

Coronavirus (COVID-19): Analysis

State of the Epidemic in Scotland (19th 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 18 March 2021 on COVID-19 in Scotland. This updates the previous publication published on 12 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 0.7 and 1.0.

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 587 cases were reported per day in the 7 days to 18 March, which is an 11% increase in reported cases since the 11 March.
- There were 75 weekly cases per 100,000 in the week to 15 March, which is an increase since last week. This compares to 302 weekly cases per 100,000 on 8 January and is similar to the weekly case rate observed at the end of September.
- Cases have plateaued and deaths are declining the most in the over 60s suggesting an impact from vaccination in this age group.
- The estimated proportion of people becoming infected with Covid in Scotland has increased slightly this week and is now above England, Northern Ireland, and Wales as determined through the weekly ONS survey.
- Latest modelled estimates suggest there are currently between 1 and 18 new daily infections per 100,000 people in Scotland.
- Average daily deaths per 100,000 population (0.18) are at a similar level to England (0.18), above Northern Ireland (0.10) but below Wales (0.23).
- Glasgow currently has the highest weekly case rate in Scotland reporting 139 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.
- Since mid-February there has been an increase in the total number of COVID-19 infections in children, with the highest proportion of cases currently observed in those aged 5 to 11.
- Over 2 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

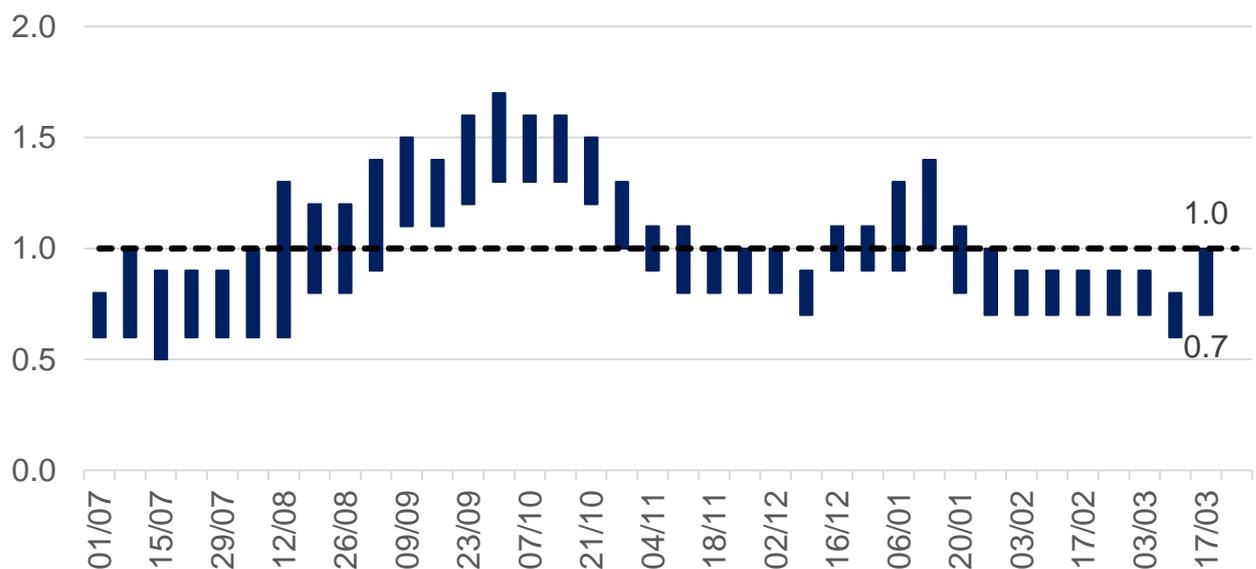
This report brings together a wide range of publically available figures from a range of data sources. These include publications by Scottish Government, Public Health Scotland, National Records of Scotland, Office for National Statistics along with scientific publications and SAGE summaries where appropriate 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 18 March)² has increased and was between 0.7 and 1.0 (Figure 1), with a growth rate of between -6% and -2%.

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 587 cases were reported per day in the 7 days to 18 March, this is an 11% increase from the daily average cases recorded a week earlier to 11 March³. Average daily cases reported are now around a quarter of the peak of 2,323 in the week to 7 January. Our current position is 75 weekly cases per 100,000 in the week to 15 March⁴. This compares to 302 weekly cases per 100,000 on 8 January and is similar to the weekly case rate observed at the end of September (see Figure 2)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/>

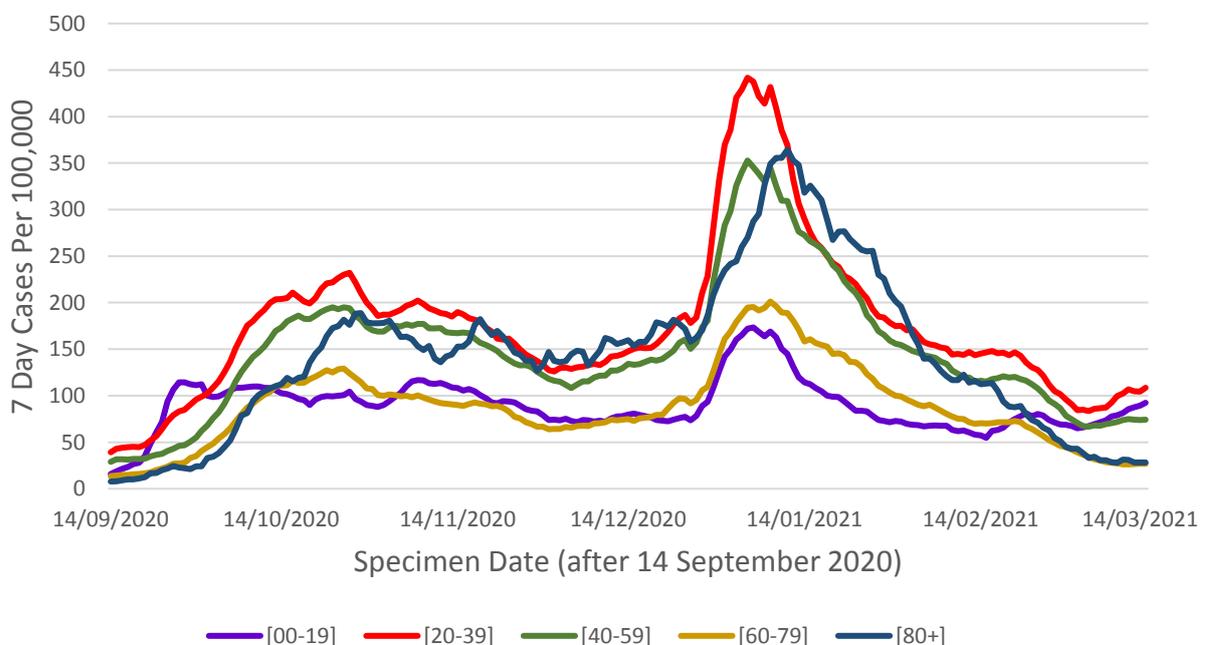
⁴ Public Health Scotland Covid dashboard: https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview

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



Case rates in the over 60s have plateaued, with a slight increase in cases in other age groups 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

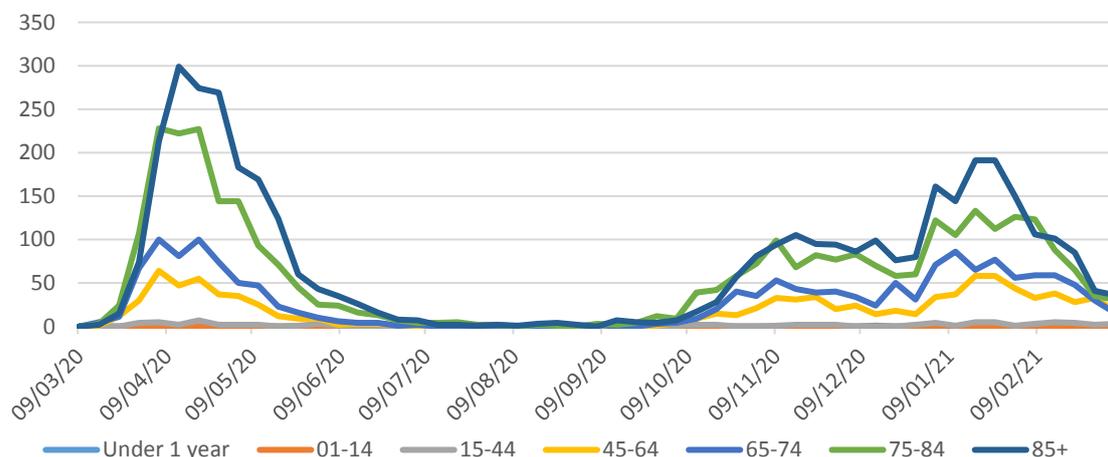
⁵ Source: Public Health Scotland

forward. Latest modelled estimates suggest there are currently anywhere between 60 and 1,000 people infected in Scotland each day². This means that as of 17 March there were between 1 and 18 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 18 March there were 405 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 23 on 14 March⁶.

There were 104 deaths registered where Covid was mentioned on the death certificate in the week to 14 March. This is a 27% decrease on the week before (142 deaths), and 84% 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 13% of total deaths in the week to 14 March. This is however slightly higher than the proportion of care home deaths last week (10%). Deaths involving coronavirus have declined most in those aged 65-74 and have gone down by 73% over the 3 weeks to 14 Mar⁷. Deaths in those aged 85+ have declined by 64% and those aged 75-84 by 65% 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 \(isdscotland.org\)](https://dashboards.scot.nhs.uk/PHS/)

⁷NRS Scotland: <https://www.nrs.scot.nhs.uk/statistics-and-data/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 (0.37% people currently testing positive for Covid-19 on 7-13 March) has increased slightly since last week and is now above England (0.29%), Northern Ireland (0.32%), and Wales (0.23%). In the week to the 13 March the estimated rate of community infection was 1 in 275 people in Scotland, compared to 1 in 340 for England, 1 in 430 for Wales and 1 in 315 for Northern Ireland⁸. Average daily deaths in Scotland (0.18 per 100,000 in the week to 17 March) are at a similar level to England (0.18 per 100,000), above Northern Ireland (0.10 per 100,000) however below Wales (0.23 per 100,000).

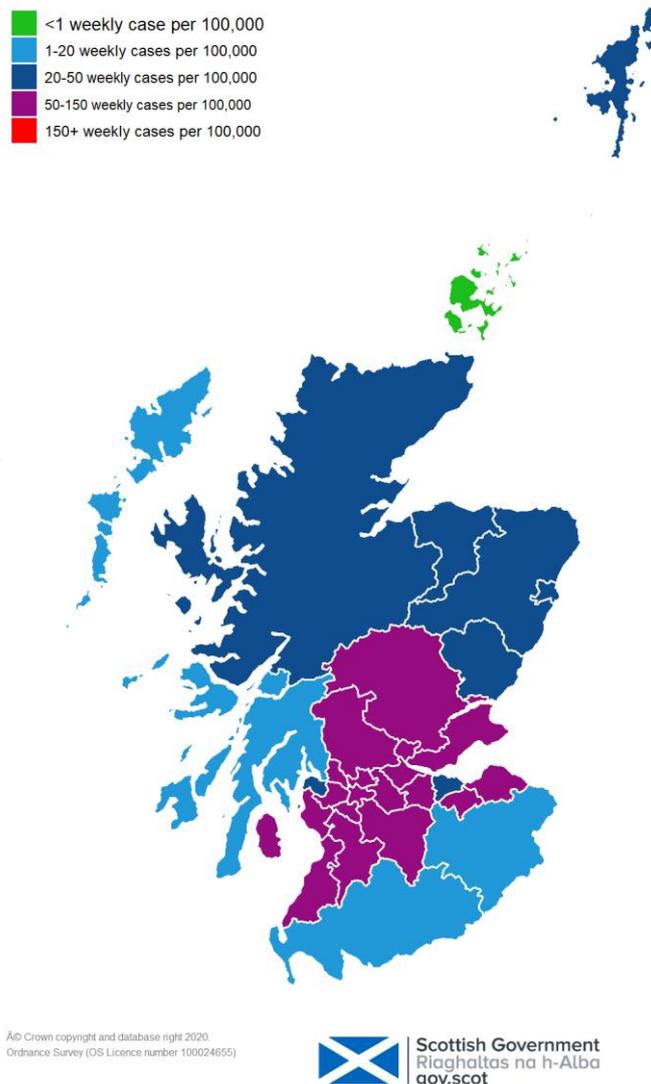
Situation by local authority within Scotland

Glasgow currently has the highest case rates in Scotland with 139 weekly cases being reported per 100,000 in the week to 15 March. This is an increase of 21% from the week to 8 March⁴. There remains high or moderate levels of cases across large areas of Scotland (Figure 5). Most Local Authorities have recorded an increase in cases per 100,000 over the past week. Local Authorities with increases greater than 20 cases per 100,000 include Glasgow City, East Renfrewshire, Fife, Midlothian, North Ayrshire, Perth and Kinross, Renfrewshire, Shetland, South Ayrshire and West Dunbartonshire. Local Authorities with the biggest fall in cases in the last week include Clackmannanshire, Na h-Eileanan Siar, Stirling, Falkirk and Angus. Dumfries and Galloway, Scottish Borders, Argyll and Bute, Na h-Eileanan Siar and Orkney currently have the lowest case rates at less than 20 per 100,000. 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/coronaviruscovid19infectionsurvey/pilot/previousReleases>

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



Children and Education

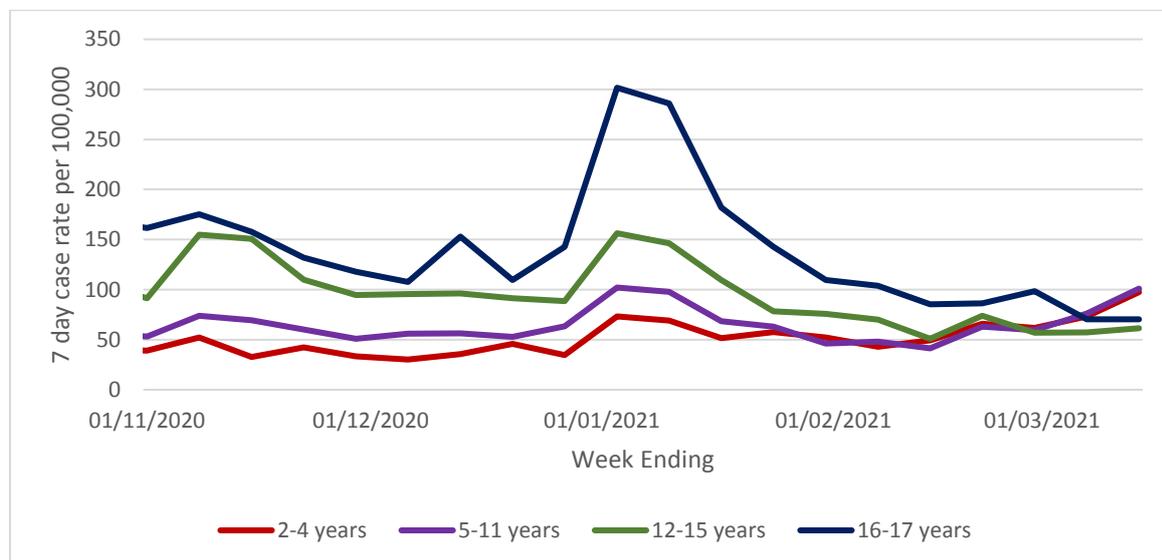
Recent easing of some restrictions in Scotland from 12 March allow up to 4 adults from 2 different households to meet outdoors. Young people (12 to 17 year olds) can meet outdoors in groups of up to 4 people from 4 different households, participate in non-contact outdoor sports in groups of up to 15 people, and travel across local authorities to participate in such activities.

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 February and all secondary school pupils (S1-S6) returning on a part-time basis from the 15 March. Subject to continued suppression of the virus, all pupils are expected to return to full time education after the Easter break.

Since mid-February there has been an increase in the total number of COVID-19 infections in children (Figure 6)⁵, with the highest proportion of cases currently observed in those aged 5 to 11. Alongside this there has been a substantial increase in testing for this age group.

Figure 6. Seven day case rate in Scotland by age group by specimen date for children. Refers to PCR testing only.



The proportion of primary school (P1-3) and early learning and childcare settings with incidents remains low. Where outbreaks have occurred these have been predominantly in areas with higher case rates in the local community.

Looking ahead

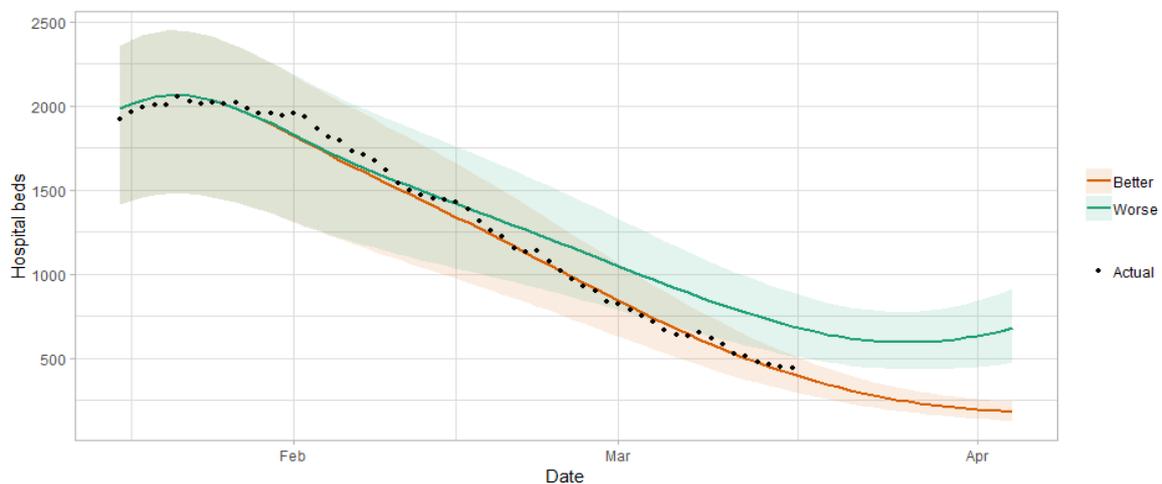
Changes in patterns of mixing and adherence to restrictions will impact on future case numbers. The Scottish Contact Survey measures times and settings that people mix where they could potentially spread Covid². From this survey we can say that interactions have remained low since the beginning of January (currently 3.2 average daily contacts). Contacts within the work setting have increased by 20%.

This is an early indication that there may be a turning point in contact levels, which could drive a change in the progress of the epidemic. In the last two weeks however increases in contacts have been reported for those aged between 30 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.

Individuals vaccinated within the 60-64 age group with underlying health conditions have a higher number of contacts than the unvaccinated, while there is no difference in 60-64 age group without underlying health conditions. 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 17-18 March, 72% 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 7)².

Figure 7. Medium term projections of modelled hospital bed demand, from Scottish Government modelling¹⁰.

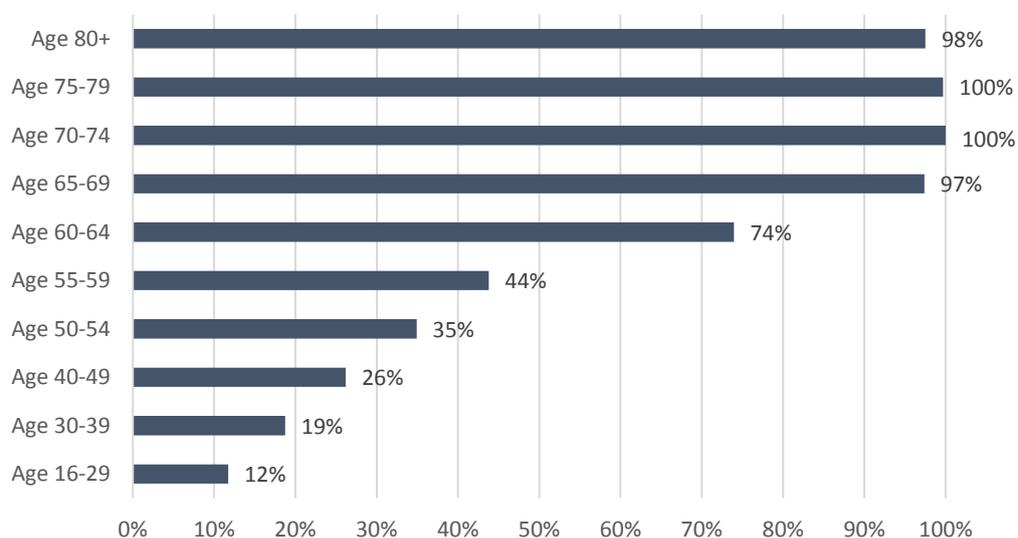


⁹ Results are taken from questions run on behalf of Scottish Government on the YouGov online omnibus survey. The sample is demographically and geographically representative of adults 18+ across Scotland, with c.1000 responses each week. Total sample size on 17-18 March was 1028 adults. 'Complete' or '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?*

¹⁰ Both scenarios are based on current vaccine roll-out plans and efficacy assumptions. The difference between the two projections reflects uncertainty about behaviour and compliance as interventions are relaxed.

Vaccinations are continuing across the priority groups. The first vaccines were administered on Tuesday 8 of December and 2,023,002 had received their first dose by 18 March 2021, an 11% increase from the 11 March³. By the 18 of March over 26,000 residents in older adult care homes had received their first vaccination along with over 48,000 care home staff. 98% of individuals aged 80 or over, almost a 100% of those aged 75-79 and 70-74, and 97% of those aged 65-69 had received their first vaccination (Figure 8). There are indications of decreasing hospitalisations and deaths among those groups vaccinated first (Figure 4).

Figure 8. Estimated percentage of people vaccinated by 18 March 2021



The proportion of people surveyed who said they would be likely to be vaccinated for COVID-19 remains high. 46% of all respondents have already received their first vaccine and of those not, 76% report they are likely to be vaccinated when a vaccine becomes available to them¹¹.

¹¹ Total sample size on 17-18 March was 1028 adults. Sample size for those who have not yet received their first vaccine was 500 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')

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 strain¹². This new variant of Covid is more transmissible, however the age and sex distribution appears similar to other variants¹³. It is likely that infection with this variant is associated with an increased risk of hospitalisation and death compared to infection with non-VOC viruses¹⁴.

Other variants of concern (VOCs) are being monitored by genomically sequencing some of the SARS-CoV-2 samples. To date there are four VOCs and six variants under investigation. Up to 15 March, there have been 21 genomically confirmed cases and 4 probable cases of the variant VOC-20DEC-02 (first seen in South Africa) detected in Scotland as well as 2 genomically 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^{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.

¹² Public Health Scotland: <https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/covid-19-statistical-report/9-september-2020/dashboard/>

¹³ [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/94444/investigation-of-novel-sars-cov-2-variant-variant-of-concern-202012/01.pdf)

¹⁴ [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/94444/s1095-nervtag-update-note-on-b.1.1.7-severity-20210211.pdf)

¹⁵ [Brief note on SARS-CoV-2 variants \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/94444/brief-note-on-sars-cov-2-variants.pdf)

¹⁶ [Brief note on SARS-CoV-2 B.1.351 - 27 January 2021 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/94444/brief-note-on-sars-cov-2-b.1.351-27-january-2021.pdf)

¹⁷ [Brief note on SARS-CoV-2 variant of concern P.1 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/94444/brief-note-on-sars-cov-2-variant-of-concern-p.1.pdf)

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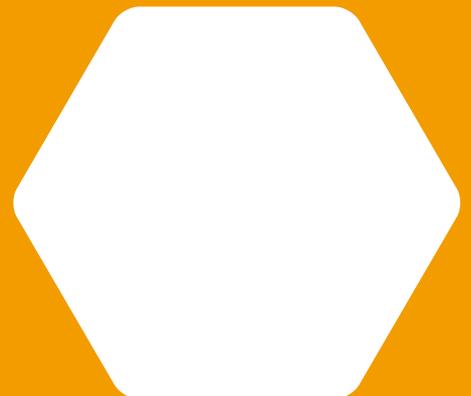
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