

COVID-19 and Related Interventions in Bangladesh

A cluster of patients of pneumonia with unknown etiology was first reported in the Wuhan city of Hubei Province in China, in December 2019. The initial symptoms were fever, cough, dyspnea, myalgia or fatigue, headache, hemoptysis, diarrhea and acute respiratory distress syndrome (ARDS). After few days, Chinese health authorities confirmed that those cases were associated with infection by a novel coronavirus. Eventually, the Chinese Centre for Disease Control and Prevention (CCDC) identified the causative agent from throat swab samples on January 7, 2020, and named the pathogen as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). SARS-CoV-2 is classified under the genus Betacoronavirus of the family Coronaviridae under the order Nidovirales. It is a non-segmented, enveloped, positive sense RNA virus. On the other side, the World Health Organization (WHO) named this disease as a coronavirus disease-19 (COVID-19). WHO has declared this on-going outbreak of COVID-19 as a Public Health Emergency of International Concern on January 30, 2020.

On 8th March 2020, three cases of COVID-19 were confirmed by the Institute of Epidemiology, Disease Control and Research (IEDCR) for the first time in Bangladesh. On 18th March, Bangladesh reported its first coronavirus death. The patient was over 70 years of age and had other morbidities. By the end of March, Bangladesh had reported 51 confirmed cases and five deaths. In order to protect the population, the government declared "lockdown" throughout the country from 23rd March to 30th May and took some necessary steps to spread awareness to keep this syndrome away from them. Between 8th March 2020 and 11th May 2021, according to the DGHS Press Release there were seven hundred seventy-six thousand, two hundred fifty-seven (776257) COVID-19 cases confirmed by RT-PCR, GeneXpert, and Rapid Antigen tests and twelve thousand five (12005) related deaths. Bangladesh is among the top 33 countries and accounts for 0.50% of the COVID-19 cases of the world. The highest number of weekly cases (47,392) were reported in the epi-week 14 (05th – 11th April 2021) and the highest daily cases (7,626) were recorded on 7th April 2021. The highest weekly death (668) was recorded in week 16 (19th – 25th April 2021) with the highest daily death of 112 on 19th April 2021. On 5th April 2021, a seven-day lockdown was announced by the Bangladeshi government with all domestic travel suspended and shopping malls shut alongside a curfew between 6pm and 6am. Considering the global situation and following the advice of public health experts, the government also decided to extend the on-going restrictions on "overall activities and peoples' movement" till May 16th to fight the second wave of the COVID-19.

Bangladesh has completed whole genome sequencing of 1433 SARS-CoV-2 samples at different laboratories – the second highest in South Asia. Several research organizations like BCSIR, CHRF, ICDDR, ideSHi, DNA Solution, and IEDCR are routinely assessing if variants of SARS-CoV-2 result in changes in transmissibility, clinical presentation and severity; or changes in public health and social measures (PHSM) implementation by national health authorities. Systems have been established to detect “signals” of potential variants of concern (VOCs) or variants of interest (VOIs) and assess these based on the risk posed to global public health. Since our last update on 11th May 2021, Bangladesh has detected 302 variants of concern (VOCs) samples; among them UK variant (B.1.1.7) has been detected in 68 samples, South African variant (B.1.351) in 233 samples, and Brazilian variant (P.1) has been reported in just one sample. In addition, 13 samples were recognized as variants of interest (VOIs); among them 3 samples are Indian double mutant variant B.1.617.2.

The nationwide COVID-19 vaccination was launched on 7th February 2021 and the 2nd dose inoculation started on 8th April 2021. Since the beginning (2nd May 2021), a total of 8 755 950 doses of Oxford/AstraZeneca (COVISHIELD) vaccine have been administered throughout the country, out of which, 5,819,709 people received their 1st dose and 2,936,241 completed their two doses schedule. Total 3,608,805 (62%) males and 2,210,904 (38%) females received their 1st dose of vaccine while 1,902,405 (65%) males and 1,033,836 (35%) females received their 2nd doses of vaccine. So far, 11.7% of the country’s eligible population has been vaccinated while in Dhaka metropolitan the coverage is 38.0%. All the COVID-19 vaccination sites are functional during this holy month of Ramadan to get the 2nd dose of COVID-19 only. Last week, the “Sinopharm COVID-19 vaccine” developed by the Beijing Institute of Biological Products and the “Sputnik V” developed by the Gamaleya National Center, Russia, received emergency use authorization from the Directorate General of Drug Administration in Bangladesh. On 2nd July 2020, a Bangladeshi private pharmaceutical company Globe Biotech Limited announced being the first company from Bangladesh to have a COVID-19 vaccine under development. The Bangladeshi company actually developed three COVID-19 vaccine candidates with different technologies. The company named the mRNA-based vaccine as Bangavax, initially called Bancovid. Globe Biotech took all the necessary steps from December 2020 to January 2021 to get ethical approval for conducting the Phase-I clinical trial of Bangavax.