

## METHODS OF ASSESSMENT OF THE POST-COVID SITUATION (EXAMPLE OF FERGANA VALLEY)

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**Abstract.** *This article is about planning, conducting and data advantages of cross-sectional (concurrent) epidemiological studies in health care. Our current research is based on this design. A 1-time examination performed at a certain time interval provides valuable information to the Health Care System about the dynamics of the disease and the comparison of the manifestations of the disease in different regions of the country.*

**Key words:** *post-covid situation, epidemiology, cross sectional study, representat group, random selection method.*

## МЕТОДЫ ОЦЕНКИ ПОСТКОВИДНОЙ СИТУАЦИИ (НА ПРИМЕРЕ ФЕРГАНСКОЙ ДОЛИНЫ)

**Аннотация.** *Эта статья посвящена планированию, проведению и преимуществам перекрестных (параллельных) данных эпидемиологических исследований в здравоохранении. Наше текущее исследование основано на этом дизайне. Одновременное обследование, проводимое в определенный период времени, дает ценную информацию для системы здравоохранения о динамике заболевания и сравнении проявлений болезни в разных регионах страны.*

**Ключевые слова:** *постковидный статус, эпидемиология, одномоментное исследование, репрезентативная группа, метод случайного отбора.*

## INTRODUCTION

The pandemic of COVID-19 has taken over the whole world, leaving behind a fiery tail of complications, thousands of dead and chronic stress. Because the modified part of COVID-19 activates immune reactions in the human body, with the release of interleukin-6, strong immune inflammation causes a sharp increase in blood D-dimers and lactate.

As a result of breaking the metabolic processes in the body, an energy and metabolic crisis occurs in COVID-19, this very process prevents the quick recovery of organs and systems, and the complete recovery of the patient who has recovered from COVID-19. Despite the fact that active treatment against COVID-19 is carried out mainly with traditional medical methods and preparations created in folk medicine in general, the main symptoms of the post-covid condition (severe lethargy, heaviness in the chest, inability to fully breathe) sensation, head and joint and muscle pains, sleep disorders, depression, decreased cognitive functions, thermoregulation disorders) persist and intensify.

Confirmation in foreign populations and studies, the transition to the post-covid state in COVID-19 ends in two ways - due to the evolution of syndromes such as acute respiratory viral infection, endotheliitis, thrombovasculitis and pneumonia - with a favorable course, transition to convalescence, and the second, cytokine storm, acute respiratory distress syndrome, polyamyosis due to the evolution of systemic inflammation – an adverse course, a potentially fatal condition in the post-covid world, a review of 15 studies from different countries has already become a public phenomenon and a part of our lives.

According to the International Classification of Diseases (ICD) 10 - the code U 071 or U 072, a group of people who were hospitalized and treated with a diagnosis of COVID-19, registered and monitored in a polyclinic - were involved in a simultaneous epidemiological study.

Post-covid condition is diagnosed based on clinical symptoms and clinical history of previous infectious disease.

According to the criteria recommended by the UK's National Institute of Health (NICE), COVID-19 was differentiated (December 2020)

- Acute COVID-19 - symptoms lasting up to 4 weeks
- Persistent symptomatic COVID-19 – symptoms persist for 4 to 12 weeks
- Post-covid condition syndrome - after 12 weeks, the symptoms persist for a long time, change from time to time, disappear and reappear, reflect the involvement of the blood systems of the body.

In about 80% of cases, people with a confirmed history of the coronavirus find themselves among those who do not fully recover, and for some, symptoms persist or worsen months later. Such a clinical situation, more specifically, lasting more than 12 weeks, not explained by an alternative diagnosis, changing over time, disappearing and reappearing, symptoms affecting many body systems - post-covid condition (called post-covid syndrome).

Taking this into account, the purpose of our research is to apply a simultaneous cross-sectional study, the methodology of conducting it, a representative group of patients infected with COVID-19 is separated, and the principles of random selection are formed. There is no special study conducted in the Uzbek population, especially in the climatic conditions of the Fergana Valley, aimed at optimizing the post-covid situation, "epidemiological path", local clinical course and early detection, prevention and treatment methods. Obtaining such results is considered a scientific topic, especially in the case of the post-covid situation, which has become an urgent issue and necessity in the current period, when the unpleasant epidemiological situation in relation to COVID-19 continues around our country.

## **MATERIALS AND METHODS**

Our study is a concurrent epidemiologic observational study and aims to collect data from the population infected with and discharged from hospitals with COVID-19 (COVID-19aA). This study is being conducted among the population of all polyclinics in Fergana city. During the study, each patient is examined once, that is, the patient is not monitored. The obtained data are collected at the same time, information about the risk factors of the disease and the disease under study.

In this case, the researcher can determine the prevalence and frequency of the disease. As an example, we determine how many of the COVID-19 patients we examined developed post-covid syndrome, thereby determining the prevalence of the post-covid condition. All inspections are carried out once in a certain period of time. A retrospective analysis is also needed to identify risk factors.

A simultaneous examination carried out in a certain period of time provides valuable information to the Health care system about the dynamics of the disease and the comparison of the manifestations of the disease in different regions of the country. This examination method helps to study the relationship between the disease and the factors affecting its development.

Taking this into account, we are simultaneously collecting information about the disease and the factors influencing its development.

The study has the following advantages:

1. Check the prevalence.
2. Speed of execution.
3. Low financial costs (compared to other types of research).
4. Convenient for studying chronic diseases.
5. The opportunity to study a large number of risk factors.
6. Ability to learn multiple outcomes.
7. The possibility of assessing the dynamics of the event / disease spread during several consecutive studies at the same time.
8. Forming a basis for further scientific research (contributing to the development of causal hypotheses).

In the method of simultaneous inspection, a working hypothesis is drawn up, which is to be clarified by means of inspection, and then the inspection is planned. This method does not cover the entire population, the desired unit is selected from the studied population in a representative way. There are several different methods to ensure representativeness, one of which is random sampling.

We use the principle of random selection in our research. In the city of Fergana, a census of men and women aged 18-60 who have experienced COVID-19 is being taken. A representative group is formed from them, the principle of random selection is used, that is, the population of the city who has been sick with COVID-19 should have an equal chance of being selected for testing. In this way, no less than 1600 COVID-19 a A are formed:

At the international level, it is recommended to form the population for examination in this way, because such a method is used, the obtained results satisfy the minimum statistical requirements. The next stage. The collected data is processed and the results are organized. In the statistical processing, an assessment of the clinical-demographic description of COVID-19a A and an analysis of the severity of COVID-19 is carried out. Coxney's multivariate regression model is constructed and other traditional statistical methods are used.

Statistical analysis of the obtained results is carried out using Excel-2020 software. The prognostic significance of risk factors is assessed using regression (discriminant and multiple stepwise) analysis. Student-Fisher criteria are used, and correlation analysis is also used.

The purpose of the study is to study the epidemiology and clinical manifestations of the post-covid condition, to optimize the methods of treatment and prevention in the conditions of the Fergana Valley.

The objectives of the study are to study and evaluate the epidemiology of the post-covid condition among residents of Fergana aged  $\geq 18-70$ ;

- To study and evaluate the gender and age-related features of the post-covid situation among the residents of Fergana;

- Study and evaluation of the main clinical syndromes and symptoms of the post-covid condition in the conditions of the Fergana Valley;

- Pharmacoepidemiological analysis and evaluation of the regular practice of carrying out the client with a post-covid condition - the population in the conditions of the Fergana Valley;

As the subject of the research, data obtained from ECG, blood pressure, anthropometric measurements, venous blood, UTT and questionnaire research methods are obtained.

Research methods. Questionnaire, general clinical, biochemical and instrumental, statistical research methods are used to assess the post-covid condition in the elderly population.

Using the questionnaire method, the most prone factors to the development of the post-covid condition are identified and evaluated: persons over 50 years of age; those who have had a severe form of covid infection and people who are on long-term lung ventilation; population groups with chronic diseases - people suffering from chronic heart failure, lung pathology, arterial hypertension, ischemic heart disease, obesity, diabetes, autoimmune diseases, etc.

## CONCLUSION

Proper planning of medical research is an integral part of evidence-based medicine. In our research on the epidemiology of the post-covid condition, the use of a simultaneous research method has the following advantages: epidemiology of the post-covid condition, determination of clinical manifestations; execution speed; convenient for studying chronic diseases; the possibility of studying a large number of risk factors; the ability to study multiple outcomes; the possibility of assessing the dynamics of the event/disease spread during several consecutive studies at the same time; forming a basis for further scientific research (contributing to the development of causal hypotheses).

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