



8th January 2024

Advisory for the Prevention and Control of JN.1 Sub-variant of COVID-19 virus

Background:

COVID-19 Virus genome has consistently changed over the course of the pandemic, resulting in variants that are different from the original COVID-19 virus. World Health Organization (WHO) has classified these mutations as either:

- **Variant of Interest (VOI)** with genetic changes that are predicted or known to affect virus characteristics such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape; and identified to cause significant community transmission or multiple clusters of infected persons or
- **Variant of Concern (VOC)** associated with changes at a degree of global public health significance like increase in transmissibility or detrimental change in COVID-19 epidemiology, increase in virulence or change in clinical disease presentation or decrease in effectiveness of public health and social measures or available diagnostics, vaccines, and therapeutics.

JN.1 is classified as VOI and fundamentally an offshoot of BA.2.86 sub-variant omicron variant COVID-19 virus, very first reported in August, 2023 by US-CDC. However, in recent weeks, JN.1 has been reported in many countries, and its prevalence is rapidly increasing globally. This rapid growth is observed across the three WHO regions with consistent sharing of SARS-CoV-2 sequences, i.e. the region of the Americas, the Western Pacific and the European regions, with the largest increase seen in Western Pacific from 1.1% in epidemiological week 44 to 65.6% in epidemiological week 48.

Objectives of the Advisory:

The objective of this advisory is to alert and facilitate the health authorities and other stakeholders for ensuring timely preventive and control measures encompassing preparedness to deal with increased workload expected in the outpatient and in-patient departments during next few weeks.

Clinical Presentation:

Although JN.1 is rapidly replacing over other sub-variants and its transmissibility is expected to be high but it is unlikely that it can produce a situation like earlier phase of pandemic, hence its morbidity and mortality is low as of current statistics. Clinical presentation of JN.1 infection is similar to other sub-variants including cough, sore throat, congestion, runny nose, sneezing, fatigue, headache, muscle aches and altered sense of smell. However, symptoms presentation depend on individual's immunity from vaccination and previous infection. It's important to know that existing vaccines, tests, and treatments still work well against JN.1

WHO overall risk assessment:

Despite a rapid increase in JN.1 infections, available limited evidence does not suggest that the associated disease severity is higher as compared to other circulating variants. Currently, available vaccines also offer same protection against this JN.1 sub variants as with other variants.



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Prevention and Control Measures:

If someone is sick or has been in close-contact with persons having flu-like illness, following preventive measures are recommended for limiting the COVID-19 transmission:

- Frequent and thorough hand washing with soap and water and use of hand sanitizer if soap and water are unavailable
- To opt for respiratory etiquettes through covering mouth and nose while sneezing or coughing with elbow
- Sick patients to stay at home, take rest and avoid crowds
- Taking social distancing measures until recovery

Vaccination:

It is most effective way to prevent infection and its severe outcomes particularly in high risk groups. The more antibodies with complete vaccine dose or booster shots, the greater the chances of reducing COVID-19 infection specially among high risk groups including elderly population, people with comorbidities and people working in high risk settings.

Required Surveillance Measures:

Enhanced surveillance for ILI and SARI may provide the best chance to detect earlier with prompt response in preventing outbreaks afterwards. All the positive samples may be sent to NIH for genomic sequencing.

Note: The updated guidelines on prevention, control and management of COVID-19 along with patient history form for COVID-19 are available at NIH website (www.nih.org.pk) which may be filled and sent to NIH along with the samples of the suspected patients.