

**Title: International travel
Update for NPHET meeting 14 January 2021**

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Action required:

- For noting
- For discussion**
- For decision

Approved for future publication: NO

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1. Risks related to travel

In recent weeks, public health experts throughout Europe have become increasingly concerned at the implications of increased transmissibility of SARS-CoV-2 via the emergence of new variants, which are understood to have originated in the UK and South Africa. Ireland has confirmed the presence of both UK variant Pangolin lineage B.1.1.7 (UK-Kent variant VOC 202012/01) and the South Africa variant 501Y.V2

In its letter of 10th of December 2020 NPHEA reaffirmed its existing public health advice regarding international travel – to avoid non-essential travel (including winter tourism), those who travel for essential reasons are advised to restrict movements for 14-days post arrival, and any period of restricted movement should not be ended prior to a not-detected result of a PCR test being returned.

The ECDC rapid risk assessment in response to SARS-Cov-2 variants (published 29 December 2020) provided that both variants detected in the UK and South Africa are associated with increased transmissibility compared to previously circulating variant. Further investigation is needed to determine an impact on disease severity.

New variants have also recently been detected emerging from Brazil. The National Institute of Infectious Diseases (NIID) of Japan has confirmed detection of a new variant in travellers who arriving from Amazonas, Brazil. The variant detected contains mutations to proteins including N501Y and E484K. Further investigation is needed to understand whether this strain has an impact on transmissibility, disease severity, laboratory diagnosis and vaccine efficacy.

2. Passenger volumes

Christmas/New year travel to Ireland

According to figures provided by DAA, there were a total of 190,229 arrivals to Ireland via air between 01 December 2020 and 11 January 2021. Significant volumes arrive directly from EU/EEA (118,125), the UK (37,020) and USA (12,032), with the remainder coming from other third countries.

Arrivals from the UK

An increasing proportion of cases in the South East, the East and the London area are due to this variant. Cases of the new variant have also been identified in other parts of the UK but to a lesser extent.

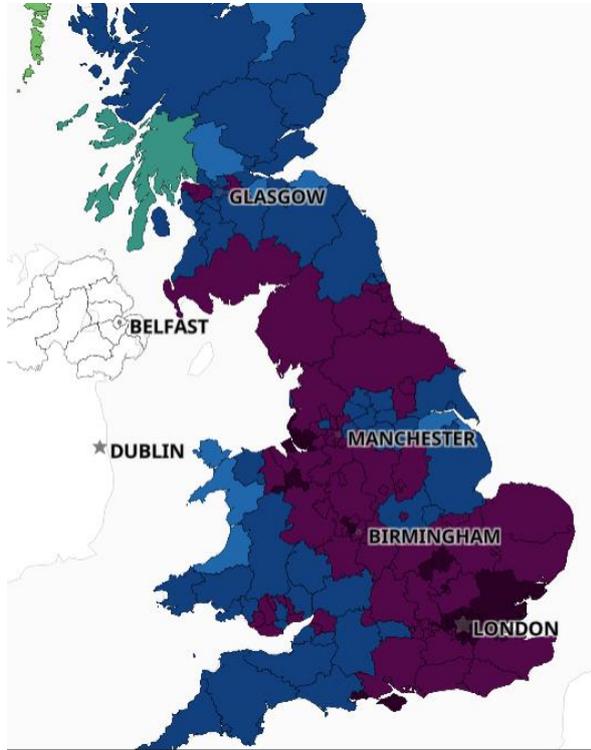
The case distribution in the UK, confirmed by sequencing, as can be seen in the maps below, show the concentration of cases near airports with flights to Ireland were in the South-East / London area of the UK, with pockets of cases around Manchester and Glasgow. In the attached maps the darker purple colours indicate the higher rates of infection.

According to arrival figures provided by the DAA, 37,072 adults and 982 children travelled to Ireland by plane in the period 01 December to 11 January from Great Britain. There were a total of 396 incoming flights from the UK to Ireland.

212 flights arrived from the London area - Gatwick, Luton, Stansted, Heathrow, Southend and London City airport. These flights brought a total of 25,858 passengers from a high-risk area to Ireland (25,162 adults and 696 children). This accounts for approximately 68% of the total number of UK arrivals during the Dec / Jan period.

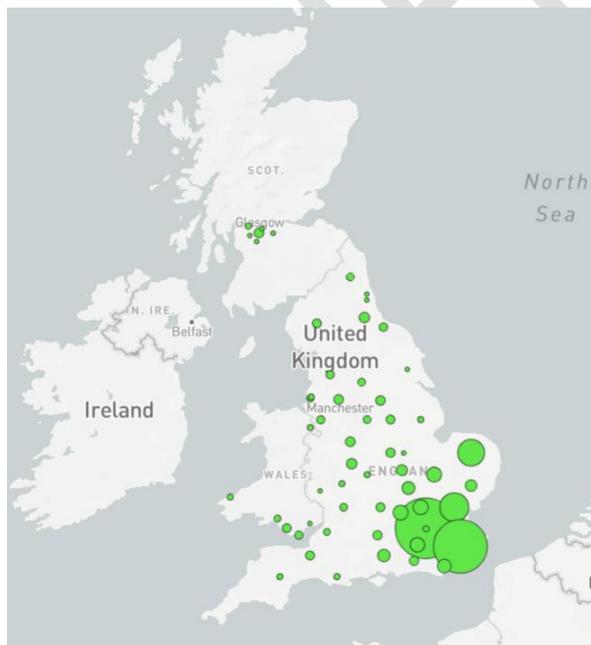
Other airports located near hubs of confirmed cases of the new UK variant include Glasgow and Manchester/Liverpool. 19 flights arrived from Glasgow with 971 adults and 14 children. 51 flights arrived from Manchester and Liverpool bringing 4022 adults and 97 children.

Fig 1. Seven-day rolling rate of new cases by specimen date ending on 07 Jan 2021



Source: <https://coronavirus.data.gov.uk/details/interactive-map>

Fig 2. Case Distribution in the UK as of 25 December 2020



Source: <https://beta.microreact.org/project/vVnFzG7o3qYUJ6bnDs3Jo-cog-uk-2020-12-20-sars-cov-2-in-the-uk>

Arrivals from South Africa

Passenger Locator Form data shows 1,116 adult passengers arriving from South Africa between 08 December to 12 January. 286 children accompanied these adults.

995 passengers did not specify a date of departure from Ireland, possibly indicating that they are Irish residents or relocating to Ireland.

Arrivals from South Africa travelled to all 26 counties, as can be seen in appendix 1. A large cohort of arrivals declared plans to stay in the east of Ireland with 457 passengers planned to stay in Dublin, 60 in Kildare, 47 in Wicklow and 30 in Wexford. Cork saw 82 arrivals, while Galway received 43 passengers and Limerick received 40 passengers. 124 passengers did not provide their address in Ireland.

Arrivals from Brazil

Passenger locator form data records 1,667 passenger arrivals from Brazil since 15 December. Daily arrival figures show a slight upward trend through early January when compared with the previous month.

3. Public health responses internationally

In recent weeks, public health experts throughout Europe have become increasingly concerned about the implications of new variants of SARS-Cov-2 first detected in Great Britain and South Africa.

After the publication of the 'Threat Assessment Brief: Rapid increase of a SARS-CoV-2 variant with multiple spike protein mutations observed in the United Kingdom' by the ECDC on 20 December 2020, countries across Europe began to take immediate action to restrict travel in order to prevent the immediate importation of UK variant cases and to buy time to impose longer term solutions. At least 18 EU/EEA countries, including Ireland, immediately imposed bans on flights arriving from the UK for varying periods of time, with some bans later extended into January 2021.

Following the use of the ban on air passengers (and in the case of France, Germany, and Belgium bans on UK arrivals by land and sea) multiple EU countries began to introduce a requirement to show a negative PCR test for arrivals from the UK from early January. Currently countries such as Germany, the Netherlands, the Czech Republic, Luxembourg, Estonia, Lithuania, Cyprus, Romania and Malta all require a negative PCR test result to be presented on arrival from the UK. Other countries such as Austria, Belgium, Norway, Germany and Switzerland allow for travellers from the UK to be tested upon arrival or undergo a mandatory quarantine period. Non-essential travel is currently not permitted from the UK to countries including the Netherlands, Belgium, Spain, Romania and Denmark.

Due to the new variants some EU countries have introduced measures which directly affect travellers from Ireland These actions can be seen in the context of moves towards more restrictive travel policies by several EU countries in response to the new variants.

On 11 January Finland suspended passenger flights from Ireland, along with flights from the UK and South Africa. The bans are expected to be in place until 18 January. All direct passenger air traffic from the UK to Finland was originally suspended for two weeks from noon on 21 December until 11 January 2021. Entry to Finland is prohibited for non-resident foreign nationals; those who can enter must isolate for 10 days. Entry from Schengen area countries is limited to residents, essential travellers and cross border commuters.

Irish residents travelling to Germany also require a negative PCR test for entry. (This is a new measure.) Currently, in addition (to the PCR testing requirement), a ten-day quarantine obligation continues to apply to travellers entering or returning to Germany from foreign “Corona risk areas”, though it is possible to be tested for Covid-19 five days after entry and to end the quarantine prematurely.

Denmark has implemented much more stringent travel restrictions since the emergence of the new variants. Passenger arrivals from all countries are required to have an acceptable purpose for travel and documentary evidence of this is required. All passengers also require a negative COVID-19 test taken within 24 hours prior to arrival.

Work is ongoing at a European level, both to better understand the risk posed by the variants and to facilitate a mutual understanding of response measures that have been adopted. A second ECDC risk assessment was published on 29 December. The Commission adopted a Recommendation on a coordinated approach to travel and transport measures on 22 December. This Recommendation discourages all non-essential travel to and from the UK until further notice though advised against any continuation of flight bans, which were nonetheless continued by several EU countries.

Flights bans and additional restrictive measures were also introduced in non-EU countries at the end of December, particularly South American countries – Argentina, Chile, Colombia, Panama and Guatemala. Israel, Saudi Arabia and Hong Kong also introduced extra restrictions to combat the spread of this variant strain.

4. Irish Response to date

1) Government Policy

A ban on passenger travel between Great Britain and Ireland was in effect from 21 December to 8 January. The travel advice to those arriving from South Africa was also upgraded to ‘self-isolation’ rather than restricted movement for 14 days that would usually apply.

Since 9 January, passengers arriving from Great Britain or South Africa have been legally required to present evidence of a negative pre-departure PCR test taken up to 72 hours before departure. Failure to do so is an offence with penalties of up to €2,500 and up to six months imprisonment or both.

Following arrival, passengers arriving from these countries continue to be advised to self-isolate for 14 days and to contact a GP to arrange a test (without charge) to be taken after day 5. The result of this test does not lead to disapplication of the advice to self-isolate for the full 14 days.

A targeted sequence of messaging to arrivals from GB or SA has been put in place through the passenger locator form. These passengers will receive regular reminders by text during their first 14 days in Ireland of the advice to self-isolate and of the availability of a free PCR test through their GP.

2) Targeted testing regime

From 22nd December 2020-12th January 2021, the HSE processed 8,070 PCR referrals for individuals who reported to have recently travelled from the UK to Ireland. Of these referrals, 1,119 have not yet been matched to lab results. For the remaining referrals, tests returned 352 detected results giving a detected rate of 5.3%.

**SARS-CoV-2 PCR test referrals for individuals who recently travelled to Ireland from UK
(22/12/2020-12/01/2021)**

Total referrals	No lab result matched to referral	Detected	Not detected	Detected %
8,070	1,119	352	6,599	5.3

Source: HSE – data as of 13/01/2021

From 11th-12th January 2021, the HSE processed 21 PCR referrals for individuals who reported to have recently travelled from South Africa to Ireland. Of these referrals, 13 have not yet been matched to lab results. For the remaining referrals, tests returned 1 detected result giving a detected rate of 12.5% (noting that this rate is based on a small total number of tests).

**SARS-CoV-2 PCR test referrals for individuals who recently travelled to Ireland from South Africa
(11/01/2021-12/01/2021)**

Total referrals	No lab result matched to referral	Detected	Not detected	Detected %
21	13	1	7	12.5%

Source: HSE – data as of 13/01/2021

4.3 Assessment by NVRL

Investigation in December 2020 into the increasing number of cases in the southeast of England led to the discovery of a new variant of concern (VOC) of the SARS-CoV-2 virus. It is now known that variant VOC 202012/01 (also known as B.1.1.7) likely emerged in that region in late Summer early Autumn 2020. Separately, in South Africa, another lineage of the coronavirus (named 501.V2) has gained one particular mutation that is also found in VOC 202012/01.

Following the formal notification by Public Health England of the novel SARS-CoV-2 variant in the UK on the 21st December 2020, the National Virus Reference Laboratory (NVRL) commenced screening for the VOC on the 22nd December and confirmed the presence of the VOC in Ireland by whole genome sequencing on Wednesday December 23rd.

The NVRL has since tested a total of 1,117 PCR-positive SARS-CoV-2 specimens for the VOC (B.1.1.7). The VOC has been detected in 196 (17.5%) cases. Of the 196, 93 are female and 103 are male. The mean age is 37.5 years, and the median is 32. The VOC was detected in all age groups (Range 2-91 years). The highest level of detection was 21.6% in those aged 19-24 years, with the lowest detectable level of < 1% in those aged 6-12 years.

The VOC has been detected in all HSE Community Healthcare Organisations (CHOs), with the highest levels of detection in CHOs 2 (Galway/Roscommon/Mayo) and 3 (Clare/Limerick/Tipperary North) at 30.3% and 30.8% respectively. However, all CHOs had a detection level of greater than 14%, with the exception of CHO5 (Tipperary South/Carlow/Kilkenny/Waterford/Wexford), in which the detection rate was 12.5%. That being said, these results may not truly reflect the prevalence of infection nationally as the NVRL receives more samples from CHOs 6, 7, 8, and 9.

Growth Rate

Retrospective analysis of Irish specimens dating from prior to the notification of the VOC by the UK authorities on the 21st December 2020 indicates that the VOC was first detected in Ireland in early November (week 45 in the surveillance year). In that week, a single VOC was identified (retrospectively) in 52 specimens tested. Further detections were identified (retrospectively [n=353] and prospectively [n=764]) as follows;

Week 45	1/52	
Week 46	0/36	
Week 47	0/32	
Week 48	3/50	
Week 49	1/62	
Week 50	2/141	1.4%
Week 51	6/70	8.6%
Week 52	29/178	16.3%
Week 53	111/424	26.2%
Week 1 2021	43/94	45.7%

Plotting the detection rate of the VOC in recent weeks demonstrates a significant increase in the second half of December.

Of note, the detection rate of the UK variant in those individuals tested positive and known to have recently travelled from the UK over that time period (weeks 51-53) is significantly higher, at 48% (61/127).

Whole Genome Sequencing

The NVRL has reported that it has completed whole genome sequencing of 51 suspected variants of concern taken in the Republic of Ireland between December 21st, 2020 and January 3rd, 2021.

Based on these analyses the NVRL has advised that:

- The presence of both UK (B.1.1.7) (n=48 cases identified) and South African (501.V2) SARS-CoV-2 lineages (n=3 cases identified) has been confirmed by whole-genome sequencing in the Republic of Ireland.
- The clustering of the Irish sequences with multiple clades in the B.1.1.7 lineage suggests multiple differentiable introductions to Ireland.
- The three samples of the B.1.351 lineage clustered together suggesting recent divergence.

5. Next steps

On 12 January 2021, the Government decided to extend the requirement for a negative pre-departure PCR to passengers arriving from all other countries, with effect from 16 January. Public health advice for this cohort will not be changed – they will continue to be advised to restrict movements for 14 days if travelling from an EU region classified as “Red” by the ECDC. Passengers from “Green” or “Orange” EU regions will not have to restrict movements (once they have a negative pre-departure test).

These developments notwithstanding, Ireland’s response to the new variants, and to risks associated with international travel generally, remains less stringent than measures adopted by many other EU countries. The strong public health responses to new variants by Denmark, Germany and Finland are notable. In addition to pre-travel testing, many countries have mandatory quarantine with potential

to release following a further 1 or 2 SARS-CoV-2 tests. Other than the pre-departure PCR test requirement, post-arrival testing, restriction of movement and self-isolation are advisory in nature and there can be no assurance that a high level of compliance with this advice is being achieved. The only way that the maximum compliance with the key public health measures for arriving travellers could assured would be to place the movement-related advice onto a statutory footing, i.e. an enforceable quarantine regime.

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Appendix 1

Arrivals from South Africa, 8 December to 12 January by destination in Ireland

County	Count of PLF
Carlow	15
Cavan	7
Clare	14
Cork	82
Donegal	19
Dublin	457
Galway	43
Kerry	15
Kildare	60
Kilkenny	10
Laois	15
Leitrim	6
Limerick	40
Longford	2
Louth	15
Mayo	17
Meath	34
Monaghan	6
Offaly	6
Roscommon	8
Sligo	4
Tipperary	7
Waterford	18
Westmeath	15
Wexford	30
Wicklow	47
no data	124
Grand Total	1116