



UKHSA Health Protection Briefing Note

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Event **New SARS-CoV-2 variant classification system**

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NIERP Level **COVID-19**

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Background and Interpretation:

UKHSA has simplified its SARS-CoV-2 variant classification system, last updated in March 2021. The updated system is part of a proportionate surveillance system for SARS-CoV-2 in the next phase of the pandemic. This system gives a clear indication of which variants have significant changes in biological properties compared to the last dominant variant. Such variants may pose a risk to public health in the UK, although at the time of identification it may be difficult to predict the extent of the impact.

SARS-CoV-2 variant designations are made by UKHSA, using the advice of the Variant Technical Group, which includes specialists in genomics, virology, epidemiology, and modelling drawn from the four nations public health agencies and academic partners.

Proposed classification system

In the new system, the SARS-CoV-2 Variants of Concern (VoC) label will be assigned to variants which are currently emerging or circulating, AND for which we have confirmed or can predict:

1. a detrimental change in biological properties (changes in transmissibility, severity, or immune evasion) compared to the current dominant variant, AND
2. a growth rate potentially compatible with maintaining transmission and/or displacing the current dominant variant.

In future we may see cocirculating variants rather than single dominant variants, in which case any new variant will be compared to those variants individually as well as the composite population of viruses in the UK.

The current SARS-CoV-2 variants of concern are BA.1 and BA.2, which are biologically distinct variants belonging to the Omicron family. The previous variants of concern, including

Alpha, Beta, and Delta, will be redesignated (V-year-month-number); for example, Alpha: V-20DEC-01; Beta: V-20DEC-02; Delta: V-21APR-02. Alpha and Beta are no longer in widespread circulation. Delta, whilst more severe than Omicron, has been outcompeted by it.

New variants will be designated based on distinct genomic features and growth. They will receive a new V-year-month-number designation. Where the variants are increasing in prevalence and there are sufficient numbers of cases, UKHSA working with academic partners will undertake characterisation analyses including growth rate, hospitalisation and vaccine effectiveness, and appropriate laboratory studies. Variant characterisation analyses are dependent on sufficient sequence confirmed cases and are dependent on both testing policy and availability of sequencing data.

There will be no other categorisation of variants. All other variants designated by UKHSA will receive a variant number (V-year-month-number). There will be no specific variant under investigation category. All prior VUIs will be redesignated (V-year-month-number), retaining their original date and number.

Table 1: New variant classifications

Old designation (VOCs)	New designation
Alpha (VOC-20DEC-01, B.1.1.7)	Alpha (V-20DEC-01, B.1.1.7)
Delta (VOC-21APR-02, and all sub-lineages)	Delta V-21APR-02, and all sub-lineages, where otherwise not named
Beta (VOC-20DEC-02, B.1.351)	Beta (V-20DEC-02, B.1.351)
Gamma (VOC-21JAN-02, P.1)	Gamma (V-21JAN-02, P.1)
Omicron (VOC-21NOV-01/BA.1)	Omicron (VOC-21NOV-01/BA.1)

Old designation (VUIs)	New designation
Omicron (VUI-22JAN-01/BA.2)	Omicron (VOC-22JAN-01/BA.2)
VUI-21OCT-01 (AY.4.2)	V-21OCT-01 (AY.4.2)
Mu (VUI-21JUL-01, B.1.621)	Mu (V-21JUL-01, B.1.621)
VUI-21APR-03 (B.1.617.3)	V-21APR-03 (B.1.617.3)

WHO manages a global variant designation system (Greek letters) using the advice of a Technical Advisory Group, which includes UKHSA and other UK members. The UK designations allow more detailed analysis of the UK dataset. However, WHO and UK designations can be used in conjunction with each other as is currently the case.

A full list of updated designations was published in the Variant Technical Briefing on 25 March 2022. The VAM manual will be updated to reflect this change.

Implications for UKHSA Regions

To note the introduction of the new SARS-CoV-2 variant classification system.

Implications for UKHSA sites and services

To note the introduction of the new SARS-CoV-2 variant classification system.

Recommendations to UKHSA Regions

HPTs are asked to inform Directors of Public Health, Local Authorities and NHS microbiologists in their area about the new SARS-CoV-2 variant classification system. The change was recently confirmed on .Gov.uk [here](#):

Recommendations to UKHSA sites and services

None

Implications and recommendations for local authorities

None

References/ Sources of information

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063424/Tech-Briefing-39-25March2022_FINAL.pdf
