LAST UPDATE: 10 DECEMBER 2021

CORONAVIRUS
UPDATE
70

Update on
SARS-CoV-2 variant of concern Omicron

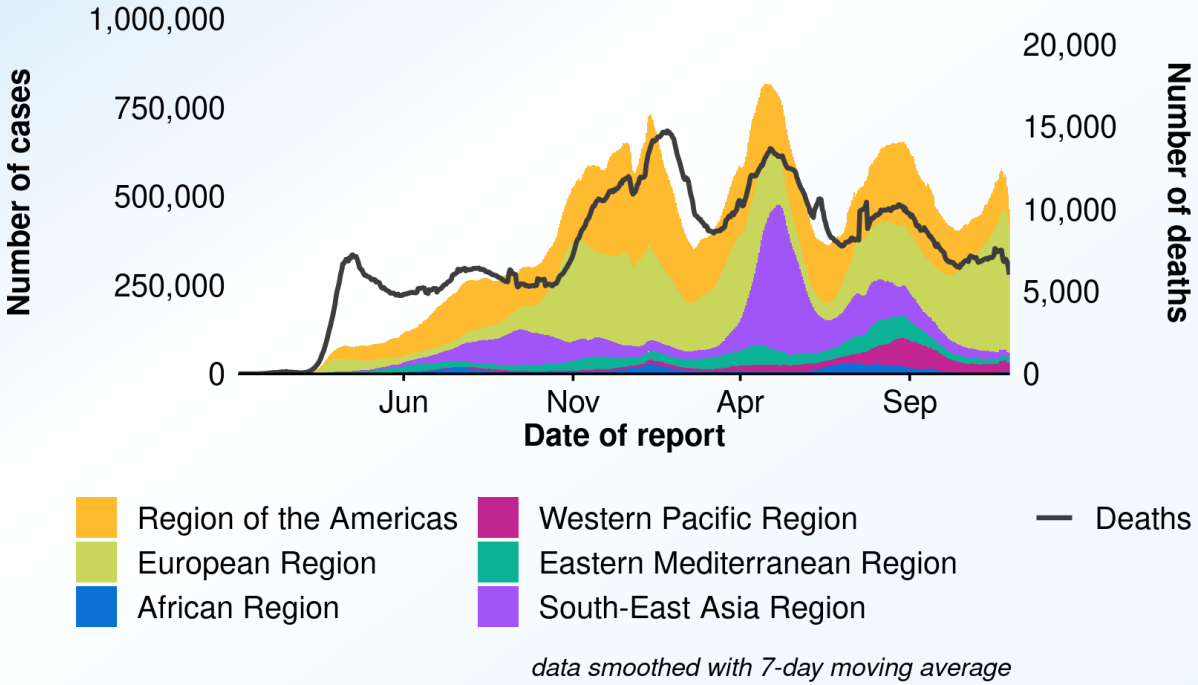
THE LATEST ON THE COVID-19 GLOBAL SITUATION
& SARS-CoV-2 variant of concern Omicron

World Health Organization | EPI•WIN | infodemic MANAGEMENT

Current global situation

CASES REPORTED TO WHO AS OF 10 DECEMBER 2021

- **Cases: > 262 million**
- **Deaths: > 5.2 million**



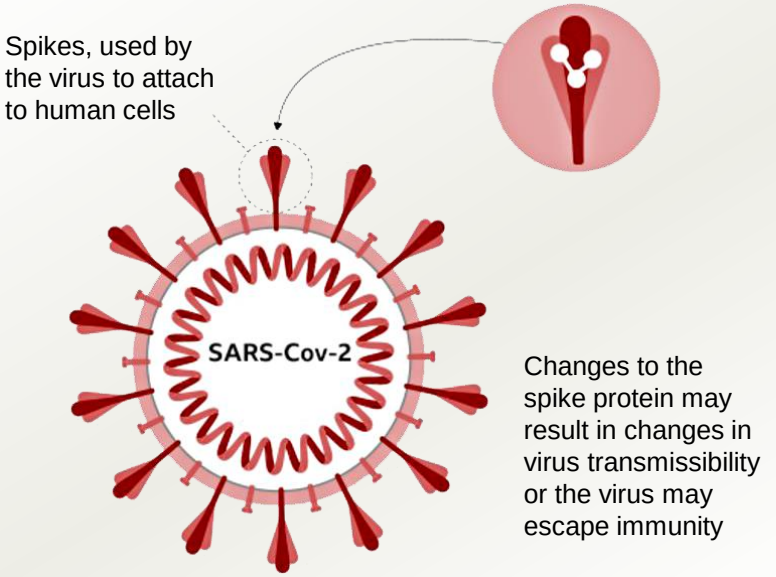
CHECK OUT THE LATEST GLOBAL SITUATION

WHO Coronavirus Disease (COVID-19) Dashboard

** Data are incomplete for the current week. Cases depicted by bars; deaths depicted by line*

All viruses evolve over time

- The more the virus circulates, the more the virus will evolve
- Most changes have little to no impact on the virus's properties or behaviour
- However, some changes to SARS-CoV-2 lead to the emergence of variants that may affect:
  - virus transmissibility
  - disease severity and presentation
  - effectiveness of vaccines, therapeutics, diagnostic tools or public health and social measures
- Several SARS-CoV-2 variants have been identified and some have been characterized by WHO as variants of interest (VOI) or variants of concern (VOC)



https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern

SARS-CoV-2 variants of interest and variants of concern

SARS-CoV-2 variant of interest (VOI)

- **A variant with genetic changes that are predicted or known to affect virus characteristics** such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape; AND
- **Causes community transmission or multiple COVID-19 cases/clusters** in multiple countries with increasing relative prevalence or other epidemiological impacts to suggest an emerging risk to global public health

SARS-CoV-2 variant of concern (VOC)

- **Meets the definition of a VOI** and, through a comparative assessment, has been associated with one or more of the following changes at a degree of global public health significance:

➢ **increase in transmissibility** or detrimental change in COVID-19 epidemiology; OR
➢ **increase in virulence** or change in clinical disease presentation; OR
➢ **decrease in effectiveness of public health and social measures** or available diagnostics, vaccines, therapeutics

https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern

Omicron designated a variant of concern (VOC) by WHO

- On 26 November WHO designated B.1.1.529 a variant of concern (VOC) because of preliminary evidence of a detrimental change in COVID-19 epidemiology. As a VOC, it was named Omicron
- Omicron has a large number of mutations including more than 30 genetic mutations of the spike protein
- The spike protein of SARS-CoV-2 is targeted by some of the currently approved COVID-19 vaccines; mutations in the spike protein therefore need to be closely monitored
- Some mutations have previously been associated with increasing transmissibility and making it easier for the virus to bind and attach to cells

Fig: Delta compared to Omicron with mutations in the S1 domain of the spike protein

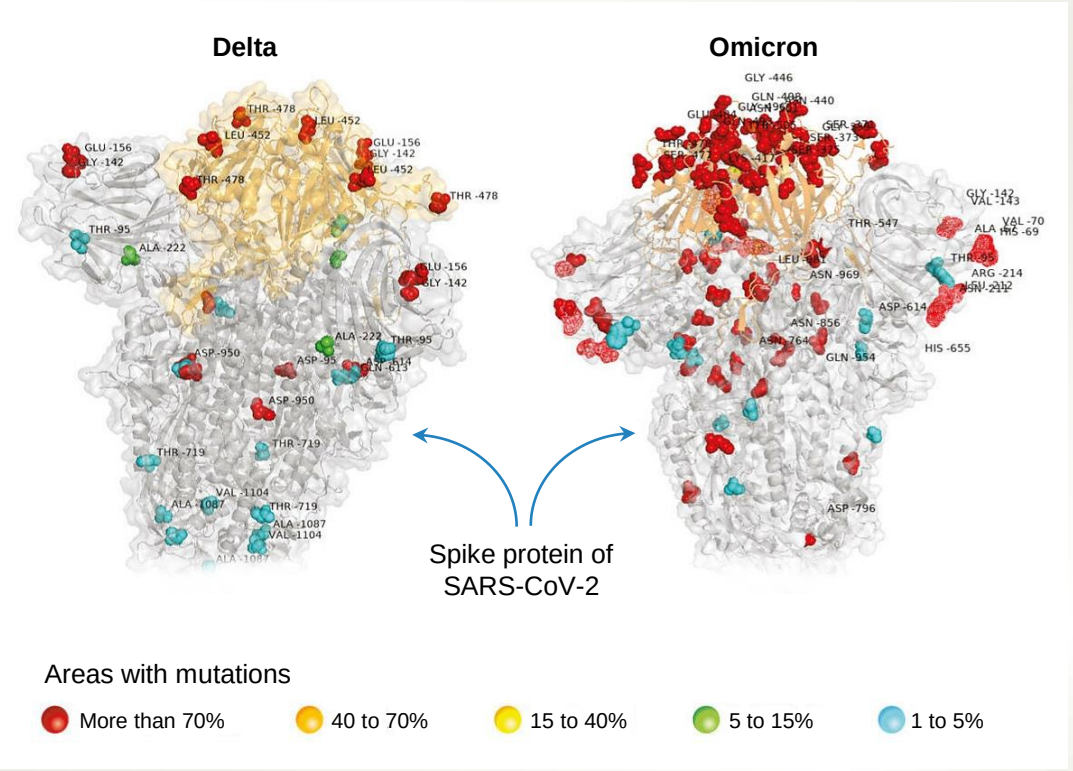


Image: AFP

https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern

Current knowledge about Omicron

Transmissibility:

It is not yet clear whether Omicron is more transmissible, causes more or less severe disease compared to other variants, or impacts the effectiveness of current COVID-19 vaccines

Reinfection:

Preliminary evidence suggests there may be an increased risk of reinfection with Omicron, however information is limited*

Detection:

Diagnostic tests, including PCR and antigen detection tests, continue to detect infection with Omicron

Clinical management:

Corticosteroids and IL-6 receptor blockers do not target the spike protein and are still effective for managing patients with severe COVID-19

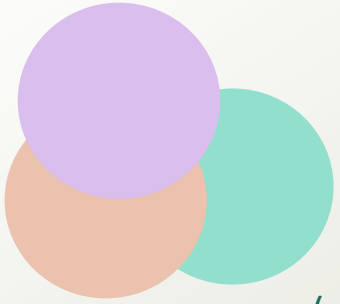
While characteristics of Omicron are being studied, evidence shows that COVID-19 vaccines are still effective to protect against severe disease due to current circulating SARS-CoV-2 variants, including Delta

*https://www.who.int/news/item/28-11-2021-update-on-omicron

Three key properties of a variant are likely to influence the overall threat from it

Its transmissibility

(relative to circulating variants)



Its virulence

(ability to cause severe disease)

Its ability to evade immune responses

(prior infection and vaccines & therapeutics)

https://www.who.int/groups/technical-advisory-group-on-covid-19-vaccine-composition-(tag-co-vac)

A global approach to monitor and assess SARS-CoV-2 variants, including Omicron

WHO has set up a multidisciplinary mechanism of external experts for decision making

Monitoring & surveillance

Technical Advisory Group for Virus Evolution (TAG-VE)
assesses whether variants
- Alter transmission or disease characteristics
- Impact vaccines, therapeutics and diagnostics, or
- effectiveness of PHSM

Evidence & assessment

The R&D Blueprint for Epidemics convenes researchers to identify knowledge gaps, studies to answer questions

TAG for COVID-19 Vaccine Composition (TAG-CO-VAC)
assesses
- impact of VOCs on current vaccines
- determines whether changes to the composition of vaccines are needed

Policy

Strategic Advisory Group of Experts (SAGE) for vaccines
Advises on vaccine use and implementation

https://www.who.int/groups/technical-advisory-group-on-covid-19-vaccine-composition-(tag-co-vac)

Additional processes to gather information on SARS-CoV-2 variants, including Omicron

Multidisciplinary mechanism of external experts for information gathering

Working Group (WG) for Clinical Management Networks
assessing impacts of VOCs on current vaccines

The Joint Advisory Group on Therapeutics Prioritization
analysing the possible effects on treatment of hospitalized patients

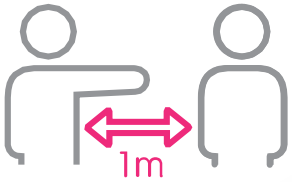
WG on outpatient platform trials
reviewing trial designs and challenges

WG on vaccines Target Product Profiles
reviewing current desirable and minimum criteria for vaccines

https://www.who.int/groups/technical-advisory-group-on-covid-19-vaccine-composition-(tag-co-vac)

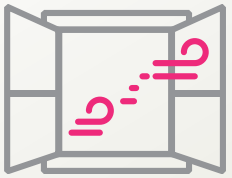
Preventive measures effectively reduce the risk of COVID-19, including Delta and Omicron

Preventive measures continue to be effective and should continue to be implemented to reduce the spread of COVID-19



Keep a physical distance of at least 1 metre from others

Wear a well-fitting mask

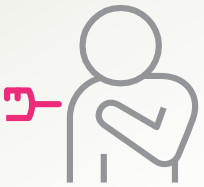


Open windows to improve ventilation

Avoid poorly ventilated or crowded spaces

Wash hands frequently

Cough or sneeze into a bent elbow or tissue

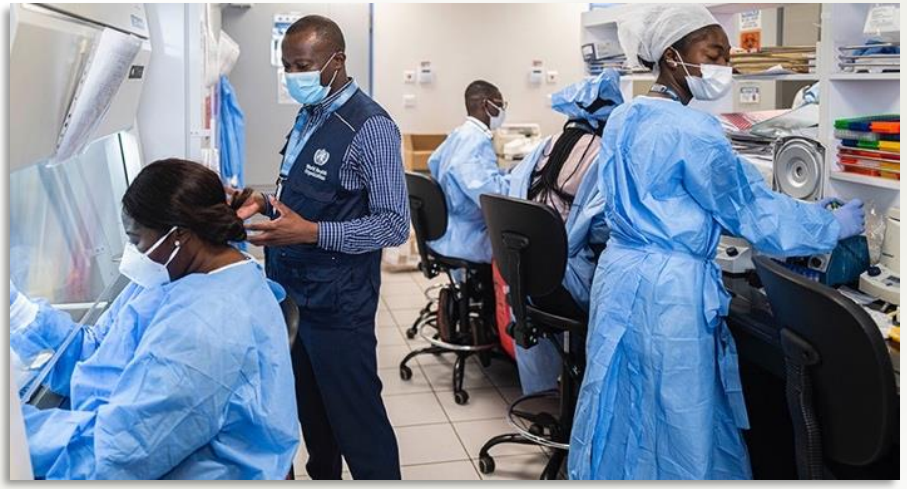


Get vaccinated, when it is your turn

Robust response to Delta helps response to Omicron and other SARS-CoV-2 variants

Advice for all countries:

- Continue to implement effective public health and social measures to reduce COVID-19 circulation
- Increase vaccination coverage in at-risk populations in all countries
  - Identify those populations who are not yet vaccinated
  - Target the most vulnerable populations



- Enhance surveillance and sequencing efforts to better understand circulating SARS-CoV-2 variants, including Omicron
  - Submit complete genome sequences to a publicly available database, such as *Global Initiative on Sharing Avian Influenza Data (GISAID)*
  - Report initial cases or clusters associated with VOC infections to WHO
  - Where capacity exists, perform field investigations and laboratory assessments to improve understanding of the potential impacts of VOCs

Risk-based approach to international travel in the context of SARS-CoV-2 variants

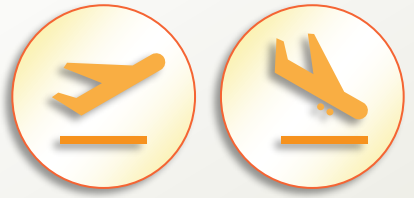
- In response to the emergence of Omicron, many countries have reintroduced travel-related health measures, including travel bans
- **Travel bans will not prevent international spread**, will place a heavy burden on lives and livelihoods, and may disincentivize countries to report and share epidemiological data
- An **evidence-informed** and **risk-based approach** to international travel should be applied in the context of COVID-19, in line with the IHR (2005)
- **Travel for essential purposes should continue to be prioritised**, including emergency and humanitarian missions, travel of essential personnel, repatriations and cargo transport of essential supplies

  - https://www.who.int/news-room/articles-detail/who-advice-for-international-traffic-in-relation-to-the-sars-cov-2-omicron-variant
  - https://www.who.int/publications/i/item/WHO-2019-nCoV-Risk-based-international-travel-2021.1
  - https://www.who.int/publications/i/item/WHO-2019-nCoV-Policy-Brief-Risk-based-international-travel-2021.1

Risk assessment should consider:

- The local epidemiological situation in departure and destination countries
- The risk of importing and exporting SARS-CoV-2 (including variants)
- Vaccine-induced and natural immunity
- Health system capacities
- Volume of travel and arrangements for follow-up of incoming travellers who test positive
- Public health and social measures in departure and destination countries
- Contextual factors, including economic impact, feasibility of applying measures

Travel risk mitigation measures that may be implemented



Travel advice:

- National authorities may apply a **multi-layered risk mitigation approach** to potentially delay and/or reduce exportation or importation of the new variant
- Such measures may include **exit/entry screening of passengers**, including via the use of **SARS-CoV-2 testing**, or the **quarantine** of travellers
- All measures should be defined though a **risk assessment** and be **commensurate with the risk, time-limited** and **applied with respect to traveller' dignity, human rights and fundamental freedoms,** as per the IHR (2005)
- Travellers should remain vigilant for any signs or symptoms of COVID-19, **follow recommendations** and **continue to adhere to protective measures** such as the use of masks and physical distancing both during travel and at point of entry
- Persons who have not been fully vaccinated or do not have proof of previous SARS-CoV-2 infection and are **at increased risk of developing severe disease**, including people 60 years of age or older or those with comorbidities should be advised to postpone travel to areas with community transmission

https://www.who.int/news-room/articles-detail/who-advice-for-international-traffic-in-relation-to-the-sars-cov-2-omicron-variant

COVID-19 protective measures

Protect yourself & others

Additional resources

- [Tracking SARS-CoV-2 variants](https://www.who.int/activities/tracking-SARS-CoV-2-variants)

  https://www.who.int/activities/tracking-SARS-CoV-2-variants

- www.gisaid.org

  The GISAID Initiative promotes the rapid sharing of data from all influenza viruses and the coronavirus causing COVID-19

  https://www.gisaid.org/

- [WHO issues best practices for naming new human infectious diseases](https://www.who.int/news/item/08-05-2015-who-issues-best-practices-for-naming-new-human-infectious-diseases)

  https://www.who.int/news/item/08-05-2015-who-issues-best-practices-for-naming-new-human-infectious-diseases

- [Classification of Omicron (B.1.1.529): SARS-CoV-2 Variant of Concern (who.int)](https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern)

  https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern

- [COVID-19 weekly epidemiological update & weekly operational update](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports)

  https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

- [Update on Omicron (who.int)](https://www.who.int/news/item/28-11-2021-update-on-omicron)

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