

## Negative effects of COVID-19 on public health - Overview of research and some predictions



***The coronavirus pandemic has had an enormous impact on health care around the world. On the one hand, it has exposed weaknesses in public health systems, such as shortages of medical personnel, equipment and medicines, as well as insufficient coordination and co-operation between countries. On the other hand, it has had a negative impact on the accessibility and quality of health care for other categories of patients, writes Mukhammadsodik Rakhimov, senior researcher of the Institute of Strategic and Regional Studies under the president of the Republic of Uzbekistan***

In order to ensure macroeconomic stability, effective social support for the population, and protection of the life and health of the citizens of Uzbekistan during the period of counteraction to the spread of coronavirus infection, the following measures were taken:

- Presidential Order "On measures to mitigate the coronavirus pandemic, cardinal improvement of the system of sanitary-epidemiological well-being and protection of public health" dated July 25, 2020;
- Presidential Order "On formation of the Special Republican Commission on preparation of the Program of measures to prevent the importation and spread of a new type of coronavirus in the Republic of Uzbekistan" dated January 29, 2020, and;
- Decree of the Cabinet of Ministers "On additional measures to prevent the spread of coronavirus infection" dated March 23, 2020, etc.

First, since the very beginning of the pandemic in Uzbekistan, under the leadership of President Sh. Mirziyoyev, more than ten normative-legal acts were adopted to prevent the spread of COVID-19 and mitigate its consequences. These documents became the basis for effective organization of work to prevent the spread of COVID in the country.

Based on the Order of the head of state "On the formation of the Special Republican Commission for the preparation of the Program of measures to prevent the importation and spread of a new type of coronavirus in the Republic of Uzbekistan" dated January 29, 2020, the Special Republican Commission was established. Appropriate measures have been taken.

As part of the implementation of the Presidential Order, an anti-crisis fund has been created. The anti-crisis fund in the amount of 10 trillion sums intended for the implementation of measures to counteract the pandemic and support the economy in the current conditions. Measures are envisaged to stimulate health workers involved in the organization of anti-epidemic measures at the expense of this fund.

At the same time, in order to provide the population with specialized free medical care on the initiative of the Head of State, a specialized hospital (Zangiata-1 and Zangiata-2) with 36,000 beds for the treatment of coronavirus patients, equipped with modern medical equipment, was built in a short period of time in Zangiata district of Tashkent region. Distribution centers were also established to combat the virus.

For example, "Expo Markaz", "Yoshlik", "Atlas" in the city of Tashkent. Methods of diagnostics and temporary treatment were used here.

At the same time, a quarantine center for 22 thousand people was organized in the Yukorichirchik district of the Tashkent region in a short time. In addition, quarantine centers for 7,000 people have been built in Namangan, Samarkand, Surkhandarya regions and the Republic of Karakalpakstan.

During the pandemic in 2020, medical institutions received three MSCTs, 56 X-ray machines, 2,303 functional beds, 1,450 CPAP machines, 3,300 oxygen concentrators, 2,040 ventilators, 55 PCR machines, 12,500 heart monitors, as well as at the expense of budgetary funds in the amount of 72 billion soums were purchased 500 ventilators, 90 heart monitors, 10 PCR machines and other equipment. In addition, 1,512 children's CPAP machines, 300 ventilators, 2,507 oxygen concentrators and other equipment were purchased through sponsorship.

During the COVID-19 pandemic, lists of families in need of material assistance and support - the so-called "iron notebook" ("temir daftar") - were formed in the country to provide social support to the population.

In order to ensure more targeted assistance, categories of needy families were also defined, including citizens who lost their jobs and sources of income as a result of quarantine measures. Additionally, to ensure the social welfare of the population, steps were taken to curb the rise in food prices. Zero rates of customs duty and excise tax were set for 20 food and essential goods (meat, milk, butter, onions, flour, sugar, gauze, hygiene products, ventilators, etc.) until the end of 2020 when imported into Uzbekistan. Materials required for construction of medical and quarantine facilities for COVID-19 control, as well as goods for their operation, were also exempted from customs duties and VAT until the end of 2020.

Secondly, the government responded quite quickly to the coronavirus pandemic. A whole package of measures was developed to accelerate economic recovery in 2020-2021. As a result, Uzbekistan became one of the few countries that managed to maintain its economic growth - GDP by 1.6% in 2020 in the context of the COVID-19 pandemic.

In particular, the global model of crisis management - easing monetary policy in the form of "flooding the crisis with money" by central banks and reducing the refinancing rate - was not reflected in Uzbekistan.

Also after the announcement of the pandemic in April 2020. The Central Bank reduced the refinancing rate by 1% (from 16% to 15% per annum). A prudent monetary policy was implemented to avoid increasing risks of stagflation (against the background of relatively high inflation). Uzbekistan has low external debt and a healthy state budget, so the country had room for anti-crisis maneuvering.

In addition, in the first days of the pandemic, the president signed a decree "On Priority Measures to Mitigate the Negative Impact of the Coronavirus Pandemic and Global Crisis Events on Economic Sectors"

(dated March 19, 2020). It noted the need to take measures to support sectors of the economy and the population, ensure macroeconomic stability, stimulate foreign economic activity, smooth operation of industries and sectors of the economy, and most importantly - to prevent a sharp decline in incomes of the country's population.

Financial and credit support of certain sectors such as agriculture, construction, tourism and health care has also been provided. The most difficult problem faced by all enterprises during the quarantine period is the lack of working capital. Credit support for replenishment of working capital was realized through two channels through the State Fund for Support of Entrepreneurial Activity, which is the main institution of support in this direction, as well as banks.

Third, in accordance with the rules of general quarantine in Uzbekistan, to reduce the negative consequences of the pandemic, the state authorities together with the public undertook a number of exemplary measures.

In particular, on the initiative of President Sh. Mirziyoyev, all decisions on preventing the spread of Covid were discussed in the Kengashes of People's Deputies, took into account the opinions of the general public, and then submitted for consideration by the Special Republican Commission. In order to prevent an excessive burden on medical institutions, citizens were periodically informed through the media and the Internet about preventive measures and methods of treating covid at home. Special protocols for the treatment of persons with the disease were also developed, taking into account the level of the disease and concomitant illnesses of the patients. Quarantine restrictions were periodically imposed.

Fourth, international cooperation played a special role in the prevention of the COVID-19 pandemic. From the very beginning of the pandemic, the President of Uzbekistan held telephone conversations with all heads of state in Central Asia and Afghanistan. During these talks, they discussed both the bilateral agenda and joint counteraction to the threat of the coronavirus pandemic spreading in the region and the world as a whole.

International organizations, such as the UN, CIS, SCO, CCTS, adopted joint programs and organized a number of conferences to exchange practical experience in counteracting the spread of coronavirus.

In particular, within the framework of the Fifth Meeting of Health Ministers of the SCO Member States held in Tashkent (09.06.2022), the unification of mutual efforts to expand the opportunities to use quality medical services during the COVID-19 pandemic was discussed in detail.

A key role in Uzbekistan's international efforts to counter the spread of the coronavirus was played by the participation of the President of Uzbekistan Sh. Mirziyoyev in the work of the extraordinary summit of the Cooperation Council of Turkic-speaking States, held on April 10, 2020 in the format of a videoconference.

He put forward a number of important initiatives to respond to the coronavirus pandemic:

- 1) Establishment of a permanent system for monitoring, analyzing and forecasting the epidemiological situation within the framework of the Turkic Council;*
- 2) Establishment of joint activities of the Ministries of Health and leading medical institutions of the Turkic-speaking countries to exchange information and experience in the prevention, diagnosis and treatment of dangerous infectious diseases;*
- 3) Establishment of the Special Coordination Group on pandemic control under the Secretariat of the Turkic Council;*
- 4) Provision of the population with necessary food, medicines and drugs.*

In addition, there has been a continuous exchange of experience with the authorities of countries such as Germany, UK, China, and Turkey to improve specific protocols for the treatment of the coronavirus.

Fifth, the leadership of Uzbekistan reiterated its commitment to regional cooperation and called for a joint response to the COVID-19 pandemic in Central Asia. The CA countries supported the exchange of experience and information to combat coronavirus infection, demonstrating regional solidarity against

common challenges. Humanitarian aid from Uzbekistan to Kyrgyzstan and Tajikistan, and then from Kazakhstan to Kyrgyzstan, contributed to regional consolidation in the fight against COVID-19.

Uzbekistan has also made humanitarian deliveries of essential medical supplies to China, Afghanistan, Iran, Kyrgyzstan, Tajikistan, Belarus, Azerbaijan, Hungary and Russia.

**Despite** the measures taken to prevent COVID-19 and the WHO announcement that the pandemic is over, the world is increasingly aware of the problems associated with the need for treatment and prevention of its consequences, which are of serious concern to the scientific and medical community. According to the WHO, every tenth person who has recovered from coronavirus declares that he has post-COVID complications.

**An analysis of materials from reputable international medical publications and specialized experts allows us to identify a number of the relatively most common post-COVID diseases.**

– **lung disease.** According to Wuhan University, **90 %** of those who recovered from covid had lung damage of varying degrees (pulmonary fibrosis).

Scientists estimate that the recovery process from this disease can take up to **15** years. Shortness of breath remains the most common pulmonary symptom of postcovid syndrome. After an infection, it is recorded on average in **32 %** of patients. According to forecasts, this disease leads to respiratory failure and, as a result, to disability.

– **cardiovascular disease.** According to cardiologists, one of the most common complications of covid is damage to the cardiovascular system. It is noted that a violation of blood clotting, which almost all infected with coronavirus suffered, can lead to the formation **of blood clots** in the vessels. Consequently, changes in the stiffness of the vascular wall often cause an increase **in blood pressure**.

Studies have shown that damage to the heart muscle was reported in **20 %** of the **500** patients examined at the Wuhan Hospital. Changes were also observed in the blood in **38 %** of the examined patients, i.e., **increased blood clotting is noted, and blood clots** were found in a third of this number of patients. According to experts, even after recovery from covid, patients remain at a high risk of **strokes** and **heart attacks**.

At the same time, as national experts note, Uzbekistan has also recently experienced the most pronounced increase in various forms of myocarditis.

– **neurological diseases.** Experts from the **US** National Center for Biotechnology Information believe that every third post-COVID patient is diagnosed with neurological diseases, including dizziness, headache, and cognitive impairment after discharge from the hospital.

A similar opinion is shared by experts from the Scientific Center for Neurology **of Russia**. According to their observations, neurological complications are observed in **80%** of severe COVID-19 survivors.

– **diseases of the joints.** And studies conducted in Turkey, France and Italy show that **65 %** of post-COVID patients had **joint pain** and **myalgia** (*syndrome of pain in muscles, ligaments, tendons and fascia - connective tissue membranes of muscles*). According to WHO statistics, women are more susceptible to post-covid articular syndrome than men.

Also, some experts emphasize that the deterioration of the condition contributes to: the accumulation of toxins formed after the death of infected cells, prolonged use of antibiotics, decreased motor activity and increased body weight. Uzbek experts also note that after infection with covid, the diagnosis of avascular (aseptic) necrosis of the femoral head has become frequent in the country.

– **diseases of the liver and kidneys.** According to Chinese experts, **27 %** of patients admitted to hospitals in Wuhan, **China**, had kidney problems. Of the 200 cases in Hubei and Sichuan provinces, **59**

% had protein in their urine.

It is noted that in patients with acute chronic kidney failure, the risk of death was five times higher. Against the background of the virus, even those who previously did not have any special complaints can acquire kidney disease in **30 % of cases**. However, Chinese scientists claim that about **50 %** of patients hospitalized with coronavirus had signs of liver damage.

Post-COVID diseases require special attention. Spanish experts argue that this trend, in turn, may lead to an increase in cases of disability. Against this background, in some countries, for example, in **the United States**, there are calls to equate post-COVID diseases with disability.

**In general**, many medical specialists in the world, including specialists from Uzbekistan, argue that the consequences of covid will remain unpredictable for a long time to come. Under these conditions, the priority direction, both for the organizers of the healthcare system and the scientific community, is a more thorough and in-depth study of the factors that cause an increase in post-COVID diseases, as well as their timely and qualified treatment. Also, many experts believe that in order to minimize the consequences of the coronavirus, it is necessary to continue measures for the full vaccination of the world's population.

As UN Secretary-General Antonio Guterres said, "It is time to re-learn the principle of global solidarity and find new ways to work together for the common good. This should include a global vaccination plan that delivers COVID-19 vaccines to the millions who have so far been denied this lifesaver».

Based on the above, experts consider it expedient to develop a joint action plan at the UN level to address urgent problems related to the effective organization of comprehensive work on the study, prevention and treatment of all types of post-coital diseases, which should contribute to preventing the growth of disability in the world.

At the same time, in order to prevent future pandemics or reduce their negative consequences, it will be expedient to bring to the global level the application of the project "One Health", which was developed in Germany and is considered in the negotiations on the pandemic treaty, in the EU Global Health Strategy and in the concept of the German government on global health.

**Source**