

## Coronavirus (COVID-19): Analysis

### State of the Epidemic in Scotland (9<sup>th</sup> April 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 8 April 2021 on COVID-19 in Scotland. This updates the previous publication published on 1 April 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 0.8 and 1.0. This is unchanged from the estimate of R as of 31 March.
- An average of 331 cases were reported per day in the 7 days to 8 April, which is a 28% decrease in reported cases since the 1 April.
- There were 43 weekly cases per 100,000 in the week to 5 April, which is a slight decrease since last week. This compares to 302

<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/)

weekly cases per 100,000 on 8 January and is similar to the weekly case rate observed on 22 September.

- Case rates in all age groups have decreased, with the sharpest decline in cases in those under 40 this week.
- The estimated proportion of people becoming infected with Covid in Scotland has decreased slightly in the most recent week and is currently below England, and Northern Ireland but above Wales as determined through the latest weekly ONS survey.
- Latest modelled estimates suggest there are currently between 13 and 31 new daily infections per 100,000 people in Scotland. This is unchanged from the estimate of 31 March.
- Average daily deaths per 100,000 population in Scotland (0.03) are below England (0.05), Northern Ireland (0.06) and Wales (0.08).
- Clackmannanshire currently has the highest weekly case rate in Scotland reporting 173 cases per 100,000 in the last week, while Argyll and Bute and Scottish Borders reported fewer than 10 weekly cases per 100,000 in the same time. Shetland, Dumfries and Galloway, Na h-Eileanan Siar and Orkney each had 0 cases per 100,000 in the last week.
- At a national level hospital bed and ICU occupancy are projected to fall over the next few weeks, but these both may plateau or increase as a result of schools reopening and other relaxations of non-pharmaceutical interventions.
- Over 2.6 million people in Scotland have been given a first vaccine against SARS-CoV-2, and over 500,000 have now received a second dose.
- The current UK variant of concern remains the dominant strain.

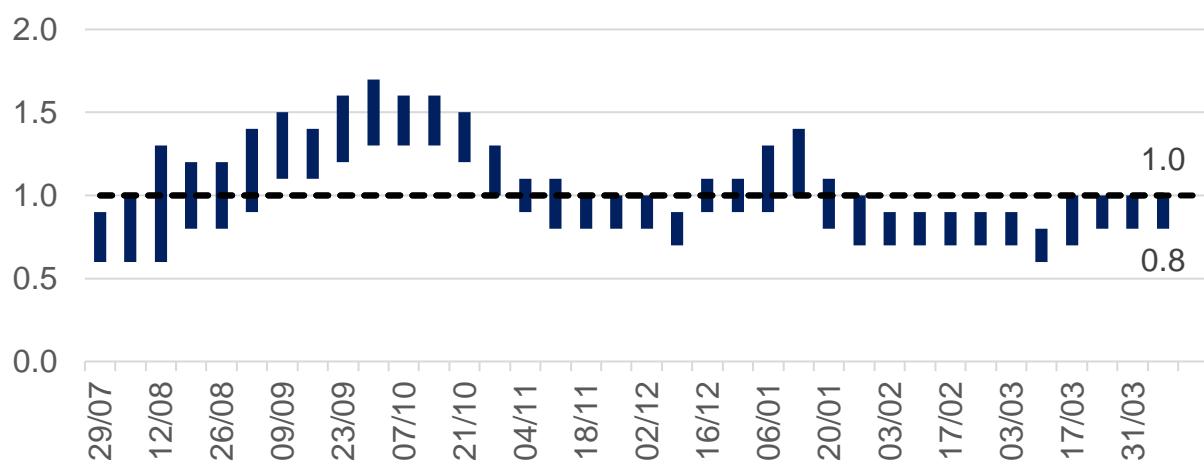
### **Method**

This report brings together a wide range of publicly 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 8 April)<sup>2</sup> has remained the same this week and was between 0.8 and 1.0 (Figure 1), with a growth rate of between -4% and 0%.

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 331 cases were reported per day in the 7 days to 8 April, this is a 28% decrease from the daily average cases recorded a week earlier to 1 April<sup>3</sup>. Average daily cases reported are now around a seventh of the peak of 2,323 in the week to 7 January. Our current position is 43 weekly cases per 100,000 in the week to 5 April<sup>4</sup>. This compares to 302 weekly cases per 100,000 on 8 January and is similar to the weekly case rate observed on 22 September (see Figure 2)<sup>4</sup>.

The number of locations where the levels of Covid in wastewater are monitored has increased from 28 to 97 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

<sup>2</sup> Scottish Government:

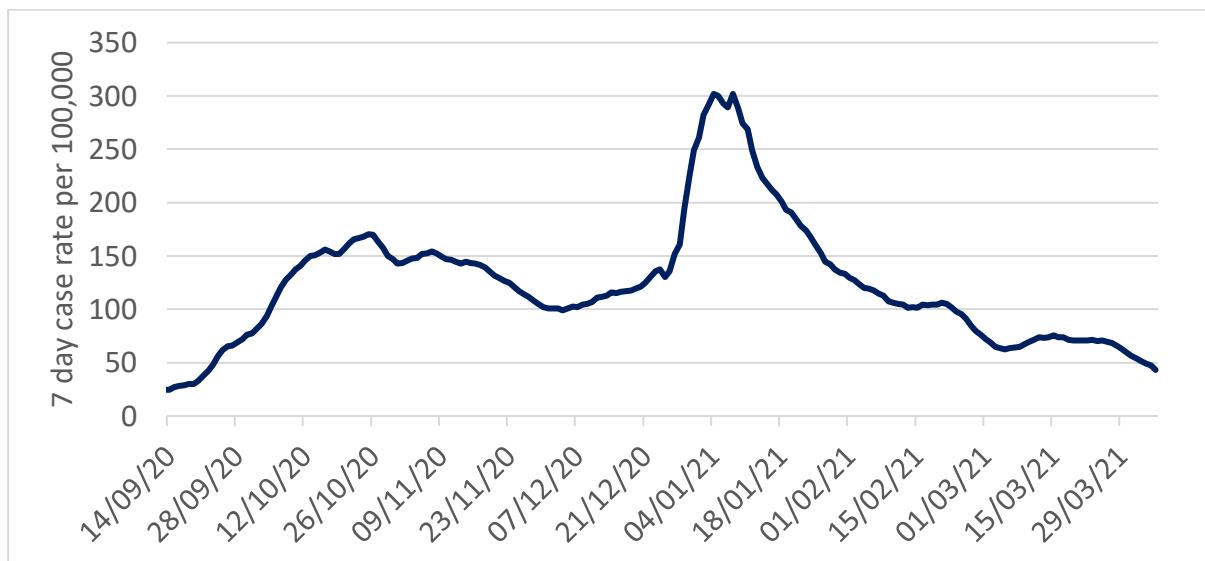
<https://www.gov.scot/publications/?term=modelling&cat=filter&topics=Coronavirus%20in%20Scotland&publicationsTypes=research-and-analysis&page=1>

<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)

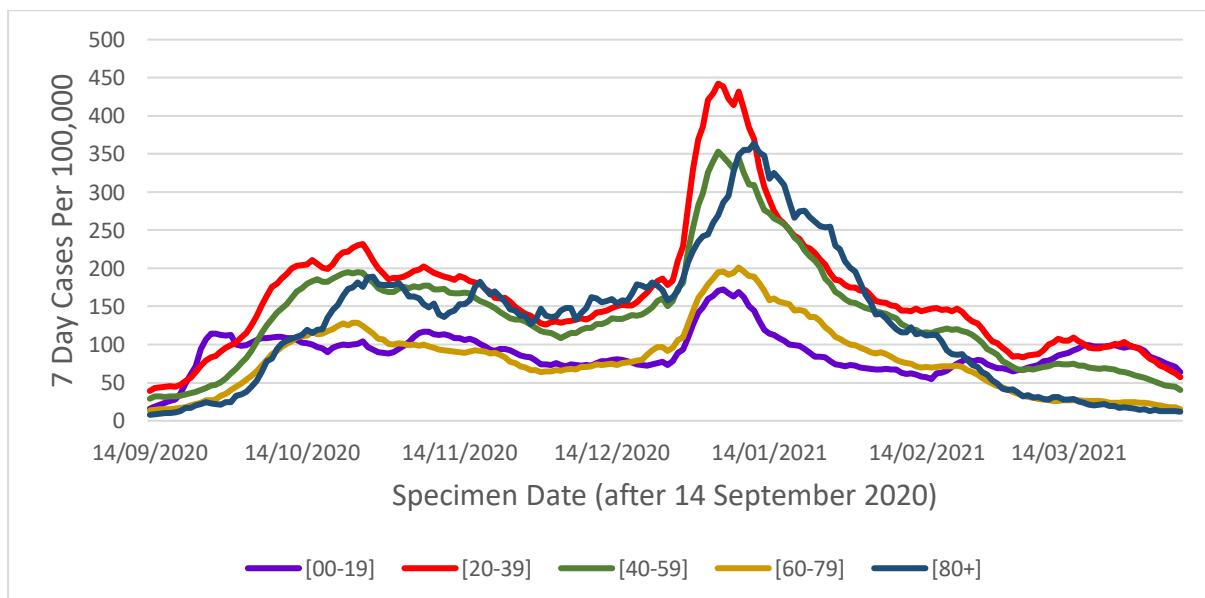
wastewater RNA this week was slightly lower than the last few weeks, consistent with a slight fall in the rate of new cases.

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



Case rates in all age groups have decreased, with a sharpest decline in cases in those under 40 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.



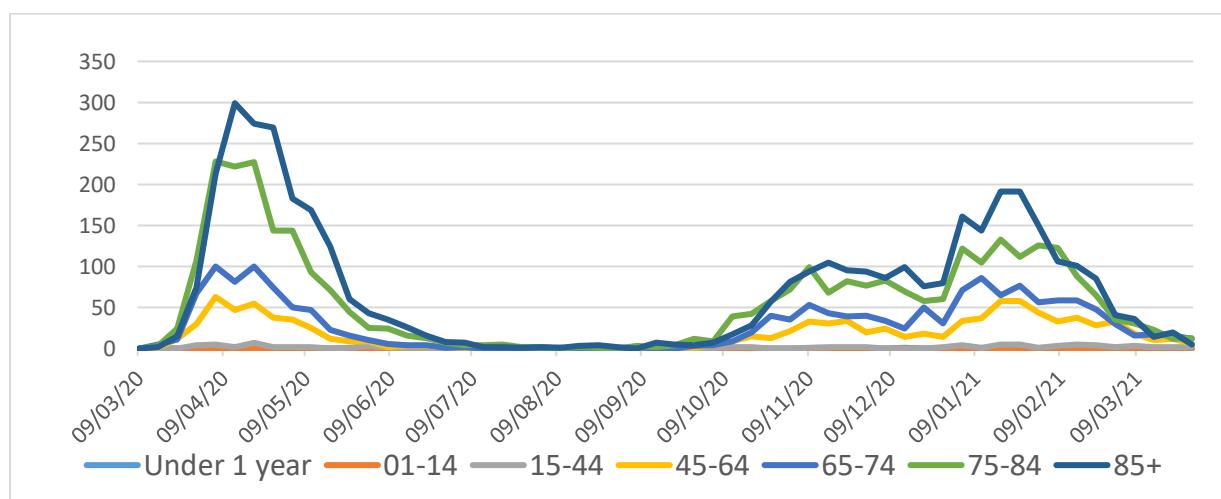
<sup>5</sup> Source: Public Health Scotland

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 700 and 1,700 people infected in Scotland each day<sup>2</sup>. This means that as of 7 April there were between 13 and 31 new daily infections per 100,000 people. This is unchanged from the estimate on 31 March.

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 8 April there were 174 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 16 on 27 March<sup>6</sup>.

There were 38 deaths registered where Covid was mentioned on the death certificate in the week to 4 April. This is a 39% decrease on the week before (62 deaths), and 94% lower than the peak in April 2020 (663 deaths). The proportion of deaths in care homes has decreased from 36% in mid-December to 11% of total deaths in the week to 4 April. Deaths involving coronavirus have declined most in those aged 85+ and have gone down by 86% over the 3 weeks to 4 April<sup>7</sup> (Figure 4). Deaths in those aged 45-64 and 75-84 have declined by 67% and 58% respectively, and in the 65-74 deaths decreased by 25% over the same 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](https://www.gov.scot/coronavirus-covid-19/covid-19-daily-data/)

<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 (0.25% people currently testing positive for Covid-19 on 28 March – 3 April) has decreased slightly since last week and is now below England (0.30%), and Northern Ireland (0.33%), but above Wales (0.12%). In the week to the 3 April the estimated rate of community infection was 1 in 410 people in Scotland, compared to 1 in 340 for England, 1 in 800 for Wales and 1 in 300 for Northern Ireland<sup>8</sup>. Average daily deaths in Scotland (0.03 per 100,000 in the week to 8 April) are below England (0.05), Northern Ireland (0.06), and Wales (0.08). The Coronavirus Infection Survey estimated that in the week to 14 March, 42.6% (2 in 5) of the population in Scotland would have tested positive for antibodies against Covid-19. This compares to 54.7% (1 in 2) in England, 50.5% (1 in 2) in Wales, and 49.3% (1 in 2) in Northern Ireland<sup>9</sup>.

## **Situation by local authority within Scotland**

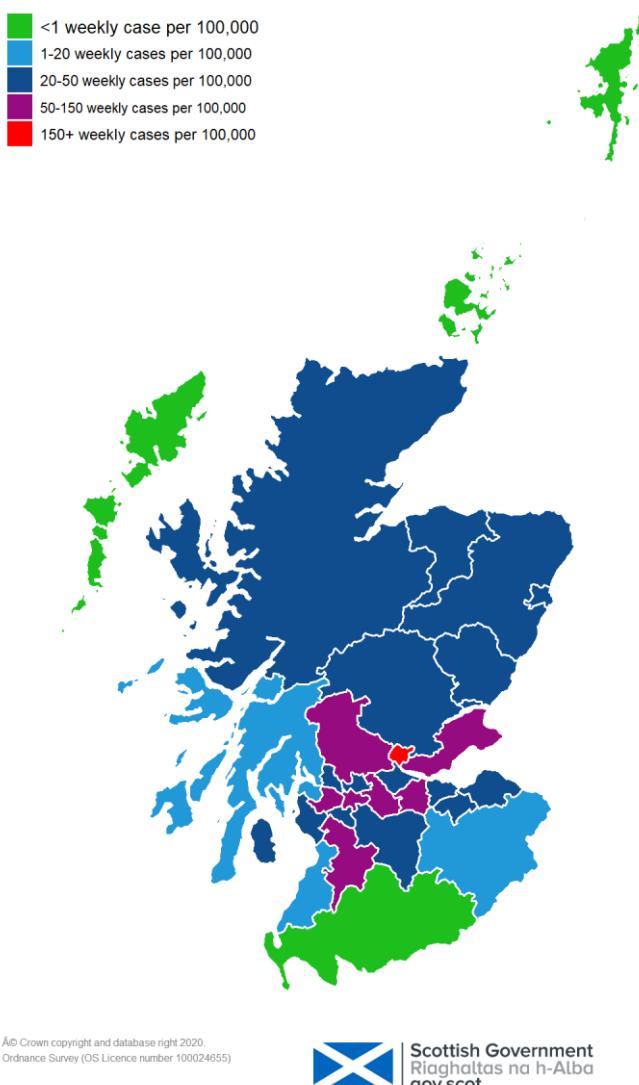
Clackmannanshire currently has the highest case rates in Scotland with 173 weekly cases being reported per 100,000 in the week to 5 April. This is a decrease of 13% from the week to 29 March<sup>4</sup>. There remains moderate levels of cases across large areas of Scotland (Figure 5). Most Local Authorities recorded a fall in cases in the last week. Argyll and Bute and Scottish Borders each have fewer than 10 weekly cases per 100,000. Shetland, Dumfries and Galloway, Na h-Eileanan Siar and Orkney each had 0 cases per 100,000 in the last week<sup>4</sup>.

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<sup>8</sup> Office for National Statistics:  
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionssurveypilot/previousReleases>

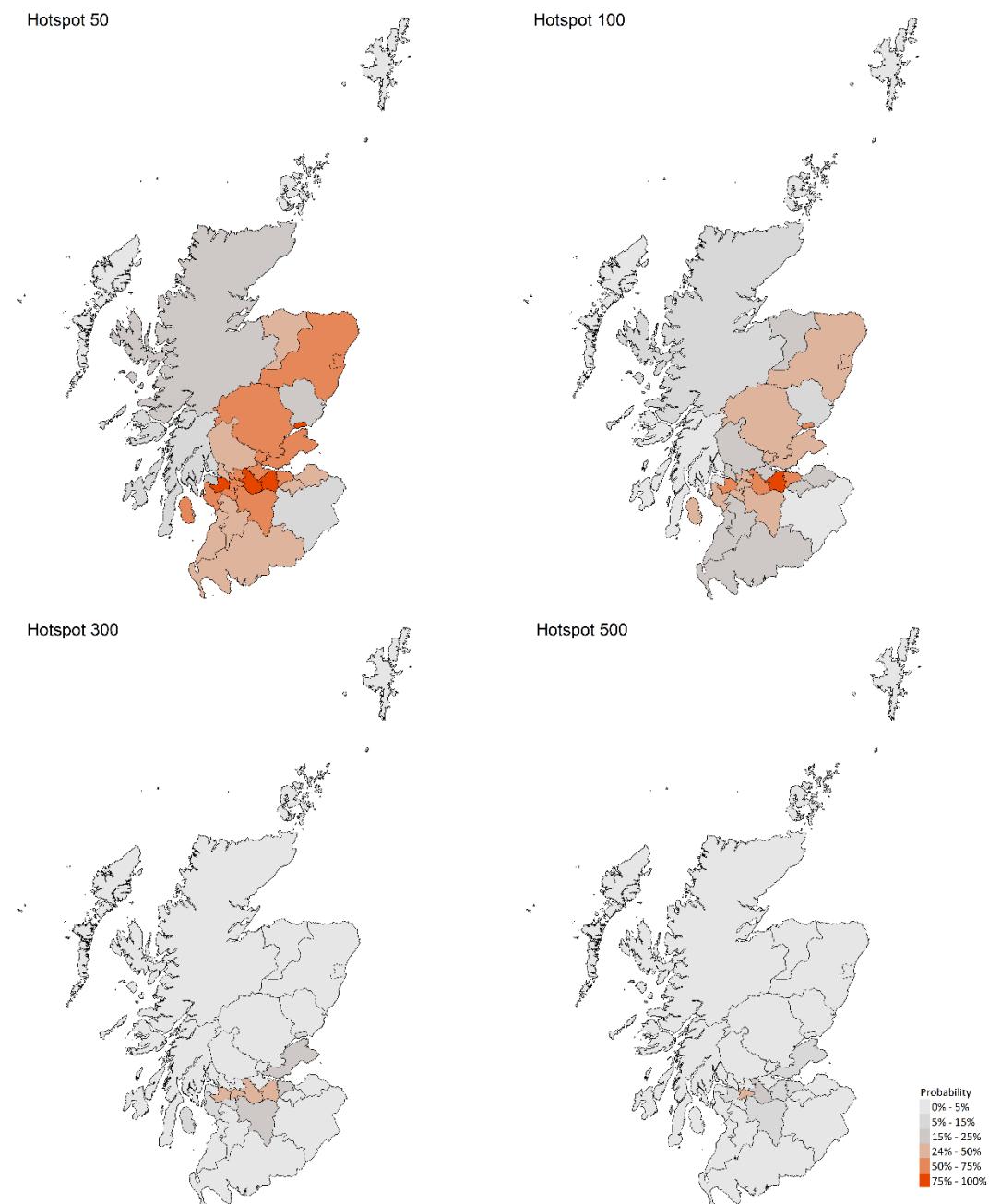
<sup>9</sup> Office for National Statistics: [Coronavirus \(COVID-19\) Infection Survey, antibody and vaccination data for the UK - Office for National Statistics](https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionssurveypilot/previousReleases)

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



The most recent modelling predicts that for the week ending 24 April, there is at least a 75% probability of 4 Local Authorities exceeding 50 cases, 1 Local Authority exceeding 100 cases, and no areas exceeding 300 cases (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 18-24 April 2021<sup>10</sup>



## Children and Education

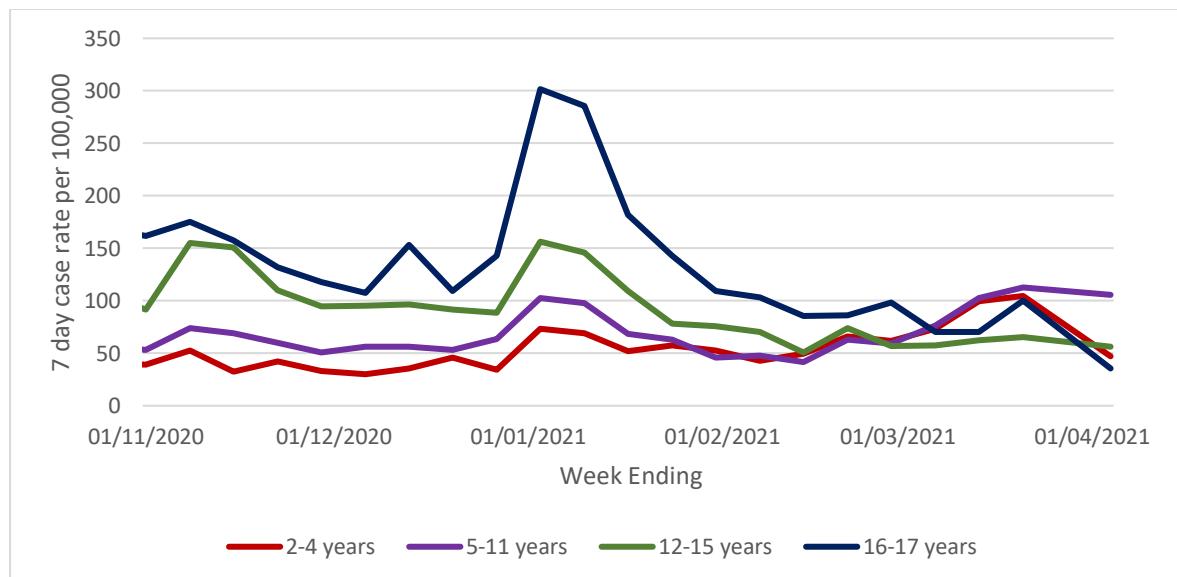
Children in early learning and childcare and those in primaries 1-3 went back to school or nursery on 22 February, and all children in primaries 4-7 went back on the 15 March. There has also been a phased return to secondary schools, with some Senior Phase (S4-S6) pupils returning to school on a part-time basis to attend practical lessons from the 22

<sup>10</sup> Estimates are not available for Na h-Eileanan Siar or the Shetland Islands.

February and all secondary school pupils (S1-S6) returning on a part-time basis from the 15 March. All schools are currently closed for the Easter break. All children and young people are expected to return to full time education on the 12<sup>th</sup> or 19<sup>th</sup> April.

Over the last week there was a decrease in the total number of COVID-19 cases in children, which has gone down from 1,043 cases in the week to 28 March to 772 cases in the week ending 4 April. The sharpest fall in 7 day cases per 100,000 was observed in those aged 2-4 and 16-17 (Figure 7)<sup>11</sup>, with the highest proportion of cases still observed in those under 12. Following a rise in the rate of testing after the latest phase of the return to schools on 15 March, there has been a decrease in testing amongst all age groups in week ending 4 April. Test positivity rates have increased from 5.3% to 6.9% in those aged 5-11 in the same period<sup>11</sup>.

Figure 7. Seven day case rate in Scotland by age group by specimen date for children. Refers to PCR testing only.



Overall, the proportion of school, early learning and childcare settings with incidents remains low.

## Looking ahead

Changes in patterns of mixing and adherence to restrictions will impact on future case numbers. The Scottish Contact Survey measures times

<sup>11</sup> Public Health Scotland: [Dashboard - Data & intelligence from PHS \(isdscotland.org\)](https://isdscotland.org)

and settings that people mix where they could potentially spread Covid<sup>2</sup>. From this survey we can say that contacts increased in comparison to two weeks prior (currently 3.2 average daily contacts). Contacts within the work setting have increased by 49% in the last two weeks, whereas mean contacts in the school setting have decreased by approximately 18%, coinciding with spring holidays. Those aged between 50 and 70 have shown the largest increase in contacts in the most recent survey, largely driven by contacts in the work and in the ‘other’ setting (contacts outside of the school, home or work settings). Although there are increases in contacts for those aged over 50, positive Covid-19 cases and deaths for everyone over this age continue to decline.

There is a high level of self-reported compliance with the current regulations and guidance. On 6-7 April, 71% of people reported ‘complete’ or ‘almost complete’ compliance<sup>12</sup>.

Hospital bed and ICU occupancy are projected to fall over the next few weeks, but these both may plateau or increase as a result of schools reopening and other relaxations of non-pharmaceutical interventions<sup>2</sup>.

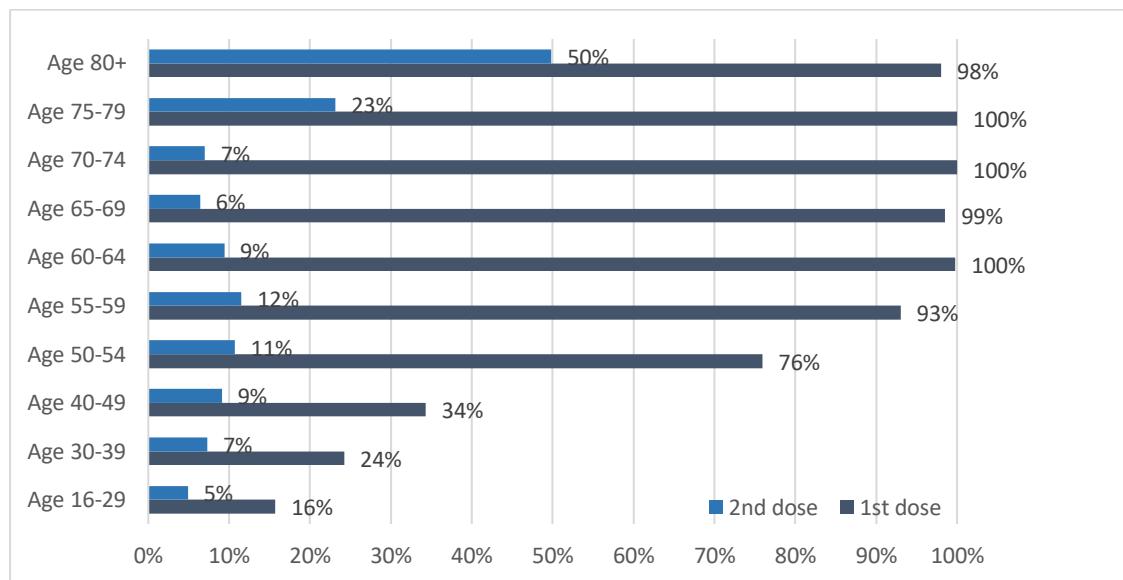
Vaccinations are continuing across the priority groups and just over 57% of the adult population in Scotland has now been vaccinated with the first dose<sup>4</sup>. The first vaccines were administered on Tuesday 8 of December and 2,608,831 had received their first dose by 8 April 2021, a 5% increase from the 1 April<sup>3</sup>. By the 8 April over 34,000 residents in care homes had received their first vaccination along with over 51,000 care home staff. In older adult care homes almost 88% of residents have now received their second dose. By age group, almost 100% of individuals aged 60+, 93% of those aged 55-59 and 76% of those aged 50-54 had received their first vaccination (Figure 8). 500,376 (11.0%) of those aged 16 and over have also received their second dose by 8 April<sup>6</sup>. There are indications of decreasing hospitalisations and deaths among those groups vaccinated first (Figure 4).

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<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 6-7 April with a total sample size of 1,055 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?*

Figure 8. Estimated percentage of people vaccinated by 8 April 2021



The proportion of people surveyed who said they would be likely to be vaccinated for COVID-19 remains high. 57% of all respondents have already received at least their first vaccine dose. Of those not vaccinated, 76% report they are likely to be vaccinated when a vaccine becomes available to them<sup>13</sup>.

### How the virus is changing

The variant of the virus commonly known as the UK variant (VOC-20DEC-01) has been increasing its share of confirmed cases since it was first detected in Scotland in mid-December and is now the dominant strain<sup>14</sup>. This new variant of Covid is more transmissible<sup>15</sup>. It is likely that infection with this variant is associated with an increased risk of hospitalisation and death compared to infection with non-VOC viruses<sup>16</sup>.

Other variants of concern (VOCs) are being monitored by sequencing of SARS-CoV-2 samples. To date there are four VOCs and six variants

<sup>13</sup> Total sample size on 6-7 April was 1,055 adults. Sample size for those who have not yet received their first vaccine was 384 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')

<sup>14</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>15</sup> Investigation of novel SARS-CoV-2 variant - Variant of Concern 202012/01 (publishing.service.gov.uk)

<sup>16</sup> S1095\_NERVTAG\_update\_note\_on\_B.1.1.7\_severity\_20210211.pdf (publishing.service.gov.uk)

under investigation<sup>17</sup>. Up to 7 April, there have been 23 genetically confirmed cases and 5 probable cases of the variant VOC-20DEC-02 (first seen in South Africa) detected in Scotland. There have been 4 confirmed and 1 probable case of the variant VOC-21JAN-02 (first identified from Brazil). 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>.

## 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 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.

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<sup>17</sup> [Variants: distribution of cases data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/covid-19-variants-distribution-of-cases)

<sup>18</sup> [Brief note on SARS-CoV-2 variants \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/2021/01/27/brief-note-on-sarscov2-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/2021/01/27/brief-note-on-sarscov2-b1351-27-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/2021/01/27/brief-note-on-sarscov2-variant-of-concern-p-1/)

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