

STATISTICS

Testing data for coronavirus (COVID-19): up to 19 December 2021

Management information update on coronavirus testing up to 19 December 2021.

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Introduction

This statistical release summarises weekly coronavirus (COVID-19) testing information provided by Public Health Wales and Digital Health and Care Wales (DHCW). This includes information on the number of tests authorised through laboratories of antigen tests (including a breakdown by key worker and residents where key workers are employed), turnaround times of antigen tests, and the number of antibody tests for key workers and residents.

Tests for coronavirus (COVID-19) are categorised as either antigen tests or antibody tests. The antigen test, which is commonly known as a swab or PCR (polymerise chain reaction) test, is used to test whether a person is currently infected with coronavirus. The antibody test is used to find out whether a person has previously had the virus. Please see **quality and methodology section** for more information.

Antigen lateral flow tests are not included in this publication. If a person receives a positive result from an antigen lateral flow test they are advised to complete a PCR test which would be tested in a laboratory, this PCR test would appear in the data presented in this release. More information is available in the **background section**.

The data are taken from management information and are subject to change. They have not been subject to the same validation processes undertaken for official statistics releases. We are publishing these data to provide a weekly summary of testing activity in Wales, including tests on critical workers, residents and the timeliness of tests. This statistical release is evolving and we appreciate feedback to improve the content.

Public Health Wales (PHW) publishes a **daily surveillance dashboard** including data on authorised tests, testing episodes, positive cases, incidence and deaths due to COVID-19. This is a **weekly summary** of this

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information, plus additional detail on the number of tests on critical workers and the location that the test sample was collected and turnaround times of tests. The data in this release starts on the 18 March 2020 for daily testing data, and from the week commencing 16 March 2020 for weekly testing data (including turnaround times).

Further detail about the data in this release can be found in the **quality and methodology section** and also in our data explainer, **Understanding data on coronavirus (COVID-19) testing**. These provide further explanation on the data used, including the difference in test dates, location of test and data sources.

Main results

- Antigen lab capacity in NHS Wales laboratories was 15,167 up to 19 December 2021. This does not include capacity at UK laboratories, where some Welsh residents' samples are processed.
- As at 9am on 19 December 2021, there have been 7.34 million antigen tests authorised for Welsh residents.
- Up to the end of 19 December 2021, 100,427 antibody tests have been authorised for Welsh residents with 19,329 positive results.

In the latest week (13 to 19 December 2021):

- 92.9% of tests requiring a rapid turnaround were completed within one calendar day*
- 94.7% of community and mass testing in person tests and 93.1% of hospital tests processed in NHS Wales laboratories were authorised in one day
- 92.6% of community tests processed in non-NHS Wales laboratories were authorised in one day*
- 66.8% of tests via the organisation portal and 53.5% of home tests were authorised within one day (see **Understanding data on coronavirus**

(COVID-19) testing for more information about test location categories)

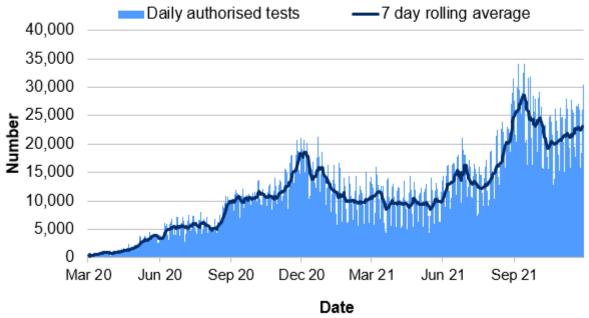
* Tests requiring a rapid turnaround time are samples collected at hospitals, community and mass testing: in person sites processed in NHS Wales laboratories and samples collected at community test centres processed in non-NHS Wales laboratories.

Antigen tests

Chart 1 shows the number of testing episodes authorised in both NHS Wales and non-NHS Wales laboratories. These figures include tests processed through laboratories outside NHS Wales, including tests for Welsh residents taken at testing centres in England, testing centres in Wales, tests ordered through the organisation portal and home testing kits.

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Chart 1: Total number of antigen testing episodes authorised through NHS Wales and non-NHS Wales laboratories up to 15 December 2021

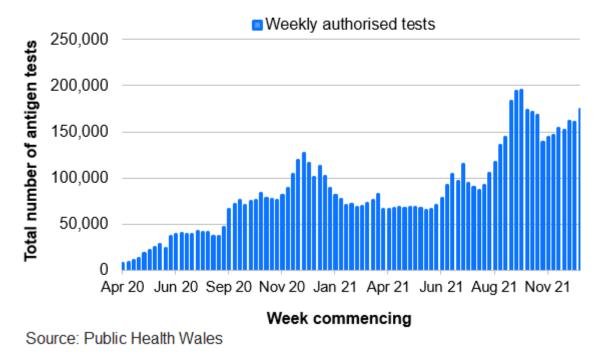


Source: Public Health Wales

Total number of antigen testing episodes through NHS Wales and non-NHS Wales laboratories at 9:00am on 19 December 2021 on Public Health Wales

Individuals may be tested more than once for COVID-19. The number of test episodes presented are calculated using a six-week episode period, with individuals who are tested multiple times in that six week period only being counted once. Any tests that occur more than six weeks after the initial test will trigger a new testing episode.

Chart 2: Total number of antigen tests authorised through NHS Wales and non-NHS Wales laboratories as at end 19 December 2021



Data available at: Number of PCR antigen tests processed by NHS-Wales laboratories and percentage processed within 1, 2 and 3 days, by week and location on StatsWales

Tests processed through non-NHS Wales laboratories increased through 2020. This is largely due to Welsh residents beginning to book tests through the organisation portal. Increases in demand is reflected in the data in September 2020, around Christmas 2020, June 2021 and the end of summer 2021.

The highest number of weekly tests authorised through NHS Wales and non-NHS Wales laboratories was in the week beginning 27 September 2021 when 195,147 tests were authorised.

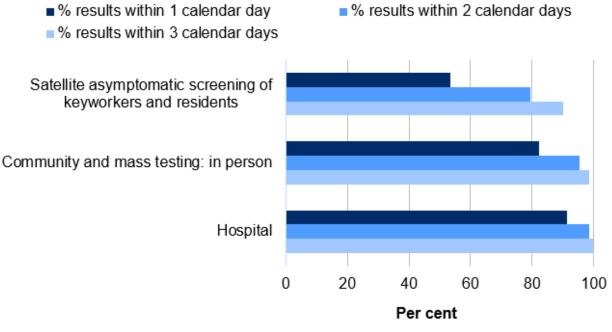
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Turnaround times for antigen tests

The figures shown are measured from the date a sample is recorded as being collected to the time the result is authorised. It does not indicate how long it takes for an individual to receive their result from point of testing.

Data on the time taken to receive a COVID-19 test result is split by testing route, as this will have an impact on the time taken to complete the test processing. Community tests have been split out by different pathways, with tests completed due to clinical need reported separately to tests completed to screen individuals who have been identified as asymptomatic key workers or residents.

Chart 3: Cumulative proportion of antigen tests authorised from NHS Wales laboratories within one, two and three calendar days as at end 19 December 2021

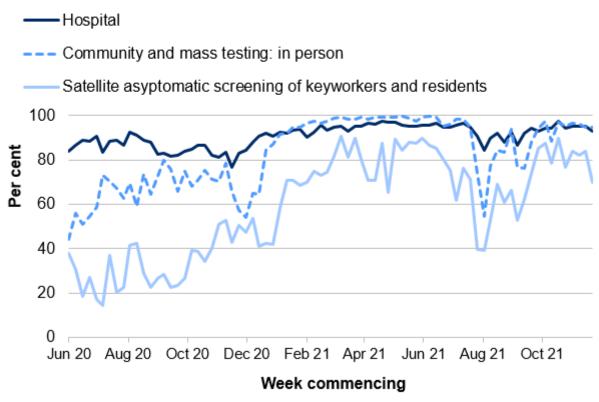


Source: Public Health Wales

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Data available at: Number of PCR antigen tests processed by NHS-Wales laboratories and percentage processed within 1, 2 and 3 days, by week and location on StatsWales

Chart 4: Proportion of antigen tests authorised in one calendar day through NHS Wales laboratories as at end 19 December 2021



Source: Public Health Wales

Data available at: Number of PCR antigen tests processed by Non NHS-Wales laboratories and percentage processed within 1, 2 and 3 days, by week and location on StatsWales

From early December 2020 to the end of January 2021, all testing routes saw an increase in the proportion of tests authorised in one calendar day. After this, the

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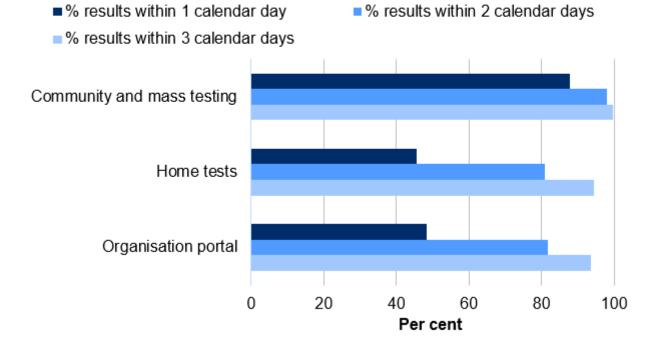
proportion has remained relatively stable across hospital and community testing routes, remaining above 90% until 15 August 2021. During this time, despite fluctuations, performance has remained above 60% for the satellite testing route.

In the week beginning 9 August 2021 there was a reduction in the proportion of tests authorised in one calendar day. In the weeks beginning 18 and 25 October 2021 the proportion of tests authorised in one calendar day returned to the higher levels seen before 9 August 2021.

In the latest week (13 to 19 December 2021):

- there have been 3,567 tests authorised for satellite asymptomatic screening of key workers and residents with 69.9% authorised within one day, a decrease of 14.2 percentage points compared to the previous week
- there have been 12,866 tests authorised as part of community and mass testing in person with 94.7% authorised within one day, similar compared to the previous week
- there have been 19,208 tests authorised at hospital with 93.1% authorised within one day, a decrease of 1.9 percentage points compared to the previous week

Chart 5: Cumulative proportion of antigen tests authorised from non-NHS Wales laboratories within one, two and three calendar days as at end 19 December 2021

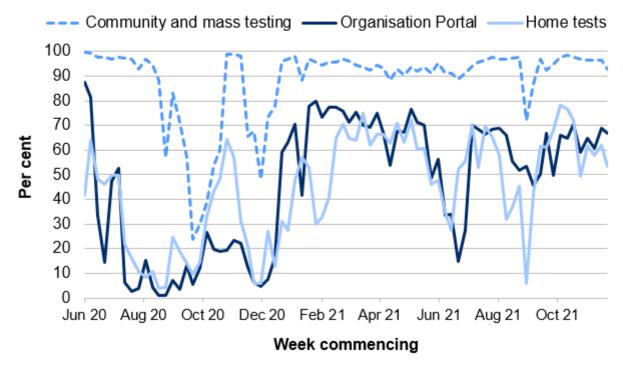


Source: Public Health Wales

Data available at: Number of PCR antigen tests processed by Non NHS-Wales laboratories and percentage processed within 1, 2 and 3 days, by week and location on StatsWales

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Chart 6: Proportion of antigen tests authorised in one calendar day through non-NHS Wales laboratories as at end 19 December 2021



Source: Public Health Wales

Data available at: Number of PCR antigen tests processed by Non NHS-Wales laboratories and percentage processed within 1, 2 and 3 days, by week and location on StatsWales

Lower rates of turnaround times can be seen between September and December 2020, in the home and organisation portal and again in June, July and September 2021. Community and mass testing has a higher turnaround rate within one calendar day, but was also lower during October to December 2020. Please note that this series can be volatile, and in particular, short term changes should be treated with caution.

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In the latest week (13 to 19 December 2021):

- there have been 23,798 organisation portal tests authorised with 66.8% authorised within one calendar day
- there have been 15,864 home tests authorised with 53.5% authorised within one calendar day
- there have been 98,195 tests authorised from community tests processed in non-NHS Wales laboratories with 92.6% authorised within one calendar day

Critical workers and residents

The current testing strategy for Wales can be found on the **Testing for coronavirus** page. The current testing policy for key workers and social care staff is to have access to twice weekly testing; this testing uses antigen lateral flow tests and is therefore not included in the data presented in this release.

Due to the lower levels of prevalence of COVID-19 in the population and the fact that the twice-weekly testing for key workers and social care staff is not included in this release, analysis on critical workers has been removed from the 12 May 2021 publication onwards. PCR test data for critical workers can be found in the accompanying **StatsWales** tables published alongside this release and all lateral flow data is published by Public Health Wales (PHW) who publish a **daily surveillance dashboard**. These two datasets alongside each other provide an overall picture of testing in critical workers. More information regarding these datasets can be found in the **background section**.

Antibody tests

COVID-19 antibody tests are used to find out whether a person has antibodies from previously being infected with coronavirus or being vaccinated. The

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antibody test works by taking a blood sample and testing for the presence of antibodies. Antibodies are produced by the body in response to an infection and can usually be found in the blood after around 2 weeks following infection.

Antibody tests may be taken for a number of different reasons. Since November 2020 the majority of the antibody tests presented in this publication are those used for diagnostic reasons. Please see **quality and methodology section** for more information

Since testing began up until the end of 19 December 2021 there have been 100,427 antibody tests in Wales, including 99 in the latest week under the current testing strategy outlined above.

Further breakdowns are provided on **StatsWales**.

Background

We are publishing these data to provide a weekly summary of testing activity in Wales, including tests on critical workers, residents and the timeliness of tests. This statistical release is evolving and we appreciate feedback to improve the content.

The underlying data that was previously published in tables 6 to 11 in the excel tables alongside this release are now available on **StatsWales**. Public Health Wales (PHW) publishes a **daily surveillance dashboard** which includes the daily data, previously published in tables 1 to 5.

The first sample processed by a non-NHS Wales laboratory for a Welsh resident was on 24 April 2020. Testing increased with the roll out of home testing on 18 May 2020.

From 13 July 2020, Public Health Wales combined tests and results processed

in NHS Wales laboratories and non-NHS Wales laboratories, which were previously reported separately.

The data in this release is based on a mixture of dates at different stages of the testing process, such as specimen date, processing date and authorised date.

Our data explainer titled **Understanding data on coronavirus (COVID-19) testing** provides further explanation on the data used including the difference in dates and data sources.

Antigen testing in labs from hospital, community mass testing and asymptomatic screening take place in NHS-Wales laboratories. Antigen testing through the organisational portal (for example care homes), the community portal and home tests take place in non NHS-Wales (lighthouse) laboratories.

There are a number of factors which can affect turnaround time for antigen tests, including delays associated with couriers and postage, delays in returning individual or organisational tests as well as processes within laboratories. Turnaround times of NHS Wales laboratories are managed by PHW and Non-NHS Wales laboratories are managed by Department of Health and Social Care (DHSC).

Community and mass testing includes samples collected at mass testing centres, community testing units and mobile testing units and pre-operative screening tests.

Antigen lateral flow tests are not included in this publication. The total number of lateral flow tests conducted on Welsh residents is published by Public Health Wales (PHW) who publishes a **daily surveillance dashboard**. This data is published weekly and contains an overview of the users of lateral flow devices by region and age group. If a person receives a positive result from an antigen lateral flow test they are advised to complete a PCR test which would be tested in a laboratory, this PCR test would appear in the data presented in this release.

This test has a higher likelihood of being positive than other tests in the data as it follows a positive lateral flow test and so this might have a small positive effect on the positivity rate of the data.

The majority of samples collected at community testing centres are processed in NHS Wales laboratories, however, a number of these may use the non-NHS Wales laboratories (known as lighthouse laboratories).

Satellite asymptomatic screening of keyworkers and residents are samples collected as part of community key worker screening programmes, such as asymptomatic tests in care homes. Although the term satellite is used, some of the screening tests of asymptomatic keyworkers or residents included in this category may be conducted in person as part of a wider mass and community testing. As testing strategy evolves this may lead to some reallocation of tests between categories.

COVID-19 antibody tests are used to find out whether a person has antibodies from previously being infected with coronavirus or being vaccinated. The antibody test works by taking a blood sample and testing for the presence of antibodies. Antibodies are produced by the body in response to an infection and can usually be found in the blood after around 2 weeks following infection.

The data presented in this release includes antibody tests conducted by Local Health Boards for diagnostic purposes in hospital settings from March 2020 onwards and antibody tests conducted by Local Health Boards in Wales for surveillance of key groups working in health, social care (including domiciliary care) and education from March 2020 to November 2020.

From November 2020 to April 2021 surveillance of domiciliary care staff was carried out by home testing, this information is not included in the data presented in this release.

The main source of antibody surveillance data is the Office for National Statistics

COVID-19 Infection Survey. The survey tests a random sample of the individuals aged 18 and over for COVID-19 antigens and antibodies on an on-going basis in order to provide a picture of the prevalence of COVID-19 in the UK population. **Results for Wales are published on a fortnightly basis by the ONS**.

Wales has opted in to the UK Government post-positive antibody testing initiative (PPATI) which launched in August 2021. The key aims are to understand how antibody levels change following an infection and how this differs by vaccination status, previous infection status and for different variants. The initiative is in its early stages and Welsh Government are working with UK Government on future publication of the findings.

The number of tests and results reflect a snapshot in time and will be greatly influenced by the sampling strategy at that moment in time. More information is available in the **Antibody testing: coronavirus (COVID-19)** pages.

During June and July 2021 there has been increasing demand on testing across the UK due to the Delta variant and this will have increased the level of samples requiring processing at the laboratories. This is likely to have contributed to lower than usual performance for turnaround times for certain testing routes with the overall turnaround times for the organisation portal and home tests being impacted but tests requiring rapid turnaround being prioritised and therefore remaining relatively stable.

In the week commencing 5 July 2021 the total number of authorised tests via the organisation portal testing route appeared lower than usual due to delays in processing and so in the week beginning 12 July 2021 the number of authorised tests via this testing route include tests that were not authorised in the previous week and so figures will appear higher than usual. In the week beginning 19 July 2021 the total number of authorised tests via the organisation portal had returned to expected levels.

In June and July 2021 some pilot test events to trial the return of audiences to

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live events require attendees to return a negative PCR test within 5 days before the event. PCR tests taken by Welsh residents attending either a Welsh pilot event or an English pilot event are included in the data presented in this release.

Stock management, requiring movement of tests between sites, and a reduced workforce at one of the largest NHS-Wales laboratories resulted in a decrease in the number of tests turned around within one calendar day from the middle of August to the beginning of September 2021.

Issues have been identified at a private laboratory based in Wolverhampton, England where incorrect test results had been issued. As a result of this, a number of people tested between 4 and 12 October were advised to re-test which may impact the figures for non-NHS Wales laboratories presented for the weeks beginning the 11 and 18 October 2021. Around 4,000 tests are estimated to be affected in Wales, more information is available in the **statement from the Minister for Health and Social Services**.

Data included in this release is correct at 23:59 on 19 December 2021 unless otherwise stated.

Quality and methodology information

Context

The data is management information which has been collected to support testing operations. We're publishing these data to provide a timely summary of testing activity but they have not undergone the same level of quality assurance as official statistics, with the data subject to future revisions. This weekly summary of COVID-19 testing information includes data from the **Public Health Wales** (PHW) daily surveillance dashboard, plus further detail on the number of tests on critical workers and the location that the test sample was collected.

This information helps to monitor the impact of COVID-19 and contribute to Wales monitoring and decision-making.

Between the weeks commencing 14 September 2020 and 12 October 2020, following changes in the source data provided by non-NHS Wales Laboratories, there were issues with allocating testing data to different pathways. This has now been resolved and a permanent solution is in place which is reflected in the data from the week commencing 19 October 2020. The interim solution used by Public Health Wales during this period was robust, therefore the data is comparable.

Reduction in turnaround times for the organisation portal from 27July 2020 were caused by capacity issues while community tests were prioritised. Improvements in laboratory processes caused an increase in turnaround times for community and home tests on the 16 November 2020.

On the evening of Friday 11 December 2020, there was planned maintenance of the Welsh Laboratory Information Management System (WLIMS), the source of the COVID-19 testing data, to allow essential service upgrades to take place. As anticipated, this affected the testing data flows from the WLIMS, therefore there was no update of the Public Health Wales (PHW) dashboard figures on Sunday 13 December 2020.

Turnaround times were effected by planned maintenance of the Welsh Laboratory Information Management System (WLIMS) system on the week beginning 7 December 2020.

On Monday 14 December 2020, figures were updated for the period of 1pm on Friday 11 to 9am on Sunday 13 December 2020, a total of 44 hours. However the data flows for tests from the WLIMS had been affected during this period.

In the week beginning the 15 December 2020 PHW changed their most recent 7 days incidence from a lag of 37 hours from sample collection date to inclusion

within this measure to 81 hours. This change allows for the inclusion of more consistently complete data and results in a more accurate figure and so we have also removed the most recent four days from our data.

As of the week commencing 12 April 2021, the Public Health Wales COVID-19 surveillance moved to a six day reporting period. This means that there is no reporting of daily figures on Saturdays (starting from Saturday 17th April). Data reported on Sundays is therefore for the 24 hour period up to 9am on Friday and the data reported on Mondays is for a 48 hour period up to 9am on Sunday. It is likely that the figures reported on Mondays are around double the usual 24 hours figure. This change does not affect the daily or weekly reporting of testing data in this release where test date is used and not date reported.

Relevance

Public Health Wales analyse patient testing data from Welsh Laboratory Information System (WLIMS) as part of their disease surveillance responsibilities. In addition, these statistics are used daily for a number of other purposes:

- to understand the impact of the COVID-19 pandemic
- to support evidence-based advice on future decisions around reviews of lockdown arrangements
- · contributions to Wales and UK wide monitoring and decision-making

Data on the time taken to receive a COVID-19 test result is split by testing route, as this will have an impact on the time taken to complete the test processing:

- home tests need to be posted and couriered to the laboratory
- screening tests in settings such as care homes may be completed in batches of tests across different staff shifts before returning the tests by courier

These methods can have an impact on the turnaround time of the test.

Screening care home tests processed by NHS Wales laboratories are included in the satellite asymptomatic screening of key workers figures.

Tests carried out as part of satellite asymptomatic screening of key workers and residents which are authorised in NHS Wales laboratories are mainly satellite tests. However, there may be a small proportion which are in person screening of key workers at testing sites. Satellite tests are when the sample is collected in a different setting other than a testing centre, for example care homes. Once the sample has been collected a courier is requested to collect the samples and deliver to a laboratory for processing. Care homes may complete batches of tests across different staff shifts before returning the tests by courier. These methods can have an impact on the turnaround time of the test with a large number of tests included in these categories being from care homes.

Although the term satellite is used, some of the screening tests of asymptomatic key workers or residents included in this category may be conducted in person as part of wider mass and community testing.

Accuracy

Public Health Wales Communicable Disease Surveillance Centre is responsible for carrying out surveillance of respiratory infections in Wales including the coronavirus (COVID-19).

Clinical data is stored in the Welsh Laboratory Information System (WLIMS), this includes COVID-19 testing data. The data is accessed and cleansed by Public Health Wales analysts, this includes removing duplicate positive cases prior to publishing the data on their daily surveillance dashboard. The data is revised on a daily basis and is classed as provisional subject to future revision. The weekly data in this release revises the most recent 13 weeks, no revisions will be given

prior to this period.

Different test dates have been used when reporting test data depending on the nature of the data and the use. For rapid surveillance (daily) data the specimen date has been used. For weekly data the authorised date has been used.

Further information can be found in our data explainer: **Understanding data on coronavirus (COVID-19) testing**.

Timeliness and punctuality

The data in this release provides data from the 18 March 2020 and onwards.

Accessibility and clarity

This statistical release has been pre-announced and then published on the **Statistics and Research section of our website**. It is accompanied by **StatsWales tables** to allow users to have direct access to the data that underlies the charts in this release.

Comparability

Weekly testing data for England: Coronavirus (COVID-19) in the UK on GOV.UK

Wales: Daily surveillance dashboard on Public Health Wales

Scotland: Coronavirus (COVID-19): daily data for Scotland on GOV.SCOT

Northern Ireland: COVID-19 - Daily Dashboard Updates on Health Northern

Ireland

Data for England and a comparison of the four nations is available on **The Department of Health and Social Care** dashboard.

The type of antigen (swab) test processed differs between Welsh and English laboratories. The type of test processed through Welsh laboratories involves a 'single dry swab' taken from the back of the throat. Tests processed through English laboratories involve 'two wet swab' sample collections taken from the nose and throat.

National Statistics status

These statistics are not National Statistics. However, as far as has been practicable, they have been collected and validated in accordance with the pillars and principles within the **Code of Practice for Statistics**. We continue to develop the data collection and quality assurance process to improve the data.

These statistics have been produced quickly in response to developing world events.

Well-being of Future Generations Act

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural wellbeing of Wales. The Act puts in place seven wellbeing goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the wellbeing goals, and (b) lay a copy of the national indicators before

Senedd Cymru. Under section 10(8) of the Well-being of Future Generations Act, where the Welsh Ministers revise the national indicators, they must as soon as reasonably practicable (a) publish the indicators as revised and (b) lay a copy of them before the Senedd. These national indicators were laid before the Senedd in 2021. The indicators laid on 14 December 2021 replace the set laid on 16 March 2016.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the **Wellbeing of Wales report**.

Further information on the Well-being of Future Generations (Wales) Act 2015.

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local wellbeing assessments and local wellbeing plans.

Next update

The next release will be on Thursday 6 January 2022.

Please note there will be no update to this release on 29 December 2021. The next update, for the week ending 2 January 2022 will be Thursday 6 January 2022. Data for the week ending Sunday 26 December 2021 will be included in the accompanying tables published alongside the release on 6 January 2022.

We want your feedback

We are considering reducing the frequency of some of the COVID-19 related statistical releases, including this publication. We welcome any comments or

feedback on how you use these releases, and any changes to them via kas.covid19@gov.wales.

Contact details

For queries about the data Statistician: Alexandra Fitzpatrick Telephone: 0300 025 9016 Email: kas.covid19@gov.wales

Media: 0300 025 8099

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