

8 July 2021 Risk assessment for SARS-CoV-2 variant: LAMBDA (VUI-21JUN-01, C.37) Public Health England

Indicator	RAG*	Confidence	Assessment and rationale
Transmissibility between humans			Insufficient information Lambda (C.37) appears to have transmitted successfully in South America with some wider spread. There is a single study with some evidence of enhanced ACE2 binding. There is insufficient genomic structured genomic surveillance to understand the contribution of Lambda (C.37) to the high levels of transmission that have been seen in some South American countries.
Infection severity			Insufficient information
Immunity after natural infection		LOW	Experimental evidence of evasion of naturally acquired immunity There is only one small study available, which finds a reduction in neutralisation with convalescent sera when compared to virus from earlier in the pandemic. The magnitude of the reduction in this single study is moderate (less than B.1.351) but further assessments are required. There are no clinical or epidemiological data on reinfections.
Vaccines		LOW	Very limited experimental evidence of evasion of vaccine derived immunity There are only 2 pseudovirus studies available (US, Chile). Both find neutralisation by vaccinee sera to be reduced for Lambda compared to viruses from earlier in the pandemic. These are small studies and it is difficult to make any clinical extrapolation from this early data.
Overall assessment			Lambda has spread successfully in South America with evidence of some wider global transmission. There is no evidence as yet of a country where it is outcompeting Delta, though careful monitoring of the epidemiology in Chile and Peru is required. There are a small number of cases in the UK which are largely travel associated. Lambda contains a novel combination of mutations and very limited laboratory data are available. The priority studies are pseudovirus and live virus neutralisation with UK vaccinee sera, assessment of growth using <i>in vitro</i> systems and genomic surveillance of those countries where both Lambda (C.37) and Delta are present.

The therapeutics risk assessment is under review for all variants and is not included.

*refer to scale and confidence grading slide