

IPCRG practice driven answers on COVID-19 and respiratory questions



How dangerous are new mutations of the SARS-CoV-2 virus and what should we advise patients with regard to these mutations?

What the research says

Several variants of concern (VOCs) have been identified to date. Current VOCs appear to be more transmissible than previous variants and some may differ in terms of the severity of disease they cause. Early indications suggest that VOC Alpha (formerly B.1.1.7) might be associated with higher rates of symptomatic infections based on case and hospitalization rates (Hornby et al 2021). While initial observational data suggested an increased risk for hospitalization and death associated with VOC Alpha (NERVTAG 2021), a study among hospitalized patients has not found an increase in disease severity associated with this variant (Frampton et al 2021). However, this variant has been associated with increased infection rates among children and younger adults in some countries including the US, Canada and Israel (Duong 2021). While some new variants appear to be causing more illness in younger people (clinical observation) this may be due to higher levels of testing or higher levels of exposure in these younger age groups and the presence of a true causative relationship has not been established.

The efficacy of SARS-CoV-2 vaccines against all current VOCs is under active surveillance. Evidence of efficacy has so far been reported for the Oxford/AstraZeneca vaccine against the

Alpha (>74%) and for the Novavax vaccine against the Alpha (89.3%) and Beta (formerly B.1.351 VOC; 49.4%; ECDPD 2021).

What this means for your clinical practice

- Current evidence suggests that the SARS-CoV-2 VOCs may be associated with higher rates of community transmission. Remain vigilant for potential SARS-CoV-2 infection in patients of all ages presenting for care.
- Continue to follow National guidance on infection control in primary care including triaging patients, use of personal protective equipment, cleaning and ventilation of clinical areas.
- Be vigilant for COVID-19 symptoms regardless of patient age.
- There is a potential for reduced effectiveness of current SARS-CoV-2 vaccines against VOCs (and other variants) and it is possible that revaccination may be required in the short term as the situation evolves.
- As available evidence continues to support the efficacy of current vaccines against VOCs continue to offer vaccination as per National guidance.
- Consider testing for SARS-CoV-2 infection in anyone of any age exhibiting symptoms suggestive of COVID-19 illness according to availability of test services and National guidance. Continue to offer advice to patients to take steps to maintain social distancing where possible as per National guidance

Source: Adapted from Centres for Disease Control (USA). 'SARS-CoV-2 Variant Classifications and Definitions' (published 1 June 2021)^a

Last updated: 1 June 2021

Variant^b	Effect on transmission	Effect on disease severity	Effect on vaccine efficacy
Alpha (formerly B.1.1.7) <i>First detected in the UK</i>	~50% increased	Potential increased severity based on hospitalization and case fatality rates ^c	Not known
Beta (formerly B.1.351) <i>First detected in South Africa</i>	~50% increased	Not known	Indications of reduced efficacy ^d
Gamma (formerly P.1) <i>First detected in Japan/Brazil</i>	Not known	Not known	Not known
Delta (formerly B.1.617.2) <i>First detected in India</i>	Not known	Not known	Not known
Epsilon ^e (formerly B.1.427/ B.1.429) <i>First detected in the USA</i>	~20% increased	Not known	Not known

^aAvailable at: <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/variant-info.html>. Accessed June 2021

^bAccording to the WHO naming convention. Available at: <https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>. Accessed June 2021

^cHorby P, et al. NERVTAG note on B.1.1.7 severity. New & Emerging Threats Advisory Group. January 22, 2021. Available at: <https://www.gov.uk/government/publications/nervtag-paper-on-covid-19-variant-of-concern-b117>. Accessed June 2021.

^dECDPD. Rapid Risk Assessment. SARS-CoV-2 – increased circulation of variants of concern and vaccine rollout in the EU/EEA, 14th update. 15 February 2021. Available at: <https://www.ecdc.europa.eu/en/publications-data/covid-19-risk-assessment-variants-vaccine-fourteenth-update-february-2021>. Accessed June 2021

^eClassed as a variant of interest by the WHO

Useful links and supporting references

Siemieniuk RAC, et al. Drug treatment for covid-19: living systematic review and network meta-analysis. BMJ 2020;370:m2980.

Available at:

<https://www.bmj.com/content/370/bmj.m2980>

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Hartmann-Boyce J, et al. Asthma and COVID-19: risks and management considerations.

CEBM. Available at:

<https://www.cebm.net/covid-19/asthma-and-covid-19-risks-and-management-considerations/> Accessed May 2021

World Health Organization. Home care for patients with suspected or confirmed COVID-19 and management of their contacts. Interim guidance, 12 August 2020. Available at:

[https://www.who.int/publications/i/item/home-care-for-patients-with-suspected-novel-coronavirus-\(ncov\)-infection-presenting-with-mild-symptoms-and-management-of-contacts](https://www.who.int/publications/i/item/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts)

Accessed May 2021

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