Public Health Scotland COVID-19 Statistical Report

As at 30 August 2021

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A Management Information release for Scotland

Contents

This is a Management Information publication

Published management information are non-official statistics. They may not comply with the UK Statistics Authority's Code of Practice with regard to high data quality or high public value but there is a public interest or a specific interest by a specialist user group in accessing these statistics as there are no associated official statistics available.

Users should therefore be aware of the aspects of data quality and caveats surrounding these data, all of which are listed in this document. Therefore, the data presented are subject to change.

Introduction

Since the start of the Coronavirus-19 (COVID-19) outbreak Public Health Scotland (PHS) has been working closely with Scottish Government and health and care colleagues in supporting the surveillance and monitoring of COVID-19 amongst the population.

The Public Health Scotland COVID-19 Daily Dashboard publishes daily updates on the number of positive cases of COVID-19 in Scotland, with charts showing the trend since the start of the outbreak. From 26 February 2021 the Daily Dashboard also includes daily updates on vaccinations for COVID-19 in Scotland.

This report provides additional information not found in the Daily Dashboard on topics such as Test and Protect and Quarantining Statistics.

The accompanying interactive dashboard contains charts and data on the following topics:

- Hospital and unscheduled care
- Healthcare for cardiovascular disease
- Healthcare for mental health
- New cancer diagnoses
- Uptake of pre-school immunisations
- Coverage of health visitor child health reviews
- Infant feeding
- Child development
- Women booking for antenatal care
- Terminations of pregnancy
- Births and babies
- Excess deaths

There is a large amount of data being regularly published regarding COVID-19 (for example, Coronavirus in Scotland – Scottish Government and Deaths involving coronavirus in Scotland – National Records of Scotland). This report complements the range of existing data currently available.

The coronavirus pandemic is a rapidly evolving situation. Future reports will provide further data and analysis to contribute to the evidence base around the outbreak.

Main Points

- As at 29 August 2021, there have been 424,508 confirmed COVID-19 cases; 33,843 of these were recorded in the most recent week, an increase of 43.3% from the previous week.
- In the week ending 29 August 2021, 34,489 individuals were recorded in the contact tracing software, from which 40,506 unique contacts have been traced.
- In the week ending 29 August 2021, under the Community Testing Programme 34.2% of symptomatic and 10.3% of asymptomatic tests for COVID-19 were positive.
- In the week ending 24 August 2021, there were 391 admissions to hospital with a laboratory confirmed test of COVID-19. There has been a general fall in admissions amongst the older age groups (aged 60 years plus) since the onset of the vaccination programme. The highest number of new admissions are now in those aged 50-59 years, 70-79 years and 80+.
- The proportion of all people who were admitted to hospital within 14 days of a laboratory confirmed COVID-19 positive test has declined, from 13% in the week commencing 25 January 2021, to 3% in the most recent week commencing 09 August 2021.
- The number of new admissions to Intensive Care Units (ICUs) for confirmed COVID-19 patients has increased from the week ending 21 August 2021, with 44 in the week ending 28 August 2021.
- In the week ending 29 August 2021 there were 36,375 people who arrived in Scotland from outside the UK, of which 5,442 were required to quarantine (with 596 quarantined in a hotel).
- PHS have identified a total of 12,799 COVID-19 vaccinations given in pregnancy to 10,411 women from the start of the COVID-19 vaccination programme in Scotland on 08 December 2020 to 31 July 2021.
- As at 24 August 2021, in those aged 18 and over, dose 1 vaccine uptake is highest in white ethnic groups (88%) and lowest in African ethnic groups (66%). For dose 2 this is 80% and 52% respectively.
- As at 24 August 2021, 83% of those aged 18 and over in the less deprived areas had received their first dose of vaccine for COVID-19 compared to 75% in more deprived areas. For dose 2 this figure is 75% and 64%.

Results and Commentary

Incidence of Variants of Concern and Variants Under Investigation

Since early May 2021, there has been a rapid increase in the Delta variant detected through whole genome sequencing (WGS) in Scotland. The Delta variant has been the dominant COVID-19 variant in Scotland since 31 May 2021.

Public Health Scotland (PHS) continues to monitor COVID-19 Variants of Concern, in collaboration with other Public Health Agencies in the UK.

The latest information on the number of such variants detected by genomic analyses across the UK is published by Public Health England.

COVID-19 Daily Data

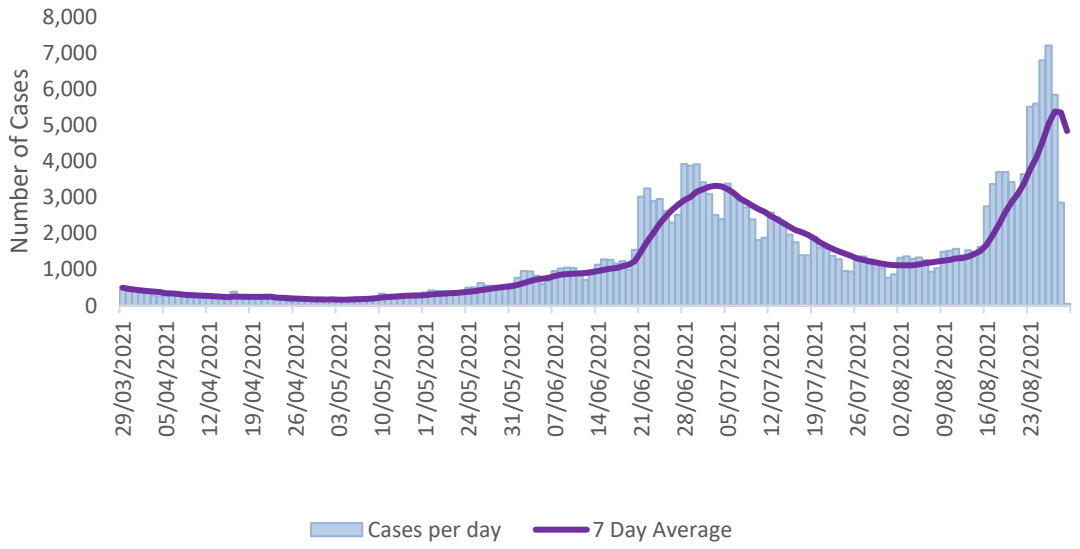
The Public Health Scotland COVID-19 Daily Dashboard publishes daily updates on the number of positive cases of COVID-19 in Scotland, with charts showing the trend since the start of the outbreak.

The total number of people within Scotland who have, or have had COVID-19, since the coronavirus outbreak began is unknown. The number of confirmed cases is likely to be an underestimate of the total number who have, or have had, COVID-19. A person can have multiple tests but will only ever be counted once. The drop in the number of confirmed cases at weekends likely reflects that laboratories are doing fewer tests at the weekend.

- There have been 424,508 people in Scotland who have tested positive, at any site in Scotland (NHS and UK Government Regional Testing centres), for COVID-19 up to 29 August 2021.
- In the week ending 29 August 2021 there were 33,843 confirmed COVID-19 cases.[1]

1. Correct as at 29 August 2021, may differ from more recently published data in the previous week's report and on the COVID-19 Daily Dashboard.

Figure 1: Number of Positive Cases per day with 7 Day Average

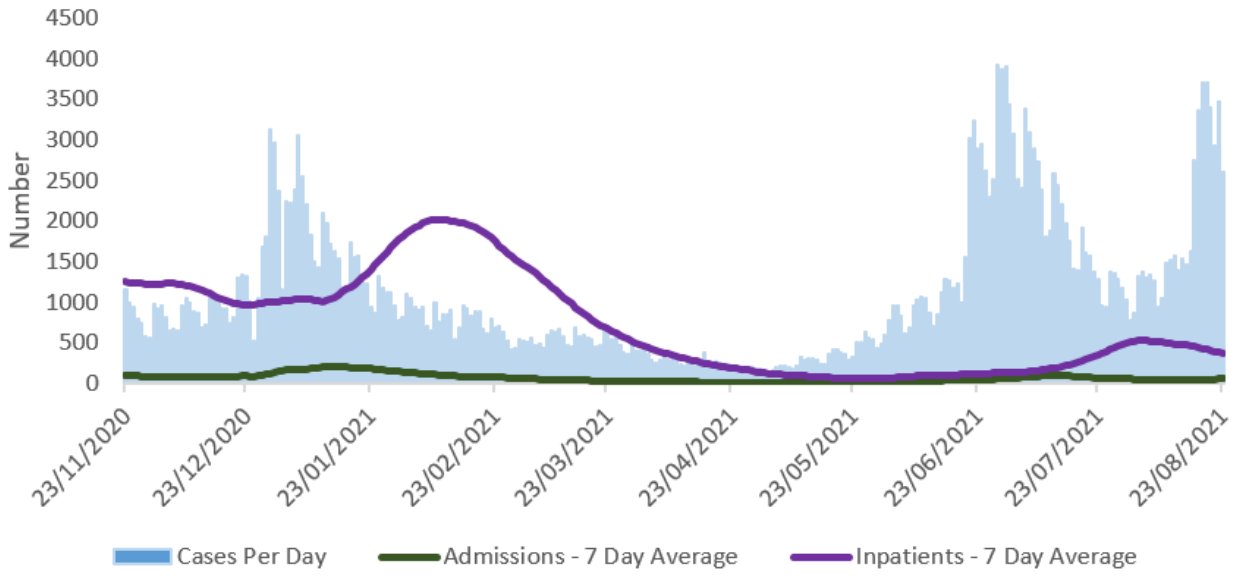


The daily dashboard also now includes data on Hospital Admissions and ICU admissions for patients with COVID-19:

- In the week ending 24 August 2021, there were 391 admissions to hospital with a laboratory confirmed test of COVID-19.
- In the week ending 28 August 2021 there were 44 new admissions to Intensive Care Units (ICUs) for confirmed COVID-19 patients.

The number of confirmed daily COVID-19 cases increased from 3,364 to 5,509 between 17 August 2021 and 23 August 2021. During this same time period, the daily COVID-19 confirmed hospital admissions has increased from 46 to 56 (seven-day rolling average). The seven-day average of inpatients in hospital has decreased by 4% (from 344 to 330).

Figure 2: Number of Positive Cases, Admissions and Inpatients, as at 23 August 2021[2]



2. Please refer to Appendix 3 - Hospital Admissions Notes for definitions of hospital admissions and inpatients.

Additional charts and data are available to view in the interactive dashboard accompanying this report.

Data is also monitored and published daily on the Scottish Government Coronavirus website.

Public Health Scotland (PHS) has undertaken work to update its COVID-19 reporting process, ensuring it continues to provide the most accurate and timely information. These changes provide better identification of positive cases, and linkage to other sources such as deaths and hospital admissions. All changes have been applied retrospectively. Please refer to the news article released on 28 July 2021 for further information.

COVID-19 Hospital Admissions

There is increasing interest in whether or not the age of people admitted to hospital who have a laboratory confirmed case of COVID-19 is changing over time. The table below shows a breakdown across all ages and by age group for the most recent four weeks. Data from 03 March 2021 is available on the Covid Statistical Report website.

It is important to note, that the figures presented below may include patients being admitted and treated in hospital for reasons other than COVID-19.

COVID-19 related admissions have been identified as the following: A patient's first positive PCR test for COVID up to 14 days prior to admission to hospital, on the day of their admission or during their stay in hospital. If a patient's first positive PCR test is after their date of discharge from hospital, they are not included in the analysis.

Table 1: COVID-19 hospital admissions by age as at 24 August 2021[3]

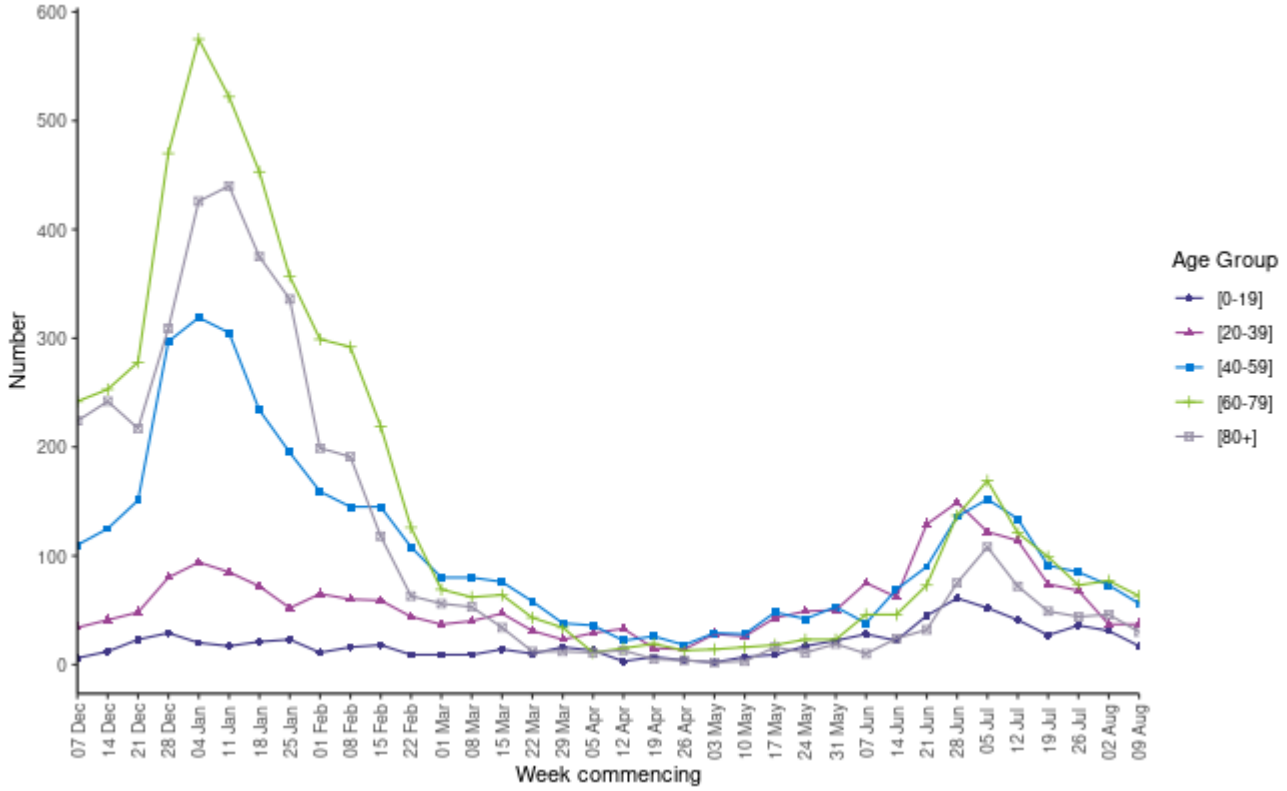
Age Band	28 July – 03 August	04 August – 10 August	11 August – 17 August	18 August – 24 August
0-9	19	16	14	25
10-19	15	14	12	19
20-29	25	19	21	32
30-39	44	24	26	42
40-49	38	40	33	40
50-59	44	43	34	65
60-69	36	56	31	51
70-79	44	46	43	58
80+	46	55	45	59
Total	**311**	**313**	**259**	**391**

Source: RAPID (Rapid and Preliminary Inpatient Data)

3. Please refer to Appendix 4 – RAPID Hospital Admissions for explanatory notes regarding RAPID Hospital Admissions.

There has been a general fall in admissions amongst the older age groups (aged 60 years plus) since the onset of the vaccination programme. However, in the latest week there has been a 51% increase in the number of new admissions, with those aged 50-59 years having the highest number admissions.

Figure 3: Trend in Hospital Admissions, who have tested positive for COVID-19 within 14 days, by age



In recent months, the proportion of all people who were admitted to hospital within 14 days of a laboratory confirmed COVID-19 positive test has also declined, from 13% in the week commencing 25 January 2021 to 3% in the most recent week commencing 09 August 2021 (Figure 4).

This reduction can be explained by a change in the age profile of people acquiring COVID-19. Although those over 60 with COVID-19 are more likely to be admitted to hospital than younger age groups (Figure 5), the proportion of newly reported cases in the over 60s has reduced in recent months (Figure 6).

Figure 4: Proportion of weekly cases admitted to hospital within 14 days of a first positive test

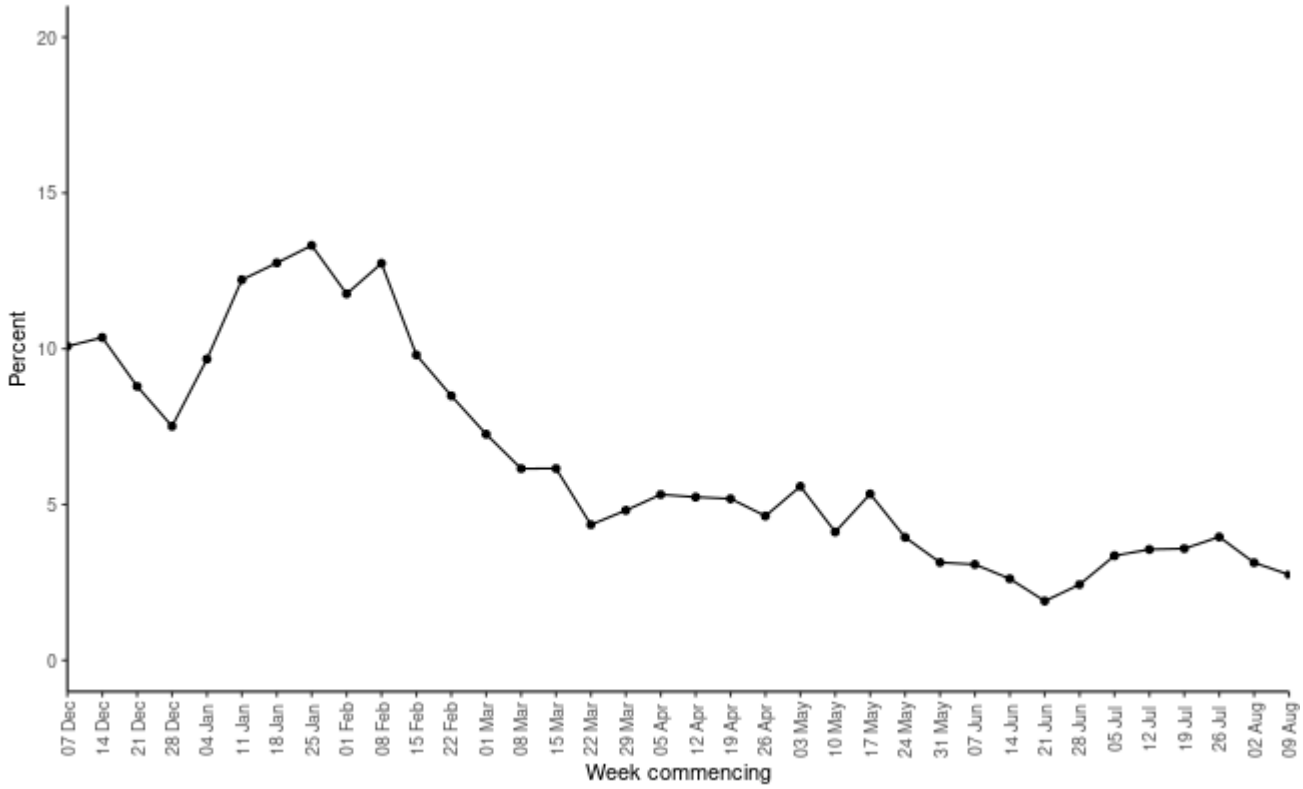


Figure 5: Proportion of weekly cases admitted to hospital within 14 days of a first positive test by age group

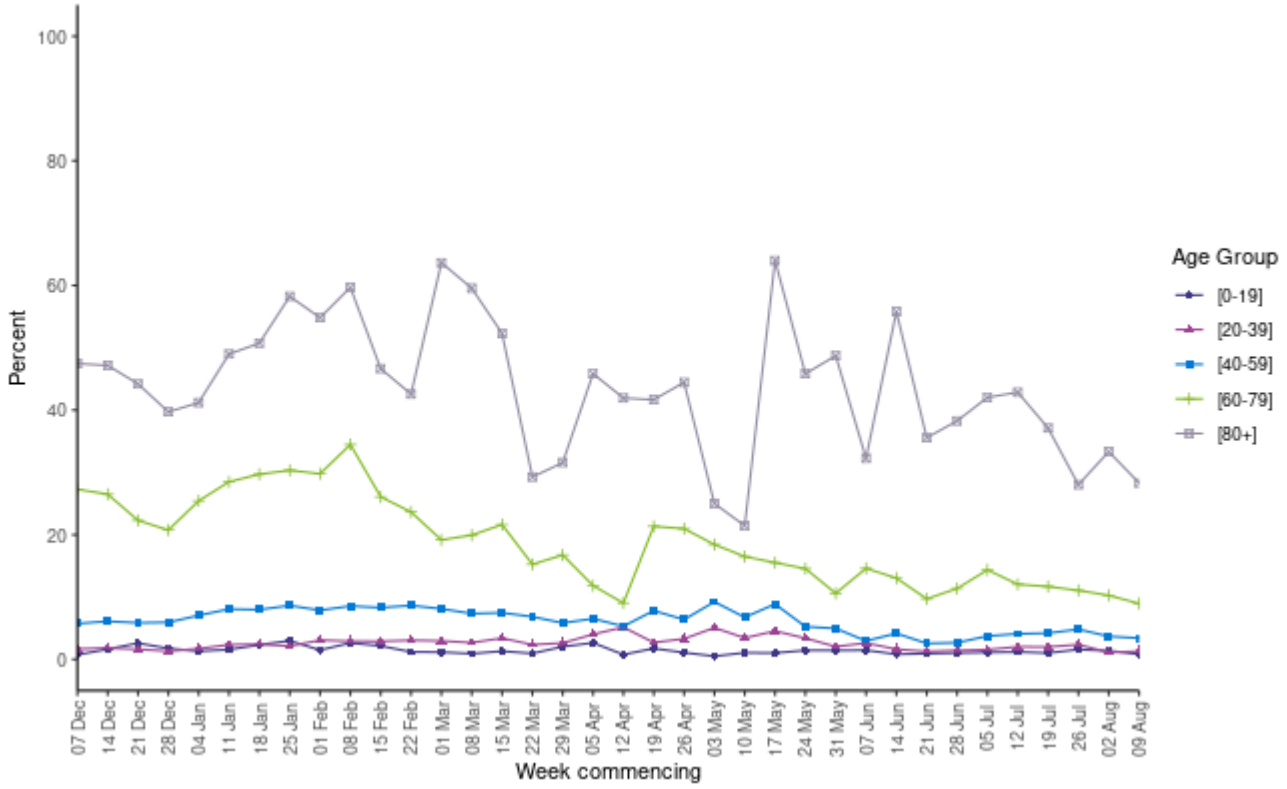
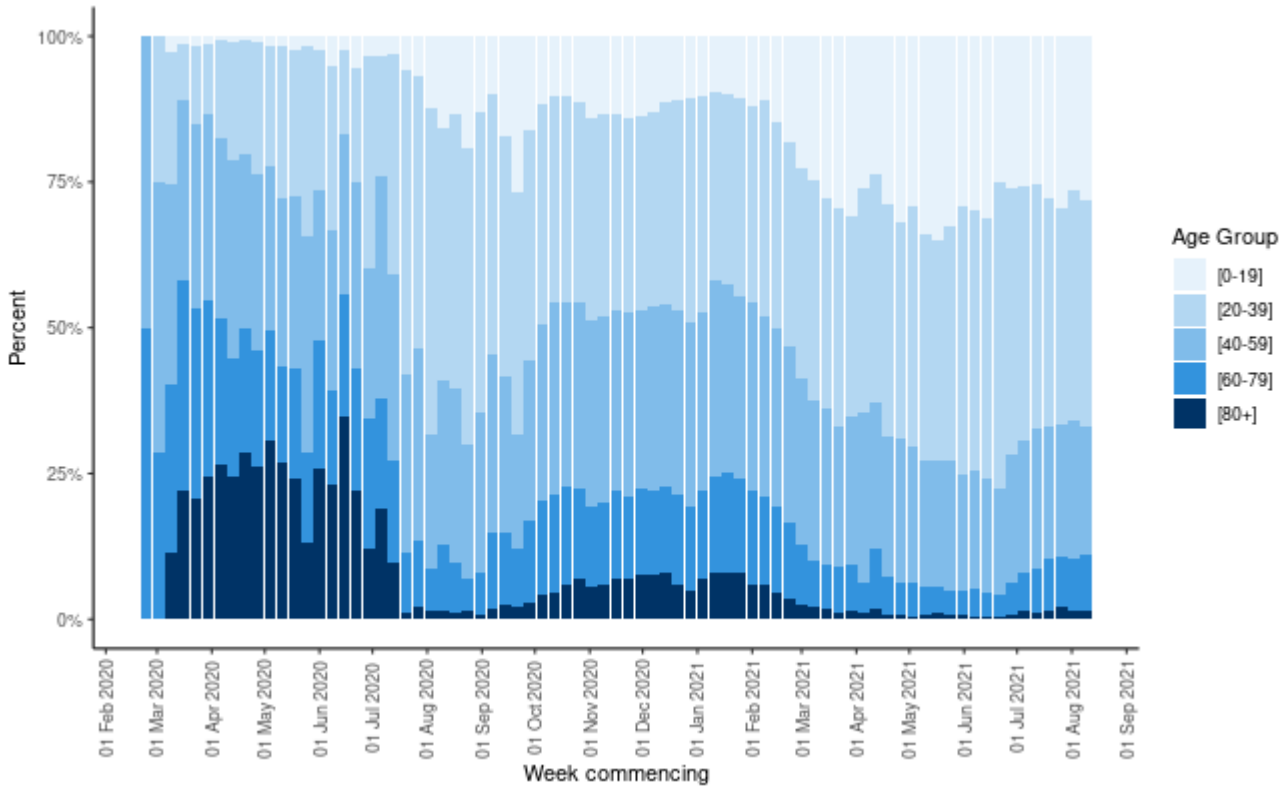


Figure 6: Distribution of confirmed COVID-19 cases by age group



COVID-19 Testing in Adult Care Home in Scotland

As of 20 January 2021, Public Health Scotland took over reporting of weekly testing data on COVID-19 in adult Care Homes in Scotland – data prior to 11 January 2021 can be found on the Scottish Government website.

This data is provisional management information submitted to the Turas Care Home Management system by Care Homes, and details numbers of people (i.e. staff and residents) tested in the last week. The numbers capture both those tests undertaken via NHS routes and those done via the Scottish Social Care portal.

Figures are an undercount in some cases as complete data was not collected for all Care Homes.

It is the responsibility of Boards to work with care homes as part of their oversight arrangements to quality assure this data. The role of PHS is to collate and publish only. Please use this information with caution.

Table 2: Adult care home testing for week ending 29 August 2021

Further information on COVID-19 testing in Adult Care Homes can be found at Coronavirus (COVID-19): trends in daily data - gov.scot (www.gov.scot).

NHS Board	Care Home with confirmed COVID-19		Care Homes with no confirmed COVID-19
	Staff tested	Residents tested	Staff tested
Ayrshire and Arran	397	186	2,700
Borders	60	0	577
Dumfries & Galloway	120	1	967
Fife	384	43	2,577
Forth Valley	311	304	2,299
Grampian	158	4	5,057
Greater Glasgow & Clyde	1,368	1,016	6,331
Highland	218	196	2,066
Lanarkshire	725	399	3,056
Lothian	756	582	5,226
Orkney	0	0	134
Shetland	0	0	257
Tayside	634	83	2,969
Western Isles	0	0	407
Scotland	**5,131**	**2,814**	**34,623**

Please note some of the data is suppressed due to disclosure methodology being applied to protect patient confidentiality

Healthcare workers – COVID-19 Testing

In July 2020, the Scottish Government expanded COVID-19 testing (PCR) to include key healthcare workers in oncology and haemato-oncology in wards and day patient areas including radiotherapy; staffing wards caring for people over 65 years of age where the length of stay for the area is over three months, and wards within mental health services where the anticipated length of stay is also over three months. A data collection was initially set up to monitor the expansion of testing starting in July 2020. Weekly trend data, broken down by health board, is available on the interactive dashboard.

Work was undertaken with Boards to improve the quality of the data and this collection has moved over to Public Health Scotland. This management information must be treated with caution as it may be subject to change as the quality of the data improves. Public Health Scotland is working closely with SG and Boards to improve data definitions and quality to ensure consistency across Scotland. As a result, data may be revised in subsequent weeks and any changes will be clearly signposted.

Table 3: Number of COVID-19 tests and positive results for healthcare workers for week ending 26 August 2021

Area	Total Eligible Staff	Total Staff tested	Number of positive tests[4]	Number of Staff not tested - declined to test	Number of Staff not tested for operational reasons	Number of staff not tested for other reasons
Specialist Cancer Wards and Treatment Areas	2531	2461	*	13	*	27
Long Stay Care of the Elderly	723	662	*	31	*	27
Long Stay Old Age Psychiatry and Learning Disability Wards	2218	2054	11	68	55	41
Scotland	**5,472**	**5,177**	**22**	**112**	**88**	**95**

4. Please note some of the data is suppressed due to disclosure methodology being applied to protect staff confidentiality. See Appendix 5 – Healthcare Worker Testing for notes on staff not tested.

Test and Protect

On 26 May 2020, the Scottish Government set out the strategy for Test and Protect - Scotland's approach to implementing the 'test, trace, isolate, support' strategy. This strategy is designed to minimise the spread of COVID-19.

Public Health Scotland is working closely with the Scottish Government and all local NHS Boards to implement 'Test and Protect'. Since 28 May 2020, once an individual receives a positive result, a team of contact tracers will then gather details on individuals who have been in contact with the person who tested positive. The contact tracers will then proceed to contact these individuals and advise them to isolate. In some cases close contacts will receive an SMS message advising them to isolate.

The data within this report are the number of contacts which are recorded in the contact tracing software. The figures presented below are preliminary and may be updated in subsequent publications. A case is generated by a positive test. However, an individual can have multiple tests, and all positive results are reported to the contact tracing system so that each result can be assessed by the contact tracer and followed up as required. In many cases, there is no follow up for a repeat positive test (because the person was already contact traced when their first positive result was reported). To reflect this, test and protect data now includes details on the number of individuals whose positive test resulted in contact tracing being undertaken. The number of individuals who tested positive is also more comparable with the figures given in the COVID-19 Confirmed Cases section of this report, which reports on new positive cases.

Please note PHS has moved to weekly reporting of this data and cumulative data is available in the interactive dashboard.

Contact Tracing figures for the week ending 29 August 2021 (based on test date), are detailed in Table 4 below, which provides a recent time trend, a longer time trend is available on the interactive dashboard.

Table 4: Contact Tracing Scotland Trend Information[5]

	18 Jul	25 Jul	01 Aug	08 Aug	15 Aug	22 Aug	29 Aug[p]
Cases	14,215	10,026	8,238	8,890	11,028	24,708	34,924
Complete Cases	12,243	8,942	7,362	7,842	9,456	20,369	15,082
% Complete	86.1	89.2	89.4	88.2	85.7	82.4	43.2
Individuals	14,042	9,902	8,142	8,783	10,933	24,393	34,489
Total Primary Contacts	41,927	32,941	28,436	29,827	37,352	67,827	52,549
Unique Primary Contacts	29,228	22,626	19,579	19,371	24,659	50,243	40,506
Average number of primary contacts per case [6]	2.9	3.3	3.4	3.3	3.4	2.7	1.5

[p] – Please treat as provisional as data is still being collected for the latest reported week and index/contacts being traced.

5 For further information and additional notes on Contact Tracing, please see Appendix 6 – Contact Tracing.

6 Scottish Government published research findings on modelling the Covid19 epidemic and reported an average of 3.8 contacts per primary case in its report Coronavirus (COVID-19): modelling the epidemic in Scotland (Issue No. 60) here. The Scottish Contact Survey (SCS) used a representative sample of the Scottish adult population, with information collected on all direct contacts. Whereas Public Health Scotland primary contacts include those who are tested and reported to Test and Protect.

In the week ending 29 August 2021, there were 34,924 Index Cases, of which 15,082 had completed contact tracing. There are a small proportion of primary contacts who were successfully contacted but advised they did not need to isolate.

Since contact tracing began, 3,284 primary contacts were not advised to self-isolate, this represents 1.2% of the total 285,286 primary contacts for which this information is known. Some of these primary contacts are children under the age of 16. Other reasons may include that the contact was wearing PPE or did not come into close contact with a positive case.

Data by NHS Board are presented in the below table for the most recent two weeks. This shows the number of individuals and the number of primary contacts by NHS Board. Comparisons between NHS Board figures should be treated with caution due to the variation in complexity of cases which the Boards are dealing with at any point in time (e.g. some cases will be straight-forward with a low number of primary contacts to be traced; others will be more complex with a higher number to be traced). These figures will be updated in subsequent weeks to incorporate any additional primary contacts who had not had their tracing completed by the time the analysis was undertaken.

In the week prior, of the 50,243 unique contacts recorded, 8,009 (15.9%) went on to test positive within ten days of their contact with an index case.

Table 5: Number of individuals and the number of primary contacts by NHS Board

	Week of first positive result			
	Week ending 22 August 2021		Week ending 29 August 2021	
NHS Board	Individual	Unique Primary Contacts within Health Board	Individual	Unique Primary Contacts within Health Board
Ayrshire & Arran	1,404	3,532	2,182	3,469
Borders	427	947	439	815
Dumfries & Galloway	906	2,140	785	1,373
Fife	1,339	2,812	1,805	2,246
Forth Valley	1,291	2,860	1,720	1,872
Grampian	1,122	2,818	1,834	3,624
Greater Glasgow & Clyde	7,170	14,038	10,334	9,854
Highland	1,158	1,710	1,633	686
Lanarkshire	3,836	8,320	6,412	7,927
Lothian	4,062	7,835	5,190	5,976
Orkney	10	57	8	24
Shetland	18	116	43	181
Tayside	1,225	2,656	1,674	2,167
Western Isles	31	106	40	149
Unknown Health Board	395	434	390	201

Contact tracers, within the National Contact Tracing Centre and NHS Boards, were unable to contact a proportion of individuals with a positive test and their primary contacts:

- 36,672 individuals with a positive test were unable to be contacted since the (Case Management System (CMS) went live (9.0% of all individuals).
- 23,812 contacts were unable to be contacted since the CMS went live (1.7% of all contacts).

These figures continue to be monitored by Test and Protect teams.

Completed Index cases

Since 03 August 2020, the use of some fields within the Contact Tracing Case Management System has become mandatory – this allows for improvement in data recording and other measures to be explored as to how Test and Protect in Scotland is responding to the number of positives cases. The measures below are the initial exploratory analysis to describe the timeliness of contact tracing. Please note these are preliminary statistics and ongoing work is in place to improve recording and use of fields within the CMS to increase accuracy. The three measures are;

- the time between a sample being taken and the positive individual being interviewed
- the time between the record appearing in the CMS and the positive individual being interviewed
- the time between the record appearing in the CMS and contact tracings being completed (i.e. contacts have been interviewed or attempted to be interviewed).

These figures are now weekly measures, data are available for previous weeks within the interactive dashboard.

Please note, data in tables 6, 7 and 8 relate to index cases recorded up to 27 August 2021. Data relates only to Monday – Friday due to completeness for the most recent week - Data are provisional and will be updated in future releases.

Table 6: Time (hours) between date test sample taken (specimen date) and the positive individual being contacted [7]

Hours taken	Week Ending 22 August 2021		Week Ending 29 August 2021	
	Number of Index Cases	% of Total Index Cases	Number of Index Cases	% of Total Index Cases
0-24	3,597	18.0	1,954	17.6
24-48	8,717	43.6	4,736	42.5
48-72	5,048	25.2	2,875	25.8
Over 72	2,447	12.2	1,437	12.9
Not known	199	1.0	134	1.2

Table 7: Time (hours) between case created in CMS and the positive individual being contacted [7]

Hours taken	Week Ending 22 August 2021		Week Ending 29 August 2021	
	Number of Index Cases	% of Total Index Cases	Number of Index Cases	% of Total Index Cases
0-24	11,410	57.0	5,785	52.0
24-48	6,003	30.0	3,406	30.6
48-72	1,527	7.6	1,476	13.3
Over 72	871	4.4	337	3.0
Not known	197	1.0	132	1.2

7 Includes being interviewed by a contact tracer or submitting preliminary information via a CO3 form

Table 8: Time (hours) between case created in CMS to its closure (revised 2 September 2021) [8]

Hours taken	Week Ending 22 August 2021		Week Ending 29 August 2021	
	Number of Index Cases	% of Total Index Cases	Number of Index Cases	% of Total Index Cases
0-24	**8,103[R]**	**40.4[R]**	5,055	45.4
24-48	4,955	24.8	2,602	23.4
48-72	2,594	13.0	1,865	16.7
Over 72	4,355	21.8	1,613	14.5
Not known	**1[R]**	**0.0[R]**	1	0.0

8 Measured by the time taken to complete the final contact interview for high risk settings/contacts and those completed via SMS

R Revised – There was a number of cases who were contacted digitally via SMS (Co3 form – Complete self trace only) that have now been appropriately assigned to the 0-24 hour category.

Travel outside of Scotland cases

Since 28 September 2020 fields have been available to record information about whether a case has travelled outside of Scotland. In the week ending 29 August 2021, 34,924 index cases were newly created on CMS, of which 12,914 had a fully completed index case interview. Of those interviewed, **662** travelled to the UK (excluding Scotland), **158** travelled to Europe and **23** to the rest of the world.

This information is collected on the contact tracing interview and is where outside of Scotland travel information is recorded. Please note we are aware of an undercount for those travelled outside Scotland. This is a data quality issue due to recording of the travel information, Public Health Scotland is working closely with contact tracing leads to improve this recording.

Protect Scotland App

The Protect Scotland App from NHS Scotland's Test and Protect was launched on 10 September 2020 and is a free, mobile phone app designed to protect individuals and reduce the spread of coronavirus. The app alerts individuals if they have been in close contact with another app user who tests positive for coronavirus. If they test positive, it can help in determining contacts that may have otherwise been missed while keeping individual's information private and anonymous. As of 30 August 2021 the total number of people who have downloaded the app is **2,180,876** with the number of contact notifications at **74,219**.

Event and Settings cases

Public Health Scotland has been able to present a table of settings and events that index cases have attended over the previous 7 days. This is based on interviews conducted with cases identified in the CMS and involves cases recalling where they have been in the 7 days prior to symptom onset (or date of test if asymptomatic).

These figures are now updated in Settings tab of the interactive dashboard accompanying this report. Please note that Public Health Scotland cannot infer from the figures whether a specific setting or an event indicates where the COVID-19 transmission took place. This is because cases may have attended multiple settings or events within a short space of time. In addition, it is possible that even though a case visited a few settings and events, transmission may have taken place elsewhere.

More information on event groupings can be found in the accompanying metadata document.

Quarantining Statistics

These statistics provide a summary of the number of people entering Scotland from outside the UK, those required to quarantine, and the numbers contacted by the National Contact Centre (NCC). Passenger arrivals into Scotland are provided by the Home Office to PHS. PHS take a sample of those who are required to quarantine and pass the data to NHS National Services Scotland, which runs the NCC on PHS's behalf.

Those arriving into Scotland who have been in a country on the red list (high risk) at any point in the 10 days before arriving in Scotland are required to quarantine in a hotel for a minimum of 10 days (further information available on the Scottish Government website). Those arriving in Scotland who have been in a country on the amber list (non-high risk) are required to quarantine at home.

Up to 23 June 2021, a sample of those individuals quarantining at home were contacted by the NCC. These calls were paused in order to prioritise contact tracing. Since 13 July 2021, these call have resumed. All travellers (except those exempt and those under 18 years of age) will receive an email, providing them with appropriate public health information on self-isolation and testing. Unvaccinated travellers arriving from an Amber country are also called by the NCC. Fully vaccinated travellers arriving from an Amber country, or travellers arriving from a Green country, receive a SMS and email. Arrivals from a Red country receive an email and continue to be managed via quarantine. Travellers under the age of 18 are not contacted.

Table 9 – Quarantine Statistics by date (22 June 2020 to 29 August 2021) [9]

	Week Ending 29 August 2021	Cumulative
Number of people arriving in Scotland	36,375	907,539
Number of people requiring to quarantine in a hotel (anywhere in the UK)	596	19,190
Number of people requiring to quarantine at home	4,846	436,709
Number of people contacted by National Centre	2,727	117,210

Of the total number of people contacted by the National Centre, the below table shows the breakdown of these contacts.

Table 10: Number of people contacted by National Centre by status (22 June 2020 to 29 August 2021) [9]

	Week Ending 22 August 2021	Cumulative
Successful contacts made	1,844	107,474
Unable to contact individual	97	8,950
In progress	786	786

9 For further information and additional notes on Contact Tracing, please see Appendix 7 – Quarantine Statistics.

Lateral Flow Device Testing

Across Scotland, there are numerous testing pathways being rolled out using Lateral Flow Devices (LFD) - a clinically validated swab antigen test taken that does not require a laboratory for processing. This test can produce rapid results within 45 minutes at the location of the test.

Some of the areas using LFD tests are: schools, health and social care workers, care homes and more. Public Health Scotland has collected the information on the number of LFD tests carried out across Scotland and will now publish this information weekly. This section is the totality of LFD across Scotland and across strategies. Sections focussing in on specific topics such as Schools, Higher Education and Community testing can be found later in the report.

Since 19 November 2020, there have been 9,599,353 LFD tests carried out in Scotland, of which 45,754 were positive (0.5%). Table 11 shows the number of LFD tests carried out in Scotland by testing group, and Table 12 shows the number of LFD tests by Health Board of residence of the individual taking the test.

Any individual who receives a positive test result using a Lateral Flow Device is advised to self-isolate and arrange for a confirmatory PCR test. The PCR result will determine the number of cases of COVID-19 in Scotland.

For additional details on Lateral Flow Device Tests, please see - Appendix 8 – Lateral Flow Device Testing

Table 11: Number of LFD[10] tests by Test group 19 November 2020 – 29 August 2021

Test Group	Test Reason	Number of tests	Number of positive tests	% LFT positive
Care Home Testing	Care Home - Visiting Professional	39,856	41	0.1%
	Care Home - Visitor	368,100	192	0.1%
	Care Home Staff	1,177,730	808	0.1%
Community Testing	Community Testing	76,415	634	0.8%
Education Testing	Combined School Staff	34,916	40	0.1%
	ELC Staff	210,774	621	0.3%
	Primary School Staff	1,031,083	1,721	0.2%
	Secondary School Pupils	586,979	2,406	0.4%
	Secondary School Staff	546,127	822	0.2%
	University Staff	101314	393	0.4%
	University Students	4,703	56	1.2%
Healthcare Testing	Healthcare Worker	2,141,411	2,736	0.1%
	Primary Care And Independent Contractors	133,330	125	0.1%
	Social Care	497,668	495	0.1%
Universal Offer	Attend An Event	90,083	372	0.4%
	High Cases In Local Area	25,201	965	3.8%
	Lives With Someone Who Is Shielding	7,814	194	2.5%
	Travel Within UK	32,599	181	0.6%
	Universal Offer	425,140	10,614	2.5%
Workplace Testing	Emergency Control Room Staff	42,300	81	0.2%
	Food Processing	7,552	7	0.1%
	Quarantine Hotel Staff/Security Personnel	2,864	18	0.6%
	UK Gov Other	1,663,277	20,535	1.2%
Other	Other	352,117	1,697	0.5%
Total	**Total**	**9,599,353**	**45,754**	**0.5%**

Data extracted: 30 August 2021

Please note some of the data is suppressed due to disclosure methodology being applied to protect staff confidentiality.

Table 12: Number of LFD[10] tests, up until 29 August 2021, by NHS Board of Residence (based on the postcode provided by the individual taking the test)

Board of Residence	Number of tests	Number of positive tests	% LFD positive
NHS Ayrshire & Arran	717,751	3,121	0.4%
NHS Borders	202,319	739	0.4%
NHS Dumfries & Galloway	276,588	1,038	0.4%
NHS Fife	591,062	3,183	0.5%
NHS Forth Valley	527,878	2,181	0.4%
NHS Grampian	1,184,832	3,346	0.3%
NHS Greater Glasgow & Clyde	1,747,001	11,198	0.6%
NHS Highland	637,226	2,063	0.3%
NHS Lanarkshire	997,594	5,568	0.6%
NHS Lothian	1,508,361	8,732	0.6%
NHS Orkney	40,732	37	0.1%
NHS Shetland	57,609	126	0.2%
NHS Tayside	811,082	3,436	0.4%
NHS Western Isles	71,385	86	0.1%
Unknown	227,933	900	0.4%
Total	**9,599,353**	**45,754**	**0.5%**

Data extracted: 30 August 2021

10 For additional details on Lateral Flow Device Tests, please see - Appendix 8 – Lateral Flow Device Testing.

Targeted Community Testing

The Community Testing Programme is ongoing across Scotland. This programme is a mixture of LFD and PCR tests. This is targeted at areas where there are concerns around community transmission levels, and offer testing to any member of that community. Further information is available within the interactive dashboard.

Table 13: Targeted Community Testing (18 January 2021 to 29 August 2021)

Symptoms	Week Ending 29 August 2021			Cumulative		
	Number of Tests	Number Positive	% positive	Number of Tests	Number Positive	% positive
Asymptomatic	28,074	2,883	10.3	284,077	18,844	6.6
Symptomatic[11]	16,486	5,636	34.2	189,138	38,453	20.3
All[12]	**46,204**	**8,973**	**19.4**	**485,703**	**59,876**	**12.3**

11 Symptomatic - the individual has selected on the booking website they have symptoms.

12 In week ending 29 August 2021, 1,644 tests were of unknown symptomatic status of which 454 were positive.

Table 14: Targeted Community Testing by Health Board (Week to 29 August 2021)

Health Board (of site)	Number of Tests	Number of Positive Test Results	% positive
NHS Ayrshire and Arran	1,556	303	19.5
NHS Borders	724	114	15.8
NHS Dumfries and Galloway	1,831	296	16.2
NHS Fife	1,681	309	18.4
NHS Forth Valley	1,948	366	18.8
NHS Grampian	1,689	245	14.5
NHS Greater Glasgow and Clyde	4,326	892	20.6
NHS Highland	920	178	19.4
NHS Lanarkshire	18,678	3,995	21.4
NHS Lothian	10,910	1,981	18.2
NHS Tayside	1,890	294	15.6
Unknown Health Board	51	0	0
Total	**46,204**	**8,973**	**19.4**

Please note some of the data is suppressed due to disclosure methodology being applied to protect staff confidentiality.

COVID-19 Vaccine

On 08 December 2020, a COVID-19 vaccine developed by Pfizer BioNTech was first used in the UK as part of national immunisation programmes. The AstraZeneca vaccine was also approved for use in the national programme, and rollout of this vaccine began on 04 January 2021. Moderna vaccine was approved for use on 08 January 2021 and rollout of this vaccine began on 07 April 2021.These vaccines have met strict standards of safety, quality and effectiveness set out by the independent Medicines and Healthcare Products Regulatory Agency (MHRA).

A 2-dose schedule is advised for the vaccines. For the Pfizer BioNTech vaccine, the second vaccine dose can be offered between 3 to 12 weeks after the first dose. For the AstraZeneca and Moderna vaccine, the second dose can be offered 4 to 12 weeks after the first dose.

Information on uptake across the vaccine programme is available on a daily basis via the PHS COVID-19 Daily Dashboard, 7 days a week at 2pm. This provides a cumulative picture of the position nationally and locally.

The dashboard provides total uptake nationally with breakdowns by Joint Committee on Vaccination and Immunisation (JCVI) age based cohorts and non age based cohorts for priority groups 1-9.

The vaccination content of this weekly publication will be kept under continual review with future editions likely to contain more in-depth analyses of uptake by particular groups or characteristics (e.g. ethnicity and deprivation category) building on the information published in this report on 23 March 2021. Going forward the Scottish Government will continue to publish limited information regarding overall uptake on its COVID-19: daily data for Scotland page, this will reflect that shown on the PHS COVID-19 Daily Dashboard.

COVID-19 vaccination in pregnancy

Data on COVID-19 vaccination in pregnancy was first provided in the Public Health Scotland COVID-19 Statistical Report published on 14 July 2021. This report now provides updated data on this topic.

The 14 July 2021 report provided background information on COVID-19 vaccination for pregnant women based on information available up to that date. More recent relevant developments are summarised below.

Updates to Joint Committee on Vaccination and Immunisation (JCVI) guidance and Government policy on the COVID-19 vaccination programme

Relating to pregnant women specifically

The JCVI guidance on COVID-19 vaccination for pregnant women, issued on 16 April 2021, remains unchanged. Under the UK COVID-19 vaccination programme, women who are pregnant are offered vaccination at the same time as non-pregnant women, based on their age and clinical risk group.

Relating to groups that may include pregnant women

On 19 July 2021, the JCVI recommended that children aged 12 to 15 years inclusive with specific underlying health conditions should be offered vaccination. On 4 August 2021, further guidance recommended that all young people aged 16 or 17 years not already eligible for vaccination should be offered a first dose of vaccination, with further guidance on second doses to follow later.

Evidence on the safety and effectiveness of COVID-19 vaccination in pregnancy

Clinical trials of COVID-19 vaccination in pregnancy

Clinical trials of COVID-19 vaccination in pregnancy are planned or underway, for example see here, here, and here.

Evidence on the immune response following COVID-19 vaccination in pregnancy

There is emerging evidence that the immune response following COVID-19 vaccination is similar in pregnant and non-pregnant women (see here). There is now clear evidence that maternal antibodies produced following COVID-19 vaccination in pregnancy cross the placenta to the fetus and are present in the baby's bloodstream at birth (as identified by their presence in cord blood at delivery, for example see here, here, and here).

'Real world' evidence on the effectiveness of COVID-19 vaccination in pregnancy following roll out of national vaccination programmes

A large scale observational study from Israel found that the Pfizer/BioNTech COVID-19 vaccination in pregnancy was 78% effective against confirmed COVID-19 infection in the mother at ≥28 days following first vaccination. A recent study from the UK Obstetric Surveillance System has shown that almost all pregnant women admitted to hospital in the UK with symptomatic COVID-19 up to mid July 2021 (the end date of the study) were unvaccinated. To date there is no evidence on the effectiveness of maternal vaccination in pregnancy in terms of preventing COVID-19 in babies after birth.

'Real world' evidence on the safety of COVID-19 vaccination in pregnancy following roll out of national vaccination programmes

The accumulating evidence continues to indicate no pregnancy-related safety concerns following COVID-19 vaccination in pregnancy.

The latest UK-wide data on adverse events following COVID-19 vaccination reported to the MHRA via the Yellow Card scheme is available here. This data does not indicate any increased risk of pregnancy-related adverse outcomes following vaccination in pregnancy.

In the study from Israel described above, no differences were found in pregnancy related outcomes between vaccinated and unvaccinated women who completed their pregnancies during the study period.

A large scale study from the US has examined data from linked vaccine safety surveillance systems run by the CDC and FDA. The study reported that the risk of mild, short term side effects following vaccination (Pfizer/BioNTech or Moderna) was similar among pregnant and non-pregnant women, and that the pregnancy and neonatal outcomes seen among women vaccinated in pregnancy were in line with what would be expected, taking into account the known background rates of events such as preterm birth in the population and the number of women who had been vaccinated.

A further study based on the same US vaccine safety surveillance systems found that the risk of miscarriage following Pfizer/BioNTech or Moderna vaccination in the six weeks prior to conception or in early pregnancy was in line with what would be expected.

Advice for women on COVID-19 vaccination in pregnancy

In light of the accumulating evidence on the safety and effectiveness of COVID-19 vaccination in pregnancy, and on the risks for women and babies of COVID-19 in pregnancy, on 22 July 2021, the Royal College of Obstetricians and Gynaecologists and the Royal College of Midwives confirmed that they recommend that pregnant women receive their COVID-19 vaccination when it is offered to their age/risk group. Patient information on COVID-19 vaccination in pregnancy available on NHS inform and from the RCOG has been updated to reflect this.

Data on COVID-19 vaccination in pregnancy from other UK nations

On 22 July 2021, Public Health England reported that 51,724 women aged less than 50 years who had received a COVID-19 vaccination in England to that date had stated that they were, or could be, pregnant at the time of vaccination. This data is based on data recorded by vaccinators at the point of vaccination rather than linkage of vaccination and pregnancy data, hence is not directly comparable to the data reported here for Scotland.

No data on COVID-19 vaccination in pregnancy is currently available for Wales or Northern Ireland.

How have we identified COVID-19 vaccinations given to pregnant women for this report?

Public Health Scotland and the University of Edinburgh are leading the COVID-19 in Pregnancy in Scotland (COPS) study.

As part of the study, we are regularly linking together a wide range of health records to identify women who are, or recently have been, pregnant. Using these records, we have identified all pregnancies in Scotland where the woman was pregnant (at any stage of pregnancy) on 1 March 2020 (the start of the COVID-19 pandemic), or has subsequently become pregnant. The study database is refreshed every month with new pregnancies added, and previous records of ongoing pregnancies updated as required, for example if a woman has recently delivered her baby. Whilst this gives us the most up to date information possible on pregnancies in Scotland, there is some unavoidable lag in the data. We can be fairly confident that events (new pregnancies starting and ongoing pregnancies ending) that occurred three months or more before each month's data refresh will be included in the study database. Some more recent events will also be included, but this very recent data will be incomplete.

To identify women vaccinated against COVID-19 in pregnancy, we have linked national vaccination data to the COPS pregnancy database. The Community Health Index (CHI) number is the unique patient identifier used on all health records within Scotland. The CHI number has been used to link the vaccination data to the pregnancy records: linkage therefore depends on both the vaccination and the pregnancy records including complete and accurate information on individuals' CHI number. Overall, 99.8% of all vaccination records for vaccinations given from the start of the programme to end July 2021 have an associated CHI number. As at mid-August 2021, the COPS database included a total of 126,030 pregnancies among 116,605 women: 125,136 (99.3%) of these pregnancy records (and 115,711, 99.2% of the women) have an associated CHI number.. Pregnancy records with no associated CHI number are likely to relate to pregnancies that are already included with an associated CHI number in the study database. For that reason, only pregnancy records with an associated CHI number have been included in the analyses presented in this report.

We have defined vaccinations given in pregnancy as those given at any point from the date of conception to the date the pregnancy ends, inclusive. The date of conception is at 2^{+0}

weeks gestation, as gestation is traditionally counted as starting from the first day of the woman's last period before her pregnancy. To minimise the chance that we have identified a vaccination as occurring 'in pregnancy' when it actually occurred after a pregnancy has ended, we have discounted any vaccinations that were showing as delivered at 44^{+0} weeks gestation or over. It is very likely that these women have completed their pregnancy, but the end of pregnancy record has not yet been received by PHS.

Further information about how the vaccination in pregnancy data has been produced is available in the previous 14 July 2021 report.

Number of COVID-19 vaccinations given in pregnancy

For this publication, we have used the COPS pregnancy database as updated in mid-August 2021 linked to records of vaccinations delivered on up to and including 31 July 2021.

We have identified a total of 12,799 COVID-19 vaccinations given in pregnancy to 10,411 women from the start of the COVID-19 vaccination programme in Scotland on 08 December 2020 to 31 July 2021.

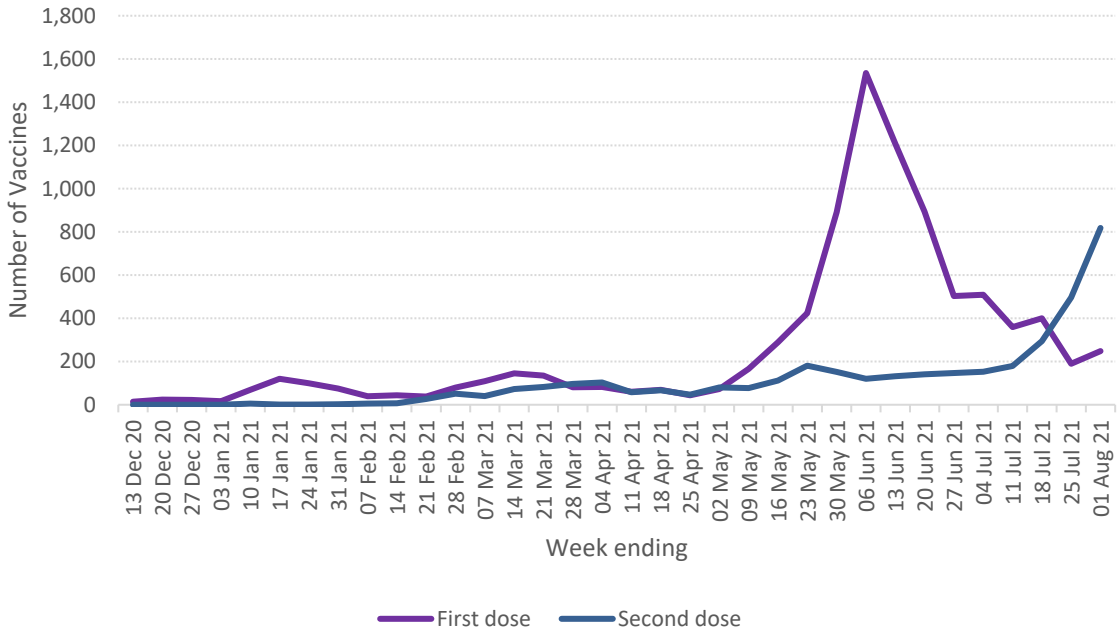
As noted above, the COPS pregnancy database will be incomplete for recent months, hence these figures are provisional. Updated figures will be published every month, and we expect figures to change over time. Change will occur both as recent pregnancies are added to the COPS database (and hence more vaccinations are identified as happening in early pregnancy) and end of pregnancy records are added to the database (and hence some vaccinations that we initially thought were given in pregnancy are subsequently identified as given after pregnancy).

Detailed data is provided in a supporting Excel file that accompanies this publication, and is also available through the Scottish Health and Social Care Open data platform.

Of the 12,799 total vaccinations given in pregnancy, 9,052 (71%) were first doses and 3,747 (29%) were second doses. 4,585 (36%) vaccinations were given in the first trimester of pregnancy (at 2+0 to 13+6 weeks gestation); 4,865 (38%) were given in the second trimester (at 14+0 to 27+6 weeks gestation); and 3,349 (26%) were given in the third trimester (at 28+0 weeks gestation or over). 9,720 (76%) of the vaccinations given were Pfizer/BioNTech; 1,364 (11%) were Moderna; and 1,715 (13%) were Oxford/AstraZeneca.

The number of first dose vaccinations given in pregnancy started to increase from mid May 2021 and peaked in early June 2021. The number of second dose vaccinations given in pregnancy started to increase from mid July 2021 as would be expected given the recommended gap between first and second doses. This time trend is similar to that seen for delivery of vaccinations to the general (non-pregnant) population of younger adult age groups (18 to 39 years).

Figure 7: Weekly number of COVID-19 vaccinations given in pregnancy by dose, weeks ending 13 Dec 2020 to 01 Aug 2021, Scotland



Uptake and coverage of COVID-19 vaccination in pregnancy

Based on the mid-August 2021 refresh of the COPS database, 31,888 women in Scotland had an ongoing pregnancy at the start of July 2021, and 3,377 (10.6%) women received any COVID-19 vaccination during pregnancy in July 2021.

There were 4,062 deliveries in July 2021. 776 (19%) of the women delivering in July had received any COVID-19 vaccination prior to delivery (vaccination given before or during pregnancy), with 154 (3.8%) of the women having received two doses of vaccination prior to delivery.

In general, up to end July 2021, the uptake and coverage of COVID-19 vaccination in pregnancy has been higher in older (compared to younger) women, and in women from less (compared to more) deprived areas of Scotland. The initial peak in uptake of vaccination in pregnancy occurred earlier in older (compared to younger) women (in May rather than June 2021), as would be expected given the roll out of vaccination to progressively younger age groups. A second increase in uptake of vaccination in pregnancy in older women (≥40 years) occurred in July 2021, likely reflecting delivery of second doses to this group.

Whilst direct comparisons are not currently available, the data on COVID-19 vaccination in pregnancy presented here shows that, to date, vaccination rates have been lower in pregnant women compared to non-pregnant women in the same age groups. For example, data provided with this report shows that 30% (209 / 706) of women aged 35-39 who delivered their baby in July 2021 had received any COVID-19 vaccination by the time of delivery. By contrast, data available for the general population shows that by the end of July 2021 81% of adults aged 30-39 years in the general population had received any vaccination.

COVID-19 cases, acute hospitalisations, and deaths by vaccine status

Vaccine Surveillance

Public Health Scotland has a COVID-19 vaccine surveillance strategy to monitor the effectiveness, safety and impact of all approved COVID-19 vaccines in Scotland. The key measure of the success of the vaccination programme in preventing infection, hospitalisations, and deaths is vaccine effectiveness.

The summary data presented in this chapter record the total number of COVID-19 cases, COVID-19 related acute hospital admissions, and confirmed COVID-19 deaths by their vaccination status and does not assess the effectiveness of the vaccine or whether the vaccine has worked in these individuals. The latter requires a careful examination of each case to explore possible reasons, which could be related to the test, virus, or the person (e.g. pre-existing conditions).

Summary of key results

- In the past three weeks, cases are still increasing and have surpassed the peak that was seen in early July. The rate of increase in cases is less among fully vaccinated individuals compared to partially or unvaccinated individuals.
- In the last four weeks from 31 July to 27 August, 40.2% of COVID-19 positive PCR cases were in unvaccinated individuals.
- In the last week from 21 August to 27 August, COVID-19 related acute hospitalisation rates are increasing. The seven-day rolling average of COVID-19 related acute hospital admissions has increased from 37.86 to 64.00 admissions per day.
- In the last week, 8 out of every 100,000 vaccinated individuals were admitted to hospital and had a COVID-19 positive PCR test 14 days prior, on admission, or during their stay in hospital, compared to 15 out of every 100,000 unvaccinated individuals.
- In the last four weeks, 40.1% of COVID-19 related acute hospital admissions were in unvaccinated individuals, of which 56.2% were in the under 40s age group. This is within the context of 91% of adults aged 18+ having had at least one dose of vaccine and vaccinated figures including the elderly and vulnerable groups.
- From the 29 December 2020 to 25 August, 264 individuals tested positive for SARS-CoV-2 by PCR more than 14 days after receiving their second dose of COVID-19 vaccine and subsequently died with COVID-19 recorded as an underlying or contributory cause of death. This equates to 0.008% of those who have received two doses of COVID-19 vaccines, and is a significantly lower COVID-19 death rate than the pre-vaccination pandemic period.

Data Sources and Limitations

13 For further information, please see - Appendix 9 – Data Sources and Limitations

Overall results of COVID-19 cases and hospitalisations, and deaths by vaccination status

COVID-19 cases by vaccination status

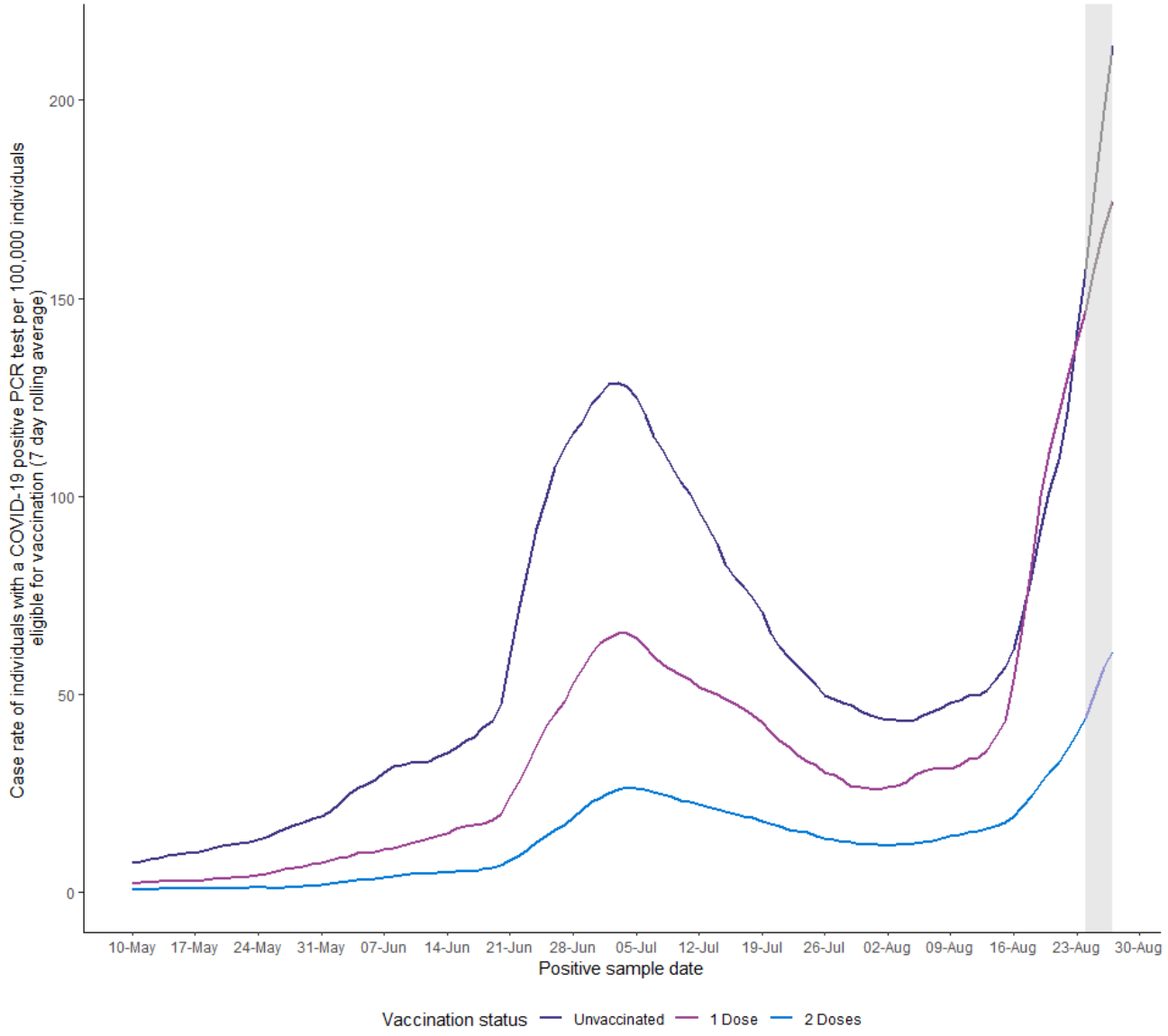
Table 15: Number of COVID-19 positive cases by week and vaccination status, 31 July 2021 to 27 August 2021

Week/Vaccination Status	Unvaccinated			1 Dose			2 Doses		
	No. of Cases	Eligible or Vaccinated	% Cases	No. of Cases	Eligible or Vaccinated	% Cases	No. of Cases	Eligible or Vaccinated	% Cases
31 July to 06 August 2021	3,439	1,080,978	0.32%	1,963	893,690	0.22%	2,696	3,053,146	0.09%
07 August to 13 August 2021	3,792	1,056,828	0.36%	2,113	802,633	0.26%	3,486	3,168,353	0.11%
14 August to 20 August 2021	7,417	1,042,694	0.71%	5,673	691,422	0.82%	6,922	3,293,698	0.21%
21 August to 27 August 2021	15,443	1,029,961	1.50%	7,599	579,467	1.31%	14,346	3,418,386	0.42%

Vaccination status is determined as at the date of PCR specimen date according to the definitions described in Appendix 9. The data displayed within the greyed-out section (3 days) are considered preliminary and are subject to change as more data is updated. Age is calculated as at 31 August 2021 whereas previously age was calculated as at 31 March 2021.

In the last week, the case rate in unvaccinated populations was 1,500 COVID-19 cases per 100,000 individuals, compared to 420 COVID-19 cases per 100,000 individuals vaccinated with two doses.

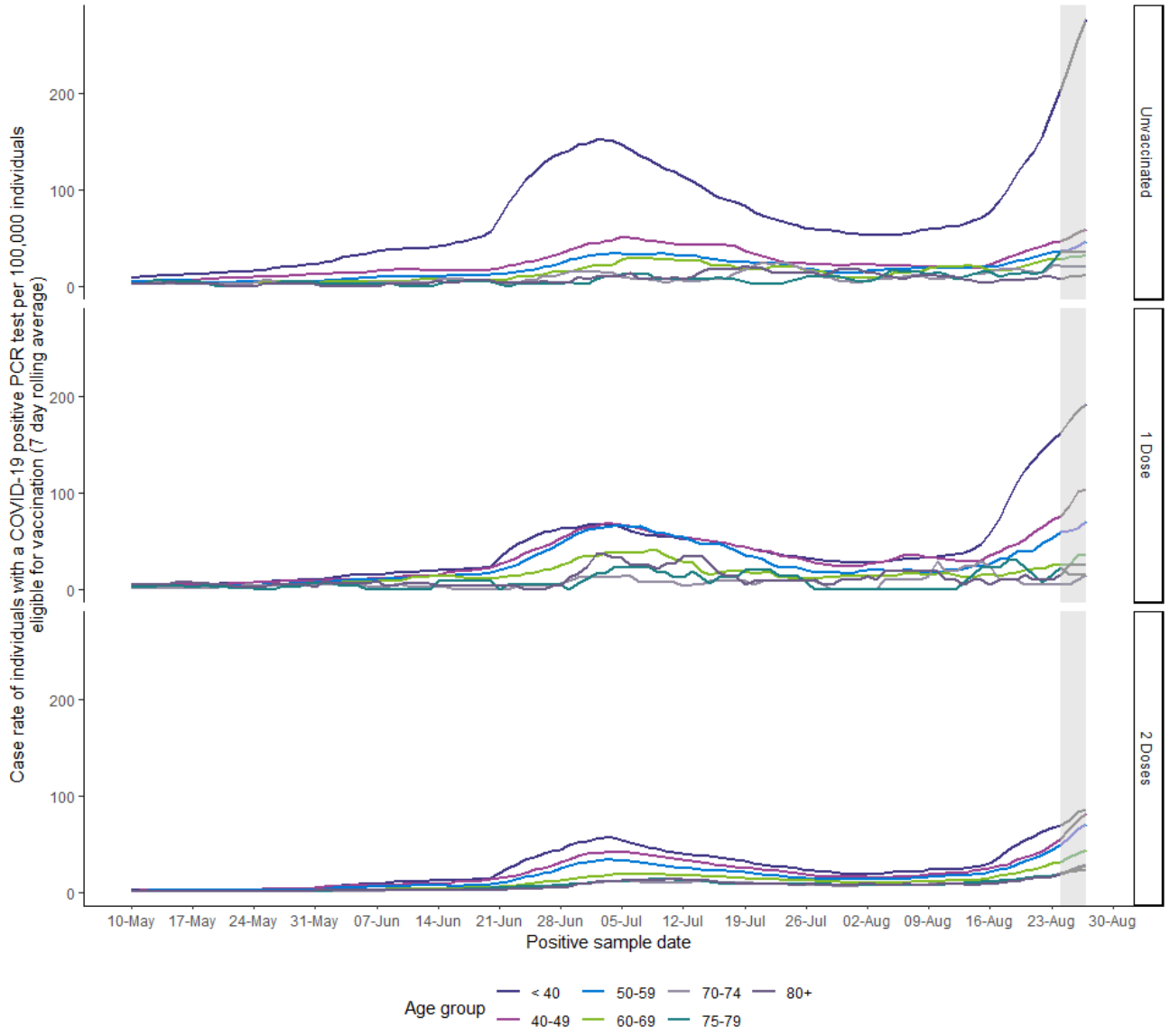
Figure 8: COVID-19 case rate per 100,000 individuals eligible for vaccination by vaccination status, 7-day rolling average from 10 May 2021 to 27 August 2021



Vaccination status is determined as at the date of PCR specimen date according to the definitions described in Appendix 9. The data displayed within the greyed-out section (3 days) are considered preliminary and are subject to change as more data is updated.

There are a lower number of cases in vaccinated individuals compared to unvaccinated individuals, but cases are increasing for all vaccine statuses. Adults with only one dose of the vaccine at present are mostly aged <50 years.

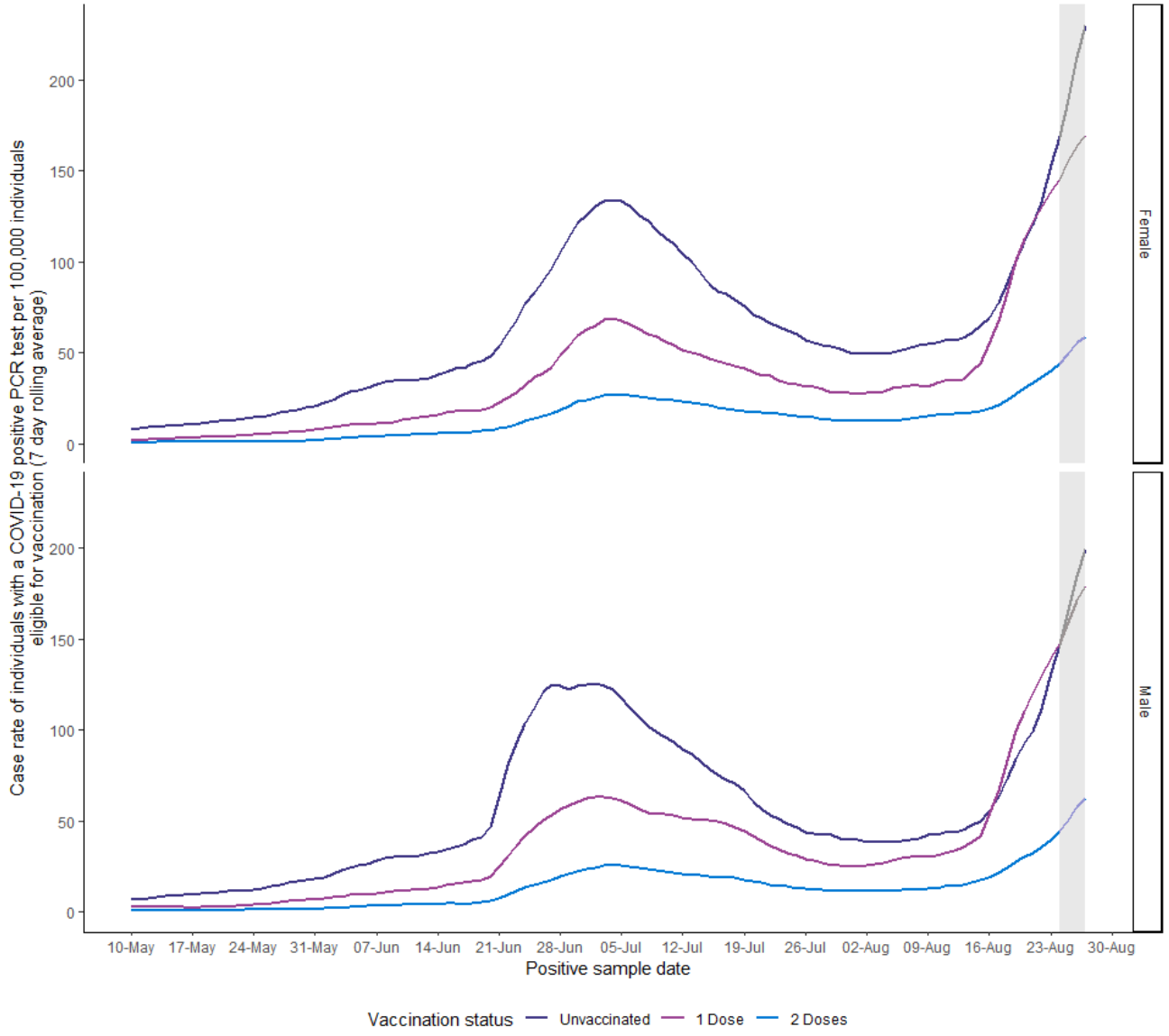
Figure 9: COVID-19 case rate per 100,000 individuals eligible for vaccination by vaccination status and age group, 7-day rolling average from 10 May 2021 to 27 August 2021



Vaccination status is determined as at the date of PCR specimen date according to the definitions described in Appendix 9. The data displayed within the greyed-out section (3 days) are considered preliminary and are subject to change as more data is updated.

Since 10 May 2021, a higher proportion of COVID-19 positive PCR cases have been in unvaccinated or single dose vaccinated individuals under the age of 40.

Figure 10: COVID-19 case rate per 100,000 individuals eligible for vaccination by sex and vaccine status, 7-day rolling average from 10 May 2021 to 27 August 2021



Vaccination status is determined as at the date of PCR specimen date according to the definitions described in Appendix 9. The data displayed within the greyed-out section (3 days) are considered preliminary and are subject to change as more data is updated.

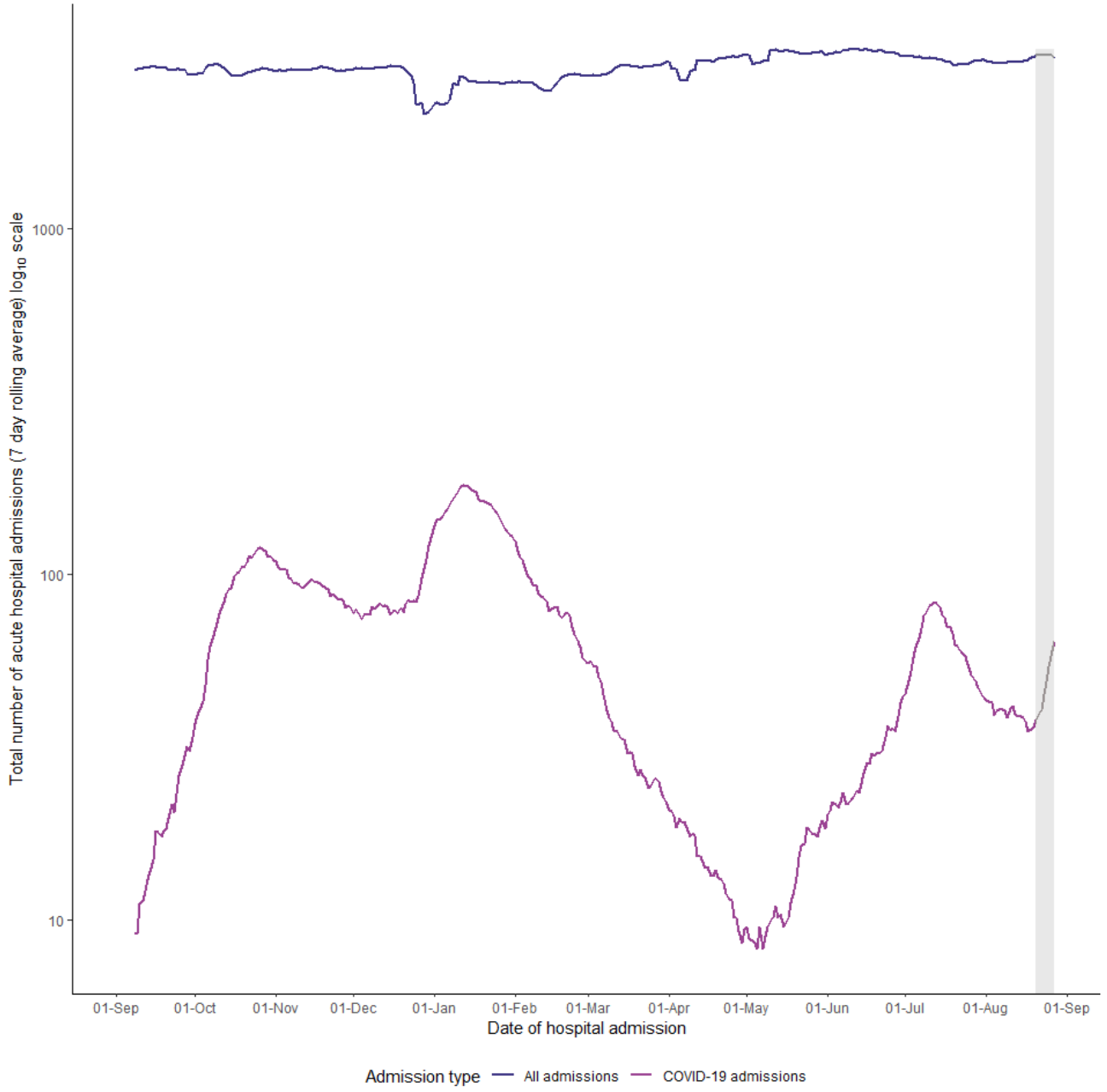
COVID-19 case rates are similar between females and males.

COVID-19 related acute hospital admissions by vaccine status

The latest analysis by PHE indicates that vaccine effectiveness against hospitalisation after 2 doses of COVID-19 vaccine is high, with a 93% protective effect against the Alpha variant and 96% for the Delta variant.

From 01 September to 27 August 2021, there were a total of 1,056,927 acute hospital admissions for any cause, of which 22,094 were associated with a COVID-19 PCR positive test 14 days prior, on admission, the day after admission or during their stay. Using the 90-day exclusion criteria between positive COVID-19 PCR tests associated with an acute hospital admission, 21,989 individuals were admitted to hospital, of which 72 were readmitted more than 90 days after their first admission.

Figure 11: Seven-day rolling average on a $\log_{10}$ comparing COVID-19 related acute hospital admissions to all acute hospital admissions, 01 September 2020 to 27 August 2021.



Data displayed are on a $\log_{10}$ scale. The data displayed within the greyed-out section (1 week) are considered preliminary and are subject to change as more data is updated.

In the last month, the number of COVID-19 related hospital admissions have increased but are small relative to all acute hospitalisations and currently remain below the previous wave. These remain low relative to all acute hospitalisations.

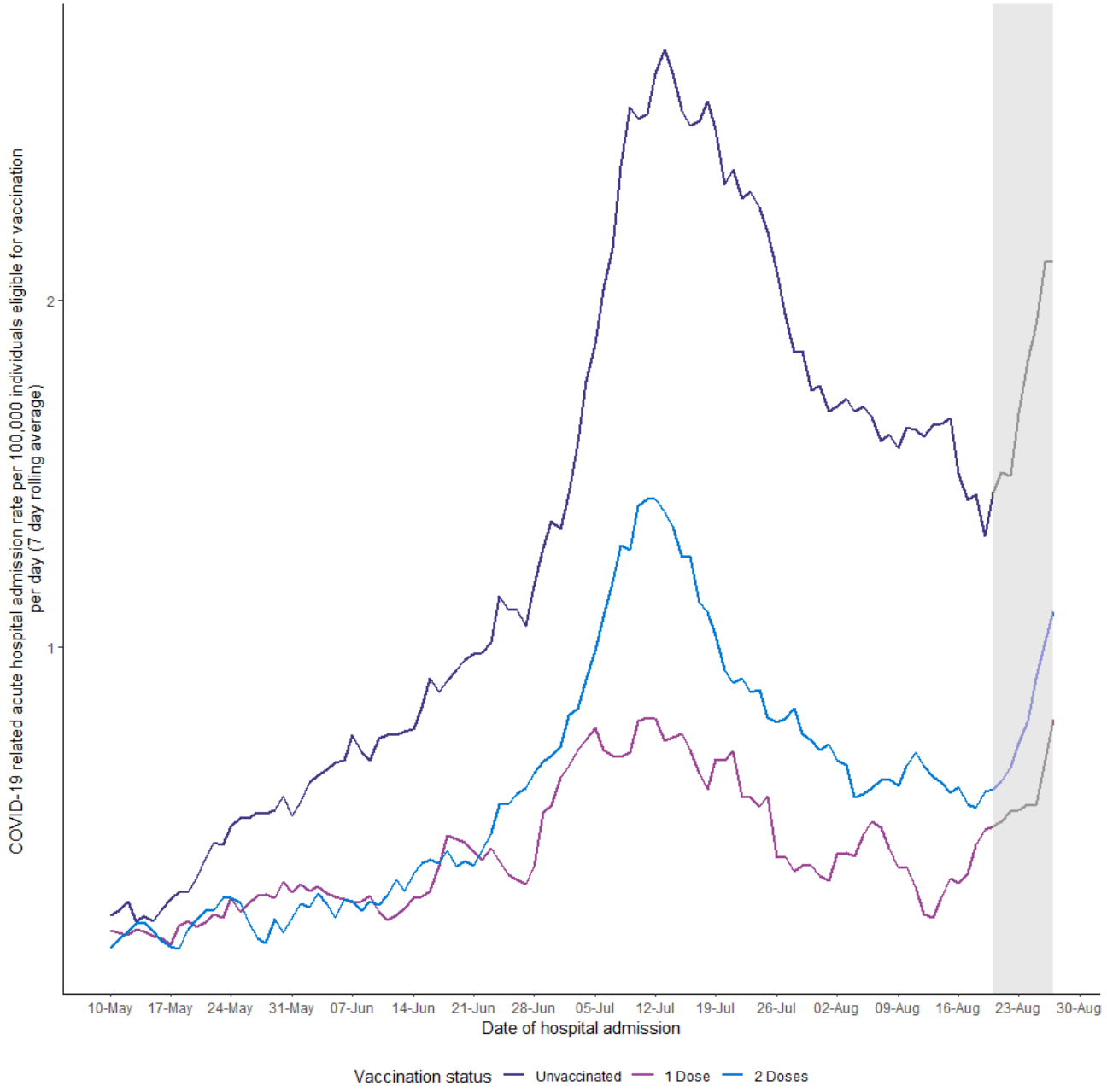
Table 16: Number of COVID-19 related acute hospital admissions by week and vaccination status, 31 July 2021 to 27 August 2021.

Week/Vaccination Status	Unvaccinated			1 Dose			2 Doses		
	No. of Admissions	Eligible or Vaccinated	% Admissions	No. of Admissions	Eligible or Vaccinated	% Admissions	No. of Admissions	Eligible or Vaccinated	% Admissions
31 July to 06 August 2021	128	1,080,978	0.012%	32	893,690	0.004%	125	3,053,146	0.004%
07 August to 13 August 2021	122	1,056,828	0.012%	13	802,633	0.002%	137	3,168,353	0.004%
14 August to 20 August 2021	106	1,042,694	0.010%	25	691,422	0.004%	134	3,293,698	0.004%
21 August to 27 August 2021	153	1,029,961	0.015%	34	579,467	0.006%	261	3,418,386	0.008%

Vaccination status is determined as at the date of positive PCR test according to the definitions described above. The data displayed within the greyed-out section (1 week) are considered preliminary and are subject to change as more data is updated.

In the last week, the number of COVID-19 related acute hospital admissions have increased. In the last week, 8 out of every 100,000 fully vaccinated individuals were admitted to hospital and had a COVID-19 positive PCR test 14 days prior, on admission or during their stay in hospital, compared to 15 out of every 100,000 unvaccinated individuals.

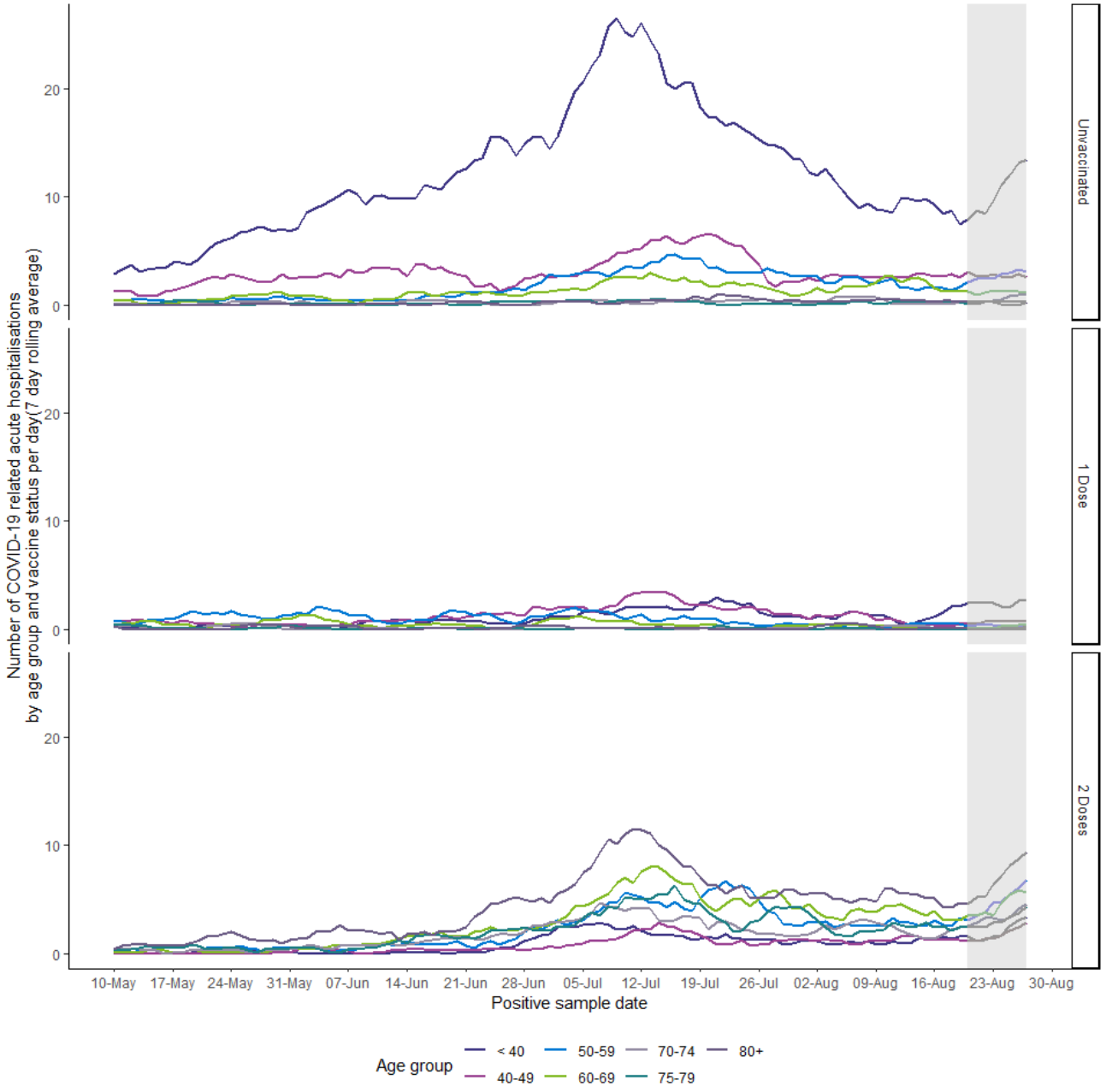
Figure 12: Rate of COVID-19 related acute hospital admissions per 100,000 individuals eligible for COVID-19 vaccination by vaccination status, seven-day rolling average from 01 September 2020 to 27 August 2021.



Vaccination status is determined as at the date of positive PCR test according to the definitions described in Appendix 9. The data displayed within the greyed-out section (1 week) are considered preliminary and are subject to change as more data is updated.

Since 10 May 2021, a larger proportion of COVID-19 related acute hospital admissions have occurred in unvaccinated populations, in comparison to populations with one or two doses of the COVID-19 vaccine.

Figure 13: Seven-day rolling average COVID-19 related acute hospital admissions by vaccination status and by age group, 10 May 2021 to 27 August 2021.



Vaccination status is determined as at the date of positive PCR test according to the definitions described in Appendix 9. Patient age is determined as their age the date of admission. The data displayed within the greyed-out section (1 week) are considered preliminary and are subject to change as more data is updated.

From the 31 July 2021 to 27 August 2021, 56.2% of unvaccinated COVID-19 related acute hospital admissions were in the under 40s age group.

Confirmed COVID-19 deaths by vaccination status

COVID-19 vaccines are estimated to significantly reduce the risk of mortality for COVID-19, however a small number of COVID-19 deaths are still expected in vaccinated people, especially in vulnerable individuals where the vaccine or the immune response may not have been effective. Evidence has shown that vaccination is highly effective in protecting against death from coronavirus (COVID-19). Data published by Public Health England (PHE) has shown that individuals who receive a single dose of either the Pfizer-BioNTech or the AstraZeneca vaccine have approximately 70 to 85% lower risk of death with COVID-19 compared with unvaccinated individuals. Vaccine effectiveness against mortality with 2 doses of the Pfizer vaccine is around 95 to 99% and with 2 doses of the AstraZeneca vaccine around 75 to 99%. Modelling analysis from PHE estimates that between 102,500 and 109,500 deaths have been prevented in England as a result of the COVID-19 vaccination programme, up to 22 August.

Table 17: Number of confirmed COVID-19 related deaths by vaccination status at time of test, 29 December 2020 to 19 August 2021

Age group	Unvaccinated	1 Dose	2 Doses	Total
< 40	27	2	0	**29**
40-49	58	5	3	**66**
50-59	195	6	17	**218**
60-69	433	18	31	**482**
70-79	785	44	80	**909**
80+	1,598	202	133	**1,933**
Total	**3,096**	**277**	**264**	**3,637**

Vaccination status is determined as at the date of positive PCR test according to the definitions described above.

From the 29 December 2020 (21 days after the start of the vaccination programme in Scotland to account for protection to develop after the first dose) to the 19 August 2021, there have been 3,637 confirmed COVID-19 related deaths with a positive PCR result and where COVID-19 was recorded as an underlying or contributory cause on the death certificate. Of these 85.1% were in unvaccinated individuals, 7.6% had received one dose of COVID-19 vaccine and 7.3% had received two doses. The risk of death from COVID-19 is strongly linked to age, with the most vulnerable being in the over 70s age group.

In Scotland, from the beginning of the COVID-19 vaccination programme over 3.4 million individuals had been fully vaccinated with two doses of COVID-19 vaccine. Of these, 264 individuals (0.008%) tested positive by PCR for SARS-CoV-2 more than fourteen days after receiving their second dose of COVID-19 vaccine and subsequently died with COVID-19 recorded as an underlying or contributory cause of death. Ninety-seven percent of individuals who died from COVID-19 had more than one other contributing factor towards their death. Of the confirmed COVID-19 related deaths, in individuals that have received two doses of COVID-19 vaccine, 80.7% were in the 70 and over age group.

Overall deaths that have occurred within 28 days of a COVID-19 vaccination

Information previously published on the number of deaths that have occurred within 28 days of Covid-19 vaccination can be found here.

Equality of COVID-19 Vaccination Uptake

This chapter contains a further update to the publication of equality of uptake of the COVID-19 vaccinations in Scotland, first published on the 24th March and updated on 28th April, 2nd June and 21st July. Vaccination data are from the 8th December 2020 to the 24th August 2021, and the analysis contains comparisons by ethnicity and socioeconomic deprivation in age bands for those aged 18+. For the first time this publication also shows comparisons for 2nd dose of vaccinations as well as for 1st dose.

Age is calculated as at 31st August 2021. In previous equality publications age was calculated as at 31st March 2021. This change may result in uptake in some age groups for certain cohorts appearing lower than what was published previously.

These analyses highlight differences in uptake between demographic groups, but they do not examine causative factors for the inequalities, which will be numerous and complex. The reasons for differences in coverage of vaccination between ethnic groups and deprived areas may include access to services and mobility, service delivery, health literacy, vaccine acceptability or other characteristics. These are being explored further through our vaccine evaluation and vaccine confidence work streams. Also to be taken into account are co-morbidities that may be present in different groups.

Those in certain groups may have higher levels of morbidity, so may be classed as clinically vulnerable to COVID-19 and thus would be invited for vaccination before others of the same age. Likewise, risk is associated with age, so older people will have been offered vaccinations before younger people if no co-morbidity exists. All people aged 18+ will have had the opportunity to attend their first vaccine appointment by 24th August 2021 or attend a drop-in centre. Opportunity to attend for 2nd dose is dependent on when the 1st dose was administered. Due to younger age groups generally receiving their 1st dose at a later date than older groups this will affect uptake rate for younger groups for 2nd dose.

Data Sources

Vaccination data are extracted from the National Clinical Data Store (NCDS) which sources data from both the Vaccine Management Tool and General Practice Patient Management Systems. Data are presented for those who have had 1 or 2 doses of a COVID-19 vaccine up to, and including, the 24th August 2021.

Socioeconomic data are derived from the Scottish Index of Multiple Deprivation (SIMD) 2020 v2, and are presented as deciles, with decile 1 indicating the population living in the most deprived areas and decile 10 the least deprived areas. More information on SIMD can be found here https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/

Ethnicity data are sourced from various datasets. Ethnicity, as reported in this chapter, incorporates an individual's ethnicity as recorded in outpatient (SMR00) and inpatient or day case (SMR01) hospital records from March 2010, Rapid Preliminary hospital Inpatient Data (RAPID) records from February 2020, COVID Case Management System (CMS) from June 2020, Electronic Communication of Surveillance in Scotland (ECOSS) from February 2020 or from the Urgent Care Datamart (A&E, SMR04) from January 2011.

Population data are extracted from Community Health Index (CHI) dataset representing all those currently registered with a GP practice in Scotland.

Linkage and Completeness

This chapter is restricted to those age groups over 18+ who have now all been invited for vaccination and represents around 4.8 million individuals. A minority of individuals will have a scheduled appointment booked that they had not yet attended, and so these figures do not give a complete picture of uptake for all those 18+.

Uptake rates presented here use different denominators than those in the Public Health Scotland COVID-19 Daily Dashboard and will show lower rates than the daily publication. The estimates used in this chapter to calculate population denominators by ethnicity and deprivation are from the CHI registration and may over-estimate the population size as they will include, for example, some individuals no longer resident in Scotland.

As at 24th August 2021, the vaccination uptake rates by age group are shown below.

Figure 14: % uptake of first dose of COVID-19 vaccination as at 24 August 2021, by age group

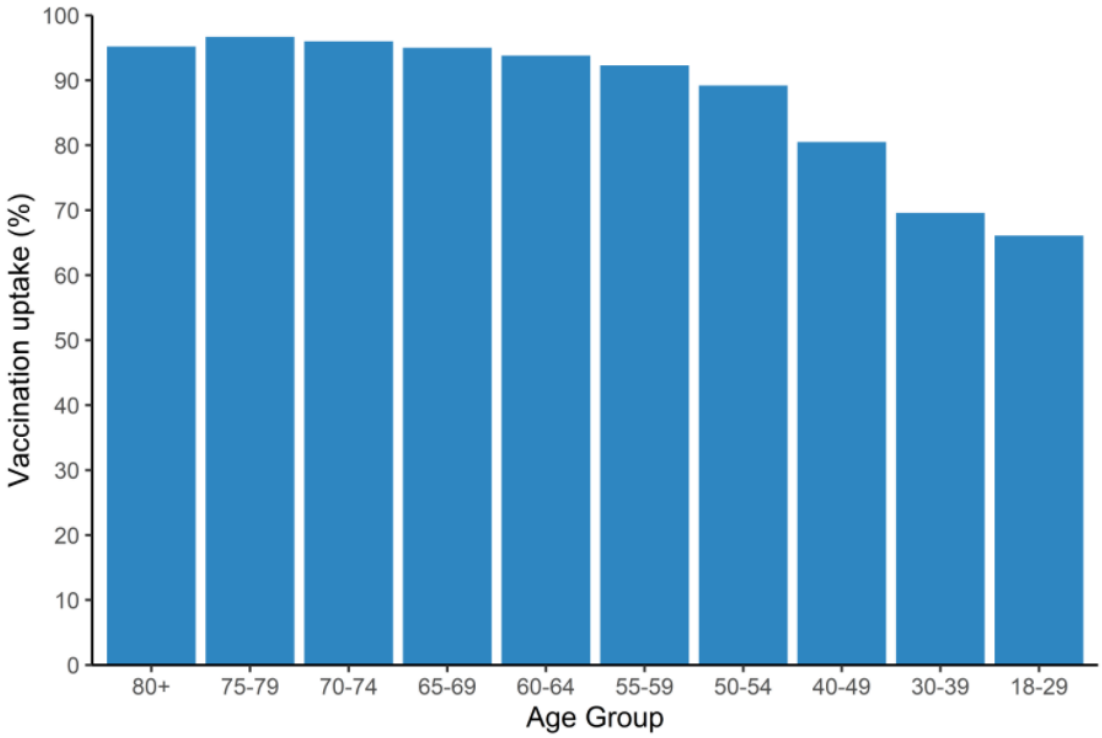
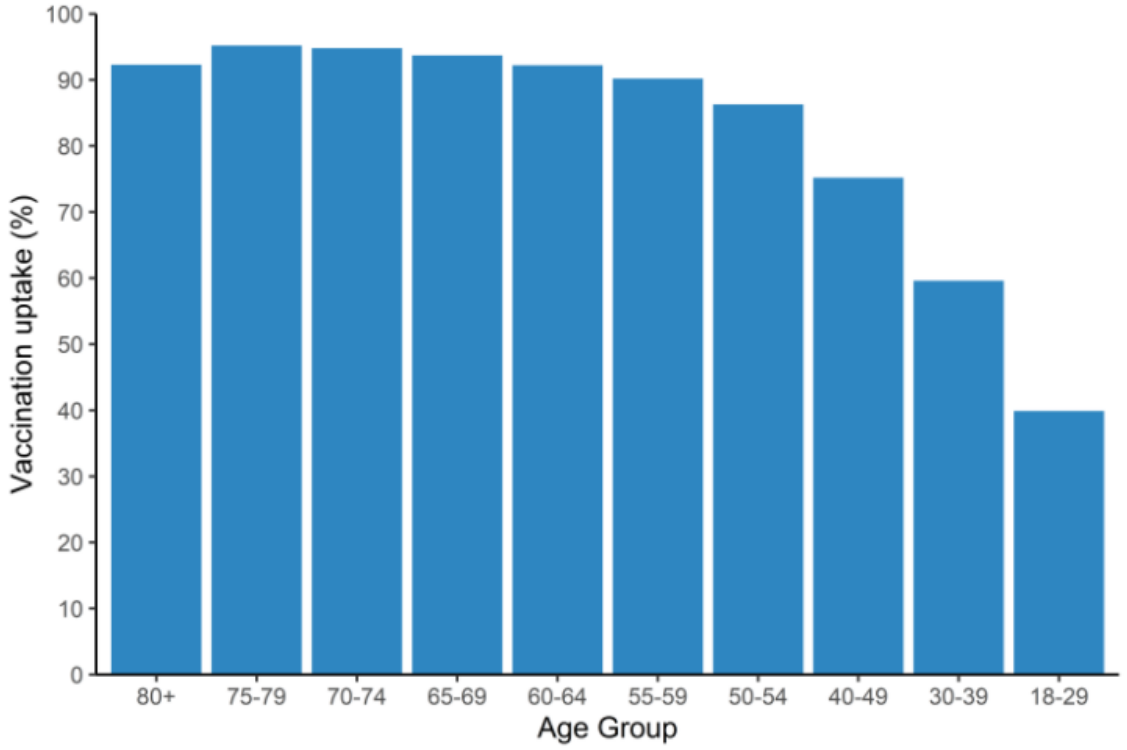


Figure 15: % uptake of second dose of COVID-19 vaccination as at 24 August 2021, by age group



Overall, the vaccination uptake percentage for over 18s is 82.3% for dose 1, and 73.9% for dose 2 when based on the CHI population.

A level of deprivation was matched to 99.9% and ethnicity to 71.0% of the age 18+ population.

Ethnicity

Figure 16 and Table 18 below show vaccination uptake for first dose by ethnic group and age group. Ethnic group categories are based on the Scottish 2011 census ethnicity categories which are used as a standard across the NHS in Scotland. Data are presented by vaccination age group to allow for differences in ethnic group population age demographics.

For all age groups, uptake for dose 1 is highest in white ethnic groups. For older age groups (50+) uptake is lowest in African groups. For younger age groups (<50) the uptake is lowest in the Caribbean or Black group. The difference is most apparent in the 18-29 age group where uptake for dose 1 is 75.2% for the white ethnic group and 53.1% for the Caribbean or Black ethnic group. Within each ethnic group there is variation of uptake rates across age groups, with generally higher uptake at older ages.

Uptake for dose 1 in white ethnic groups is high across all age groups, with uptake ranging from 97.6% in the 75-79 age group to 75.2% in those aged 18-29 years, a difference of 22.4%. In contrast, Caribbean or Black ethnic groups have the largest range, with uptake ranging from 93.0% in the over 80s to 53.1% in those aged 18-29 years.

Figure 16: % uptake of first dose of COVID-19 vaccination as at 24 August 2021, by age group and ethnic group

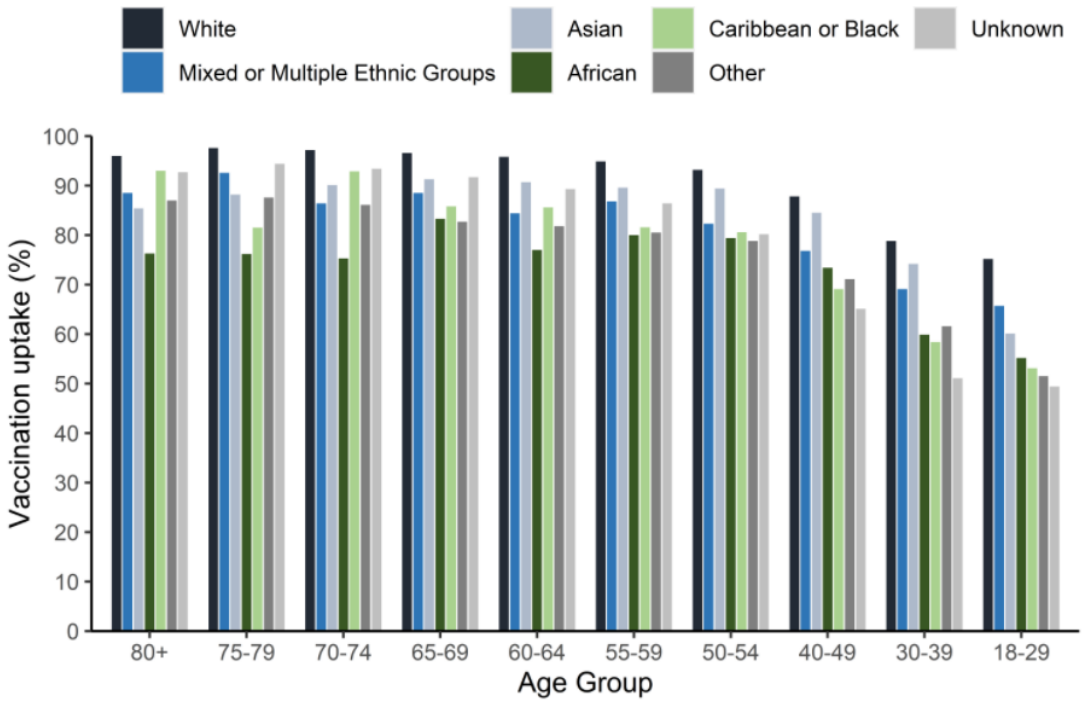


Table 18: % uptake of first dose of COVID-19 vaccination as at 24 August 2021, by age group and ethnic group

Age Group	White	Mixed/Multiple	Asian	African	Caribbean or Black	Other	Unknown
80+	96.0	88.5	85.4	76.3	93.0	87.0	92.7
75-79	97.6	92.6	88.2	76.2	81.5	87.6	94.4
70-74	97.2	86.4	90.1	75.3	92.9	86.1	93.4
65-69	96.6	88.5	91.3	83.3	85.8	82.7	91.7
60-64	95.8	84.4	90.7	77.0	85.6	81.8	89.3
55-59	94.9	86.8	89.6	80.0	81.6	80.5	86.4
50-54	93.2	82.3	89.4	79.4	80.6	78.8	80.2
40-49	87.8	76.8	84.5	73.4	69.1	71.1	65.1
30-39	78.8	69.1	74.2	59.9	58.4	61.6	51.1
18-29	75.2	65.7	60.1	55.2	53.1	51.5	49.4
All 18+	88.2	72.1	76.5	66.4	66.5	65.9	69.5

Figure 17 and Table 19 below show vaccination uptake for second dose by ethnic group and age group.

For all age groups, uptake for dose 2 is highest in white ethnic groups. For older age groups (50+) uptake is lowest in African groups. For younger age groups (<50) the uptake is lowest in the Caribbean or Black group apart from 18-29 where the lowest rate is in the African group. The difference is most apparent in the 18-29 age group where uptake is 47.1% for the white ethnic group and 25.0% for the African ethnic group. Within each ethnic group there is variation of uptake rates across age groups, with generally higher uptake at older ages. Uptake for dose 2 generally mirrors the pattern for dose 1 as it is dependent on a first dose being administered, however, not all 18-29 year olds are eligible for their second dose yet (i.e. 8 weeks since first dose).

Uptake for dose 2 in white ethnic groups is high across all age groups, with uptake ranging from 96.1% in the 75-79 age group to 47.1% in those aged 18-29 years, a difference of 49.0%. In contrast, Caribbean or Black ethnic groups have the largest range, with uptake ranging from 93.0% in the over 80s to 25.2% in those aged 18-29 years.

Figure 17: % uptake of second dose of COVID-19 vaccination as at 24 August 2021, by age group and ethnic group

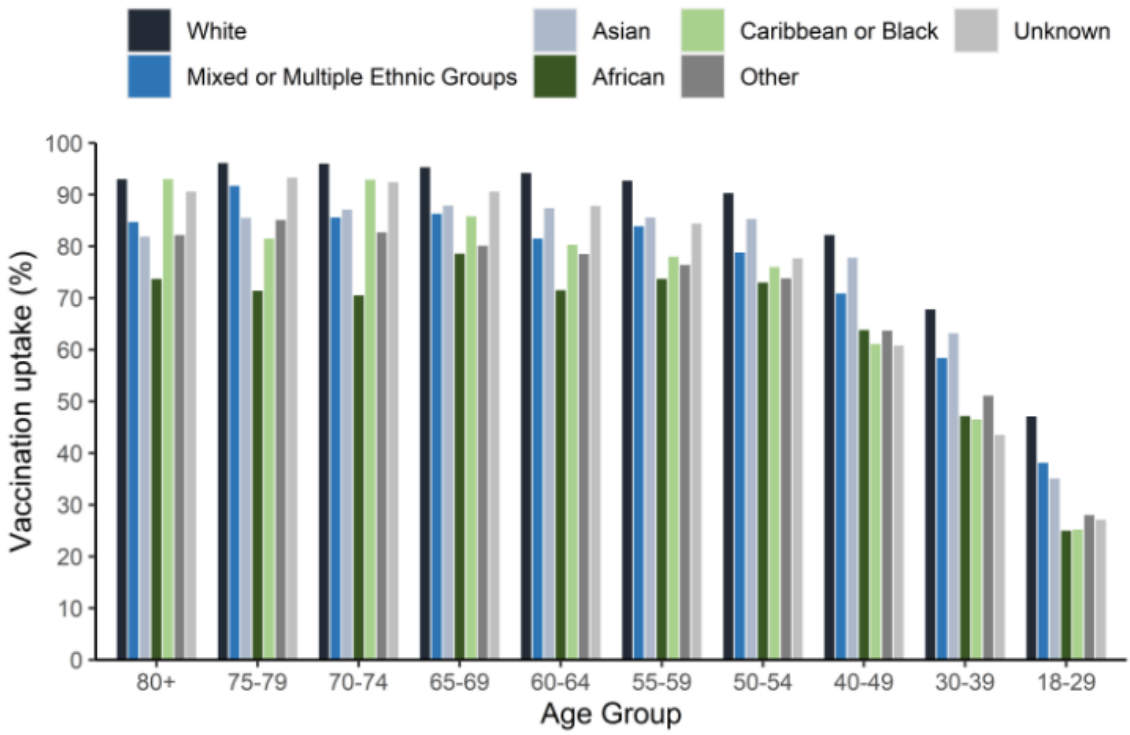


Table 19: % uptake of second dose of COVID-19 vaccination as at 24 August 2021, by age group and ethnic group

Age Group	White	Mixed/Multiple	Asian	African	Caribbean or Black	Other	Unknown
80+	93.0	84.7	81.9	73.7	93.0	82.2	90.6
75-79	96.1	91.7	85.5	71.4	81.5	85.1	93.3
70-74	96.0	85.6	87.1	70.5	92.9	82.7	92.4
65-69	95.3	86.3	87.9	78.6	85.8	80.1	90.6
60-64	94.2	81.5	87.4	71.5	80.3	78.5	87.8
55-59	92.7	83.9	85.6	73.7	78.0	76.4	84.4
50-54	90.3	78.8	85.3	73.0	76.0	73.8	77.7
40-49	82.2	70.9	77.8	63.8	61.1	63.7	60.8
30-39	67.8	58.4	63.2	47.2	46.5	51.1	43.5
18-29	47.1	38.1	35.1	25.0	25.2	28.0	27.1
All 18+	79.7	57.4	64.5	52.0	54.2	54.4	62.0

Figure 18 below shows vaccination uptake for 1st dose over time by ethnic group and age group between the 8th of December 2020 and the 24th August 2021. The trends over time reflect the JCVI priorities for vaccination. For each age group there is a point at which uptake

naturally plateaus as most people who want to get the vaccine when first invited within their priority group have done so. From that point onwards, there has been a continual decrease in the gap between the ethnic groups, particularly for African ethnic groups, indicating that individuals are continuing to come forward for vaccination after their priority group has been invited (see Figure 18 and Table 20).

Figure 18: % uptake of first dose of COVID-19 vaccination between the 8th December 2020 and the 24th August 2021, by age group and ethnic group

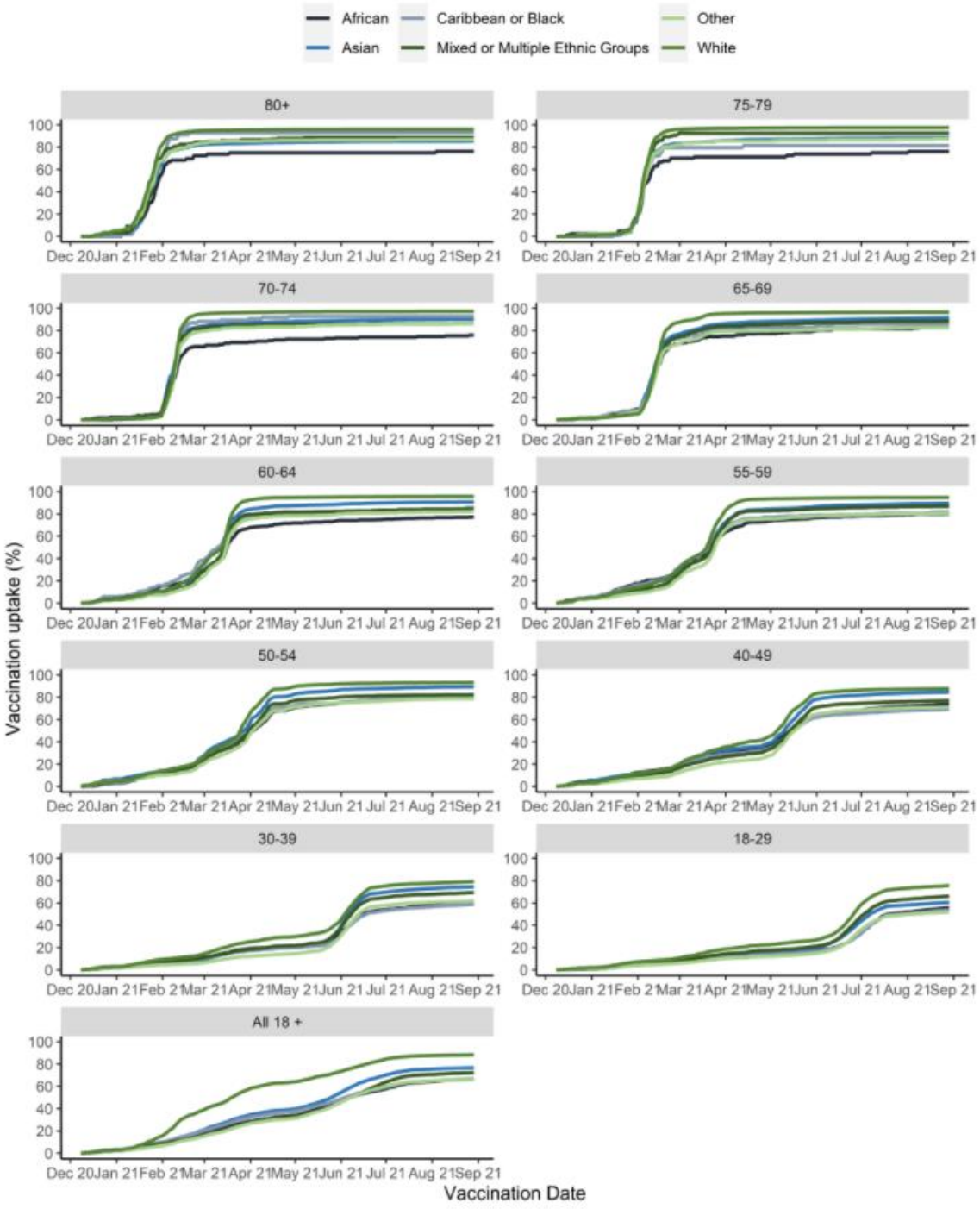


Table 20: % uptake of first dose of COVID-19 vaccination on the 1st of May 2021 and the 24th August 2021, by age group and ethnic group

Age Group	White		Mixed/ Multiple		Asian		African		Caribbean or Black		Other	
	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug
80+	95.9	96.0	88.0	88.5	84.6	85.4	75.0	76.3	93.0	93.0	86.2	87.0
75-79	97.4	97.6	92.6	92.6	87.1	88.2	71.4	76.2	81.5	81.5	85.5	87.6
70-74	96.8	97.2	85.6	86.4	88.2	90.1	72.3	75.3	92.9	92.9	83.4	86.1
65-69	96.0	96.6	85.6	88.5	88.3	91.3	77.5	83.3	83.2	85.8	80.0	82.7
60-64	94.9	95.8	81.7	84.4	87.5	90.7	71.9	77.0	81.2	85.6	78.2	81.8
55-59	93.5	94.9	82.9	86.8	84.5	89.6	73.7	80.0	77.1	81.6	75.6	80.5
50-54	89.7	93.2	77.2	82.3	83.0	89.4	70.9	79.4	73.3	80.6	71.5	78.8
40-49	45.3	87.8	33.7	76.8	39.5	84.5	37.2	73.4	34.8	69.1	28.0	71.1
30-39	29.9	78.8	21.9	69.1	20.5	74.2	21.7	59.9	20.0	58.4	14.6	61.6
18-29	22.7	75.2	17.5	65.7	16.1	60.1	14.7	55.2	13.7	53.1	12.1	51.5
18+	64.2	88.2	33.1	72.1	39.8	76.5	34.0	66.4	37.8	66.5	31.5	65.9

Figure 19 below shows vaccination uptake for 2nd dose over time by ethnic group and age group between the 8th of December 2020 and the 24th August 2021. The trends over time reflect the JCVI priorities for vaccination. For those aged 18 to 29 not all will be eligible for their second dose yet (i.e. 8 weeks since first dose), therefore the trend for this group is still increasing. For all other age groups there is a point at which uptake naturally plateaus as most people who want to get the vaccine when invited within their priority group have done so. As for dose 1, from that point onwards, there has been a continual decrease in the gap between the ethnic groups, particularly for African ethnic groups, which is indicative of some individuals in this group coming forward later (see Figure 19 and Table 21).

Figure 19: % uptake of second dose of COVID-19 vaccination between the 8th December 2020 and the 24th August 2021, by age group and ethnic group

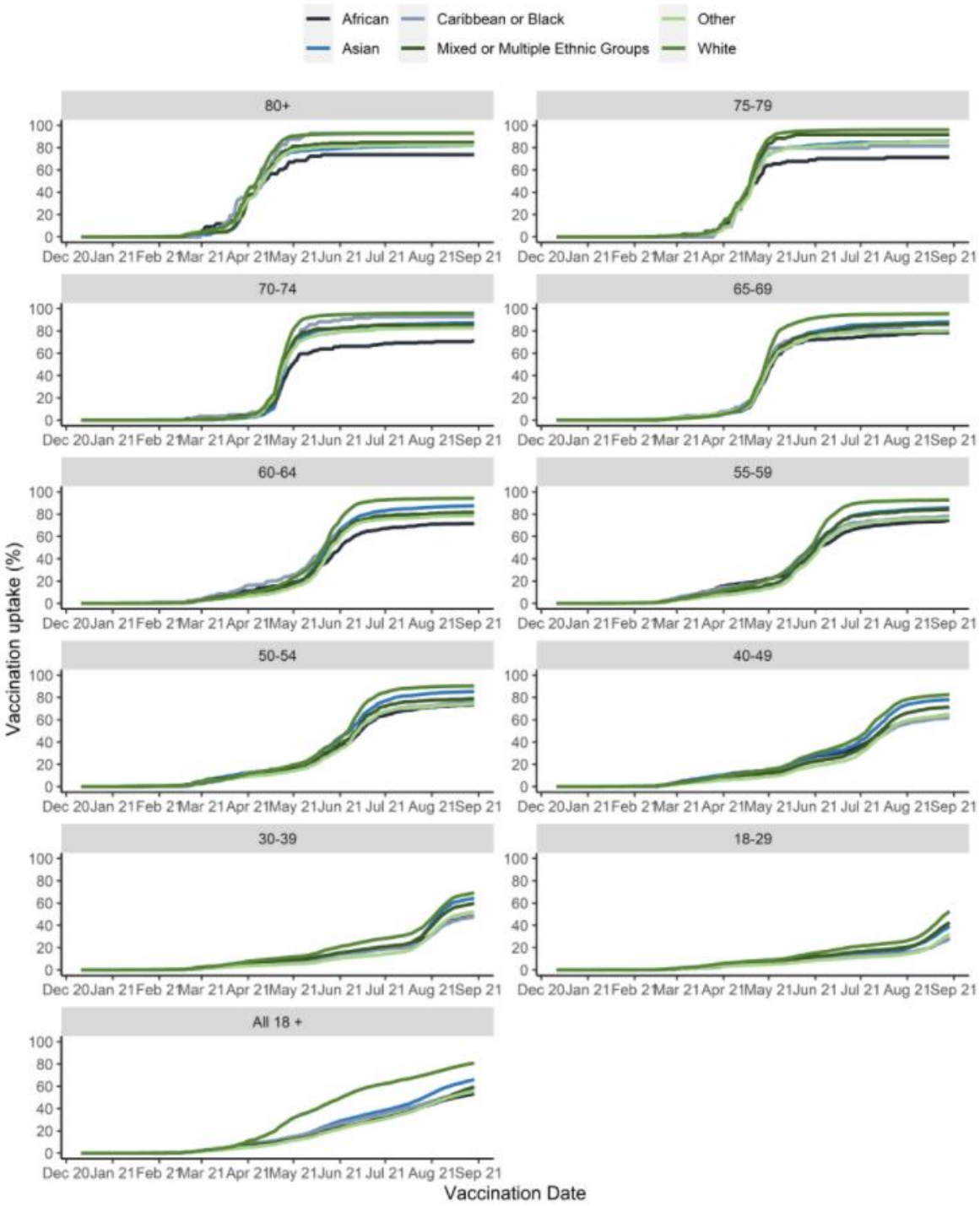


Table 21: % uptake of second dose of COVID-19 vaccination on the 1st of May 2021 and the 24th August 2021, by age group and ethnic group

Age Group	White		Mixed/ Multiple		Asian		African		Caribbean or Black		Other	
	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug	01-May	24-Aug
80+	90.6	93.0	81.4	84.7	76.3	81.9	67.1	73.7	87.7	93.0	77.9	82.2
75-79	88.1	96.1	83.5	91.7	74.1	85.5	64.3	71.4	79.6	81.5	74.7	85.1
70-74	81.4	96.0	70.0	85.6	65.5	87.1	50.6	70.5	69.4	92.9	63.9	82.7
65-69	59.9	95.3	48.9	86.3	47.8	87.9	44.6	78.6	47.1	85.8	47.4	80.1
60-64	23.0	94.2	17.9	81.5	17.4	87.4	18.6	71.5	25.5	80.3	14.7	78.5
55-59	22.0	92.7	17.1	83.9	16.3	85.6	22.3	73.7	21.5	78.0	13.5	76.4
50-54	19.7	90.3	16.2	78.8	18.1	85.3	17.3	73.0	17.8	76.0	14.2	73.8
40-49	15.5	82.2	12.4	70.9	14.0	77.8	15.0	63.8	13.4	61.1	9.1	63.7
30-39	11.7	67.8	9.1	58.4	7.2	63.2	9.1	47.2	7.7	46.5	5.4	51.1
18-29	8.9	47.1	7.2	38.1	7.3	35.1	5.5	25.0	6.0	25.2	5.0	28.0
18+	31.7	79.7	12.6	57.4	15.0	64.5	13.0	52.0	15.0	54.2	11.5	54.4

A more detailed breakdown of vaccination uptake by ethnicity, including data for individual NHS Boards, can be found in the supplementary tables accompanying this report at Covid Weekly Report.

Deprivation

Uptake of 1st dose vaccination is higher in those in the least deprived areas for all age groups compared to the most deprived areas (see Figure 20 and Table 22). For the 18+ age group there is a drop in the two least deprived deciles (deciles 9 and 10) compared to decile 8, which shows the highest uptake rate at 87.0%. The gap in uptake rates between the least and most deprived areas increases from 2.4% in the 75 to 79 age group, to 10.6% in the 40-49 age group, before it decreases to 7.4% for those aged 30-39 years and to 5.1% for those aged 18-29 years.

Figure 20: % uptake of first dose of COVID-19 vaccination as at 24th August 2021, by age group and SIMD decile

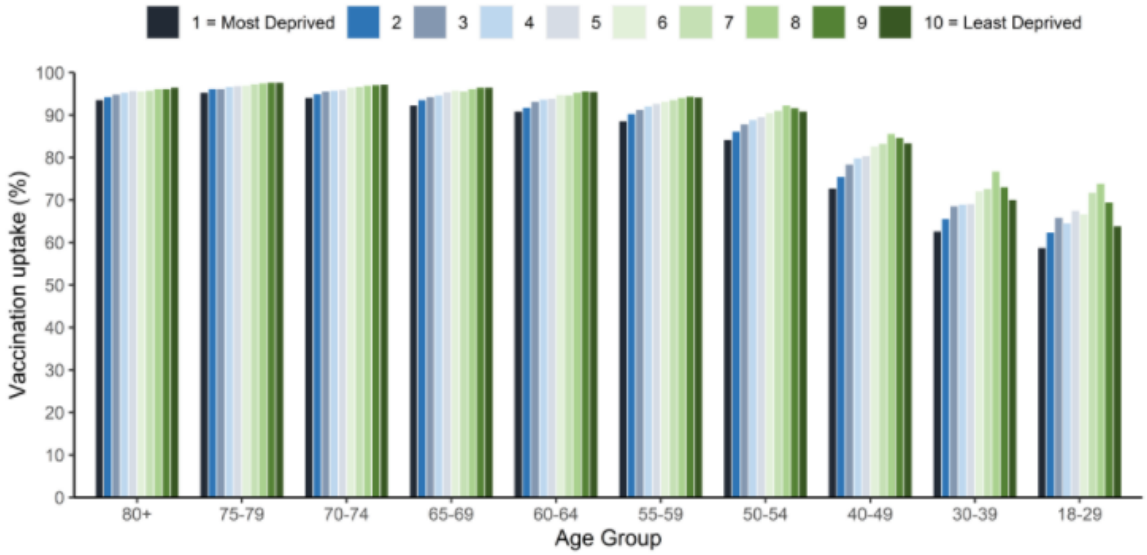


Table 22: % uptake of first dose of COVID-19 vaccination as at 24th August 2021, by age group and SIMD decile

Age Group	SIMD 1=Most Deprived	2	3	4	5	6	7	8	9	SIMD 10=Least Deprived
80+	93.5	94.2	94.8	95.2	95.6	95.5	95.7	96.1	96.1	96.4
75-79	95.2	96.1	96.1	96.6	96.8	96.9	97.2	97.4	97.6	97.6
70-74	94.0	94.9	95.5	95.7	95.9	96.4	96.6	96.9	97.0	97.1
65-69	92.2	93.5	94.2	94.6	95.3	95.7	95.5	96.1	96.4	96.4
60-64	90.8	91.7	93.1	93.6	93.8	94.7	94.6	95.2	95.5	95.4
55-59	88.5	90.2	91.2	92.0	92.6	93.1	93.5	94.0	94.3	94.1
50-54	84.1	86.1	87.8	88.8	89.5	90.4	91.0	92.2	91.6	90.8
40-49	72.7	75.4	78.3	79.8	80.3	82.6	83.2	85.5	84.6	83.3
30-39	62.6	65.5	68.5	68.9	69.0	72.0	72.6	76.7	73.0	70.0
18-29	58.7	62.3	65.8	64.5	67.4	66.6	71.7	73.8	69.4	63.8
All 18+	75.2	78.2	80.9	81.4	82.9	84.1	85.3	87.0	85.2	82.9

Uptake of 2nd dose vaccination is higher in those in the least deprived areas for all age groups compared to the most deprived areas (see Figure 21 and Table 23). For the 18+ age group there is a drop in the two least deprived deciles (deciles 9 and 10) compared to decile 8, which shows the highest uptake rate at 79.5%. The gap in uptake rates between the least and most deprived areas increases from 3.8% in the 75-79 age group, to 15.5% in the 40-49 age group, before it decreases to 11.8% for those aged 30-39 years and to 6.9% for those aged 18-29 years.

Uptake for dose 2 generally mirrors the pattern for dose 1 as it is dependent on a first dose being administered, however, not all 18-29 year olds are eligible for their second dose yet (i.e. 8 weeks since first dose).

Figure 21: % uptake of second dose of COVID-19 vaccination as at 24th August 2021, by age group and SIMD decile

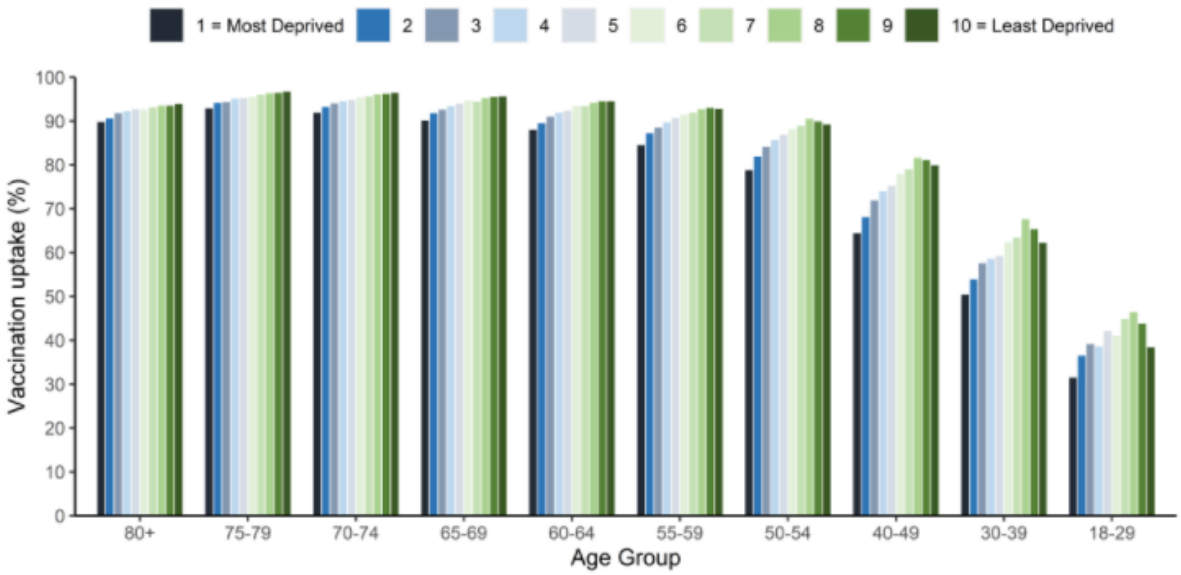


Table 23: % uptake of second dose of COVID-19 vaccination as at 24th August 2021, by age group and SIMD decile

Age Group	SIMD 1=Most Deprived	2	3	4	5	6	7	8	9	SIMD 10=Least Deprived
80+	89.8	90.6	91.8	92.2	92.7	92.6	93.1	93.5	93.5	93.9
75-79	92.9	94.1	94.3	95.1	95.2	95.5	96.0	96.3	96.4	96.7
70-74	91.9	93.2	94.0	94.5	94.8	95.3	95.6	96.1	96.2	96.4
65-69	90.1	91.8	92.6	93.4	94.0	94.7	94.4	95.2	95.5	95.6
60-64	88.0	89.5	91.0	91.9	92.3	93.4	93.4	94.1	94.5	94.5
55-59	84.5	87.2	88.5	89.7	90.7	91.4	91.9	92.7	93.0	92.8
50-54	78.8	81.9	84.1	85.7	86.9	88.1	88.9	90.5	89.9	89.2
40-49	64.4	68.1	71.9	74.0	75.2	77.9	79.0	81.6	81.1	79.9
30-39	50.4	53.9	57.6	58.6	59.2	62.4	63.4	67.6	65.3	62.2
18-29	31.5	36.5	39.1	38.6	42.1	41.1	44.9	46.4	43.8	38.4
All 18+	64.3	68.4	71.7	72.7	74.9	76.4	77.7	79.5	78.1	75.3

A more detailed breakdown of vaccination uptake by SIMD decile, including data for individual NHS Boards, can be found in the supplementary tables accompanying this report at Covid Weekly Report.

COVID-19 across the NHS

Charts for a number of measures related to COVID-19 service use in the NHS were presented in the report up until 15 July 2020. Up to date data for these measures are available to view in our interactive dashboard.

This includes:

- Number of positive confirmed cases per day and cumulative total
- Positive cases by age, sex and SIMD
- COVID-19 admissions to hospital
- COVID-19 patients admitted to ICU
- COVID19 Hub and Assessment Consultations
- COVID-19 related contacts to NHS 24 and calls to Coronavirus helpline
- SAS (Scottish Ambulance Service) Incidents related to COVID-19

Wider Impact of COVID-19

The COVID-19 pandemic has direct impacts on health as a result of illness, hospitalisations and deaths due to COVID-19. However, the pandemic also has wider impacts on health, healthcare, and health inequalities. Reasons for this may include:

- Individuals being reluctant to use health services because they do not want to burden the NHS or are anxious about the risk of infection.
- The health service delaying preventative and non-urgent care such as some screening services and planned surgery.
- Other indirect effects of interventions to control COVID-19, such as changes to employment and income, changes in access to education, social isolation, family violence and abuse, changes in the accessibility and use of food, alcohol, drugs and gambling, or changes in physical activity and transport patterns.

More detailed background information on these potential impacts is provided by the Scottish Public Health Observatory in a section on Covid-19 wider impacts.

The surveillance work stream of the Public Health Scotland social and systems recovery cell aims to provide information and intelligence on the wider impacts of COVID-19 on health, healthcare, and health inequalities that are not directly due to COVID-19. The wider impact dashboard can be viewed online and includes the following topics:

- Hospital and unscheduled care
- Healthcare for cardiovascular disease
- Healthcare for mental health
- New cancer diagnoses
- Uptake of pre-school immunisations
- Coverage of health visitor child health reviews
- Infant feeding
- Child development
- Women booking for antenatal care
- Terminations of pregnancy
- Births and babies
- Excess deaths

These analyses are based on a selected range of data sources that are available to describe changes in health service use in Scotland during the COVID-19 pandemic. More detailed information is available at NHS Board and Health and Social Care Partnership (HSCP) level.

Weekly National Seasonal Respiratory Report

Since 14 October 2020 Public Health Scotland has also published a weekly report on epidemiological information on seasonal influenza activity in Scotland. Due to COVID health care services are functioning differently now compared to previous flu seasons so the consultation rates are not directly comparable to historical data.

This is available to view here:

https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/weekly-national-seasonal-respiratory-report/

Surveillance of influenza infection is a key public health activity as it is associated with significant morbidity and mortality during the winter months, particularly in those at risk of complications of flu e.g. the elderly, those with chronic health problems and pregnant women.

The spectrum of influenza illness varies from asymptomatic illness to mild/moderate symptoms to severe complications including death. In light of the spectrum of influenza illness there is a need to have individual surveillance components which provide information on each aspect of the illness. There is no single flu surveillance component that can describe the onset, severity and impact of influenza or the success of its control measures each season across a community. To do so requires a number of complimentary surveillance components which are either specific to influenza or its control, or which are derived from data streams providing information of utility for other HPS specialities (corporate surveillance data). Together, the influenza surveillance components provide a comprehensive and coherent picture on a timely basis throughout the flu season. Please see the influenza page on the HPS website for more details.

Contact

Public Health Scotland
phs.covid19data&analytics@phs.scot

Further Information

COVID surveillance in Scotland
Scottish Government
Daily Dashboard by Public Health Scotland National Records of Scotland

UK and international COVID reports
Public Health England
European Centre for Disease Prevention and Control
WHO

The next release of this publication will be 08 September 2021.

Open data

Data from this publication is available to download from the Scottish Health and Social Care Open Data Portal.

Rate this publication

Let us know what you think about this publication via. the link at the bottom of this publication page on the PHS website.

Appendices

Appendix 1 – Background information

In late December 2019, the People's Republic of China reported an outbreak of pneumonia due to unknown cause in Wuhan City, Hubei Province.

In early January 2020, the cause of the outbreak was identified as a new coronavirus. While early cases were likely infected by an animal source in a 'wet market' in Wuhan, ongoing human-to-human transmission is now occurring.

There are a number of coronaviruses that are transmitted from human-to-human which are not of public health concern. However, COVID-19 can cause respiratory illness of varying severity.

On the 30 January 2020 the World Health Organization declared that the outbreak constitutes a Public Health Emergency of International Concern.

Extensive measures have been implemented across many countries to slow the spread of COVID-19.

Further information for the public on COVID-19 can be found on NHS Inform.

Appendix 2 – World Health Organisation (WHO) Standard for Contact Tracing and Scotland Wide Performance Reporting

Details for this standard were previously published and are available within the Weekly Covid-19 Statistical report (publication date 27 January 2021).

Appendix 3 – Hospital Admissions Notes

Hospital Admissions

RAPID(Rapid and Preliminary Inpatient Data)

COVID-19 related admissions have been identified as the following: A patient's first positive PCR test for COVID up to 14 days prior to admission to hospital, on the day of their admission or during their stay in hospital. If a patient's first positive PCR test is after their date of discharge from hospital, they are not included in the analysis.

In the data presented here, an admission is defined as a period of stay in a single hospital. There may be multiple admissions for a single patient if they have moved between locations during a continuous inpatient stay (CIS), or if they have been admitted to hospital on separate occasions.
RAPID is a daily submission of people who have been admitted and discharged to hospital. Figures are subject to change as hospital records are updated. It can take 6-8 weeks or longer before a record is finalised, particularly discharge details.

Hospital Inpatients (Scottish Government Data)
Number of patients in hospital with recently confirmed COVID-19

This measure (available from 11 September 2020 and first published 15 September 2020) includes patients who first tested positive in hospital or in the 14 days before admission. Patients stop being included after 28 days in hospital (or 28 days after first testing positive if this is after admission). Further background on this new approach is provided in this Scottish Government blog.

This is based on the number of patients in beds at 8am the day prior to reporting, with the data extract taken at 8am on the day of reporting to allow 24 hours for test results to become available. Where a patient has not yet received a positive test result they will not be included in this figure. Patients who have been in hospital for more than 28 days and still being treated for COVID-19 will stop being included in this figure after 28 days.

All patients in hospital, including in intensive care, and community, mental health and long stay hospitals are included in this figure.

Appendix 4 – RAPID Hospital Admissions

Total specimen dates may not equal reported new cases due to denotifications.
These data include admissions to acute hospitals only and do not include psychiatric or maternity/obstetrics specialties.
RAPID – Please note a three-day time lag is applied to recent records being incomplete. Data are updated daily and figures are subject to change.
Total figures for COVID-19 related admissions published by PHS are updated daily and figures are subject to change, and so total figures presented here will not match data published elsewhere.

Appendix 5 – Healthcare Worker Testing

Number of Staff not tested – declined a test
The number of staff who were offered a test and actively declined to take it.
Staff not tested for operational reasons
The number of staff who were not able to be tested for operational/capacity reasons e.g. issues with test availability, staff unable to be tested due to work pressures etc.
Number of Staff not tested for other reasons
The number of the staff present on wards in the reporting week who were not tested. They were eligible for testing (excluding those who declined and those who were not tested for operation reasons). This should be the remainder of eligible staff not recorded in the other groupings.

Appendix 6 – Contact Tracing

An **index case** is generated for each positive result with a test date on or after 28 May 2020. This includes tests derived from Scottish laboratories and from UK Government laboratories.

An **individual** is a unique person who has had a positive test. An individual can have multiple positive tests which results in multiple cases within the test and protect system. In these figures, each person is only counted once.

A **contact** may be contacted more than once if multiple positive cases list them as a contact.

Completed cases are cases which are marked as completed in the case management system, which means that all contacts have been followed up and completed. It excludes cases marked as failed, in progress or new. In the latest weeks there will be cases which are still open either because contact tracing is still underway (particularly for the latest week) or the NHS Board is still managing the case as part of an open outbreak.

Figures for **Unknown Health Board** in the ***Number of individuals and the number of primary contacts by NHS Board*** table includes individuals with no information on their Health Board of residence and from elsewhere in the UK.

While a close contact of multiple index cases within a Health Board is only counted once, please note that a contact may be included in more than one Health Board as the data is related to the positive case Health Board and a contact may have been in close contact with multiple index cases located in different Health Boards.

Figures for the most recent week are provisional and will be updated in next week's publication.
Data are extracted Sunday 29 August 2021 at 8pm. Data relate to tests up to 27 August 2021. Weekly data presented from Monday to Sunday in order to be consistent. Figures are provisional and may change as the test and protect tool is updated by contact tracers.

Individuals unable to be contacted

This information is only available for index cases that have been recorded on the CMS. The CMS went live on 22 June 2020 with NHS Boards migrating on a phased approach with all Boards using CMS from 21 July 2020. Prior to a Board migrating to CMS, data was recorded in a Simple Tracing Tool which did not give the level of granularity required to report on these measures. These data are developmental and an extensive data quality assurance exercise is underway and data may be revised in subsequent publications. Please note the methodology has changed as of 1 November 2020, a refined method has now been applied to identify unique indexes.

Contact tracers will contact index cases by telephone, and by default all close contacts will receive an automated SMS. This approach ensures high quality calls can continue to be prioritised for index cases. Even when SMS is defaulted to, in these scenarios, a number of close contacts are still telephoned, following clinical risk assessment, particularly if they are linked to complex cases. When close contacts of index cases are contacted via SMS text message, the GOV.UK Notify Service is used which means it is known if the SMS has been received by the mobile phone, not just that it has been sent. Where the SMS is not received, a contact tracer will attempt to contact the individual through other means. The case will not be marked as complete unless someone has spoken to the individual.

Not known data in the following tables

- **Time (hours) between date test sample taken (specimen date) and the positive individual being interviewed by a contact tracer (Table 6)**
- **Time (hours) between case created in CMS and the positive individual being interviewed by a contact tracer (Table 7)**
- **Time between case created in CMS to its closure, measured by the time taken to complete the final contact interview (Table 8)**

records where dates cannot be identified to calculate the difference. Data quality assurance work is taking place to improve this recording.

Data in the above tables relate to index cases recorded up to 27 August 2021. Data relates only to Monday – Friday due to completeness for the most recent week - Data are provisional and will be updated in future releases.

Appendix 7 – Quarantine Statistics

Number of people arriving in Scotland
Number of Passenger Locator Forms received, as notified to Public Health Scotland by the Home Office. Passenger Locator Forms indicate intention to travel; passengers may not have actually arrived in the UK. Multiple forms for the same traveller may also be counted

Number of people requiring to quarantine in a hotel (anywhere in the UK)
From 15 February 2021 any person arriving directly from a high risk country into the UK with a Scottish residence or any arriving directly into Scotland from a non high-risk listed country. Count is based on Passenger Locator Form data received from Home Office.

Number of people requiring to quarantine at home
From 30 June 2020 – 14 February 2021. Any persons who are required to quarantine in Scotland (all countries prior to 30 June 2020; high risk countries from 30 June 2020), adults aged 18 and over only. From 15 February 2021 this is anyone arriving from a non-high risk country and did not arrive directly into Scotland. Count is based on Passenger Locator Form data received from Home Office.

Number of people contacted by National Contact Centre (NCC)
Sample of people who are passed to NCC for follow-up to provide advice and support. Some contacts made relate to arrivals from the previous week; therefore contacts can sometimes exceed arrivals.

Up to the 23 June 2021, a sample of those individuals quarantining at home were contacted by the NCC. These calls, along with any in progress, have now been paused in order to prioritise contact tracing. Since 13 July 2021, these call have resumed.

Successful contacts made
People who were successfully contacted by NCC

Unable to contact individual
Calls could not be completed because the individual could not be contacted (invalid phone number or no response to call). Where appropriate details of individuals are passed to Police Scotland for further follow up. Includes not completed due to quarantine ending before NCC could contact individual.

Appendix 8 – Lateral Flow Device Testing

UK Gov other includes any LFD result which has come through the UK Government route (NHS Digital) which has the test site code "Other". Please note the universal offer results up to 28 July 2021 are reported via this method. From 28 July 2021 onwards, universal offer results are reported separately as Universal Offer.

The Attend An Event, High Cases In Local Area, Lives With Someone Who Is Shielding, Travel Within UK and Universal Offer categories only include data from 28 July 2021 onwards. From this date these categories are now options when entering a non-work LFD result via the UK Gov portal. Please note that it is up to the user to select the Attend An Event, High Cases In Local Area, Lives With Someone Who Is Shielding or Travel Within UK category, these are not part of any defined testing programme such us Community Testing or University Testing.

Please note bulk uploading functionality is not yet available so data is likely to be an undercount. Data will be update and revised in future publications.

Other is any result entered via the gov.uk website where "none of the above" has been selected. Please note anyone requesting a LFD test via the general population offer, will currently report their results via this category.

Those within **Unknown** in the table reporting tests by **NHS Board of Residence** (Table 12) is any test that had an invalid or missing postcode.

Appendix 9 – Data Sources and Limitations

Date of extraction and analysis

Due to delays in reporting, figures are subject to change as records are updated. A marker (greyed-out block) has been applied where data is preliminary and caution should be taken in their interpretation.

The definitions described below are being used for the purposes of evaluating the impact of the COVID-19 vaccine on COVID-19 cases, COVID-19 related acute hospital admissions and confirmed COVID-19 deaths. The numbers reported in this section use test data, accounting for potential reinfections, and may differ from other sections and elsewhere which only count the number of new COVID-19 cases.

COVID-19 PCR test results

All positive COVID-19 PCR test results and associated demographics of an individual are extracted from the Test and Protect database (Corporate data warehouse) which contains test results from ECOSS. Data included in this analysis is reported up until the Friday of the previous week. Non-Scottish residents are excluded from the dataset.

COVID-19 cases are identified as the following: An individual that has tested positive for COVID-19 by PCR. If an individual tests positive more than once, the repeat positive PCR test is only counted if

the positive PCR test is more than 90 days apart. Records with missing CHI numbers are excluded as these data cannot be linked to vaccination status.

Denominators used are based on the target population aged 18 years and over. The total number of vaccinated include a small number of under 18 year olds who are in specific priority groups. However, individuals under 18-years-old are included in the numerator.

Population data are extracted from Community Health Index (CHI) dataset representing all those currently registered with a GP practice in Scotland. These are different denominators than those in the Public Health Scotland COVID-19 Daily Dashboard and may over-estimate the population size as they will include, for example, some individuals no longer resident in Scotland.

Vaccination status:

Vaccination status for all individuals who test positive for COVID-19 by PCR is extracted from the data used to produce the PHS vaccine uptake/daily dashboard. Vaccine records include the number of doses and date of vaccination. Individuals are listed as unvaccinated if there is no vaccination record linked to their unique CHI identifier at the time of analysis. Vaccination status is taken at date of specimen for COVID-19 cases, acute hospital admissions, or death and assigned to number of doses according to the case definitions described below.

COVID-19 vaccination status is defined as per the following:

- **Unvaccinated:** An individual that has had no doses of COVID-19 vaccine and has tested positive for COVID-19 by PCR or has had one dose of COVID-19 vaccine and has tested positive less than or equal to 21 days after their 1st dose of COVID-19 vaccine.
- **Dose 1:** An individual that has had one dose of COVID-19 vaccine and has tested positive for COVID-19 by PCR more than 21 days after their 1st dose of COVID-19 vaccine or less than or equal to 14 days after their second dose of COVID-19 vaccine.
- **Dose 2:** An individual that has had two doses of COVID-19 vaccine and has tested positive for COVID-19 by PCR more than 14 days after their 2nd dose of COVID-19 vaccine.

Acute hospital admissions

Hospital admission data is extracted from the RAPID dataset at 16:00 on Monday 30 August 2021. RAPID is a daily submission of people who have been admitted and discharged to hospital. Figures are subject to change as hospital records are updated. Data included in this analysis is reported up until the Friday of the previous week.

In the data presented here, an admission is defined as a period of stay in a single hospital. If the patient has been transferred to another hospital during treatment, each transfer will create a new admission record. Therefore, there may be multiple admissions for a single patient if they have moved between locations during a continuous inpatient stay (CIS), or if they have been admitted to hospital on separate occasions.

COVID-19 related acute hospital admissions have been identified as the following: An individual that has tested positive for COVID-19 by PCR:

- Up to 14 days prior to hospital admission
- On the day of, or day following admission (if no discharge date is available)
- In between hospital admission and discharge (if there is a valid discharge date available).

Where an individual has more than one PCR positive test, positive results are only included for the first PCR positive test associated with a hospitalisation, or if the positive PCR test is more than 90 days after the previous PCR positive test that was eligible for inclusion. Using these criterion, all

records of hospitalisation occurring within 90 days of a previous positive test are excluded. Therefore, if a positive PCR test result for an individual meets these criteria for multiple hospital stays, for example, an individual is admitted twice within a week, only the earliest hospital admission is included in the analysis.

If a patient tested positive after their date of discharge from hospital, they are not included in the analysis unless they are readmitted to hospital and meet the criteria described above.

The number of reported acute hospitalisations does not take into account the reason for hospitalisation, Therefore, people that were admitted for a non-COVID-19 related reason (and tested positive upon admission) may be included and result in an overestimation of COVID-19 related acute hospitalisations.

Confirmed COVID-19 deaths Death data were extracted from the SMRA dataset at 16:00 on Wednesday 25 August 2021. Data included in this analysis is reported up until the Thursday of the previous week.

A confirmed COVID-19 related death is defined as an individual who has tested positive by PCR for SARS-CoV-2 at any time point and has COVID-19 listed as an underlying or contributory cause of death on the death certificate. Vaccine status is determined at time of most recent specimen date.