

**The Prime Minister announced on 19 December that a new variant of the virus (VUI-202012/01 or the first Variant Under Investigation in December 2020) had been isolated with 1,108 cases so far identified at the time of writing, mostly in the South and East of England, but cases have been identified elsewhere.**

### **Why do we have a variant strain?**

All viruses mutate over time and new variants emerge regularly. This is normal. Sometimes the mutation or change fails, and the new variant dies out but sometimes it becomes more infectious. Evidence suggests this mutation in the spike protein, which is the part of the virus that makes it infectious, produces more virus and changes how the virus interacts with human cells.

### **How did we find out about it?**

In November, Public Health England was investigating why infection rates in Kent were not falling despite national restrictions. This identified an unusual pattern of transmission which spread geographically. Further sampling across the South East, London and part of Essex indicated an increasing spread of the new variant strain.

The new strain has been heavily concentrated in London, the South East and eastern England. However, cases have been identified across the UK. As this variant seems to increase transmission significantly, it is important we all continue to take actions to reduce transmission.

### **What do we know about this variant?**

The variant is still under study, but there are some things we know so far.

- There are a number of variants of SARS-CoV-2 including one isolated in Danish Mink. This latest variant is a different variant, and while found in Gibraltar, Denmark and Australia is thought to have originated in either South East England (Kent) or London
- The virus is thought to be more easily spread from person to person. This is down to two factors.
  1. It produces more virus in people who are infectious (a higher viral load) which means more virus can be breathed out in droplets or aerosol. So there is more of it breathed out to get into someone's body through their nose, mouth and eyes.
  2. It has multiple mutations on its spike proteins (surface spikes) which means when it does get into your body it is better adapted to getting inside your cells and replicating.
- Various estimates are stated that it is about 50%-75% more transmissible than the dominant strain that has been circulating for months. But these are

estimates and should be treated with caution. Prevention measures **remain effective** when performed rigorously.

### **Does it make people more ill?**

There is no evidence that this variant causes more severe disease or higher mortality, but cases continue to be studied to understand this better and will be monitored over the coming weeks.

### **Do the tests still work?**

PCR (swab) tests and Lateral Flow (quick turnaround) tests are both effective at detecting this variant, though cannot differentiate between variants. This means that tests will reliably indicate whether individuals have COVID, but people will not know from the standard tests whether this is caused by the new variant. The tests used in hospitals are also effective for this strain.

### **Does the vaccine still work?**

Yes. There is no evidence to suggest the Pfizer vaccine would not protect against the new strain. Further laboratory work is being undertaken as a priority to understand this.

### **Actions**

Increasing transmission means that if more people are infected more quickly, that would lead to more people needing hospital treatment. The way to control the virus is the same, whatever the variant. It will not spread if we avoid close contact with others. Continue to:

- Keep your distance from others
- Reduce your social contact
- Wash your hands
- Wear a mask

The measures we need to take still work, if taken thoroughly. Thank you to everyone who has done their bit so far, to help reduce the spread and protect the most vulnerable.