. An informational occasion will become news when the information is relevant, interesting to the readers / viewers of the media where the press release is directed, is socially significant and comes from certain leaders.

The press release should include: the date it was sent; the exact name of the organization that produces it; information on where you can clarify the information provided.

The composition of the press release allows you to shorten it from the end, as needed. In actual practice, only part of the information provided can be published in the media. Therefore, in the process of preparing a press release, information is placed in order to reduce its importance on the principle of "inverted pyramid". The main points of the message are fixed in the first two paragraphs. The rest - comments, analysis, information, explanations - in the following.
The press release should have a headline that discloses the information reason. It is the main element that attracts attention and reveals the essence of this document. In addition, the caption sets the tone for the general perception of the message text.

**Materials for self-control:**
1. Strategic communications in public health can be?
   A. systematic and systematic;
   B. variable and non-variable;
   C. directed and not directed;
   D. simple and complex;
   E. planned and not planned.
2. In public health, the term Key Message is used. Choose which characteristic fits this term?
   A. it should be presented in a form that is accessible and understandable to the target audience;
   B. should be the same for all target audiences;
   C. should be different for all target audiences;
   D. the message should contain only key concepts;
   E. the message should only contain schematics.
3. The type of signal or the medium in which it is communicated?
   A. mode of communication;
   B. advocacy;
   C. interview;
   D. lecture;
   E. lesson.
4. In public health, can social marketing in health promotion apply this mode of communication?
   A. media;
   B. political decisions;
   C. strikes;
   D. debate;
   E. none of the answers given is correct.
5. In public health, can social marketing in health promotion apply this mode of communication?
   A. indirect communication through medical professionals;
   B. mediated communication through neighbors;
   C. indirect communication through friends;
   D. indirect communication through colleagues;
   E. all answers are correct.
6. In public health, can social marketing in health promotion apply this mode of communication?
   A. interpersonal communication;
   B. leadership communications;
   C. personal communications;
D. friendly communication;
E. all answers are correct.

7. In public health, can social marketing in health promotion apply this mode of communication?
   A. information messages, banners, etc;
   B. photo message;
   C. SMS message;
   D. interview;
   E. none of the answers given is correct.
Methodical instructions for independent work of students during the preparation for the practical (seminar) class and at the class

<table>
<thead>
<tr>
<th>Educational discipline</th>
<th>Social medicine, public health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module №</td>
<td>2</td>
</tr>
<tr>
<td>Topic</td>
<td>Informatization of public health. Medical information systems in the world and in the country</td>
</tr>
<tr>
<td>Study level</td>
<td>IV</td>
</tr>
<tr>
<td>Faculty</td>
<td>Foreign Students Training Department (Medicine)</td>
</tr>
</tbody>
</table>

Poltava
1. **Relevance of the topic** In Ukraine, the reform of the health care system has begun, is to change the system of financing and the introduction of the principle "money goes for the patient." An important tool for the implementation of the reform is the creation of a modern electronic system that will significantly improve the efficiency and transparency of healthcare.

Current global trends are the pursuit of efficient use of resources in the health sector. Staffing in the health sector tends to decrease, while the demand for better quality services increases, and responsibility for the results increases. Mobility of the population, urbanization are the factors that put forward new requirements for accessibility of health care in any part of the country and beyond its borders.

The rapid development of information and communication technologies (ICT), in particular in the field of high data, artificial intelligence, is considered by most countries as the main answer to these challenges. In developed countries, digital transformation has already changed a number of industries and organizations, bringing significant benefits to both public health and individual health care and adapting the way health services are delivered and the nature of health system management at all levels.

2. **Specific goals:**
   - know the definitions of medical information technology;
   - understand what a central database is;
   - interpret basic concepts;
   - be able to fill in accounting documents electronically;

3. **Basic knowledge necessary for studying the topic (interdisciplinary integration)**

<table>
<thead>
<tr>
<th>Disciplines</th>
<th>Acquired knowledge</th>
</tr>
</thead>
</table>
| 1. Medical biology  
Biological physics and chemistry.  
Normal physiology  
Morphology  
Propedeutics of internal diseases | Conduct an analysis of sociological research Identify the basic concepts, methods and means of research that are used to study environmental factors and their effects on the body and human health. Conduct a statistical study. Identify links between natural phenomena. Analyze the activities of clinical departments |
| 2. Hygiene and ecology | Information communication in the system "Public Health - Environment" to identify the relationship between natural phenomena |
3. Social medicine and health care

Organization of dental care to the public. Communication of public health risk factors with observed actual characteristics of individual and public health. Evaluate the organization of health care and its performance. Assess the relationship of the clinical and organizational aspects of public health services in health care facilities.

4. Tasks for independent work of preparation for the occupation.

4.1. The list of key terms, parameters, characteristics which the student needs to learn while preparing for the class:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medical Information Technologies</td>
<td>This is a set of methods and tools that allow medical data to be processed in holistic technological systems for creating, using, storing, transmitting and protecting an information product.</td>
</tr>
<tr>
<td>2. Medical Information System</td>
<td>It is a tool that allows you to identify and plan all the resources of a health care institution through the use of specialized software, computer equipment, necessary medical equipment, communications equipment, and supports medical and diagnostic, financial, administrative, business, accounting and service activities of the institution to provide quality medical care.</td>
</tr>
<tr>
<td>3. E-health</td>
<td>endogenous, controlled, exogenous, uncontrollable</td>
</tr>
<tr>
<td>4. Electronic Medical Records</td>
<td>a set of patient's EMRs that can be created in several healthcare institutions and stored in a systematic and standardized form in a single system.</td>
</tr>
</tbody>
</table>

4.2. Theoretical questions to the lesson:
1. Medical information technology.
2. Medical information system.
3. E-health.
4. Electronic Health System (EHRA).
5. electronic medical records (EHR).
6. Central component (central database).
7. Electronic medical information systems.
8. Central patient index.
9. Electronic Medical Record (EMR).
10. electronic medical records (EHR).

4.3. Practical tasks that are performed in the lesson:
A task
Filling out electronic medical records of patients.

Content:
Automation of medical institutions is the creation of a unified information space of health facilities, which, in turn, allows you to create automated workplaces for doctors, organize the work of the medical statistics department, create databases, keep electronic medical records and integrate all medical, diagnostic, administrative, business and financial processes.

Among the major trends that have recently developed, it should be noted the active use of the Internet capabilities (LIS MeDaP laboratory information system from BioChimMac, ALTEY Laboratory from Altay) and the desire to ensure compatibility of various software systems among themselves (LIS MeDaP, program "Dexter" and "Laboratory Journal" company "Laboratory Diagnostics"). Systems with biofeedback appear for diagnostics and corrective treatment (Doctor A's cardiomonitoring, Breath Maker program for treating the stuttering of the Bio Cybernetics SIC) and computer monitoring tools (Doctor A, wearable by the Holter monitor EKOMED + cardiotechnology 4000), hardware-software complex "Integrator").

E-health (E-health, international. - E-health) - the use of ICT to improve the level of health, including the way and the organization of processes in the health system and related areas, include science, education, research activities. E-health is an industry and environment that includes not only information and telecommunication systems, but also such components as governing bodies, regulatory framework, standards and compliance control, human resources, infrastructure, strategy and investment attraction model.

The electronic health care system (ESSP) is an information and telecommunications system that automates the recording of medical services and management of medical information by creating, publishing, publishing and exchanging information, data and documents in electronic form, which includes a central database and electronic medical information systems between which automatic exchange of information, data and documents is provided through an open program interface.

The central component (central database) is a set of systems, registries, databases, classifiers, functional modules for generating reports, contracts, other forms, etc., which ensure guaranteed availability of information, storage of medical data, keeping records of medical services required to manage the health care system and effectively communicate the participants of the EHP according to their functions.

Electronic medical information systems - any information and telecommunication systems that automate processes in the field of health care and interact with the central component. Electronic medical information systems may include:

- systems that provide automation in health care facilities (outpatient clinics, hospitals, diagnostic and other centers, pharmacies, etc.) - medical information systems, laboratory information systems, radiological information systems, pharmacy information systems, teleconferencing systems, telemonitoring, planning systems and resource management organizations (English - Enterprise Resource Planning, ERP) healthcare, accounting systems, etc.); systems for patients providing access and the
ability to manage medical data (electronic patient rooms, web portals, mobile applications, systems transmitting medical data from wearables, etc.);

• information systems of the NSSU that provide the functions of a strategic purchaser of medical services (ERP, business analyst of the health care system, forecasting the need for medical services, developing a program of medical guarantees and calculating tariffs for medical services, concluding contracts with medical service providers, reporting and making payments, monitoring health care providers, data verification, etc.); systems that provide automation in the executive authorities, local authorities, organizations in the field of health care management (modules for business intelligence, statistical data processing, logistics management and stock balance, etc.);

• systems, registries, databases for providing information needs of certain categories of users (specialized data stores of radiological studies, local patient registries, National Cancer Registry, other patient registries with separate nosologies, etc.).

The Central Patient Index (English - Master patient index, MPI) is an algorithm used to create and maintain the most unique patient identifier based on information from all systems (ESAS, other national registries) and is used to reduce duplication of patient records and linking available EMZ in systems with the account of the specific patient.

Electronic Medical Record (EMR) - patient's medical data, the results of medical care in a unified electronic form in accordance with standardized requirements. EMZs are created and stored within one health institution and, as a rule, reflect a separate fact regarding patient health (for example, a record of a visit to a doctor, a diagnosis, a separate biometric measurement).

Electronic medical records (EHR) - a set of patient EMZ, which can be created in several health institutions, and stored in a systematic and standardized form in a single system.

As part of the central component, the EHR will be implemented in the form of a register of medical records, directional records (electronic directions) and prescriptions (electronic prescriptions).

The goal of health informatization is to solve the above problems through creating an E-health environment for:

• providing tools for the implementation of health financing reform and the functioning of the NHSL as a single national customer and payer for medical services;

• providing accurate information in the right amount, in the right place, at the right time for the health care system participants;

• taking advantage of “big data” processing and intelligent systems to predict healthcare needs, plan industry resources, support clinical decisions and improve the quality of medical services;

• engaging the patient in taking care of their own health, controlling the quality of the services received by providing access to and managing their own medical data.

Principles of building E-health:
Focusing on the patient means continuous accumulation and storage of data with reference to the patient's account in the system, his EHR, providing the patient, as a subject of personal data, with the ability to manage and access their own medical data. The implementation of this principle leads to the fact that "medical data goes for the patient" when the patient changes the doctor or institution, provides the patient with medical services.

The priority of the electronic form - when creating, exchanging and storing data, the priority of the electronic form of data is processed using ICT. To implement this approach, fundamentally different approaches to the construction of processes in the health care system and the requirements for the structured information are necessary, the result is the review of most of the primary and accounting forms of medical records, forms of statistical and other reporting. In the development of any processes, policies, legislation in the field of health care, the basis should be the exchange of data in electronic form.

Single entry and reuse of data - ensuring the reuse of data in information systems, whereby the health personnel benefits from more efficient processes and the failure to store and process data on paper. The state, scientists and the business environment benefit from the ability to process “big data” in electronic form and make effective, economically sound decisions, develop innovative solutions and improve the level of health care in the country.

A single medical information space - creating conditions for compatibility / integration and the ability to transfer data between systems within the framework of E-health, harmonious interconnection with related industries and areas both at the level of Ukraine and interstate, for further integration with the corresponding systems in the EU. A unified information environment is created using international technical standards for the exchange of information, terminological dictionaries, classifiers in the field of medicine / healthcare and technical solutions.

When creating systems and processing data, the legislation of Ukraine on the protection of personal data and the requirements of the General Regulations of the EU on the protection of personal data (General Data Protection Regulation (EU) 2016/679, GDPR), in particular the principle of a certain goal and minimization of data - be collected and processed have only the data necessary for the realization of the goal.

The classification of medical information systems (IIAs) can be carried out on various grounds.

Depending on the degree of automation of the process of collecting and processing information, MIS are divided into automated and automatic. In automated systems, part of the operations for collecting and processing information is performed by man. Automatic systems involve the complete exclusion of a person from the process of collecting and processing information.

AI. In terms of the type of information base, an IIA is divided into systems, operate on data, and systems operating on knowledge. Systems of the second type are expert systems. Their functioning relies heavily on the knowledge gained from
experts, and the results of functioning are close to the results of analytical work of experts.

III.
Depending on the type of tasks, the MIS can be divided into the following groups:
• reference and information systems - automated search systems, measuring systems;
• information and logic - diagnostic systems; forecast systems; monitoring systems;
• control or automated control systems. In the control systems, a fundamentally new function is implemented - the adoption of control decisions.

The most widespread in medical institutions received information retrieval systems (IPS), which, depending on the nature of the information, are divided into factual and documentary systems.

The IPS factsheets contain informational data sets of actual data. Analogs of such systems are "paper" directories, catalogs, technical passports. In computer information retrieval systems, actual data are usually stored in databases (DB) and are tables with columns in which the names of various characteristics of objects are indicated, and in the lines descriptions (values of characteristics) of these objects are given.

Documentary IPS operate with information in the form of documents. Examples of such systems can be a bibliographic card file, a card file with medical histories, other card files. When performing a search, the documentary IPC provides either the numbers of the necessary documents, or a list of headers, or the storage address of the documents sought. In this case, the assessment of the information found in the documents found is made by a person [4].

Control systems implement the collection of information about the control object, information processing, data transfer to the governing body, the formation of a control decision.

IV.
The IIA can be classified according to a hierarchical principle, which corresponds to the multi-level structure of health care, as an industry. In this case, they are usually distributed in four levels:
• basic (or clinical) level (doctors of a different profile),
• the level of the medical institution (clinic, hospital, clinic, ambulance, etc.),
• territorial level (specialized and specialized medical services and regional authorities),
• state level (government agencies and authorities).

Within each level, MISS classification is performed according to the functional principle, that is, in accordance with the goals and objectives that are solved by the system. Consider this classification in more detail.

MIC Information Support
MICs are characterized by the presence, as a rule, of large amounts of data and knowledge. Data and knowledge processing is reduced to three main stages. At the
first stage, information elements are placed in certain structures - databases (DB) and knowledge bases (BR). At the second stage, DB and KB are amenable to streamlining: their structure changes, the order of information placement, the nature of interrelations between information elements. At the third stage, the operation of the database is carried out: search for the necessary information, decision-making, editing databases and knowledge.

The information support of the IIA consists of: medical records, extracts from case histories, epicrisis, standardized examination cards, diagnostic and informative assessments of indicators and conditions, criteria for the effectiveness of examination and treatment, a catalog of medical concepts and terms.

Medical hardware and computer systems

An important type of specialized medical information systems are medical hardware-computer systems (MAKC). Currently, one of the areas of information medicine is the computerization of medical equipment. The use of a computer in medical practice in conjunction with the measuring and control technology has made it possible to create new effective tools for providing automated collection of information about the patient’s condition, its processing in real time and managing the patient’s condition. This process led to the creation of medical hardware-computer systems that have raised instrumental methods of research and intensive care to a qualitatively new level.

MAKC are intended for informational support and / or automation of the diagnostic and therapeutic process, carried out in direct contact with the patient's body. MAKC is also called hardware-software complexes (devices, tools) or, more fully, hardware-computer and microprocessor-based medical-technological equipment automated by information systems.

MAKC relate to basic medical information systems, to information systems supporting technological processes. The main difference of the systems of this class is the work in the conditions of direct contact with the object of study and, as a rule, in real time. They are complex software and hardware systems. In addition to computer technology, they require special medical devices, equipment, video equipment, and communication facilities.

Typical representatives of MAKC are medical monitoring systems for patients; systems for computer analysis of tomography, ultrasound diagnostics, EEG, ECG, radiography; systems for automated data analysis of microbiological and virological research, analysis of human cells and tissues.

Systems of this class can improve the quality of preventive and diagnostic work, especially in conditions of mass service, when there are not enough qualified specialists and time.

MAKC provide a solution to problems from one of the most important areas: increasing the labor productivity of medical workers and the quality of the treatment and diagnostic process by introducing computer technologies in diagnosis and treatment. A significant improvement in the quality of the diagnostic and therapeutic process in modern MAKS is achieved due to the speed and completeness of the processing of biomedical information.
Functional classification
By functionality, MAKC are divided into:
• specialized;
• multifunctional;
• complex.
Specialized (one functional) systems are designed to conduct research of one type (for example, electrocardiographic).
Multifunctional systems allow you to conduct research of several types (for example, electrocardiographic and electroencephalographic).
Integrated systems provide comprehensive automation of an important medical task. For example, a monitoring system for automating the intensive care ward allows you to monitor the most important physiological parameters of patients, as well as monitor the functioning of ventilators.
Classification by purpose
By appointment, MAX can be divided into a number of classes. These include:
• systems for functional and morphological studies;
• monitoring systems;
• treatment process management systems;
• laboratory diagnostic systems;
• systems for scientific biomedical research.
Widespread receive systems for functional and morphological studies. With their help are carried out:
• study of the circulatory system
• study of the respiratory system;
• study of the brain and nervous system;
• research of sense organs (sight, hearing, etc.)
• X-ray examinations (including computed tomography)
• Magnetic resonance imaging;
• ultrasound diagnostics;
• radionuclide studies.
MAX software
Software (software) MAX is no less important than hardware, that is, technical. The software includes mathematical methods for processing biomedical information, algorithms and the actual programs that ensure the functioning of the entire system.
Medical support is developed by the task director — by the doctors of the respective specialties, and by the hardware department — by engineers, specialists in medical and computer technology. The development of specialized microprocessor devices falls on specialists in microelectronics. The software is created by programmers or computer technologists.
The most advanced devices are equipped with the so-called "integrated" software, thanks to which the doctor receives a complete system covering the entire research process, including the stages of preparation, research and data processing.
A very important function of telemedicine is the provision of medical care in a place of need with the help of modern telecommunications in cases where distance and time are critical factors.

There are two types of computer software: software and hardware. Software includes system and application. The system software includes a network interface that provides access to data on the server. The database is managed by an application management program (CKBD) and may contain, in particular, medical records, x-rays in digital form, statistical reports on the hospital, accounting. Application software is a program for which, in fact, the computer is intended. These are calculations, processing of research results, various kinds of calculations, the exchange of information between computers [1].

Integrated automation system of medical institutions. Medical systems, including programs that solve the narrow problems of specialist doctors, such as radiologists, ultrasound and processing of medical statistics.

Cycle of automated information system
The life cycle of an automated information system consists of five main stages:
• developing a system or acquiring a complete system;
• system implementation;
• software maintenance;
• system operation;
• dismantling the system.

The use of information technology in the clinic allows
• improve the quality of medical services;
• increase patient satisfaction;
• reduce the non-therapeutic burden on medical specialists;
• improve the availability of medical information and the speed of its delivery to medical personnel;
• improve the efficiency of support services;
• reduce the percentage of accidental losses and unreasonable costs of medical materials, equipment and inventory;
• improve internal medical records;
• optimize the process of mandatory reporting to the above organizations;
• increase the loyalty of doctors and medical staff;
• present the results of the clinic to the management in real time. Information Technology Screening in the Reception

Electronic database of the patient with a complete history of visits and a list of medical services provided with their detailed content, starting from the date of the first call. Quick contextual search for any information in the database.
• High degree of protection of medical data.
• Electronic document management.
• Conducting business in accordance with applicable departmental standards and the requirements of the Ministry of Health.
• Manage electronic queues and electronic records to specialists.

The use of information technology in the offices of specialists
• ARMs of medical specialists allow you to enter medical data, telemetry and related information directly from medical equipment into computer databases during a real-time survey for the purpose of their further processing, analysis, storage and maintenance of the history of requests.

• Electronic automated preparation of prescriptions, prescriptions, extracts, sick-lists and other standardized documents for patients [1].

The use of computer technology when conducting obstetrical, diagnosis, treatment:

In stomatology
Digital (digital) X-ray systems (radio video recorder) allow you to study in detail the various fragments of a tooth and periodontal image, increase or decrease the size and contrast of images, save all information in the database and transfer it to paper using a printer. The most famous programs: Gendex, Trophy. The second group of programs is systems for working with dental video cameras. They allow detailed display of the condition of groups or individual teeth “before” and “after” the treatment (AcuCam Concept N (Gendex), ImageCAM USB 2.0 digital (Dentrix), SIROCAM (Sirona Dental Systems GmbH, Germany). For X-ray examination, the computer "Computer radioviziografy: GX-S HDI USB sensor (Gendex, Des Plaines), ImageRAY (Dentrix), Dixi2 sensor (Planmeca, Finland).

Ultrasound diagnosis (ultrasound)

Ultrasound is widely used in the diagnosis of diseases of internal organs. The principle of ultrasonic scanning is based on the ability of high-quality ultrasound to propagate in a straight line in the tissues of the human body, reflected at the interface between media with different acoustic density.

The use of computers in medical laboratories

Specialized software designed to automate clinical diagnostic laboratories is commonly referred to as the “Laboratory Information System” (LIS). LES is an information system specifically designed to automate the work of the diagnostic laboratory. When using a computer in laboratory medical research, a specific diagnostic algorithm is laid into the program. A database of diseases is created, where each disease corresponds to certain symptoms or syndromes. In the process of testing, using an algorithm, questions are asked to the person. Based on his answers, symptoms (syndromes) are selected that are most relevant to the disease [3].

Computed fluorography

The software for digital fluorography units contains three main components: the complex control module, the x-ray image recording and processing module, including the formal protocol creation unit and the information storage module containing the information transmission unit over a distance. This software structure allows you to use it to capture images, process it, store it on different media and print hard copies. The presence of a program block to storing the study protocol in the form of a standardized form makes it possible to automate data analysis with the issuance of diagnostic recommendations, as well as the automated calculation of various statistical indicators. The software provides for the possibility of transmitting
images and protocols when using modern communication systems (including the Internet) in order to consult diagnostically complex cases in specialized institutions.

Microprocessor controlled radiation therapy

The basis of the therapeutic use of ionizing radiation is the principle of lethal damage to a tumor, taking into account the sensitivity of the tissues surrounding the tumor to maintain their viability. Microprocessor-controlled radiation therapy - provides the possibility of using more reliable and safe methods of irradiating cancer tumors. Modern high-energy radiation sources (betatron, linear accelerator) less damage normal tissue than gamma-ray and radiotherapy devices.

Devices for diagnosis and localization of renal and gallstones (lithotripsy)

allow you to control the process of their destruction using external shock waves. The method is based on the generation of an acoustic shock wave using a special apparatus - the lithotripter. The shock wave is concentrated at one point - the focus, where its energy is maximum. The stone is positioned at this point with the help of a lithotripter guidance system. Under the action of a series of impulses of a shock wave, a stone breaks down into a large number of small fragments [2].

CT scan

Computer tomography - gives accurate layered images of the structures of internal organs and the brain with MPT of the brain. These data are recorded in a computer, which on their basis constructs a complete three-dimensional image. The physical basis of measurement is varied: X-ray, magnetic, ultrasound, nuclear, etc. Tomography is one of the main examples of the introduction of new information technologies in medicine.

Video Broadcasting and Operational Video Systems

The video broadcasting system transmits an image of the general plan and an image of the operational field with each operating theater. Transmission occurs through a computer network and is recorded in the archive for later viewing. Communication is carried out with subscribers who are in the medical institution and outside of it, in remote subdivisions. The video conferencing system allows multimedia and informational interaction between employees of an organization when discussing an operation or conducting training. The use of video conferencing and video broadcasting can improve the quality of treatment, hold medical consultations, train medical staff.

Computer integration with medical equipment

Medical devices, equipment, measuring and control equipment plus computers with special software - these are medical instrument-computer systems (MPCS). These basic-level medical information systems are designed for visual examination methods, laboratory tests and research, monitoring (monitoring) of the patients condition. The listed technologies provide the medical staff with reliable and timely information. But the advantage is the high information content of the source data.
**Materials for self-monitoring:**

**A. Materials for self-monitoring:**

1. E-health (E-health, international. - E-health) is:
   A. The use of ICT in order to improve the level of health care, including the method and organization of processes in the health care system and related areas, including science, education, research activities.
   B. Information and telecommunications system that automates the recording of medical services and management of medical information by creating, posting, publishing and exchanging information, data and documents in electronic form.
   C. A set of systems, registries, databases, classifiers, functional modules for generating reports, contracts, other forms, etc., which ensure the guaranteed availability of information, medical data storage, keeping records of medical services necessary for managing the health system and efficient interactions of EHR members according to their functions.
   D. Medical data of the patient, the results of medical care in a unified electronic form in accordance with standardized requirements. EMZs are created and stored within the framework of one health care institution and, as a rule, reflect a separate fact regarding patient health.
   E. A set of patient EMZs that can be created in several health care facilities and stored in a systematic and standardized form in a single system.

2. The central component is:
   A. A set of systems, registries, databases, classifiers, functional modules for generating reports, contracts, other forms, etc., which ensure the guaranteed availability of information, medical data storage, keeping records of medical services necessary for managing the health system and efficient interactions of EHR members according to their functions.
   B. Using ICT to improve the level of health care, including the way and processes in the health care system and related areas, including science, education, research.
   C. Information and telecommunications system that automates the recording of medical services and management of medical information by creating, posting, publishing and exchanging information, data and documents in electronic form.
   D. Medical data of the patient, the results of medical care in a unified electronic form in accordance with standardized requirements. EMZs are created and stored within the framework of one health care institution and, as a rule, reflect a separate fact regarding patient health.
   E. A set of patient EMZs that can be created in several health care facilities and stored in a systematic and standardized form in a single system.

3. The electronic medical record is:
   A. Medical data of the patient, the results of medical care in a unified electronic form in accordance with standardized requirements. EMZs are created and stored within the framework of one health care institution and, as a rule, reflect a separate fact regarding patient health.
B. Information and telecommunications system that automates the recording of medical services and management of medical information by creating, posting, publishing and exchanging information, data and documents in electronic form

C. a set of systems, registries, databases, classifiers, functional modules for generating reports, contracts, other forms, etc., which ensure the guaranteed availability of information, medical data storage, keeping records of medical services necessary for managing the health system and efficient interactions of EHR members according to their functions.

D. using ICTs to improve the level of health care, including the way and processes in the health care system and related areas, including science, education, research.

E. A set of patient EMZs that can be created in several health care facilities and stored in a systematic and standardized form in a single system.

4. The electronic medical record is:

A. A set of patient EMZs that can be created in several healthcare institutions and stored in a systematic and standardized form in a single system.

B. Using ICT to improve the level of health care, including the way and processes in the health care system and related areas, including science, education, research.

C. Information and telecommunications system that automates the recording of medical services and management of medical information by creating, posting, publishing and exchanging information, data and documents in electronic form

D. a set of systems, registries, databases, classifiers, functional modules for generating reports, contracts, other forms, etc., which ensure guaranteed availability of information, storage of medical

B. Tasks for self-control:

Fill out an electronic medical card for an appointment with a family doctor

Literature:

Basic (basic)

Auxiliary
Information resources
- World Health Organization www.who.int
- European Health for All Database www.euro.who.int/en/home
- Cochrane Center for Evidence-Based Medicine www.cebm.net
- Cochrane Library www.cochrane.org
- Canadian Center for Health Evidence www.cche.net
- Center for Disease Control and Prevention www.cdc.gov
- Public Health Center of the Ministry of Health of Ukraine www.phc.org.ua
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- British Medical Journal www.bmj.com
- Evidence-Based Medicine Magazine www.evidence-basedmedicine.com

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