

## EDITORIAL

# BETA, DELTA,OMICRON – WHAT’S NEXT?

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Coronavirus disease 2019 (COVID-19), the highly contagious infectious disease caused by SARS-CoV-2, has had a catastrophic effect on the world’s demographics resulting in 6.2 million deaths worldwide, emerging as the most consequential global health crisis since the era of the influenza pandemic of 1918. Since the first reported case in Wuhan, Hubei Province, China, in late December 2019, SARS-CoV-2 rapidly disseminated across the world in a short span of time, compelling the World Health Organization (WHO) to declare it as a global pandemic on March 11, 2020. It has overwhelmed and collapsed many healthcare systems; also had a rippling effect on the global economy. Bangladesh, a low-middle income country of 167 million people, is no exception and is being severely impacted by the COVID-19 pandemic. As SARS-CoV-2 continues to wreak havoc across the world, having emergence of mutant and recombinant variants of the virus; it always stays as an issue of increasing concern.

Based on the epidemiological update by the WHO, as of December 11, 2021, five SARS-CoV-2 VOCs have been identified since the beginning of the pandemic: Alpha, Beta, Gamma, Delta and Omicron. Among these Delta was the most fatal and Omicron is the most infectious one, and responsible for the latest pandemic hit worldwide. In late March, 2022 the UK Health Security Agency (UKHSA) announced a new recombinant COVID-19 variant called XE - that is the mixture of two Omicron subvariants - BA.1 & BA.2. XE has spread to UK, India and Thailand till now. WHO estimates XE is 10 percent more transmissible than BA.2; though till date BA.2 is the more dominant variant in the picture. Like all other previous recombinant variant, it is being predicted that XE will die off relatively quickly.

With limited vaccine supplies, increasing variants, a population tired of restrictions and an overwhelmed health system with limited supply of every needed

thing from hospital bed to Oxygen, Bangladesh is at a precipice. Facing the worst wrath of three waves of the pandemic, its health system almost collapsed last year as patients flooded hospitals when the highly contagious delta strain was running rampant. From 3<sup>rd</sup> January 2020 to 8<sup>th</sup> April 2022, there have been 1,951,911 confirmed cases of COVID-19 with 29,123 deaths in Bangladesh, reported to WHO.

The most crucial step to contain this global pandemic with a continuously mutating virus is by vaccination to prevent SARS-CoV-2 infection in communities across the world. Vaccination triggers the immune system leading to the production of neutralizing antibodies against SARS-CoV-2. But unfortunately, treating vaccines as a private good being snatched up by the richest countries has established a vaccine apartheid has left the countries in the Global South reeling from what is now a preventable disease. It is high time for low-income and middle-income countries like us to realize that as long as we are not self-sufficient in vaccine production, this trend will continue. If we look at the statistics, globally, as of 4<sup>th</sup> April 2022, a total of 11,250,782,214 vaccine doses have been administered; and a total of 252,731,398 vaccine doses have been administered in Bangladesh. The good news for us is that, WHO confirmed to get the know-how of COVID vaccine making to the 5 countries of global south including our country.

With resources diverted towards COVID-19, care for other diseases have been immeasurably neglected. As, diagnosis and treatment of multidrug-resistant tuberculosis, dengue fever and malaria transmission prevention campaign, EPI schedule and so on were greatly hampered. Indirect impact of COVID-19 on neonatal deaths has been reported, and impact on maternal health is estimated to be substantial. Rise in indiscriminate use of antimicrobials is paving the path for further rise of antimicrobial-resistant

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Editor in Chief, BJM

DOI: <https://doi.org/10.3329/bjm.v33i2.59284>

*Bangladesh J Medicine* 2022; 33: 128-129

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bacteria. All these factors may combine to erode the decades of progress Bangladesh has made in improving health outcomes.

Although the respiratory system is the principal target for SARS-CoV-2, it can affect other major organ systems such as the gastrointestinal tract, hepatobiliary, cardiovascular, renal, and central nervous system. SARS-CoV-2-induced organ dysfunction, can be explained by direct viral toxicity, ischemic injury caused by vasculitis, thrombosis, or thrombo-inflammation, immune dysregulation, and/or renin-angiotensin-aldosterone system (RAAS) dysregulation. Along with new variants, new symptoms are also emerging as severe earache, ear numbness, and even temporary hearing loss, which can also continue even after the infection has passed.

Having the world's attention on this sole topic for so long, there have been a lot of new addition in the medical science and technology. Highest newer vaccines for a single disease within the shortest possible time, first time ever mRNA vaccine, many new anti-viral medications can be called the silver-lining here. Furthermore, newer monoclonal antibodies as Casirivimab, Imdevimab, Bamlanivimab, Etesevimab, Sotrovimab are now on research for future effective treatment.

Despite all the hopeful news, it will be "a mistake" to believe that the more COVID evolves, the less serious its mutations will become. Still, WHO's current estimate of the global case fatality rate for COVID-19 is 2.2%. Proper vaccination and maintaining health hygiene is the only way for us to see the light that is waiting at the end of this long tunnel.

Two years after the pandemic the globe is at edge. This havoc of 21<sup>st</sup> century leading the world to food scarcity, price hike, famine, social unrest, change in human nature leading to an economic collapse of the whole world.

Unfortunately, the war between Russia and Ukraine has put oil in fire for the whole world. The world needs peace which should be sustainable for our future generations to come.

#### **Further reading**

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