

Coronavirus (COVID-19): Analysis

State of the Epidemic in Scotland – 27th 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 26 May 2021 on Covid-19 in Scotland. This updates the previous publication published on 21 May 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 and local level, and how Scotland currently compares to the rest of the UK. It looks at the vaccination program in Scotland and the effects that 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 1.0 and 1.3. This is higher than last week.
- An average of 396 cases were reported per day in the 7 days to 26 May, which is a 38% increase in reported cases since the 19 May.
- There were 47 weekly cases per 100,000 in the week to 23 May, which is an increase since last week. This compares to 302 weekly

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)

cases per 100,000 on 8 January and is similar to the weekly case rate observed on 23 September.

- Case rates saw a rise amongst all age bands with the sharpest increase in those aged 80+ followed by 0-19, 40-59, 20-39 and 60-69 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 6 and 14 new daily infections per 100,000 people in Scotland.
- Deaths involving coronavirus have declined most in those aged 45-64 and 65-74 over the 3 weeks to 23 May, having gone down by 100%. Deaths in those aged 75-84 and 85+ have declined by 78% and 67% respectively over the same period.
- Average daily deaths per 100,000 population in Scotland (0.01) are below Wales (0.03), in line with England (0.01) and above Northern Ireland (0.00).
- Clackmannanshire currently has the highest weekly case rate in Scotland reporting 163 cases per 100,000 in the last week, followed by Glasgow with 144 cases per 100,000. Dumfries and Galloway, Highland, Inverclyde, Na h-Eileanan Siar and Scottish Borders reported fewer than 10 weekly cases per 100,000 and Orkney and Shetland reported no weekly cases per 100,000 in the same period.
- 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 3.1 million people in Scotland have been given a first vaccine against SARS-CoV-2, and over 1.9 million have now received a second dose.
- The variant of concern VOC-21APR-02 (first identified in India) is spreading rapidly and in some parts of Scotland is fast replacing VOC-20DEC-01 the “UK variant” as the dominant strain.

Method

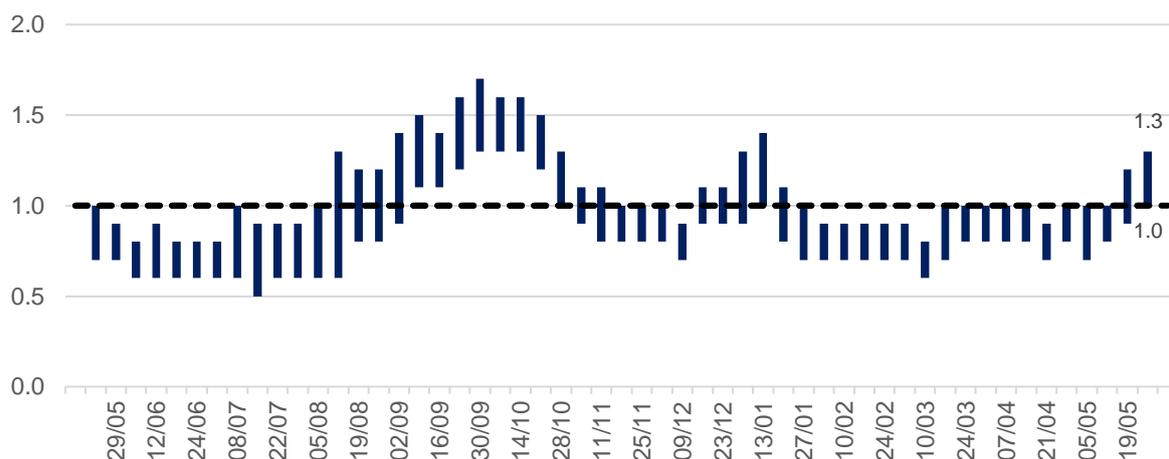
This report brings together a wide range of publically available figures from a range of data sources. These include publications by Scottish Government, Public Health Scotland, National Records of Scotland and Office for National Statistics along with scientific publications and SAGE summaries where 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 27 May)² was between 1.0 and 1.3 (Figure 1), with a growth rate of between 0% and 4%.

Figure 1. R in Scotland over time.



As Scotland continues to move out of national-level stay at home measures, an average of 396 cases were reported per day in the 7 days to 26 May. This is a 38% increase from the daily average cases recorded a week earlier to 19 May³. Average daily cases reported are currently a sixth of the peak of 2,323 in the week to 7 January. Our current position is 47 weekly cases per 100,000 in the week to 23 May⁴. 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 23 September⁴.

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 remained at levels similar to last week. This is due to offsetting between large increases and decreases in the Glasgow area, while

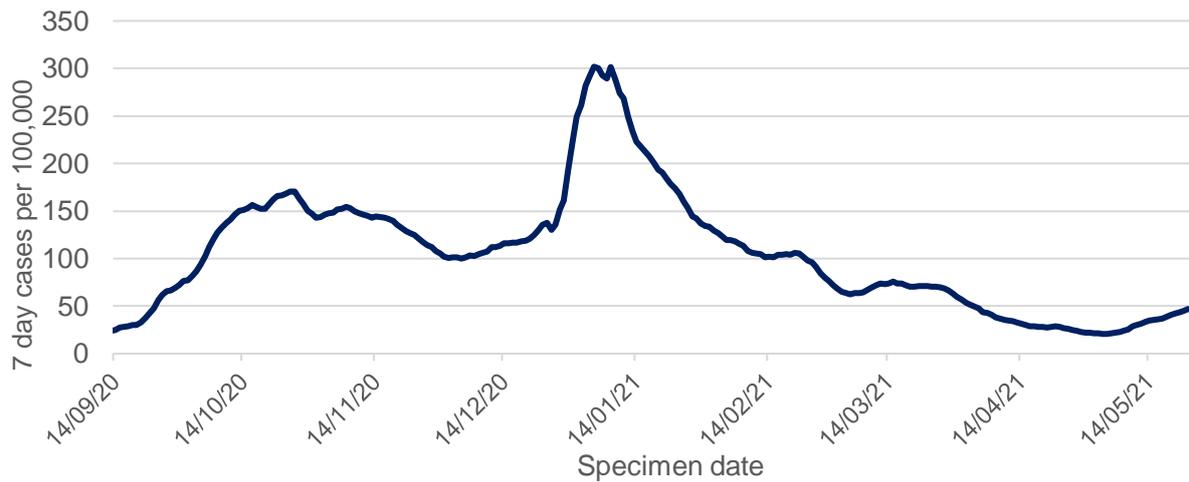
² Scottish Government: [Coronavirus \(COVID-19\): modelling the epidemic - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/coronavirus-covid-19-daily-data-for-scotland/)

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

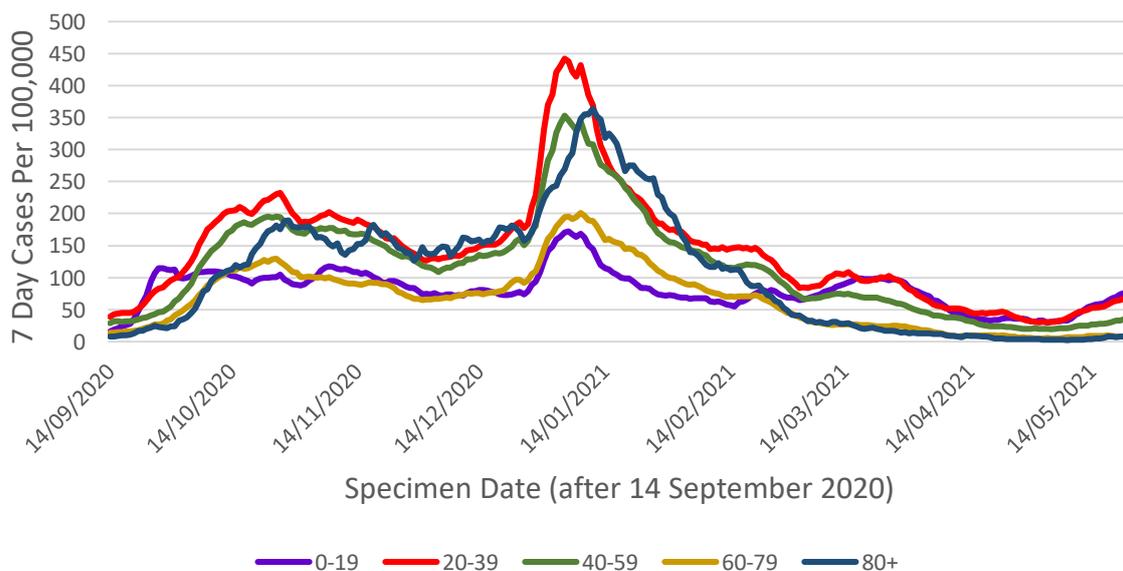
other locations show smaller increases. Inverclyde and the Falkirk area both show increases in virus levels that are not yet reflected by the case levels. If this follows the patterns seen in Alloa and Lerwick, rises in cases in these areas in the near future is possible.

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, 40-59, 20-39 and 60-79 this week (Figure 3).

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



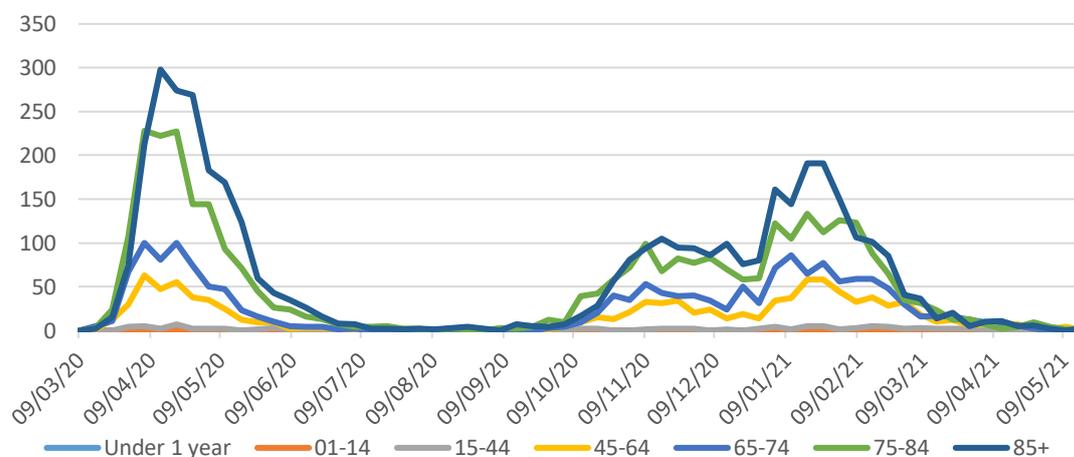
⁵ Source: Public Health Scotland

Not everyone who has the virus will be tested, as many people do not realise they have Covid, or they have mild symptoms and do not come forward. Latest modelled estimates suggest there are currently anywhere between 300 and 800 people infected in Scotland each day². This means that as of 26 May there were between 6 and 14 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. This has since increased and as of 26 May there were 98 patients in hospital with Covid-19. Daily hospital admissions for people with Covid follow a similar pattern, having decreased from a peak of 241 on 11 January to a low of 4 on 28 April, and since increased slightly to 17 on 22 May⁶.

There were 4 deaths registered where Covid was mentioned on the death certificate in the week to 23 May. This is a decrease from 6 deaths 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 25% of Covid deaths in the week to 23 May 2021. Deaths involving coronavirus have declined most in those aged 45-64 and 65-74+ and have gone down by 100% (from 2 to 0) in these age groups over the 3 weeks to 23 May⁷ (Figure 4). Deaths in those aged 75-84 and 85+ have declined by 78% and 67% respectively over this period.

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



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

⁷ 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 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 Ireland⁸. Average daily deaths in Scotland (0.01 per 100,000 in the week to 26 May) are in line with England (0.01), above Northern Ireland (0.00) and below Wales (0.03). The Coronavirus Infection Survey estimated that in the week to 9 May, 68.6% 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 75.9% in England, 76.6% in Wales and 75.0% in Northern Ireland⁹.

Situation by local authority within Scotland

Clackmannanshire currently has the highest case rate in Scotland with 163 weekly cases reported per 100,000 in the week to 23 May, which is a 367% increase from the week to 16 May⁴. It is followed by Glasgow with 144 weekly cases per 100,000, which is a 31% 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:

- Angus,
- Argyll and Bute,
- City of Edinburgh,
- Clackmannanshire,
- Dundee City,
- East Ayrshire,
- East Dunbartonshire,
- East Lothian,
- East Renfrewshire,

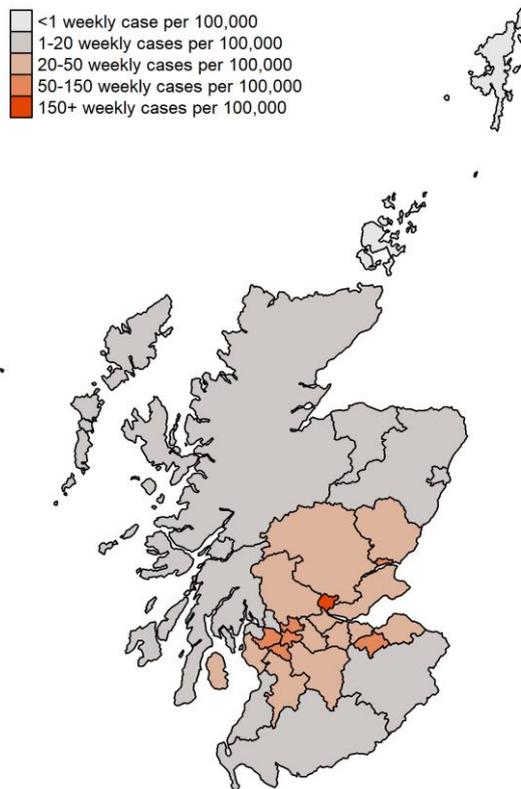
⁸ Office for National Statistics: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurvey/pilot/previousReleases>

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

- Falkirk,
- Glasgow,
- Highland,
- Midlothian,
- North Ayrshire,
- Renfrewshire,
- Scottish Borders,
- South Ayrshire,
- South Lanarkshire,
- Stirling and
- West Dunbartonshire.

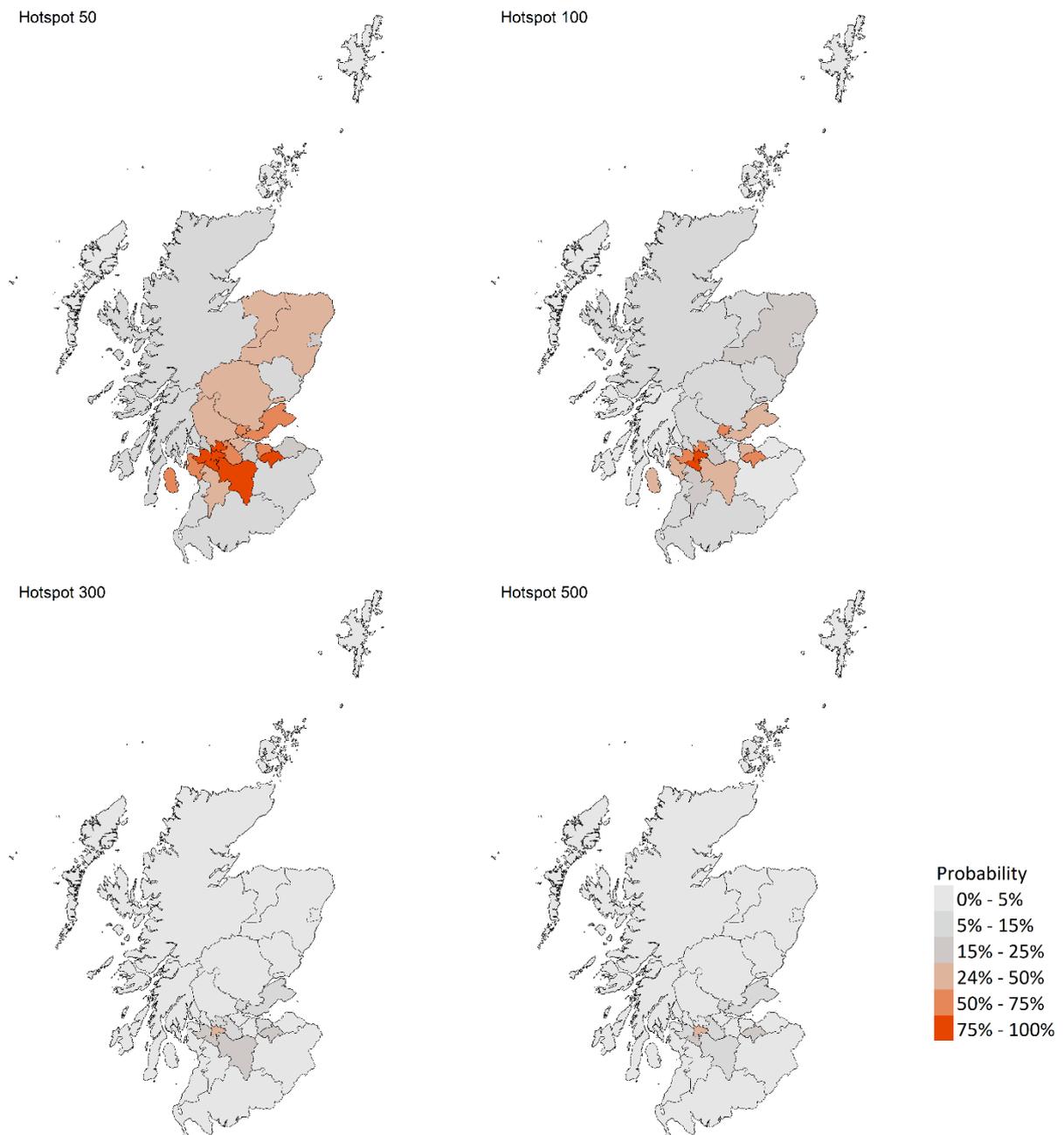
Dumfries and Galloway, Highland, Inverclyde, Na h-Eileanan Siar and Scottish Borders each had fewer than 10 weekly cases per 100,000 in the week to 17 May⁴. Orkney and Shetland reported no weekly cases per 100,000 in this period.

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



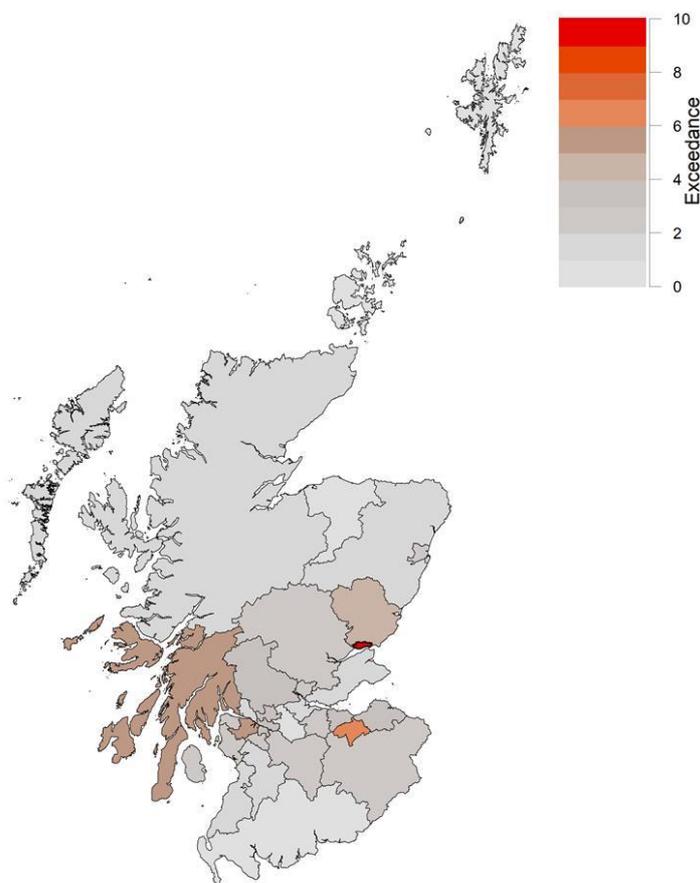
The most recent modelling predicts that for the week ending 12 June East Dunbartonshire, East Renfrewshire, Glasgow City, Midlothian, Renfrewshire and South Lanarkshire have at least a 75% probability of exceeding 50 cases per 100,000 population. Of those, 2 local authorities have at least a 75% probability of exceeding 100 cases (East Renfrewshire and Glasgow City) (Figure 6)².

Figure 6. Maps of probability of Local Authorities exceeding 50, 100, 300 and 500 cases per 100,000 population in the period 6 June – 12 June 2021.



There were also ten local authorities that exceeded what would be expected at this stage in the epidemic between 20 - 26 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 occurred¹⁰. Angus, Argyll & Bute, Dundee City, East Dunbartonshire, East Lothian, Edinburgh City, Glasgow City, Midlothian, Renfrewshire and Stirling were identified as areas at higher risk of increasing transmission in the week to 26 May (Figure 7)².

Figure 7. Map of cumulative weekly exceedance for Local Authorities in Scotland to 26 May².



Children and Education

There is no further update to Children and Education from last week's report. An update will be provided next week.

¹⁰ 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

Looking ahead

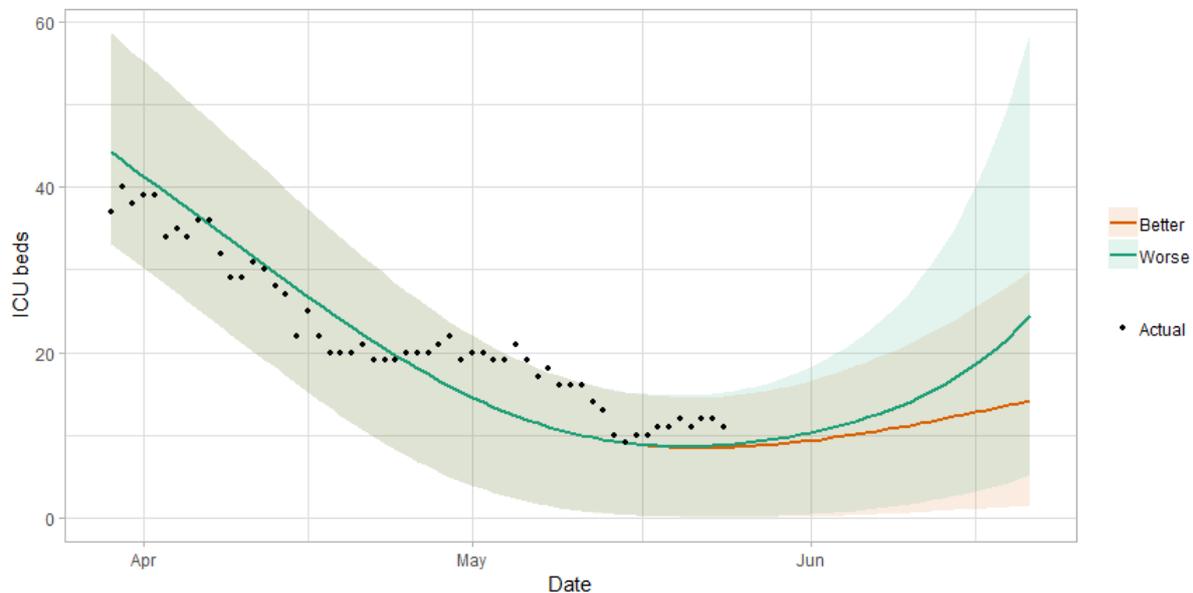
Changes in patterns of mixing and adherence to restrictions will impact on future case numbers. The Scottish Contact Survey measures times and settings that people mix where they could potentially spread Covid². From this survey we can say that average contacts remained at a similar level in the last two weeks (comparing surveys pertaining to 29 April - 5 May and 13 - 19 May) with a current level of 4.2 daily contacts. Contacts within the home, work and other setting remain at a similar level in comparison to two weeks prior, whereas contacts within the school setting have decreased by 39%. The only age groups to increase their contacts in the last two weeks were those aged between 18-29 and 40-49. These increases were largely driven by contacts within the other setting (contacts outside of the work, home or school settings) for 18-29 year olds, and by a combination of the other and work settings for 40-49 year olds.

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' compliance¹¹.

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 8²).

¹¹ 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?*

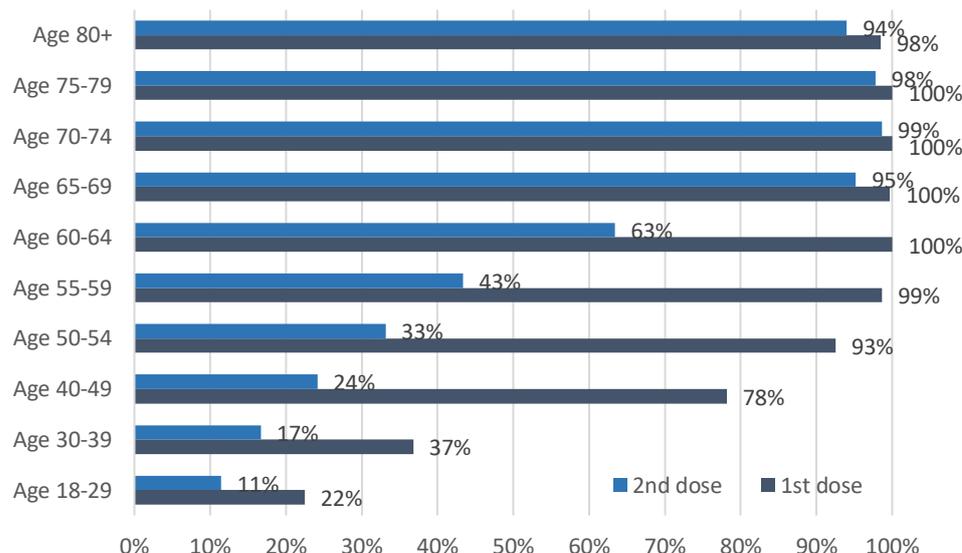
Figure 8. Medium term projections of modelled ICU bed demand, from Scottish Government modelling¹².



Vaccinations are continuing across the priority groups and 70.9% of the adult population in Scotland has now been vaccinated with the first dose⁶. The first vaccines were administered on Tuesday 8 December and 3,155,733 people had received their first dose by 26 May 2021, a 3% increase from 19 May³. By 26 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% of residents have now received their second dose. By age group, almost 100% of individuals aged 55+ and 93% of those aged 50-54 have received their first vaccination (Figure 9). 94% of the over 80s, 98% of those aged 75-79, 99% of those aged 70-74, and 95% of those aged 65-69 have received their second dose. Overall, 1,913,809 (43.1%) of those aged 18 and over had received their second dose by 26 May⁶. There remains low levels of hospitalisations and deaths among those groups vaccinated first (Figure 4).

¹² 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.

Figure 9. Estimated percentage of adults vaccinated by 26 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. Of those not vaccinated, 74% report they are likely to be vaccinated when a vaccine becomes available to them¹³.

How the virus is changing

The variant of concern VOC-21APR-02 (first identified in India) is spreading rapidly and in some parts of Scotland is fast replacing VOC-20DEC-01, the “UK variant”, as the dominant strain. 136 cases have been sequenced as VOC-21APR-02.

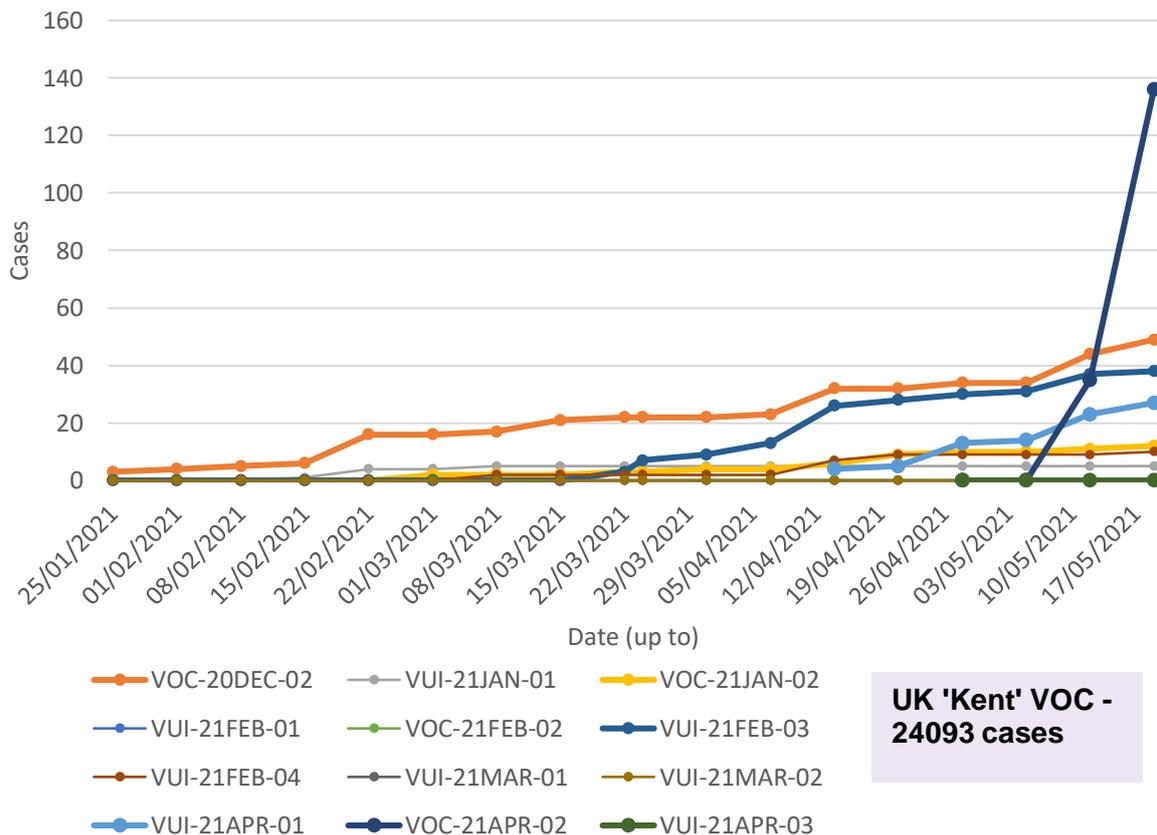
To date there are five VOCs and eight variants under investigation¹⁴. As reported in last week’s issue, up to 19 May there have been 49 genomically confirmed cases of the variant VOC-20DEC-02 (first seen in South Africa) in Scotland. There have been 12 confirmed cases of the variant VOC-21JAN-02 (first 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 the week before) and 27 cases of VUI-21APR-01 (first identified in India), an increase of 4 from the week before (Figure 10).

¹³ 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 available to you? (Please select a number between 0 and 10, where 0 means ‘extremely unlikely’ and 10 means ‘extremely likely’)

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

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^{15 16 17}.

Figure 10. Variants detected in Scotland by sequencing (data up to 19 May and reported weekly¹⁸).



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

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)

¹⁸ [Variants: distribution of cases data - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

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.

This publication will be available in accessible HTML on the [gov.scot](http://www.gov.scot) website

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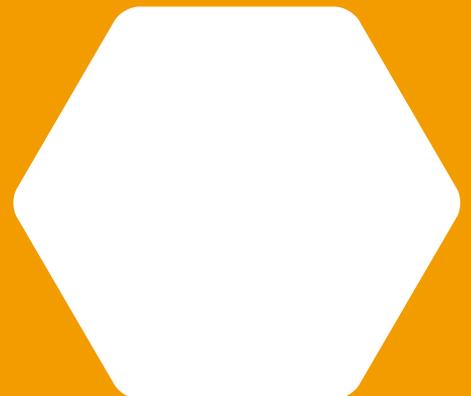
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