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Articles

Organization of Assistance and Training of Healthcare Personnel in Medical Facilities Responding to COVID-19

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In December 2019, a cluster of patients infected with a new beta coronavirus was identified in Wuhan, China. Initially, this virus was given the provisional name “new coronavirus 2019” (2019-nCoV), and later the international Committee on virus taxonomy (ICTV) assigned it the name SARS-CoV-2. The disease it causes is called “coronavirus disease 2019” (COVID-19). In its documents, WHO calls this virus the COVID-19 virus. Coronaviruses (Coronaviridae) are a large family of RNA - containing viruses that can infect humans and certain animals. In humans coronaviruses can cause a range of diseases (from mild forms of acute respiratory infection to severe acute respiratory syndrome). Four coronaviruses (HCoV-229E, -OC43, -NL63, and-HKU1) are currently known to circulate in the population, which are present year-round in the structure of acute respiratory viral infections and usually cause mild to moderate upper respiratory tract damage. Several countries have managed to reduce or stop human-to-human transmission of the COVID-19 virus. Their actions saved lives and gave the rest of the world extra time to prepare for COVID - 19: get emergency response systems ready, build capacity to detect and care for patients, provide hospitals with facilities, supplies and necessary personnel, and develop life-saving medical interventions. Every country must urgently take all necessary measures to slow the further spread of infection and avoid overloading health systems with the large number of critically ill patients with COVID-19.

Introduction

COVID-19 (acronym for COronaVIrus Disease 2019) is a potentially severe acute respiratory infection caused by the SARS-CoV-2 coronavirus. It is a serious disease that can occur both in the form of an acute respiratory viral infection of a light course, and in a severe form, specific complications of which may include coronavirus pneumonia, which leads to acute respiratory distress syndrome or respiratory failure with a risk of death [1-2-3]. The pandemic began with the detection in late December 2019 in the city of Wuhan, Hubei province, of the first cases of pneumonia of unknown origin in local inhabitants associated with the local animal and seafood market of Huanan. On January 30, WHO recognized the new coronavirus outbreak as a public health emergency of international significance. On February 11, 2020, the disease was named a new coronavirus disease (COVID-2019). On 11 March 2020, WHO announced that the outbreak of coronavirus infection had become a pandemic [4-5-6]. Chinese scientists have isolated the pathogen-a new coronavirus and established a genetic link between the sequence of its genome. The virus is at least 70% similar in genetic sequence to the SARS-CoV virus that causes severe acute respiratory syndrome (also known as atypical pneumonia) and is therefore called SARS-CoV-2 [7-6-1].

A distinctive feature of the current pandemic that makes it difficult to fight it is the long incubation period. Another adverse feature is a large number of asymptomatic patients, that is, individuals who, having contracted a coronavirus infection, do not show clinical manifestations, although they are able to infect others [8-9-10].

The disease is caused by a new virus, against which people initially have no acquired immunity, and

people of all age categories are susceptible to infection. The virus enters the cell by attaching a protein to a receptor of angiotensin-converting enzyme. After attaching to a receptor, the SARS-CoV-2 virus uses cell receptors and endosomes to penetrate. After infection, the virus spreads through the mucus along the respiratory tract, causing a large release of cytokines and an immune response in the body. In this case, there may be a decrease in the number of lymphocytes in the blood, in particular T-lymphocytes. Some studies suggest that too many lymphocytes are consumed to fight the virus. Reducing their number also reduces the protective abilities of the immune system and can lead to an exacerbation of the disease [2-6-1-11-4] .

Data on the duration and intensity of immunity against the SARS-CoV-2 virus are currently unavailable, and long-term serological studies of the immunity of recovered people will be required to determine the duration. Against coronaviruses other than SARS-CoV-2, humoral immunity is formed, but cases of repeated infection (reinfection) are often reported.

At the moment, there are no specific antiviral treatments or prophylaxis against the virus. In most cases (about 80 %), no specific treatment is required, and recovery occurs on its own. Severe forms of the disease are more likely to develop in the elderly and in people with certain comorbidities, including asthma, diabetes and heart disease. In severe cases, funds are used to maintain the functions of vital organs.

On may 21, 2020. in the world officially recorded 5 047 377 cases of coronavirus Covid-19 in 188 countries. At the moment, 2,793,330 people suffer from coronavirus infection in the active phase. The total number of deaths from coronavirus is 329,816 people and this is 6.53%. There are 1,924,231 confirmed cases of complete recovery from Covid-19 coronavirus in the world. In the Republic of Uzbekistan, the number of cases of coronavirus infection is 2967, 2407 citizens have fully recovered, and the mortality rate from Covid-19 is 13 cases.

Methods

In the Republic of Uzbekistan, under the leadership of the President of the Republic, based on international best practices and WHO recommendations, a number of urgent and effective measures were taken, such as closing borders and restricting entry from abroad, applying a strict policy of social distance, new hospitals and places for quarantine were built, and training cycles for medical workers were organized to train them to work in COVID-19 conditions.

In this regard, a strategic preparedness and response plan was developed from COVID-19 to: slowing and stopping transmission, preventing outbreaks and reducing the rate of spread of the disease; providing optimal care for all patients, especially those who are seriously ill; minimizing the negative impact of the epidemic on health systems, social services and economic activities.

According to the statistics of COVID-19 data in the Republic of Uzbekistan, it can be noted that until April 28, it was characteristic that the number of people who fell ill prevailed over the number of people who recovered. And since April 28, a turning point has begun, and to this day the number of people who have recovered is prevailing relative to the number of people who have become ill.

According to statistics, the maximum number of cases per day COVID-19 was observed on April 14 and amounted to 167 confirmed cases. Cases of recovery from CAVID-19 in the Republic amounted to 2407 cases and on average these figures have been increasing in recent days.

Statistics of test data show that up to 15,000 COVID-19 tests are performed daily.

The Ministry of Health together with the World Health Organization, with the participation of the Main Department of science and education with the teaching staff of 11 higher educational

institutions of the Republic of Uzbekistan conducts daily.

Thematic online training for representatives of higher, secondary and Junior medical personnel.

Thematic video-online conferences/webinars from the faculty for medical professionals.

- Online consultations for patients and persons with suspicion (with OVID-19).

Development, approval and publication of educational literature and guidelines for COVID-19.

Thematic video-online conferences/webinars with leading foreign experts.

Consult the population in an Online clinic (Askdoctor. uz) and others.

These courses were completed in the period from March 30, 2020. until May 20, 2020. according to COVID, there are 19,40869 doctors, 32,769 nurses and 13,207 Junior medical staff, and about 1,500 medical workers are trained daily.

Discussion

According to the instructions of the Cabinet of Ministers and the Order of the Minister of health, state final examinations for bachelor's degree graduates of medical schools in the areas of Medicine, Pediatrics, Professional education (Medicine), bachelor's degree graduates, as well as master's and clinical residency of medical schools were held ahead of schedule from April 20, 2020, specialized scientific and practical medical centers and research institutes and a total of 4480 specialists were sent for employment in health care institutions, including 2326 graduates of bachelor's degree, 436 master's degree and 1728 clinical residency.

Indicators for online training of medical personnel by University teaching staff show that the highest indicators were in Andijan, Khorezm, Navoi regions and Tashkent. On a daily basis, medical universities conduct training video-online conferences/webinars according to the schedule approved by the Minister of health.

Guidelines, national guidelines and clinical protocols were developed for all areas and specialties of medical education.

In the process of training of health personnel in medical institutions to respond to COVID-19 used who recommendations, regulatory documents of the Republic of Uzbekistan (Ministry of Health of the Republic of Uzbekistan on State sanitary-epidemiological supervision under the Cabinet of Ministers, the Agency of sanitary-epidemiological welfare at the Ministry of Health, etc.), using evidence-based medicine.

WHO recommends that medical professionals use masks when caring for patients, and respirators when performing procedures during which liquids may be sprayed in the air. To prevent the spread of nosocomial infection, including among medical personnel, it is important that health workers take precautions.

The basic principles in the WHO guidelines include: compliance with hand hygiene and respiratory hygiene; standard precautionary measures, including the wearing of masks by patients, personal protective equipment by medical personnel, and monitoring of cleanliness and waste; additional precautions, including adequate ventilation of rooms, wearing medical masks, gloves and eye protection devices, limiting contact with patients, if possible, placing them in rooms with negative pressure; taking precautions when performing procedures where contaminated liquids may be

sprayed in the air; treatment of all laboratory specimens as potentially infectious.

In medical institutions, it is also recommended to clean and disinfect tables, chairs, walls, computer equipment, and other surfaces. Effective against SARS-CoV-2 are ethyl alcohol (70-90 %), chlorine-based products (such as hypochlorite), and hydrogen peroxide (more than 0.5%). In the context of a pandemic, given the high contagiousness and virulence of coronavirus, special attention should be paid to ensuring full-scale, responsible implementation of sanitary and anti-epidemic measures,compliance with infection control measures.

Everyone stood up to fight the invisible enemy. The contribution of doctors, mid-level and Junior medical staff to the fight against coronavirus is invaluable. They are on the front line saving the lives of millions of people, risking their own lives.

In conclusion, therefore, by increasing their level of preparedness, notification and response to identify, manage and care for patients with COVID-19, as well as by promptly taking the necessary measures on an appropriate scale, they have reduced its negative impact on the economy, state and society.

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