GUIDELINES AND RESEARCH UPDATES

World Health Organization India

TECHNICAL DOCUMENTS:

D1. Therapeutics and COVID-19: living guideline (WHO, 14 January 2022) **[**LINK**]**

- This is eighth version of the WHO living guideline- it contains 14 recommendations, including three new recommendations regarding Janus kinase (JAK) inhibitors and sotrovimab. This updates strongly recommend for the use of baricitinib as an alternative to interleukin-6 (IL-6) receptor blockers, in combination with corticosteroids, in patients with severe or critical COVID-19.

D2. Enhancing Response to Omicron SARS-CoV-2 variant (WHO, 21 January 2022) **[**LINK**]**

- This document outlines key elements of response in the wake of emerging epidemiological evidence with regard to Omicron variant. This global risk assessment, and public health advice, are based on the currently best available evidence.

D3. Annexes to the recommendations for use of the Pfizer-BioNTech vaccine BNT162b2 against COVID-19 (WHO, 21 January 2022) **[**LINK**]**

- The document contains annexes to the interim recommendations for use of the Pfizer-BioNTech vaccine BNT162b2vaccine. It includes tables that summarize the grading of recommendations, assessment, development and evaluations (GRADE). additionally, SAGE evidence-to-recommendation framework tables (ETR tables) are also included.

D4. WHO calls for comments on the revised Target Product Profile for COVID-19 vaccines (WHO, 20 January 2022) **[**LINK**]**

- This Target Product Profile (TPP) was developed through a consultation process with key stakeholders in human and animal health, scientific, funding and manufacturing communities. It is intended to guide and prioritize the development of vaccines and decisions about need for boosters, based on the available data.

D5. WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines (WHO, 21 January 2022) **[**LINK**]**

- This revised roadmap takes into account increasing vaccine availability, vaccine coverage rates, and the evolving epidemiological situation including COVID-19 variants of concern. It supports countries in developing recommendations for

optimized use of vaccines against COVID-19, priority-use groups for vaccination (both primary series and booster doses) based on epidemiological scenarios, public health goals, and vaccine coverage scenarios.

D6. Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2 (CDC, 21 January 2022) [LINK]

- This updated guidance intends to enhance protection for healthcare personnel, patients, and visitors, and to address concerns about potential impacts on the healthcare system given a surge of SARS-CoV-2 infections.

D7. USCDC Updates on Types of Masks and Respirators (CDC, 21 January 2022) [LINK]

- This guidance describes different types of masks and respirators to be used to protect from getting and spreading COVID-19. Masks and respirators can provide varying degrees of protection. This guidance note also presents options in order of least to most protective measures. To protect yourself and others from COVID-19, it is recommended to wear the most protective mask you can that fits well and that you will wear consistently.

JOURNAL ARTICLES

J1. Estimating the early impact of the US COVID-19 vaccination programme on COVID-19 cases, emergency department visits, hospital admissions, and deaths among adults aged 65 years and older: an ecological analysis of national surveillance data (The Lancet, 8 January 2022) [LINK]

- The study estimated the national-level impact of the initial phases of the US COVID-19 vaccination programme on COVID-19 cases, emergency department visits, hospital admissions, and deaths among adults aged 65 years and older. The findings suggest that roll-out of the US COVID-19 vaccination programme was associated with reductions in COVID-19 cases, emergency department visits, and hospital admissions among older adults; however, the magnitude of the impact of vaccination roll-out on deaths was unclear.

J2. Immunogenicity and Reactogenicity of Vaccine Boosters after Ad26.COV2.S Priming (The New England Journal of Medicine, 19 January 2022) [LINK]

- The study assessed immunogenicity and reactogenicity 28 days after a homologous or heterologous booster vaccination. Findings concluded that Ad26.COV2.S and mRNA boosters had an acceptable safety profile and were immunogenic in health care workers who had received a priming dose of Ad26.COV2.S vaccine. The strongest responses occurred after boosting with mRNA-based vaccines.

J3. Risk factors and disease profile of post-vaccination SARS-CoV-2 infection in UK users of the COVID Symptom Study app: a prospective, community-based, nested, case-control study (The Lancet- Infectious Diseases, 1 January 2022) **[**LINK**]**

- Post-vaccination SARS-CoV-2 infection was studied. Frailty was associated with post-vaccination infection in older adults (≥60 years) after their first vaccine dose, and individuals living in highly deprived areas had increased odds of post-vaccination infection following their first vaccine dose. Vaccination (compared with no vaccination) was associated with reduced odds of hospitalization or having more symptoms

J4. Post-mortem lung tissue: the fossil record of the pathophysiology and immunopathology of severe COVID-19 (The Lancet- Respiratory Medicine, 1 January, 2022) **[**LINK**]**

- This review collated findings from the full range of approaches to post-mortem lung tissue analysis that have been used in COVID-19 autopsy studies. It concludes that research using post-mortem lung tissue is vital to our understanding of the pathogenesis of severe COVID-19. From the point of initial infection in the lungs, there appear to be several distinct phenotypic pathways that lead to death.

J5. The Omicron (B.1.1.529) variant of SARS-CoV-2 binds to the hACE2 receptor more strongly and escapes the antibody response: Insights from structural and simulation data (International Journal of Biological Macromolecules, 19 January 2022) **[**LINK**]**

- This study details the impact of novel mutations on the structure, function, and binding of receptor-binding domain (RBD) to hACE2 and monoclonal antibodies (mAb) to the N-terminal domain (NTD) of the spike protein. This study is the first to provide a basis for the higher infectivity of the new SARS-CoV-2 variants and provides a strong impetus for the development of novel drugs against them.

J6. COVID-19 Cases and Hospitalizations by COVID-19 Vaccination Status and Previous COVID-19 Diagnosis — California and New York, May-November 2021 (CDC, Morbidity & Mortality Weekly Report, 19 January 2022) **[**LINK**]**

- This analysis aimed to integrate laboratory testing, hospitalization surveillance, and immunization registry data during May–November 2021, before widespread circulation of the SARS-CoV-2 Omicron variant and before most persons had received additional or booster COVID-19 vaccine doses to protect against waning immunity. The findings highlight different experiences stratified by COVID-19 vaccination status and previous COVID-19 diagnosis and during times when different SARS-CoV-2 variants predominated. Case rates were initially lowest among vaccinated persons without a previous COVID-19 diagnosis; however, after emergence of the Delta variant and over the course of time, incidence increased sharply in this group, but

only slightly among both vaccinated and unvaccinated persons with previously diagnosed COVID-19.

J7. Early assessment of the clinical severity of the SARS-CoV-2 omicron variant in South Africa: a data linkage study (The Lancet, 19 January 2022) [LINK]

- This study assessed the clinical severity of infections with the omicron variant. Early analyses suggest a significantly reduced odds of hospitalization among individuals with SGTF versus non-SGTF infections diagnosed during the same time period. SGTF-infected individuals had a significantly reduced odds of severe disease compared with individuals infected earlier with the delta variant.