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

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| Registered:  №БД-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  20\_\_year “\_\_”\_\_\_\_\_\_\_ | Ministry of Health  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  20\_\_year“\_\_”\_\_\_\_\_\_\_ |

**PUBLIC HEALTH RESEARCH AND ASSESSMENT**

**MODULE SOFTWARE**

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| Field of knowledge: |  | 900000 | -Health care and social security |
| Education: |  | 910000 | -Health care |
| Specialty: |  | 70910215 | - Public health and Healthcare management |
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**Tashkent – 20**\_\_

**Developers:**

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**Reviewers:**

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| Internal reviewer Karimbaev Sh.D. | – TTA, associate professor of the Department of organization and management of Public Health and health, candidate of Medical Sciences. |
| External reviewer Iskandarova Sh.T. | – Tashkent Pediatric Medical Institute, head of the Department of Public Health and health management, doctor of medical sciences, professor |

The module program was developed at the Tashkent medical academy.

The module program was considered and recommended at the Council of the Tashkent Medical Academy (201\_\_year“\_\_\_” \_\_\_\_\_\_\_даги“\_\_\_”- dated protocol).

Module Program 20\_\_ years of Coordination Council of medical and pharmaceutical institutions of Continuing Professional Education of the Ministry of health of the Republic of Uzbekistan"\_\_\_"\_\_\_\_\_\_\_\_ approved with the "\_ \_ \_ " statement in.

The list of module programs is approved by Annex \_\_\_\_\_\_ of the order of the Ministry of Health of the Republic of Uzbekistan dated "\_\_\_"\_\_\_\_\_\_\_\_ of 20\_\_.

**1. The relevance of the study module and its role in higher education**

In our republic, it is now able to bring health, moral health indicators to the levels of developed countries, improve the methods and forms of training and professional development of specialists corresponding to the requirements of the period to further improve the popular, high-quality and efficiency of medical care, deeply understand the Biosocial foundations of the protection of Public Health,, it is considered one of the important tasks, such as the training of active organizers and doctors.

The module for the study and assessment of Public Health is one of the most complex disciplines in medical education, which is of great importance in the formation of a future doctor, a health organizer engaged in the protection of Public Health.

Improving public health and Health Management in our republic consists in increasing the role and importance of many people in this profession, improving public health and health management through continuing education using the best practices of the world's leading countries and the achievements of science.

Specialists of" Health Management and public health " should have the ability to conduct scientific research in medicine, collect data, analyze them, and conduct scientifically based activities. This module is based on the results of the best clinical studies, makes it possible to conduct qualitative and effective diagnosis, treatment, preventive work, taking into account the patient's desire and relying on his own experience. In this regard, the training of the module for the study and evaluation of Public Health will be of paramount importance for the specialties of Health Management and public health.

**2.** **The purpose and function of the training module**

**2.1. Purpose of the module:**

The purpose of the module is to provide students with information about the types of epidemiological studies, as well as independently conduct scientific research, statistical analysis of them, critical assessment,study of population and Family Health, living conditions of the population, lifestyle and influencing factors,strengthen health, develop and search for new methods related to prevention, and form skills and abilities.

**2.2. Functions of the module**

The tasks of the module are to teach students to acquire knowledge and skills sufficient to independently conduct clinical and epidemiological studies, as well as to critically evaluate the results of scientific research, consolidate data, statistical analysis and apply them in practice.

**2.3. Requirements for knowledge, skills and qualifications of students on the module:**

***Student****:*

*to have an idea of the application of indicators characterizing Clinical Epidemiology and public health, public health in scientific research;*

*epidemiological studies, international aspects and main functions of the plant, knowledge and use of the basic principles of Health Protection of the population;*

*the environment and the population must have the skills to identify problems and risk factors related to the maintenance of the health of the plant.*

**3. Main part**

**3.1. Topics and content of lecture sessions in the module, general instructions and recommendations for the organization*:***

The module does not provide for lecture sessions

***3.2.Topics of practical training in the module, general instructions and recommendations for organization:***

***3.2.1.List of topics of practical classes***

Topic 1. Clinical Epidemiology and public health. Indicators characterizing the health of the population. The current trend of Public Health and methods of study. Basic principles of Clinical Epidemiology. Historical development of Clinical Epidemiology.

Topic 2. Clinical studies and their types. Application of epidemiological studies.Epidemiological research findings and risk factors. Causes, conditions and prevalence of socially significant infectious and noninfection Diseases, Research USU.

Theme 3. Indicators characterizing the health of the population. Specific features of the study of population incidence . Indicators characterizing the slat of the population; indicators characterizing diseases spread among the population; accounting for epidemiological and noepidemiological diseases; statistics of infectious diseases . Mukhim noepidemic diseases, chronic diseases. Location of patients to the hospital (hospitalization). Temporary incapacity for work.

Theme 4. Written research methods. Indicators of measurement of the frequency of occurrence of diseases. Searchable research methods. Prevalence (Prevalence). Incidence (Incidence). 100 the concept of" man - Year". Written research methods. Phenomena research method. Event Series research method. Correlation research method. Transverse research methods. Indications of general, special and corroded diseases.

Theme 5. Indicators characterizing the health of the population. Demographic statistics. Indicators of birth and death, their calculation, death of children under one year old and its social hygienic significance. Indicators of disability, physical development and methods of their study. Indicators of the health system and their assessment.

Theme 6. Analytical research methods. The design of the cohort research method. Organization and conduct of research. The concept of danger.Advantages and disadvantages of the cohort research method. Relative risk, absolute risk indicator. Relative and absolute risk reduction, proportion of relative risk.

Theme 7. Analytical research methods. Phenomenon-control research method, its design. Organization and conduct of research. Methods for determining the occurrence and control groups. Advantages and disadvantages of the phenomenon – control method. Indicators of the ratio of chances.

Theme 8. Clinical studies. Methods for measuring the danger of the occurrence of diseases. Advantages and disadvantages of clinical studies. The concept of randomization. Types of exposure and control. Method of blindness. Comparison method.

Theme 9. Disease screening. Sensitivity and specificity of the screening test. Detection of the disease by screening until the clinical signs of the disease come to the surface. Calculation of sensitivity and specificity. In what cases should screening be carried out

Theme 10. Systematic shark and meta – analysis. Search the internet for relevant information. The importance of systematic shark and meta analysis in obtaining data. The concept of the Bibliotheca of Cochrane.Various databases. How to conduct a search.Terms search through words.Logical operators AND, OR, NOT.Limitations.Search by phrases, avtors and magazine name.How to read the research found in search engines.

Theme 11. Organization of scientific research. Critical assessment of medical data. Setting the goals and objectives of the study. Drawing up a research program and plan. Collection of research materials. Statistical analysis of research. Implementation of research results in practice. Formulation of the clinical question. Drawing up a question based on PICO. Search strategy.

Theme 12. Subject, tasks, styles of biostatistics. Population Health Statistics and Health Statistics. General and selected complex. Determination of the number of observations. Formation of selected complexes. Representativeness, the method of blindness when conducting statistical research. Placebo effect.

Theme 13. Systematic error and additional factors. Relative and average quantities, the method of calculating their error. Systematic error in selection (selection bias). Systematic error in observation (observation bias). An additional factor (confounding) and how it can affect research. Calculation of relative and average quantities. Calculation of the average error of relative and average quantities. Calculation of the reliability limit (Di).

Theme 14. Application of parametric methods in statistical research. Standardization method. Dynamic rows. Compatibility criterion-X 2. Correlation. The method of Dispersion analysis is the assessment of the reliability of the data obtained, the limit and gradation of reliability. Drawing up layouts of related tables and graphic images. Development of recommendations based on the results of research.

Theme 15. Determination of the prospect of indicators of morbidity and mortality of the population. Drawing up a prognostic table. Comprehensive assessment of family home conditions in the study of Public Health.

***3.2.2. General guidelines and recommendations for the organization of practical classes:***

Practical classes should be conducted by a teacher in an akadem group in an auditorium equipped with multimedia devices.

When conducting practical training, didactic principles in sheep are followed:

- to clearly define the purpose of practical training;

- to arouse interest in students in the possibility of deepening knowledge on the innovative pedagogical activity of the teacher;

- to provide the student with the opportunity to independently obtain the result;

-preparation and conduct of the student theoretically-methodically

***3.2.3. Practical skills and competencies acquired during module training***

***List of practical skills to acquire during the module:***

During the transition of educational (clinical) practice, it is envisaged that students will master the following practical skills:

1. drawing up a program on the stages of statistical research;

2. determination of the goals and objectives of scientific research, drawing up cards and questionnaires for collecting statistical data;

3. collection, grouping, aggregation, calculation, analysis of statistical data;

4. calculation of statistical indicators based on statistical records and reporting documents;

5. calculation of indicators of demographic, morbidity, disability, physicaldevelopment and their assessment;

6. relative risk, absolute risk indicator, relative and absolute risk reduction, relative risk share, calculation of chance ratio indicators;

7. correlation, standardization methods, calculation of compatibility criterion, reliability assessment of the data obtained,

8. health systemto calculate indicators that assess health and evaluate them;

9. study and control of infectious diseases. Drawing up primary and secondary prevention programs for their prevention.

**List of competencies to be acquired during the module**

1. calculation of indicators of relative risk, absolute risk indicator, decrease in relative and absolute risk, share of relative risk, ratio of chances (opportunities) ;

2. assessment of the reliability of the data obtained, application of the reliability limit and gradation;

3. drawing up layouts of related tables and graphic images;

4. development of recommendations based on the results of studies;

5. it is necessary to have competencies in the search for relevant information, a critical approach to them, their diagnosis, treatment and application in preventive activities.

Guidelines and recommendations for the organization of educational (clinical) practice during the module:

- Students perform the appropriate tasks for the performance of skills under the guidance of a teacher and a supervisor in practice in the institutions of the leading health system under which the contract is concluded during the period of educational practice and record it in the practice book.

-Each student, after the internship, reports on the internship, the skills acquired at the school and presents it in the form of a presentation.

-This report is listened to and evaluated in accordance with the established procedure with the guidance of the school director and the participation of teachers.

**4. Independent education and independent work, instructions and recommendations for the organization**

***4.1.List of topics of proposed independent work:***

1. Methods of written and analytical research.

2. Methods for measuring the danger of the occurrence of diseases.

3. Clinical studies. Randomized clinical studies.

4. Critical assessment of medical data.

5. Disease screening.

6. Relative and average quantities, the method of calculating their error.

7. Systematic shark and meta – analysis.

8. Search the internet for relevant information.

9. Data standardization concept.

10. The basis for working with software in the Epi-Info 3.5.4 version.

11. Data grouping and graphical representation.

12. Statistical methods and forecasting model.

***4.2. Recommended forms of independent work:***

In the organization of the student's independent work, the following forms are used:

- in addition to the training of the auditorium, the number and quality of the pedagogical control of the approved practical skills in the halls/centers of the trainer, mulyaj and simulasion are reflected in the notebooks of performing the skills and mastering practical skills;

- conducting discussions and lectures on sanitary whitewashing among the population;

- independent assimilation of certain theoretical topics with the help of educational literature;

- preparation of information (Abstract) on a given topic and its presentation;

- work and give lectures on special or scientific literature (monographs, articles) on sections or topics of the module (science – ;

- solution of situational issues focused on situational and clinical problems;

-Keys (SASE-study based on Real clinical situations and clinical situational issues) solution

- make models, build crosswords, create organizers

***4.3.Guidelines and recommendations for the organization of Independent Education and independent work:***

Independent work on the study and assessment of Public Health is carried out outside the audience and audience. In this case, students perform independent work, under the guidance of teachers of the department, based on an independent educational system to consolidate the theoretical knowledge gained in the audience and form skills in solving practical issues in the health care system. In doing so, they study additional literature and use internet sites to prepare abstracts and scientific docks, perform homework on the topic of practical training, prepare visual aids and slides.

**5.Main and additional literature and information sources**

***5.1.Main literature***

1. Mamatkulov B. Public health and health management. Ilm Zia, Tashkent-2020.
2. Mamatkulov B., Rachmanova N. Klinicheskaya epidemiology: Osnovi dokazatelnoy medisini. - Tashkent -2011, str.459;
3. Mamatkulovb.M. Fundamentals of Medical Statistics (Biostatistics),.Tashkent-2005.
4. Mamatkulov B., Adilova Z., Mirzabaeva S. Application of scientific verification work in practice (evidence-based medicine). Textbook for students of the direction of higher nursing of higher educational institutions.- Tashkent: successor publishing house, 2015. Page 80.

***5.2.Additional literature***

5. E.N.Weiner. Valeology: Uchebnikdlyavuzov. 8 - E izd., pererab. - M.: Flinta: Nauka, 2010 – 448s.

6. V.A.Minyaeva, N.I.Vishnyakova. Obtshestvennoezdorove I Zdravooxranenie: Uchebn.dlya studentav-5 - e izd., pererab. I dop. - M.: Medpress-Inform, 2009. - 656s.;

7. Lucianne Bailey, KaterinaVardulaki et al. Introduction to Epidemiology. England, 2007, str.164

8. M.Akhmedov, R.Azimov, V.Alimova, B.Rechel-system zdravaoxraneniya: Uzbekistan, vremyaperemen. – 2007; 9(3): 1-210S.;

9. T.G.Tulchinsky, E.A.Varavikova. Maintaining public health. Fundamentals of new science, Part 1. Tashkent, 2003.str.463;

10. T.G.Tulchinsky, E.A.Varavikova. Maintaining public health. Fundamentals of new science, Part 2. Tashkent, 2003.str.503.

11. V.V.Vlasov. Epidemiology (Uchebnoeposobiedlyavuzov). M., 2006, str.462;

12. V.A.Medik, M.S.Tokmachev. Rukovodstvopostatisikezdorovya I zdravooxraneniya., 2006, str.527;

13. A.Banerji. Medisinskaya statistics ponyatnimyazikom.M., 2007, str.287;

***5.3Internet sites***

1. www.<http://www.ziyonet.uz/>
2. www.<http://www.tma.uz/>
3. www.<http://Min.vuz>
4. [www.http://lex.uz](http://www.http://lex.uz)