

COVID-19 variants appear to be as transmissible or more transmissible than the original strain, so existing public-health measures remain important

Curran J, Dol J, Boulos L, Somerville M, McCulloch H. Transmission characteristics of SARS-CoV-2 variants of concern : A scoping review. SPOR Evidence Alliance and COVID-END in Canada, March 17, 2021.

Why is all the evidence on this topic being summarized?

- As of March 2021, three COVID-19 variants of concern have been identified (known as the U.K. variant, the South Africa variant, and the Brazil variant, based on where they were first reported).
- These variants can potentially cause changes in signs and symptoms associated with the disease, and the severity of the disease, and the likelihood of passing it to others.
- These variants may require strengthening existing public-health measures or new ones.

What question did we want to answer?

- How much more transmissible are these variants?
- Why are they more transmissible?
- What characteristics are used to define new variants?

How have we done this rapid review/rapid evidence profile/living evidence profile?

- We conducted a search to retrieve all studies related to the three variants of concern in several databases and relevant websites.

How up to date is this scoping review?

- This scoping review was last updated on March 1, 2021.

What are the main results of our scoping review?

- The risk of passing on the UK variant, South Africa variant and the Brazil variant appears to be higher than other COVID-19 variants.
- It is difficult to draw conclusions about why these variants are more transmissible based on existing studies. Some evidence suggests that the viral load may be higher (the amount of virus in a person's blood, once a person has been infected). Other studies suggest that the molecular structure of these variants may prevent your body from activating its immune system and defending itself against the virus.

- The definition of variants of concern depends on three main characteristics:
 1. how variants of concern evolved compared to those that are not of concern;
 2. the changes in variants of concern that matter to human biology; and
 3. how variants of concern have advantage over others, and hence can spread more rapidly.

How confident are we in the results?

- We did not assess the strengths and weaknesses of the studies we drew on.
- We also could not rely on the assessment of other scientists because most of the studies have not been reviewed by scientists in the field.
- It was difficult to interpret and compare data across studies.

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