

## Coronavirus (COVID-19): Analysis

### State of the Epidemic in Scotland – 21<sup>st</sup> May 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 20 May 2021 on COVID-19 in Scotland. This updates the previous publication published on 14 May 2021<sup>1</sup>. 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 0.9 and 1.2. This is higher than last week.
- An average of 311 cases were reported per day in the 7 days to 20 May, which is a 29% increase in reported cases since the 13 May.
- There were 37 weekly cases per 100,000 in the week to 17 May, which is an increase since last week. This compares to 302 weekly

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<sup>1</sup> 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)

cases per 100,000 on 8 January and is similar to the weekly case rate observed on 21 September.

- Case rates saw a rise amongst all age bands with the sharpest increase in those aged 80+ followed by 0-19, 60-79, 20-39 and 40-59 this week.
- The estimated proportion of people becoming infected with Covid in Scotland has continued to decrease in the most recent week and is currently above Wales but below England and Northern Ireland as determined through the latest weekly ONS survey.
- Latest modelled estimates suggest there are currently between 4 and 10 new daily infections per 100,000 people in Scotland.
- Deaths involving coronavirus have declined most in those aged 65-74 and 85+ over the 3 weeks to 16 May, having gone down by 100%. Deaths in those aged 75-84 and 45-64 have declined by 75% and 43% respectively over the same period.
- Average daily deaths per 100,000 population in Scotland (0.01) are in line with England (0.01) and Wales (0.01), and below Northern Ireland (0.02).
- East Renfrewshire currently has the highest weekly case rates in Scotland reporting 118 cases per 100,000 in the last week, followed by Glasgow with 112 cases per 100,000, while Argyll and Bute, Dumfries and Galloway, Highland, Inverclyde, Orkney, Scottish Borders, Shetland, South Ayrshire and West Dunbartonshire reported fewer than 10 weekly cases per 100,000 each in the same time.
- At a national level hospital bed and ICU occupancy are projected to plateau or rise over the next few weeks, as a result of relaxations of non-pharmaceutical interventions.
- Over 3 million people in Scotland have been given a first vaccine against SARS-CoV-2, and over 1.7 million have now received a second dose.
- Since early 2021 the current UK variant of concern (VOC-20DEC-01) has been the dominant strain in Scotland, however recently other variants of concern (VOC) including VOC-21APR-02 (first identified in India), have been increasing in Scotland and the rest of the UK.

## **Method**

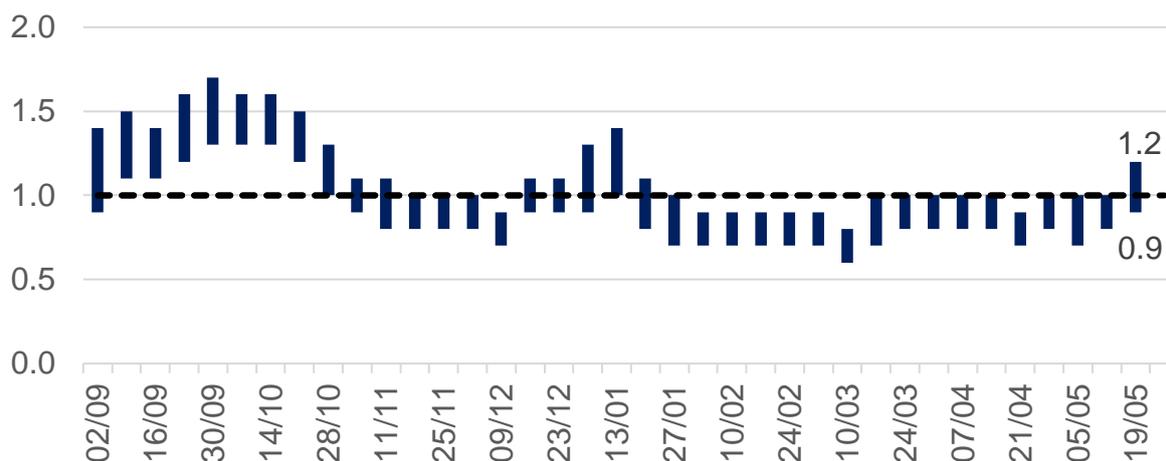
This report brings together a wide range of publically available figures from a range of data sources. These include publications by Scottish Government, Public Health Scotland, National Records of Scotland and Office for National Statistics along with scientific publications and SAGE summaries where 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 YouGov polling surveys.

### The national picture

The latest R value for Scotland (published on 20 May)<sup>2</sup> was between 0.9 and 1.2 (Figure 1), with a growth rate of between -3% and 2%.

Figure 1. R in Scotland over time



As Scotland started to move out of national-level stay at home measures, an average of 311 cases were reported per day in the 7 days to 20 May. This is a 29% increase from the daily average cases recorded a week earlier to 13 May<sup>3</sup>. Average daily cases reported are currently an eighth of the peak of 2,323 in the week to 7 January. Our current position is 37 weekly cases per 100,000 in the week to 17 May<sup>4</sup>. This compares to 302 weekly cases per 100,000 on 8 January (see Figure 2) and is similar to the weekly case rate observed on 21 September<sup>4</sup>.

The number of locations where the levels of Covid in wastewater are monitored has increased to 103 sites around Scotland. In contrast to COVID-19 case records, virus shedding into wastewater is a biological process. This means that wastewater data is unaffected by factors that impact whether testing is done. The overall level of wastewater Covid-19 has increased notably this week, reaching around two and a half times

<sup>2</sup> Scottish Government:

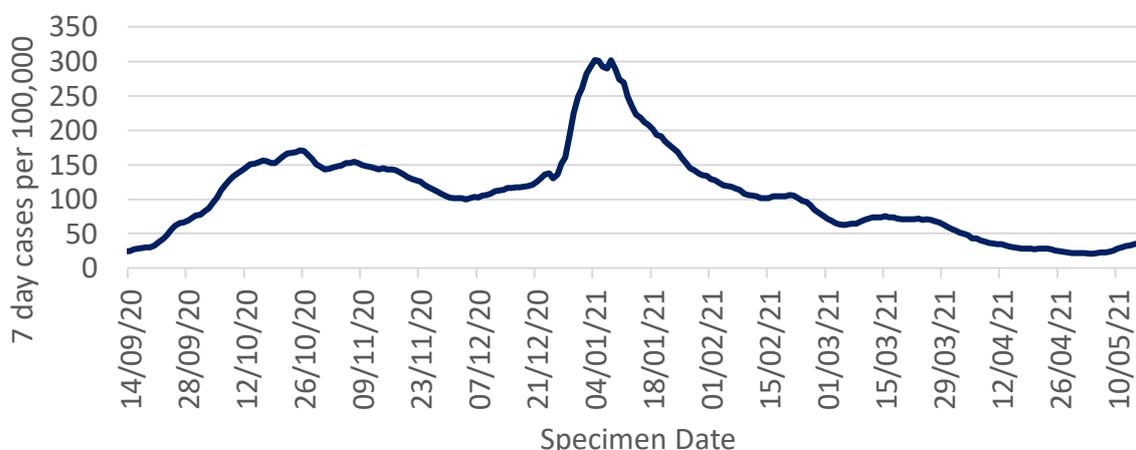
<https://www.gov.scot/publications/?term=modelling&cat=filter&topics=Coronavirus%20in%20Scotland&publicationTypes=research-and-analysis&page=1>

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

<sup>4</sup> Public Health Scotland Covid dashboard: [https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard\\_15960160643010/Overview](https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview)

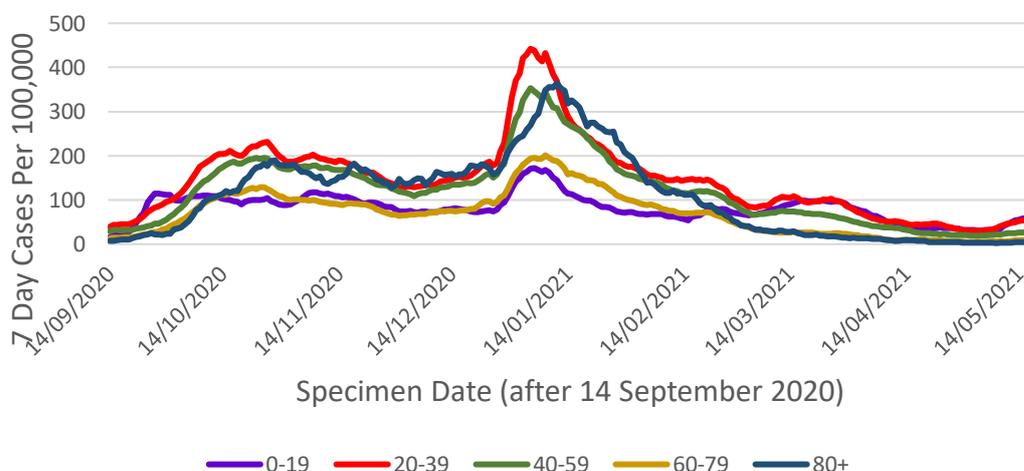
last week's levels and exceeding the rate of increase in cases. This is particularly driven by new outbreaks in the Glasgow area. Alloa in Clackmannanshire and Lerwick in the Shetland Islands both show increases in virus levels that are not yet reflected by the case levels. Additional sites where wastewater shows a rise in Covid-19, albeit to a lesser extent, are Hatton around Dundee, Inverclyde, Allanfearn in the Highlands, and some sites in the Falkirk area.

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



Case rates saw a rise amongst all age bands with the sharpest increase in those aged 80+ followed by 0-19, 60-79, 20-39 and 40-59 this week (Figure 3).

Figure 3. Seven day case rate in Scotland by age group by specimen date<sup>5</sup>. Refers to PCR testing only.



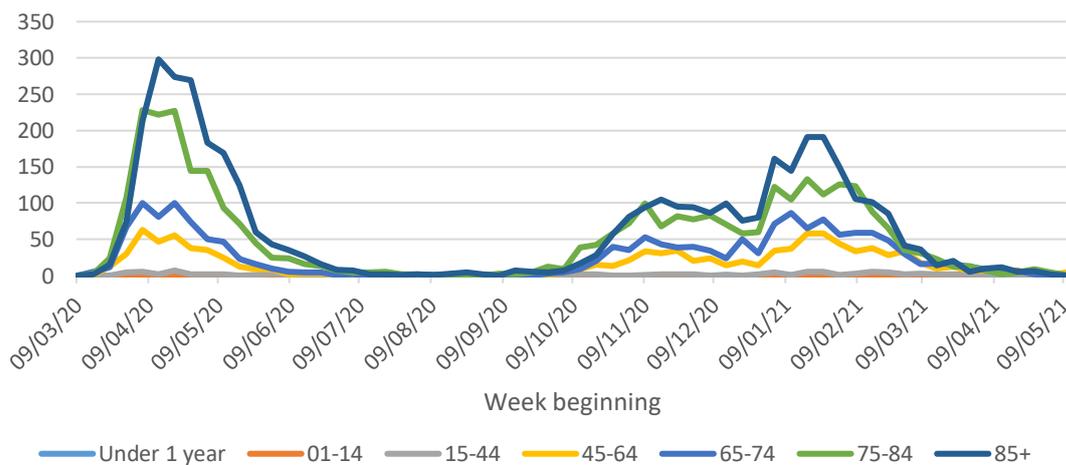
<sup>5</sup> Source: Public Health Scotland

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 anywhere between 200 and 500 people infected in Scotland each day<sup>2</sup>. This means that as of 19 May there were between 4 and 10 new daily infections per 100,000 people.

The number of people in hospital with confirmed Covid for less than 28 days has started to increase. After peaking at 2,053 on 22 January, this figure decreased to a low of 58 on 6 May. As of 20 May there were 83 patients in hospital with COVID-19. However, there was a fall in daily hospital admissions for people with Covid from a peak of 241 on 11 January to 8 on 16 May<sup>6</sup>.

There were 6 deaths registered where Covid was mentioned on the death certificate in the week to 16 May. This is a 14% decrease on the week before, and 99% lower than the peak in April 2020 (663 deaths). The proportion of deaths in care homes has decreased from 60% in April 2020 to 17% of Covid deaths in the week to 16 May 2021. Deaths involving coronavirus have declined most in those aged 65-74 and 85+ and have gone down by 100% (from 6 to 0 and from 5 to 0 deaths respectively) in these age groups over the 3 weeks to 16 May<sup>7</sup> (Figure 4). Deaths in those aged 75-84 and 45-64 have declined by 75% and 43% respectively over this period.

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



<sup>6</sup> Public Health Scotland dashboard: [COVID-19 Daily Dashboard - PHS COVID-19 | Tableau Public](#)

<sup>7</sup> NRS 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 latest ONS survey estimates that the proportion of the population infected in the community in Scotland (0.05% of people currently testing positive for Covid-19 from 9-15 May) has continued to decrease in the most recent week. This is still above Wales (0.02%), but is now below England (0.09%) and Northern Ireland (0.06%). In the week to the 15 May the estimated rate of community infection was 1 in 1,960 people in Scotland, compared to 1 in 1,110 for England, 1 in 4,340 for Wales and 1 in 1,550 for Northern Ireland<sup>8</sup>. Average daily deaths in Scotland (0.01 per 100,000 in the week to 20 May) are in line with England (0.01) and Wales (0.01), but below Northern Ireland (0.02). The Coronavirus Infection Survey estimated that in the week to 25 April, 59.2% of the adult population in Scotland would have tested positive for antibodies against Covid-19, as a result of having the infection in the past or being vaccinated. This compares to 69.3% in England, 63.2% in Wales and 63.5% in Northern Ireland<sup>9</sup>.

## Situation by local authority within Scotland

East Renfrewshire currently has the highest case rates in Scotland with 118 weekly cases reported per 100,000 in the week to 17 May, which is a 197% increase from the week to 10 May<sup>4</sup>. It is followed by Glasgow with 112 weekly cases per 100,000, which is a 58% increase from the previous week. There are mostly low levels of cases across Scotland, with moderate and high levels of cases observed across the central belt (Figure 5). Local authorities that recorded an increase in cases per 100,000 population over the last week include:

- Aberdeenshire,
- Angus,
- Argyll and Bute,
- Edinburgh,
- Clackmannanshire,
- East Dunbartonshire,
- East Lothian,
- East Renfrewshire,
- Fife,
- Glasgow,

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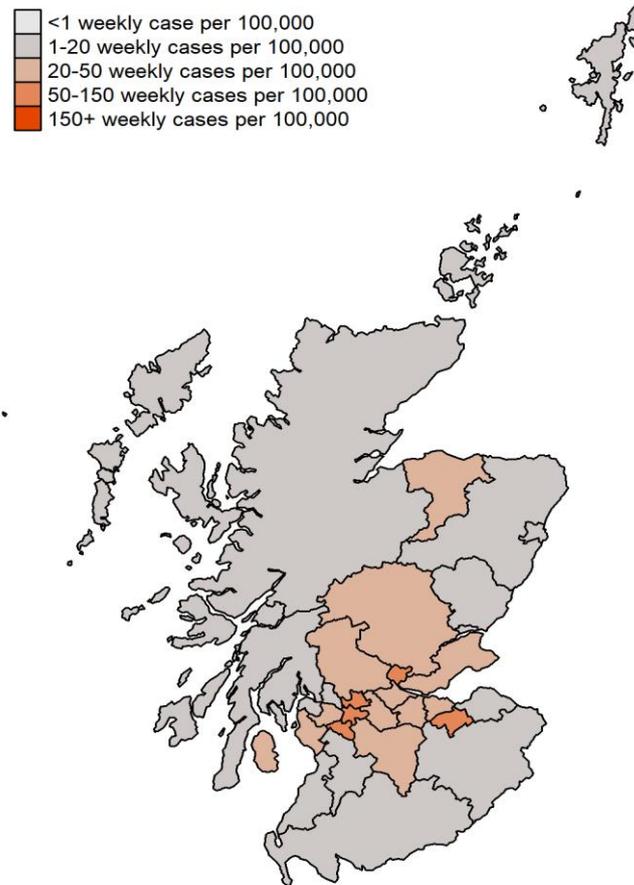
<sup>8</sup> Office for National Statistics: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveysurvey/pilot/previousReleases>

<sup>9</sup> Office for National Statistics: [Coronavirus \(COVID-19\) Infection Survey, antibody and vaccination data for the UK - Office for National Statistics](#)

- Midlothian,
- Na h-Eileanan Siar,
- North Ayrshire,
- North Lanarkshire,
- Orkney,
- Perth and Kinross,
- Renfrewshire,
- Scottish Borders,
- Shetland,
- South Lanarkshire and
- Stirling.

Argyll and Bute, Dumfries and Galloway, Highland, Inverclyde, Orkney, Scottish Borders, Shetland, South Ayrshire and West Dunbartonshire each had fewer than 10 weekly cases per 100,000 in the week to 17 May<sup>4</sup>.

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



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 Scottish Government  
Riaghaltas na h-Alba  
gov.scot

The most recent modelling predicts that for the week ending 5 June, Glasgow has at least a 75% probability of exceeding 50 cases per 100,000 population (Figure 6)<sup>2</sup>.

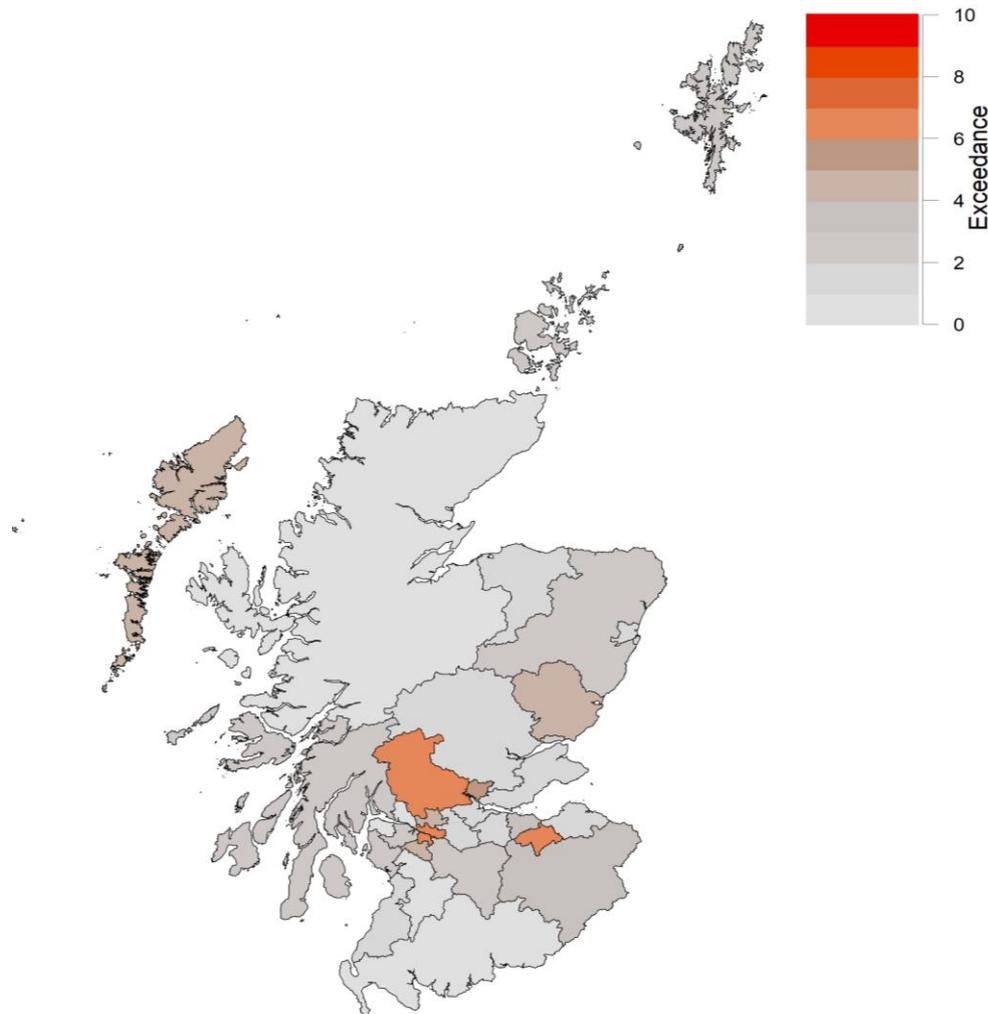
Figure 6. Maps of probability of Local Authorities exceeding 50, 100, 300 and 500 cases per 100,000 population in the period 30 May – 5 June 2021



There were also nine local authorities that exceeded what would be expected at this stage in the epidemic between 13-19 May. Health Protection Scotland defines exceedance as a greater than expected rate of infection compared with the usual background rate for the place and

time where the incident has occurred<sup>10</sup>. Clackmannanshire, East Dunbartonshire, East Renfrewshire, Edinburgh, Glasgow, Midlothian, Na h-Eileanan Siar, Scottish Borders and Stirling were identified as areas at higher risk of increasing transmission in the week to 19 May (Figure 7)<sup>2</sup>.

Figure 7. Map of cumulative weekly exceedance for Local Authorities in Scotland to 19 May<sup>2</sup>



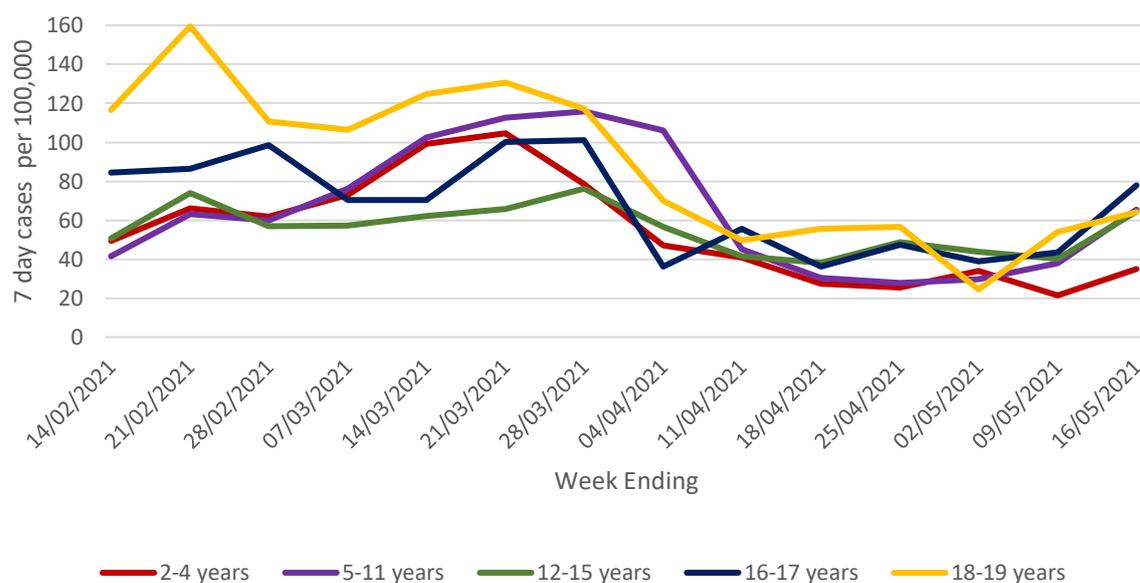
<sup>10</sup> Healthcare infection incidents and outbreaks in Scotland - [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2181/documents/1\\_chapter-3-literature-review-v1.0.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2181/documents/1_chapter-3-literature-review-v1.0.pdf)

## Children and Education

The majority of children and young people had returned to full time education by the 19 April. Over the last week there was an increase in the total number of COVID-19 cases in young people, which has gone up from 399 cases in the week to 9 May to 642 cases in the week ending 16 May. 7 day cases per 100,000 have increased in all age groups in the week ending 16 May, and the highest proportion of cases is still observed in those under 12 (335 cases) (Figure 8)<sup>11</sup>.

The rate of testing also increased amongst all age groups in the week ending 16 May. Test positivity rates have increased in all age groups except for 12-15 year olds this week<sup>12</sup>. Overall, the proportion of school, early learning and childcare settings with incidents remains low.

Figure 8. Seven day case rate in Scotland by age group by specimen date for children. Refers to PCR testing only.



## 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 Covid<sup>2</sup>. From this survey we can say that average contacts increased by 12% in

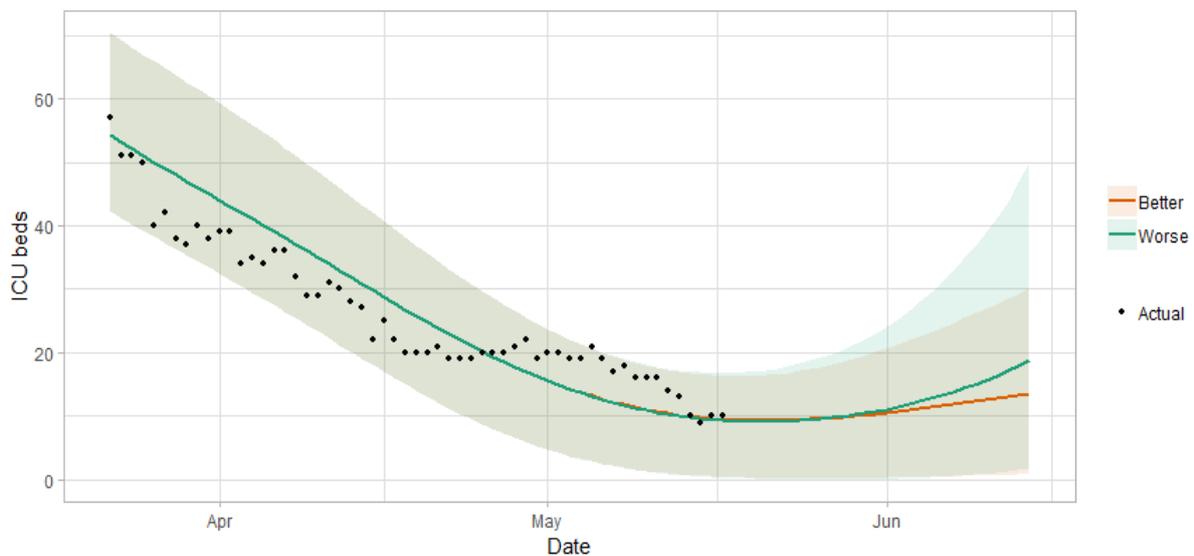
<sup>11</sup> Public Health Scotland: [PHS COVID-19 Education report \(shinyapps.io\)](https://shinyapps.io)

the last two weeks (comparing surveys pertaining to 22 – 28 April and 6 - 12 May) with a current level of 4.3 daily contacts. The biggest increase in contacts is seen within leisure settings (contacts outside of the school, home and work), rising by 26%. Contacts within work and school have also increased by 14% and 22% respectively. Over this same period, all individuals with the exception of those aged between 40 and 59 increased their contacts. The biggest increase is seen by those aged between 18-29, increasing by 50%, largely driven by work contacts.

Self-reported compliance with the current regulations and guidance has decreased since January but remains at a high level. On 18-19 May, 71% of people reported 'complete' or 'almost complete' compliance<sup>12</sup>.

Hospital bed and ICU occupancy are projected to plateau or rise over the next few weeks, as a result of relaxations of non-pharmaceutical interventions (Figure 9<sup>2</sup>).

Figure 9. Medium term projections of modelled ICU bed demand, from Scottish Government modelling<sup>13</sup>

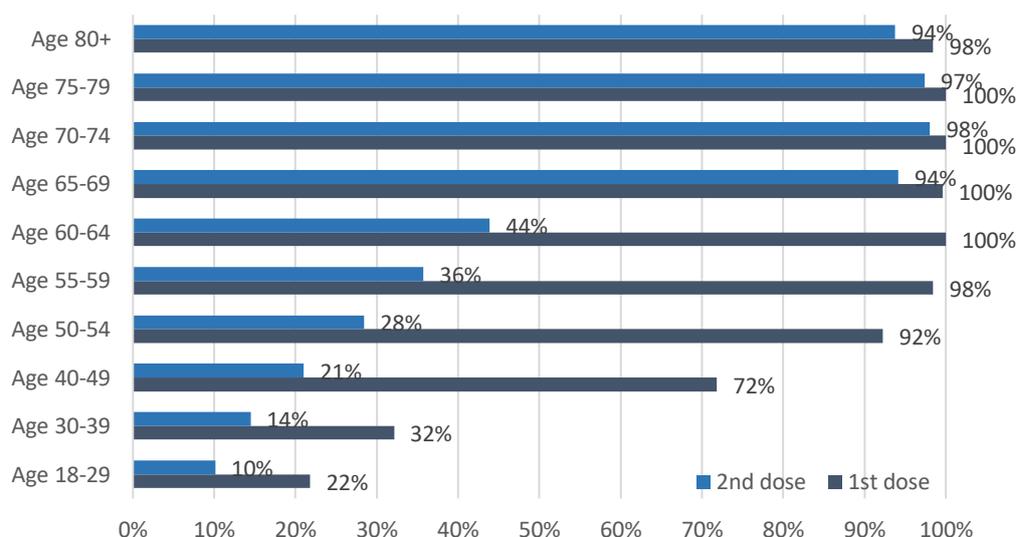


<sup>12</sup> Results are taken from questions run on behalf of Scottish Government on the YouGov online omnibus survey. The sample is demographically and geographically representative of adults 18+ across Scotland, with c.1000 responses each week. Fieldwork took place on 18-19 May with a total sample size of 1,063 adults. 'Complete' or 'almost complete' compliance refers to respondents who rated themselves 6 or 7 on a scale of 1-7 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?*

<sup>13</sup> Both scenarios are based on current vaccine roll-out plans and efficacy assumptions. Actual data does not include full numbers of CPAP. ICU bed actuals include all ICU patients being treated for Covid-19 including those over 28 days.

Vaccinations are continuing across the priority groups and 69.0% of the adult population in Scotland has now been vaccinated with the first dose<sup>4</sup>. The first vaccines were administered on Tuesday 8 December and 3,063,648 had received their first dose by 20 May 2021, a 3% increase from 13 May<sup>3</sup>. By 20 May over 35,000 residents in care homes had received their first vaccination along with over 53,000 care home staff. In older adult care homes 93.0% of residents have now received their second dose. By age group, almost 100% of individuals aged 55+ and 92% of those aged 50-54 had received their first vaccination (Figure 10). 94% of the over 80s, 97% of those aged 75-79, 98% of those aged 70-74, and 94% of those aged 65-69 have received their second dose. Overall, 1,742,072 (39.2%) of those aged 18 and over had received their second dose by 20 May<sup>6</sup>. There remains low levels of hospitalisations and deaths among those groups vaccinated first (Figure 4).

Figure 10. Estimated percentage of adults vaccinated by 20 May 2021



The proportion of people surveyed who said they would be likely to be vaccinated for COVID-19 remains high. 62% of all respondents have already received at least their first vaccine dose<sup>14</sup>. Of those not vaccinated, 74% report they are likely to be vaccinated when a vaccine becomes available to them<sup>15</sup>.

<sup>14</sup> You Gov results for previous reports have been reviewed retrospectively. 11-12 May: 66% of all respondents have already received at least their first vaccine dose. 4-5 May: 64% of all respondents have already received at least their first vaccine dose.

<sup>15</sup> Total sample size on 18-19 May was 1,063 adults. Sample size for those who have not yet received their first vaccine was 263 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

## How the virus is changing

Since early 2021 the current UK variant of concern (VOC-20DEC-01) has been the dominant strain in Scotland<sup>16</sup>. However, other variants of concern (VOCs) are being monitored by sequencing of SARS-CoV-2 samples (Figure 11), which have been increasing in Scotland and the rest of the UK. To date there are five VOCs and eight variants under investigation<sup>17</sup>. Up to 19 May, there have been 49 genomically confirmed cases of the variant VOC-20DEC-02 (first seen in South Africa) detected in Scotland. There have been 12 confirmed cases of the variant VOC-21JAN-02 (first identified from Brazil). There have also been a number of cases of other variants, which are currently under investigation, including 38 cases of VUI-21FEB-03 (first seen in Nigeria) (up one from last week) and 27 cases of VUI-21APR-01 (first identified in India), an increase of 4 in the past week. There have been 136 cases of VOC-21APR-02 (first identified in India), an increase of 101 from last week. There is some concern that some of these new variants may partially escape immunity, from both natural infection and from vaccines currently being deployed, and we are monitoring the evidence on this<sup>18 19 20</sup>.

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available to you? (Please select a number between 0 and 10, where 0 means 'extremely unlikely' and 10 means 'extremely likely')

<sup>16</sup> Public Health Scotland: <https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/covid-19-statistical-report/9-september-2020/dashboard/>

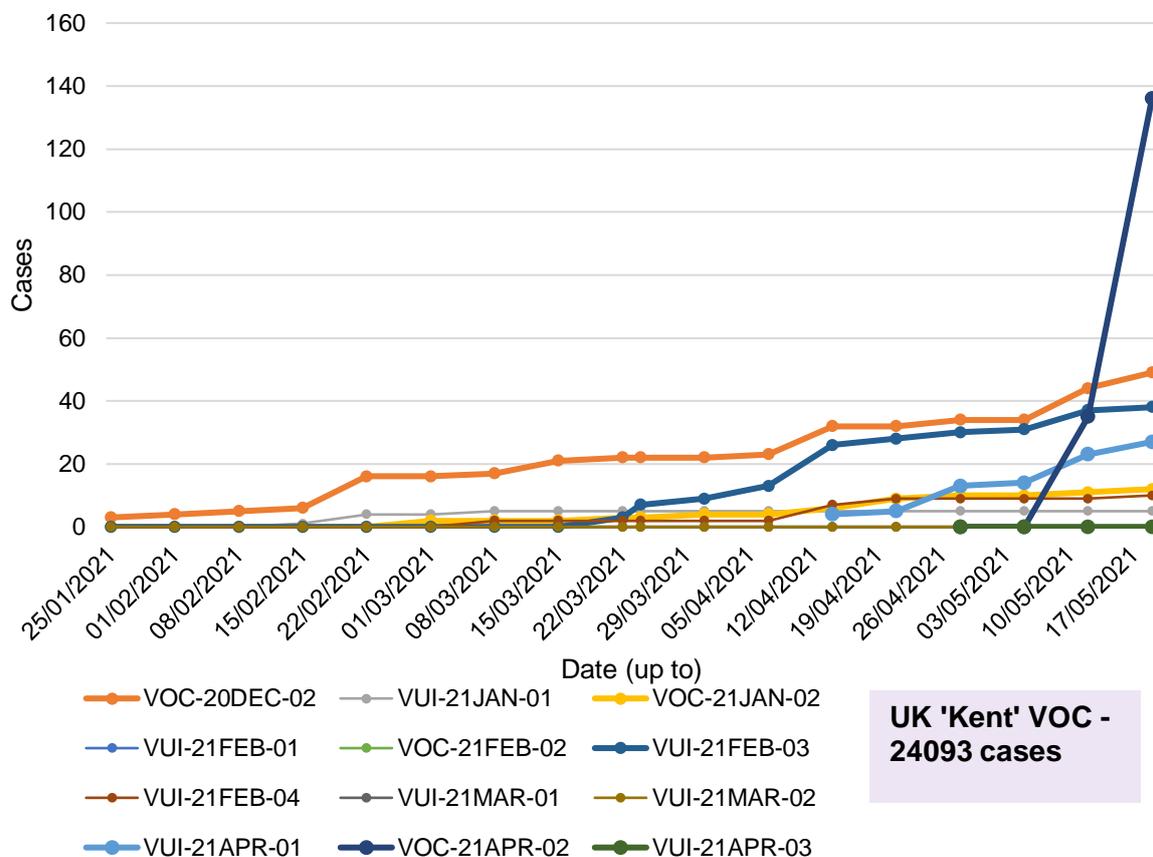
<sup>17</sup> [Variants: distribution of cases data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/variants-distribution-of-cases-data)

<sup>18</sup> [Brief note on SARS-CoV-2 variants \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/publications/brief-note-on-sars-cov-2-variants)

<sup>19</sup> [Brief note on SARS-CoV-2 B.1.351 - 27 January 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/publications/brief-note-on-sars-cov-2-b-1-351-27-january-2021)

<sup>20</sup> [Brief note on SARS-CoV-2 variant of concern P.1 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/publications/brief-note-on-sars-cov-2-variant-of-concern-p-1)

Figure 11. Variants detected in Scotland by sequencing (data up to 19 May and reported weekly<sup>21</sup>)



**UK 'Kent' VOC - 24093 cases**

## 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 the 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 problems 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.

<sup>21</sup> [Variants: distribution of cases data - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

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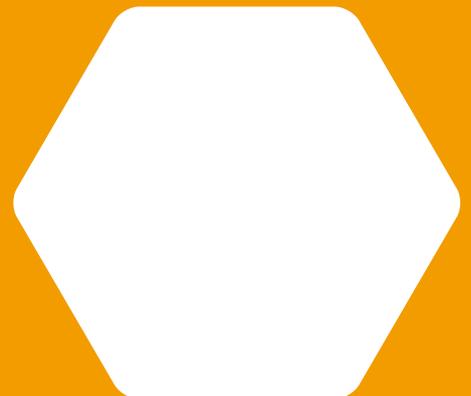
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