

## Twitter Thread by The Sharing Scientist

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**A quick thread on the new variant, pulling together information from news sources, twitter, genomic databases, and word from well-placed peers.**

Cabinet has been summoned for call at lunchtime. Lots of concern about new data on virus in parts of England, feels like fast moving situation. <https://t.co/308YsJEVGw>

— Nick Eardley (@nickeardleybbc) [December 19, 2020](#)

The new variant in the UK consists of several mutations in the spike protein, including  $\Delta$ H69/ $\Delta$ V70 deletions & other receptor binding domain mutations such as N501Y.

The variant is described here in this pre-print from [@GuptaR\\_lab](#).

<https://t.co/ui2U1r1ANA>

# Recurrent emergence and transmission of a SARS-CoV-2 Spike deletion $\Delta$ H69/ $\Delta$ V70

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This article is a preprint and has not been certified by peer review [what does this mean?].

**Abstract**

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## Abstract

SARS-CoV-2 Spike amino acid replacements in the receptor binding domain (RBD) occur relatively frequently and some have a consequence for immune recognition. Here we report recurrent emergence and significant onward transmission of a six nucleotide deletion in the Spike gene, which results in loss of two amino acids:  $\Delta$ H69/ $\Delta$ V70. Of particular note this deletion often co-occurs with the receptor binding motif amino acid replacements N501Y, N439K and Y453F. In addition, we report a sub-lineage of over 350 sequences bearing seven spike mutations across the RBD (N501Y, A570D), S1 ( $\Delta$ H69/V70) and S2 (P681H, T716I, S982A and D1118H) in England. Some of these mutations have possibly arisen as a result of the virus evolving from immune selection pressure in infected individuals. Enhanced surveillance for the  $\Delta$ H69/ $\Delta$ V70 deletion with and without RBD mutations should be considered as a priority.

The  $\Delta$ H69/ $\Delta$ V70 variant continues to increase quite rapidly as a proportion of overall positives (roughly doubling in the last 2 to three days), and is apparently now the dominant strain in test positives in some regions.

Extensive efforts have gone into enhanced surveillance for the  $\Delta$ H69/ $\Delta$ V70 deletion with and without RBD mutations, and it is good that we are aware of this.

There is a need for calm and rational thinking, and more evidence is needed.

But the early data is certainly concerning