

WHO recommendations on mask use by health workers, in light of the Omicron variant of concern

WHO interim guidelines
22 December 2021



In light of the rapid spread of the Omicron variant of concern(1) (VOC) of SARS-CoV-2, the virus that causes coronavirus disease (COVID-19), the World Health Organization (WHO) recommends the following regarding the use of masks by health workers providing care to patients with suspected or confirmed COVID-19.

Please note that regarding the recommendations on mask use by health workers providing care to patients with suspected or confirmed COVID-19, these interim guidelines supersede the recommendations provided in the “Annex to Infection prevention and control during health care when COVID-19 is suspected or confirmed” published on 1 October 2021 (2).

WHO Recommendations

1) A respirator (FFP2, FFP3, NIOSH-approved N95, or equivalent or higher-level certified respirator) or a medical mask should be worn by health workers along with other personal protective equipment (PPE) – a gown, gloves and eye protection – before entering a room where there is a patient with suspected or confirmed COVID-19.

Respirators should be worn in the following situations:

in care settings where ventilation is known to be poor or cannot be assessed or the ventilation system is not properly maintained*

based on health workers' values and preferences and on their perception of what offers the highest protection possible to prevent SARS-CoV-2 infection.

Note: this recommendation applies to any setting where care is provided to patients with suspected or confirmed COVID-19, including home care, long-term care facilities and community care settings.

*(New conditional recommendation, based on very low certainty evidence)***

2) A respirator should always be worn along with other PPE (see above) by health workers performing aerosol-generating procedures (AGPs)(2) and by health workers on duty in settings where AGPs are regularly performed on patients with suspected or confirmed COVID-19, such as intensive care units, semi-intensive care units or emergency departments.

(Existing recommendation, with strength modified from conditional to strong, based on very low certainty evidence)

3) Appropriate mask fitting should always be ensured (for respirators through initial fit testing and seal check and for medical masks through methods to reduce air leakage around the mask) as should compliance with appropriate use of PPE and other precautions.

(Existing Good Practice Statement)

* Guidance for adequate ventilation: “In health facilities where a mechanical ventilation system is available, the ventilation rate should be 6–12 air changes per hour (e.g., equivalent to 40–80 L/s/patient for a 4x2x3 m³ room), and ideally 12 air changes per hour for new constructions, with a recommended negative pressure differential of ≥ 2.5 Pa (0.01-inch water gauge) to ensure that air flows from the corridor into patient rooms” (9).

** WHO provides this interim recommendation independent of the COVID-19 infection prevention and control Guidelines Development Group.

Background information to the new interim recommendation

As of 2 December 2021, evidence on the effectiveness of respirators versus medical masks in health care settings is still limited to five observational studies that have important methodological limitations and inconsistent findings about whether respirators decrease the risk of SARS-CoV-2 infection (3-7). These studies were conducted before the emergence of the Delta and Omicron VOCs and increasing vaccination uptake in health care settings. The comparative protective effectiveness of respirators compared to medical masks in settings without exposure to AGPs in the context of SARS-CoV-2 transmission continues to be a critical research question which has not been fully answered. Importantly, other factors that influence the overall risk of transmission include general PPE use, ventilation, PPE training, fit testing and behavioural factors, including compliance with appropriate mask wearing and hand hygiene.

Although there are limitations to the available evidence on respirators vs medical masks in health care facilities, data show that the Omicron variant is spreading significantly faster than the Delta variant in countries with documented community transmission, with a doubling time between 1.5-3 days. Preliminary, unpublished data show a reduction in neutralizing titres against Omicron suggesting a level of immune evasion and an important reduction in vaccine effectiveness against infection and symptomatic disease for Omicron compared to Delta (1). Worldwide, the Omicron variant is spreading rapidly, and a high proportion of health workers are still unvaccinated and thus at high risk for infection and potentially, severe disease and death.

In light of the increased transmission of Omicron, potential immune escape and limited vaccination coverage in health and care workers around the world, WHO makes these recommendations including the new conditional recommendation.

WHO urges scaling up production, procurement and distribution of respirators and medical masks for use in health and care settings to ensure equitable access to respirators and medical masks by all health and care workers around the world. In settings where the availability of respirators is limited or there are shortages, WHO suggests considering extended use or appropriate reprocessing of respirators.(8)

Regardless of the type of mask, appropriate mask use is critical to ensuring effectiveness and reducing the risk of transmission. Masks should be viewed as one key component of a comprehensive package of infection prevention and control (IPC) measures to be applied during health care when COVID-19 is suspected or confirmed.(9)

References

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9. Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed. Interim guidance. Geneva: World Health Organization, 12 July 2021 (<https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2021.1>).

WHO continually evaluates the emerging evidence and will review these interim recommendations within two months and issue new guidance as needed.

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