

Coronavirus (COVID-19): Analysis

State of the Epidemic in Scotland (12th March 2021)

Background

This report summarises the current situation on the COVID-19 epidemic in Scotland. It brings together the different sources of evidence and data about the epidemic in Scotland at this point in time, why we are at that place, and what is likely to happen next. This summarises the data up to and including the 11 March 2021 on COVID-19 in Scotland. This updates the previous publication published on 5 March 2021¹. The information in this document helps the Scottish Government, the health service and the wider public sector respond to the epidemic and put in place what is needed to keep us safe and treat people who have the virus.

This edition of the state of the epidemic, summarises current data on COVID-19 at a national level, at a local level and how Scotland currently compares to the rest of the UK. It looks at the vaccination program in Scotland and the effects which are beginning to be seen from this. Information is provided about variants of concern and what impact these may have. Bringing this information together in one place gives the opportunity to better understand the current state of the epidemic in Scotland.

Key Points

- The reproduction rate R in Scotland is currently estimated as being between 0.6 and 0.8.

¹ Scottish Government: [Coronavirus \(COVID-19\): state of the epidemic - gov.scot \(www.gov.scot\)](https://www.gov.scot/Coronavirus-(COVID-19):-state-of-the-epidemic)

- An average of 527 cases were reported per day in the 7 days to 11 March, which is a 1% increase in reported cases since the 4 March.
- There were 65 weekly cases per 100,000 in the week to 8 March. This compares to 302 weekly cases per 100,000 on 8 January and is now similar to the weekly case rate observed at the end of September. This has plateaued for the last week.
- Cases and deaths are declining the most in the over 75s suggesting an impact from vaccination in this age group.
- The estimated proportion of people becoming infected with Covid remains below England, and Northern Ireland, however above Wales as determined through the weekly ONS survey.
- Latest modelled estimates suggest there are currently between 10 and 19 new daily infections per 100,000 people in Scotland.
- Average daily deaths per 100,000 population (0.23) are at similar levels to Northern Ireland (0.18), England (0.26) and Wales (0.27).
- Stirling currently has the highest weekly case rate in Scotland reporting 137 cases per 100,000 in the last week, while Orkney reported no cases in the same time.
- At a national level hospital bed and ICU occupancy are projected to fall over the next few weeks, but with the potential to plateau or increase as a result of schools reopening.
- Over 1.8 million people in Scotland have now been vaccinated against SARS-CoV-2, with the initial target for older care home residents having been surpassed.
- The current UK variant of concern has been increasing its share of confirmed cases since it was first detected in Scotland in mid-December and is now the dominant strain.

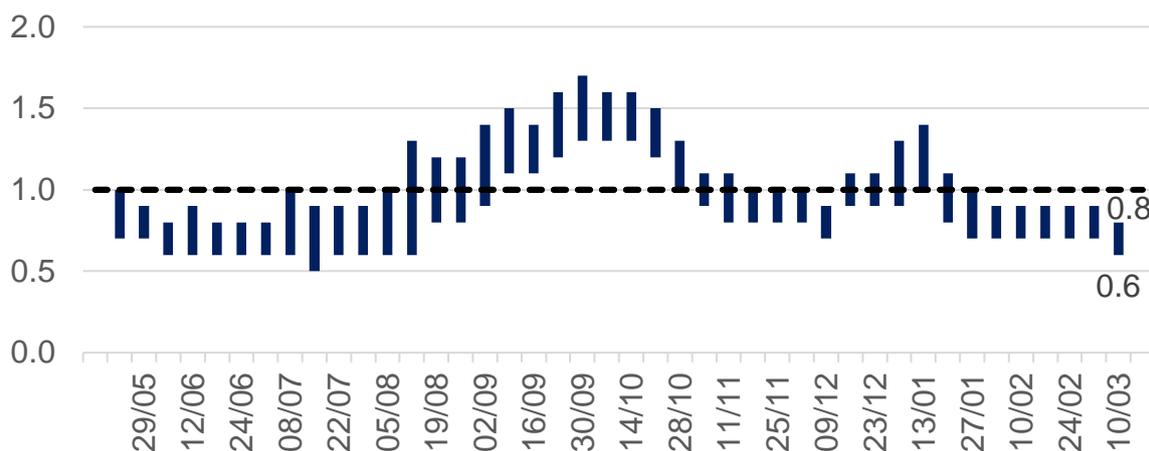
Method

This report brings together a wide range of publically available figures from a range of data sources. These include publications by Scottish Government, Public Health Scotland, National Records of Scotland, Office for National Statistics along with scientific publications and SAGE summaries where appropriate to summarise the state of the epidemic in Scotland in a given week. We also provide information on public attitudes to the virus from weekly You Gov polling surveys.

The national picture

The latest R value for Scotland (published on 11 March)² has decreased and was between 0.6 and 0.8 (Figure 1), with a growth rate of between -6% and -4%.

Figure 1. R in Scotland over time



Since they were introduced in early January at a national level we have seen the impact of stay at home measures in reducing the level of SARS-CoV-2 in Scotland. An average of 527 cases were reported per day in the 7 days to 11 March, this is a similar number of cases as reported on 4 March, and follows a 33% decline from the week to 25 February³. Average daily cases reported are now less than a quarter of the peak of 2,323 in the week to 7 January. Our current position is 65 weekly cases per 100,000 in the week to 8 March⁴. This compares to 302 weekly cases per 100,000 on 8 January and is now similar to the weekly case rate observed at the end of September (see Figure 2). Test positivity has decreased since stay at home measures were introduced, and is now at 3.1% on average over the past week (to 8 March)⁴.

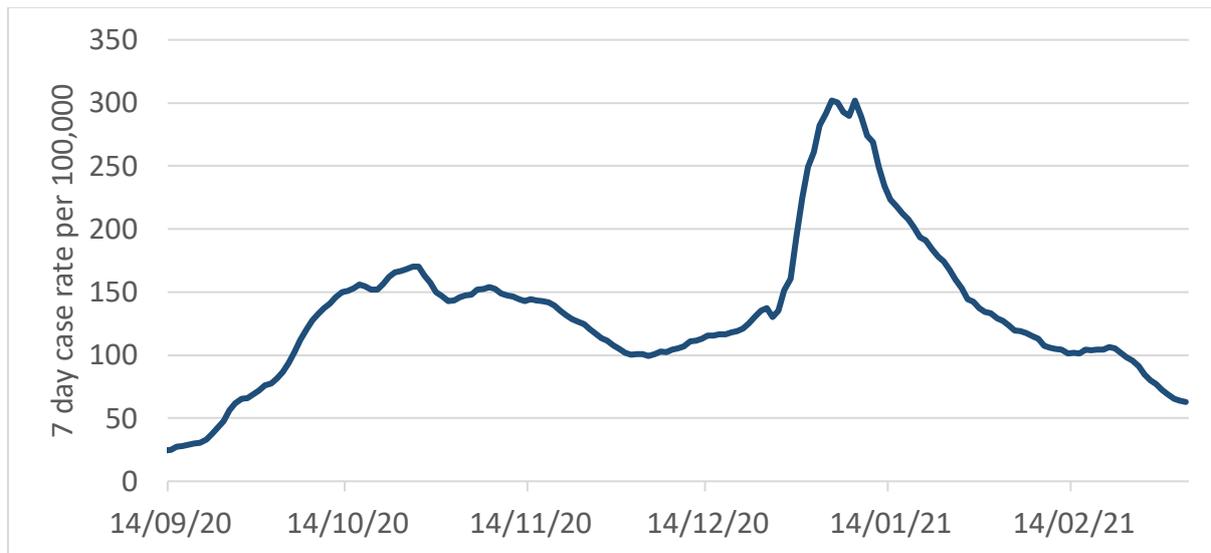
² Scottish Government:

<https://www.gov.scot/publications/?term=modelling&cat=filter&topics=Coronavirus%20in%20Scotland&publicationTypes=research-and-analysis&page=1>

³ Scottish Government: <https://www.gov.scot/publications/coronavirus-covid-19-daily-data-for-scotland/>

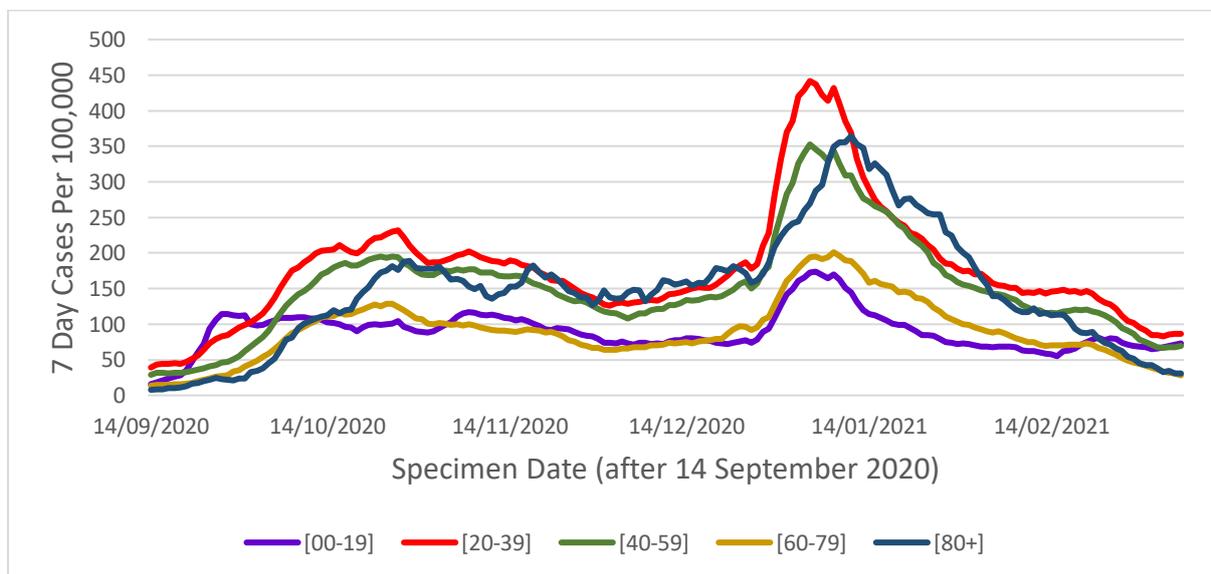
⁴ Public Health Scotland Covid dashboard: https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview

Figure 2. Seven day case rate for Scotland. Refers to PCR testing only.



There has been a further sharp decline in the case rate in the over 80s, and case rate in the 60-79 age band has also started to decline sharply since 21 February. Cases in other age groups have remain fairly stable, this week (Figure 3).

Figure 3. Seven day case rate in Scotland by age group by specimen date⁵. Refers to PCR testing only.



Not everyone who has the virus will be tested, as many people do not realise they have COVID, or have mild symptoms and do not come forward. Latest modelled estimates suggest there are currently

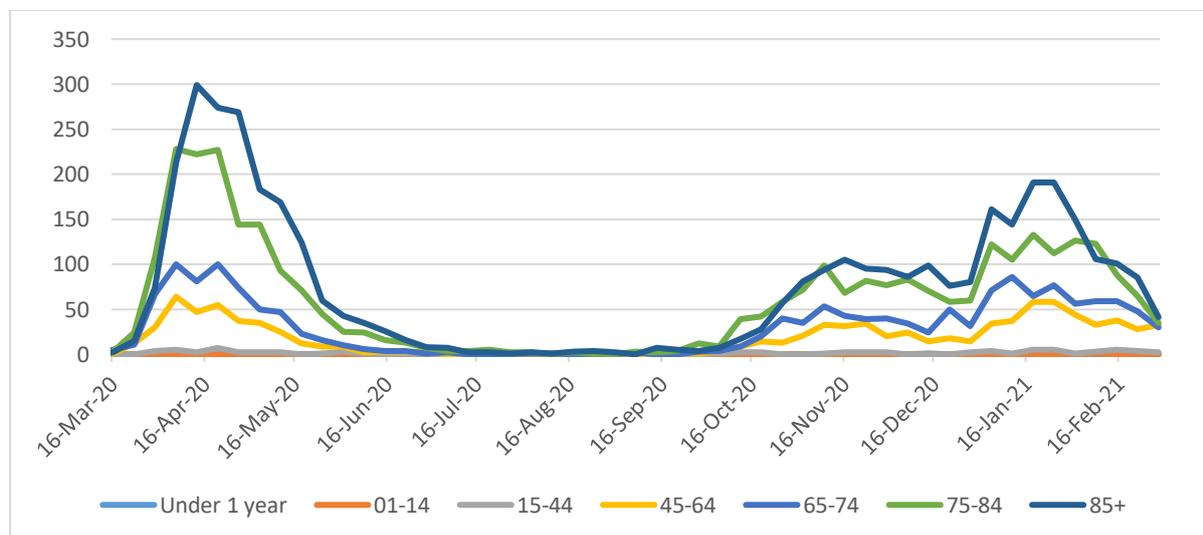
⁵ Source: Public Health Scotland

anywhere between 500 and 1,000 people infected in Scotland each day². This means that as of 10 March there were between 10 and 19 new daily infections per 100,000 people.

The number of people in hospital with confirmed Covid for less than 28 days is declining. After peaking at 2,053 on 22 January, this figure has decreased and as of 11 March there were 556 patients in hospital with COVID-19. In addition, there was a fall in daily hospital admissions for people with Covid from a peak of 242 on 11 January to 22 on 7 March⁶.

There were 141 deaths registered where Covid was mentioned on the death certificate in the week to 7 March. This is a 39% decrease on the week before (230 deaths), and 79% lower than the peak in April (663 deaths). The proportion of deaths in care home has been gradually decreasing from 36% since mid-December to 10% of total deaths in the week to 7 March. Deaths involving coronavirus have declined most in those aged 75-84 and have gone down by 72% over the 3 weeks to 7 Mar⁷. Deaths in those aged 85+ have declined by 61% over the same time (Figure 4).

Figure 4. Deaths by age group (weekly total by week beginning, NRS)⁷



⁶ Public Health Scotland dashboard: [Dashboard - Data & intelligence from PHS \(isds.scot.nhs.uk/\)](https://isds.scot.nhs.uk/)

⁷NRS Scotland: <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland>

How Scotland compares with the rest of the UK

The recent ONS survey estimates that the proportion of the population infected in the community in Scotland (0.31% people currently testing positive for Covid-19 on 28 Feb – 6 Mar) is below England (0.37%), and Northern Ireland (0.32%), however above Wales (0.27%). In the week to the 6 March the estimated rate of community infection was 1 in 320 people in Scotland, compared to 1 in 270 for England, 1 in 365 for Wales and 1 in 310 for Northern Ireland⁸. Average daily deaths in Scotland (0.23 per 100,000 in the week to 10 March) are at a similar level to Northern Ireland (0.18 per 100,000), England (0.26 per 100,000) and Wales (0.27 per 100,000).

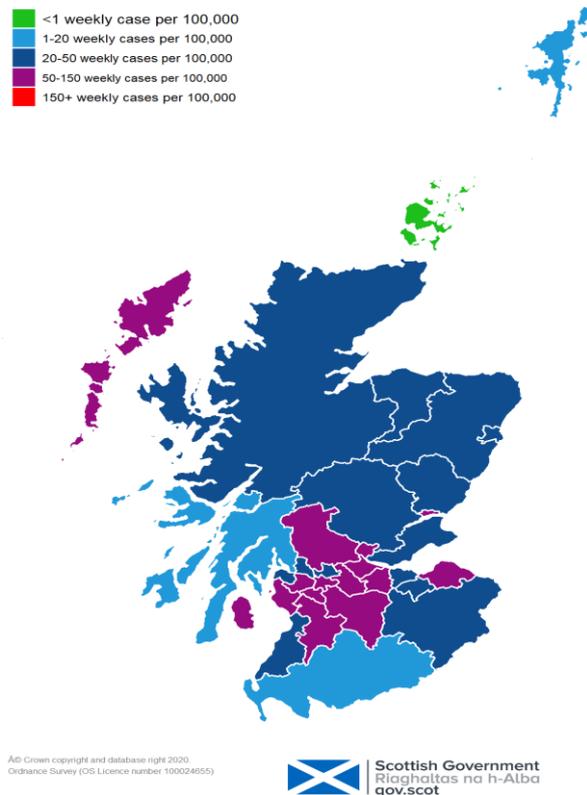
Situation by local authority within Scotland

Stirling currently has the highest case rates in Scotland with 137 weekly cases being reported per 100,000 in the week to 8 March. This is a decrease of 2% from the week to 1 March⁴. There remains high or moderate levels of cases across large areas of Scotland (Figure 5). The Local Authorities which have recorded an increase in cases per 100,000 over the past week are Aberdeen, Aberdeenshire, East Renfrewshire, Glasgow, Highland, Na h-Eileanan Siar, North Ayrshire, Scottish Borders, Shetland and South Ayrshire. Case rates have fallen or remained stable in most other parts of Scotland. Over the past week the case rate per 100,000 has remained at 0 in Orkney⁴.

⁸ Office for National Statistics:

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveys/pilot/previousReleases>

Figure 5. Map of weekly new positive cases per 100,000 people in Scotland



Looking ahead

Changes in patterns of mixing and adherence to restrictions will impact on future case numbers. The Scottish Contact Survey measures times and settings that people mix where they could potentially spread Covid². From this survey we can say that interactions have remained low since the beginning of January (currently 3.0 average daily contacts).

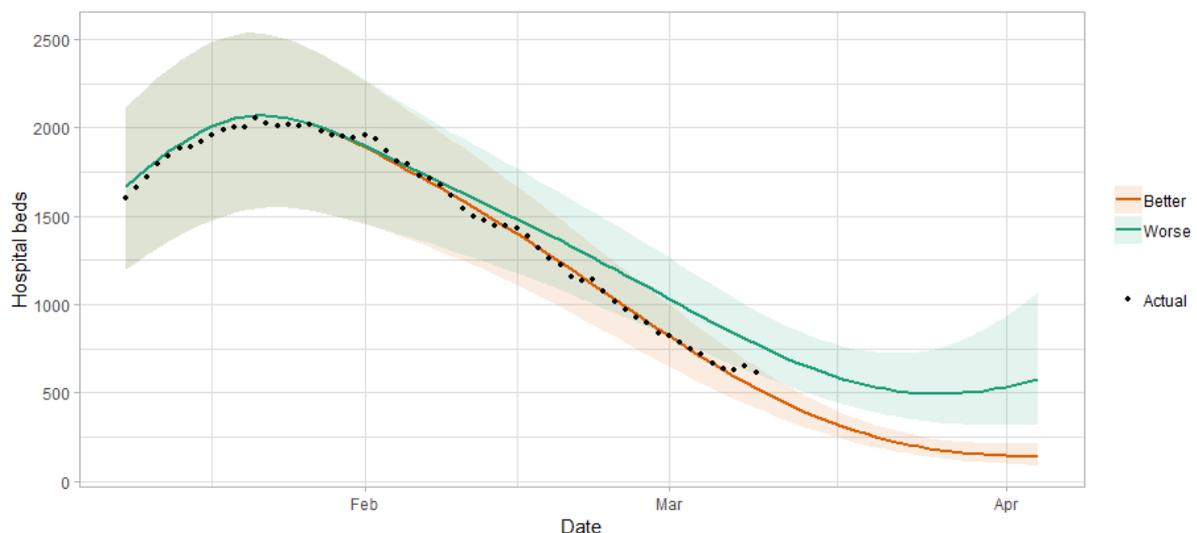
In the last two weeks however increases in contacts have been reported for those aged between 40 and 50, largely due to a rise in contacts within the work setting. The largest increase in interactions is seen between those aged 30 – 50 with those under the age of 18 which coincides with the recent phased return of schools.

Those vaccinated who work in health and social care have double the number of contacts than those who have not. A significant difference is seen in the work setting contacts for this group, as opposed to the home and other settings. We will continue to monitor changes in behaviour as the vaccine roll out continues.

There is high level of reported compliance with the Stay at Home regulations that came into effect on 5 January. On 9-11 March, 77% of people reported 'complete' or 'almost complete' compliance⁹.

Hospital bed and ICU occupancy are projected to fall over the next few weeks, but with the potential to plateau or increase as a result of schools reopening (Figure 6)².

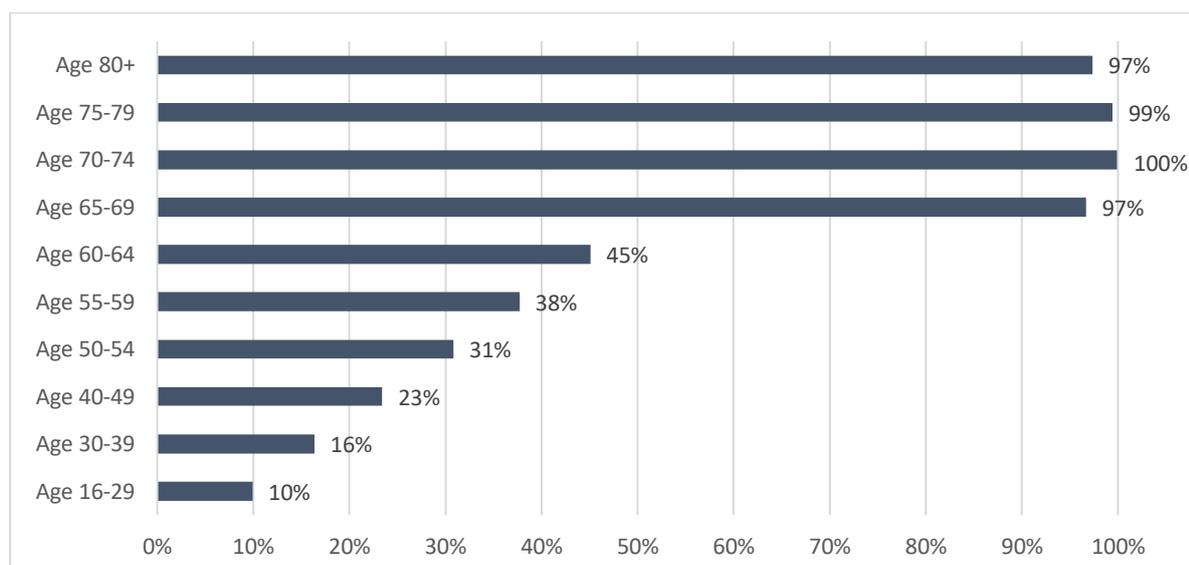
Figure 6. Medium term projections of modelled hospital bed demand, from Scottish Government modelling.



Vaccinations are continuing across the priority groups. The first vaccines were administered on Tuesday 8 of December and 1,825,800 had received their first dose by 11 March 2021, an 8% increase from the 4 March³. By the 11 of March over 32,000 residents in older adult care homes had received their first vaccination along with over 46,000 older adult care home staff. 97% of individuals aged 80 or over, 99% of those aged 75-79, almost 100% of those aged 70-74 and 97% of those aged 65-69 had received their first vaccination (Figure 7)⁴. It is anticipated that vaccination will reduce infection levels in the most vulnerable in the coming weeks and months. There are now indications of decreasing case rates and deaths among those groups vaccinated first (Figures 3 and 4).

⁹ Results are taken from questions run on behalf of Scottish Government on the YouGov online omnibus survey. The sample is demographically and geographically representative of adults 18+ across Scotland, with c.1000 responses each week. Total sample size on 9-11 March was 1010 adults. 'Complete' or 'almost complete' compliance refers to respondents who rated themselves 6 or 7 on a scale of 0-7 for the question: *Thinking about ALL of the guidance from the Scottish Government on what to do and what not to do during the Coronavirus pandemic (including distancing, protection measures and all restrictions)...On a scale of 1-7, where 1 is 'Not at all' and 7 is 'Completely', to what extent do you feel you are following the regulations and guidance?*

Figure 7. Estimated percentage of people vaccinated by 11 March 2021



The proportion of people surveyed who said they would be likely to be vaccinated for COVID-19 remains high. 42% of all respondents have already received their first vaccine and of those not, 84% report they are likely to be vaccinated when a vaccine becomes available to them¹⁰.

How the virus is changing

Variant VOC-202012/01 commonly known as the UK variant has been increasing its share of confirmed cases since it was first detected in Scotland in mid-December and is now the dominant strain¹¹. This new variant of Covid is more transmissible, however the age and sex distribution appears similar to other variants¹². It is likely that infection with VOC 202012/01 is associated with an increased risk of hospitalisation and death compared to infection with non-VOC viruses.¹³

Other variants of concern (VOCs) are being monitored, to date there are four VOCs and five variants under investigation. Up to 10 March, there have been 19 confirmed cases and 3 probable cases of the variant VOC-202012/02 (first seen in South Africa) detected in Scotland, and five cases of variant VUI-202010/01 (first seen in Brazil). In addition,

¹⁰ Total sample size on 9-11 March was 1010 adults. Sample size for those who have not yet received their first vaccine was 545 adults. 'Likely' to be vaccinated refers to respondents who rated themselves 8 to 10 on a scale of 0-10 for the question: How likely or unlikely are you to be vaccinated for COVID-19 when a vaccine becomes available to you? (Please select a number between 0 and 10, where 0 means 'extremely unlikely' and 10 means 'extremely likely')

¹¹ Public Health Scotland: <https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/covid-19-statistical-report/9-september-2020/dashboard/>

¹² [Investigation of novel SARS-CoV-2 variant - Variant of Concern 202012/01 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/91444/investigation-of-novel-sars-cov-2-variant-variant-of-concern-202012-01.pdf)

¹³ [S1095 NERVTAG update note on B.1.1.7 severity 20210211.pdf \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/91444/s1095_nervtag_update_note_on_b.1.1.7_severity_20210211.pdf)

cases of the VOC-202101/02 and VUI-202102/03 have been found in Scotland; 2 confirmed and 1 probable case of VOC-202101/02 and two probable cases of VUI-202102/03¹⁴. There is some concern, mainly based on laboratory analysis that these variants may partially escape immunity, from both natural infection and from vaccines currently being deployed, and we are monitoring the evidence on this^{15 16 17}.

Next steps

The Scottish Government continues to work closely with Public Health Scotland to monitor the course of the epidemic using several data sources. Each week this report will provide an overview of current COVID-19 situation in Scotland. This will include real time data on case rates, hospitalisations and deaths and how Scotland's figures compare to those from the rest of the UK. Modelling can tell us where the epidemic is likely to be heading. Local data and data by age group can highlight where problem arise, which can help in addressing some of these issues. In the coming weeks the roll out of the vaccine will continue to be monitored along with the impact of this on case rates and deaths among different age cohorts. Investigations are ongoing by NERVTAG, SPI-M, SAGE, Public Health England and Public Health Scotland regarding the impact of new variants and of vaccination, this will be reflected here as work is undertaken.

¹⁴ [Variants: distribution of cases data - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

¹⁵ [Brief note on SARS-CoV-2 variants \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

¹⁶ [Brief note on SARS-CoV-2 B.1.351 - 27 January 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

¹⁷ [Brief note on SARS-CoV-2 variant of concern P.1 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

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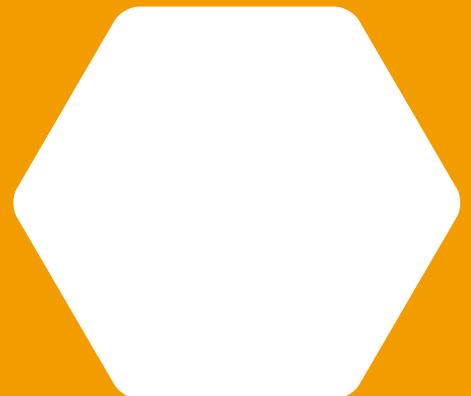
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