# HCFI Dr KK Aggarwal Research Fund

## Coronavirus Updates

### WHO report terms anxiety and burnout among healthcare workers as a "pandemic within a pandemic"

A new report prepared jointly by the Qatar Foundation, World Innovation Summit for Health (WISH) and the World Health Organization (WHO) has highlighted the high levels of anxiety, depression and burnout among health and care workers during the pandemic. Anxiety symptoms were reported by 23% to 46%, while 20% to 37% faced symptoms of depression. Almost half (41-52%) of them experienced burnout. Jim Campbell, WHO Director of Health Workforce said, "Well into the third year of the coronavirus disease 2019 (COVID-19) pandemic, this report confirms that the levels of anxiety, stress and depression among health and care workers has become a "pandemic within a pandemic"... (*Source: WHO, Oct. 5, 2022*)

### France experiencing the eight wave of coronavirus

France is in the midst of the eight wave of coronavirus. As per data published earlier this week, the 7-day moving average of daily new cases was recorded to be 45,631, which is the highest since early August. The total number of hospitalizations has also increased to 15,166 as has the number of intensive care unit (ICU) COVID patients at 843… (*Source: Medscape, Oct. 5, 2022*)

### Rising prevalence of BA.4.6 in the US

The BA.4.6 sublineage of the Omicron variant of concern has been steadily rising in the United States and now makes up around 13% of the circulating severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variants in the United States compared to 11.9% in the preceding week, as per data from the Centers for Disease Control and Prevention (CDC). The BA.5 continues to be the dominant strain and accounts for 81.3% cases, while the BA.4 is responsible for just 1.1% of cases… (*Source: Reuters, Oct. 5, 2022*)

### Impact of masks on communication for the deaf people

Majority of the deaf and hard of hearing people found it difficult to communicate during the pandemic. Nearly 60% reported feeling "disconnected from society", while 76% reported missing important information. Those with late-onset and "severe or profound" deafness faced challenges while communicating. People who relied on sign language thought that they were more disconnected because they missed reading the signs… (*Source: Cognitive Research: Principles and Implications, Sept. 5, 2022*)

### Norwegian Cruise Line relaxes mandatory testing and masking rules

In a far cry from the days when the Diamond Princess Cruise became the hotspot of COVID-19, the Norwegian Cruise Line has relaxed the necessity of testing, masking and vaccination for its passengers. However, all travel guidelines as required in the country of visit would still be observed stated the cruise line… (*Source: Medscape, Oct. 4, 2022*)

### New BF.7 and BA.5.1.7 Omicron sublineages detected in China

Two new sublineages of the Omicron variant have been detected in China. BF.7 and BA.5.1.7 are highly contagious in nature, which makes them highly transmissible. The BF.7 is a subvariant of the BA.5.2.1… (*Source: ETHealthworld, Oct. 13, 2022*)

### XBB: A new recombinant variant of SARS-CoV-2

A new recombinant variant "XBB" has emerged as a significantly more immunoevasive strain of SARS-CoV-2. It is a combination of BJ.1 and BA.2.75, which are sublineages of the Omicron variant. In a bioRxiv preprint study, it has shown the strongest resistance to monoclonal antibodies. It was first isolated in Singapore and has been detected in Bangladesh, Denmark, Japan, Australia and the US. Almost half of the new cases are due to this new recombinant variant. So far, 71 cases have been detected in India from Maharashtra, Odisha, West Bengal and Tamil Nadu… (*Source: First Post, Oct. 14, 2022*)

### Drug interactions between Paxlovid and drugs for heart disease

A review paper published in the *Journal of the American College of Cardiology* has cautioned about potential drug-drug interactions between nirmatrelvir-ritonavir (Paxlovid) and other commonly used cardiovascular drugs such as antiarrhythmics, antiplatelets and anticoagulants, statins like simvastatin or lovastatin,

ranolazine and immunosuppressive agents… (*Source: ACC, Oct. 12, 2022*)

### US FDA grants EUA to bivalent booster vaccines for use in young children

The US Food and Drug Administration (FDA) has granted emergency use authorization (EUA) to Moderna and Pfizer bivalent booster vaccines to be administered as a single dose in young children. Moderna's bivalent vaccine has been approved for use in children aged 6 years and older, while the updated Pfizer vaccine can now be given to children aged 5 years and older… (*Source: US FDA, Oct. 12 2022*)

### IndoVac: Indonesia's first indigenous COVID-19 vaccine

Indonesia will soon start manufacturing its first indigenous COVID-19 vaccine "IndoVac". The vaccine is being developed in collaboration with Baylor College of Medicine in Texas, USA. Less than 75% of the eligible population has completed their two-dose primary vaccination; 27% have taken one booster dose, while less than 1% have taken the second booster dose… (*Source: Medscape, Oct. 13, 2022*)

### COVID-19 rearing up again in Europe

Europe may be looking at a new wave of COVID-19 as cases across Europe region are showing a rising trend, according to the WHO and European Centre for Disease Prevention and Control (ECDC). In the Week ending 2nd October, only the European Region recorded an increase of 8% in new weekly cases, according to WHO's weekly Epidemiological Update dated 5th October. "With the arrival of autumn and winter, the resurgence of influenza can also be expected", according to a press release. The uptake of vaccine has not been very optimistic in Europe… (*Source: WHO, Oct. 12, 2022*)

### "COVID-19 remains a public health emergency of international concern", says WHO

The Emergency Committee of WHO on COVID-19 has cautioned that "COVID-19 remains a public health emergency of international concern". The Committee urged countries to update their pandemic "preparedness and response plans".

Testing and treatment facilities, including vaccination should be accessible to all, especially those at high-risk of getting the infection. At a media briefing on 12th October, the WHO Director General Dr Tedros Ghebreyesus said, "This pandemic has surprised us before and very well could again"… (*Source: WHO, Oct. 19, 2022*)

### CDC to include COVID-19 vaccine in the routine vaccination schedule

The CDC will update the 2023 annual immunization schedules for both children and adults by including COVID-19 vaccines as recommended by the CDC's Advisory Committee on Immunization Practices (ACIP). The updated vaccination schedule will be published early next year… (*Source: CDC, Oct. 20, 2022*)

### Europe's drug regulatory agency recommends Moderna's bivalent vaccine as booster

Moderna's bivalent COVID-19 booster vaccination will soon be available in Europe for persons aged 12 years and above following the European Medicines Agency (EMA)'s recommendation for authorization. EMA has also granted authorization to Moderna and Pfizer-BioNTech vaccines for children as young as 6 months… (*Source: Reuters, Oct. 20, 2022*)

### Novavax COVID-19 vaccine now also authorized as booster

The Novavax COVID-19 vaccine is now also available as a booster dose in the United States. Earlier this week, the US FDA authorized the vaccine as booster for adults who cannot get the updated boosters or those who do not want to take any other booster dose… (*Source: Medscape, Oct. 20, 2022*)

### No pre-departure COVID test required for travelers to Qatar

Football fans traveling to Qatar for the World Cup will no longer be required to have a negative pre-departure COVID-19 test. Earlier, a negative COVID-19 test was necessary for all the inbound travelers regardless of their vaccination status. The Health Ministry has also done away with the need for showing the COVID status on a contact tracing App prior to entering the stadium or other public places. Citizens will also not be asked to get themselves tested within 24 hours of returning home after travel abroad… (*Source: Reuters, Oct. 26, 2022*)

### Report predicts a slow rise in COVID cases globally

A report from the University of Washington's Institute for Health Metrics and Evaluation (IHME) has estimated that the number of daily cases would increase to 18.7 million by February next year from the present 16.7 million average daily cases. "It forecast that global daily deaths would average 2,748 people on February 1, compared with around 1,660 currently." This rise in cases is likely to be propelled by the oncoming winter season. However, a surge in deaths is not likely to occur… (*Source: Medscape, Oct. 26, 2022*)

### Wuhan goes under partial lockdown

Wuhan, the epicenter of the pandemic, has locked one of its districts following a spurt in COVID-19 cases in view of the zero-COVID policy still being followed in China. Nearly 1 lakh residents have been asked to stay at home from Wednesday (Oct. 26) to Sunday (Oct. 30). Outpatient services have been put on hold in the Union Hospital in Wuhan. Online teaching has resumed in universities in Wuhan… (*Source: Medscape, Oct. 26, 2022*)

### The first inhalable vaccine against COVID-19?

As per media reports, Shanghai residents are being administered an inhalable vaccine against COVID-19 as booster dose for people who have completed their primary vaccination. The vaccine developed by CanSino Biologics is an aerosolized form of its adenovirus vaccine. The vaccine is in the form of a mist, which is slowly inhaled into the mouth through a nozzle. The vaccinated person is required to hold the breath for 5 seconds… (*Source: Indian Express, Oct. 27, 2022*)

### Gout increases risk of COVID hospitalization and mortality

Gout patients with COVID-19 are at greater risk of acquiring COVID-19 and experience serious adverse outcomes, including hospitalization and death, despite having completed their vaccination schedule compared to people without gout. Women with gout were 1.5 times more likely to be admitted to hospital for their illness and nearly 2.5 times more likely to die due to the illness… (*Source: Arthritis Rheumatology, Sept. 9, 2022*)

### Weekly new COVID-19 cases continue to decline globally

A decrease of 17% was noted in the weekly COVID-19 cases in the last week of October compared to the preceding week, with more than 2.3 million new cases, as per the WHO's latest COVID-19 Weekly Epidemiological Update although the Americas and the Western Pacific Region have shown a slight uptick in cases. A decrease in testing may preclude accurate estimation of the new cases, cautions the WHO… (*Source: WHO, Nov. 2, 2022*)

### Pfizer starts phase 1 trial of a COVID-flu combination vaccine

Pfizer-BioNTech will soon start testing of its mRNA-based combined coronavirus and influenza vaccine in the United States. The phase 1 trial will begin with 180 volunteers…(*Source: Reuters, Nov. 3, 2022*)

### COVID-19 and gut dysbiosis

COVID-19 is significantly associated with gut microbiome dysbiosis, states a study reported in Nature Communications. This predisposes patients to secondary blood stream infections, which may be potentially life-threatening similar to that seen among immunocompromised patients such as those with cancer…(*Source: Nature Communications, Nov. 1, 2022*).

### A 50-folds increase in ventilation rates lowers risk of infection with Omicron

To keep the likelihood of infection <1% with the Alpha SARS-CoV-2 variant, the required ventilation rates are 650-1,200 $m^3$/hour for exposure time of 15 minutes and 8,000-14,000 $m^3$/hour for 3 hours of exposure. For Delta variant, the rates increased to 2,200-6,800 $m^3$/hour for 15 minutes, and 26,000-80,000 $m^3$/hour for 3 hours. For Omicron variant, the ventilation rate increased 50-folds to 5,400-17,000 $m^3$/hour for 15 minutes and 64,000-2,50,000 $m^3$/hour for 3 hours. However, wearing N95 masks would reduce this requirement…(*Source: Building Simulation, Oct. 19, 2022)*

### Include heavy menstrual bleeding as a possible side effect of mRNA vaccines, says EMA

The Pharmacovigilance Risk Assessment Committee (PRAC) of the EMA has recommended updating of the label for the Moderna and Pfizer mRNA vaccines by including heavy menstrual bleeding as a side effect. According to the committee, "there is at least a reasonable possibility that the occurrence of heavy menstrual bleeding is causally associated with these vaccines". The bleeding has been "non-serious and temporary"…(*Source: EMA, Oct. 28, 2022*)

*With inputs from Dr Monica Vasudev*

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