



Llywodraeth Cymru  
Welsh Government

STATISTICS

# Testing data for coronavirus (COVID-19): up to 20 December 2020

Management information update on coronavirus testing up to 20 December 2020.

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This statistical release summarises weekly coronavirus (COVID-19) testing information provided by Public Health Wales and NHS Wales Informatics Service (NWIS). 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 (such as those being used at the mass testing centres in Merthyr Tydfil) are not included in this publication. If a person receives a positive result from an antigen lateral flow test they are required to complete a standard swab antigen test which would be included in the data presented. More

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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.

On the evening of Friday 11 December, 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. On Monday 14 December, figures were updated for the period of 1pm on Friday 11 to 9am on Sunday 13, a total of 44 hours. However the data flows for tests from the WLIMS had been affected during this period. After this downtime, there was a period of data reconciliation and validation which are reflected in the figures in this publication. There may still be some small changes in numbers reported for these dates in future publications.

Public Health Wales produce a [daily surveillance dashboard](#) where users can access the most up to date information on the number of tests authorised, individuals tested (testing episodes) and positive cases.

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.

[Accompanying tables](#) for this release are available separately, including all the data shown in this release and historical data.

## 1. Main results

- Antigen lab capacity in NHS Wales laboratories was 15,167 up to 20 December 2020. This does not include capacity at UK laboratories, where some Welsh residents' samples are processed.

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- As at 9am on 20 December 2020, there have been 1.84 million antigen tests authorised for Welsh residents.
- There have been a total of 828,294 antigen tests performed on critical workers and residents where critical workers are employed in Wales.
- Up to the end of 20 December 2020, 89,428 antibody tests have been authorised for Welsh residents, with 9,774 positive results.

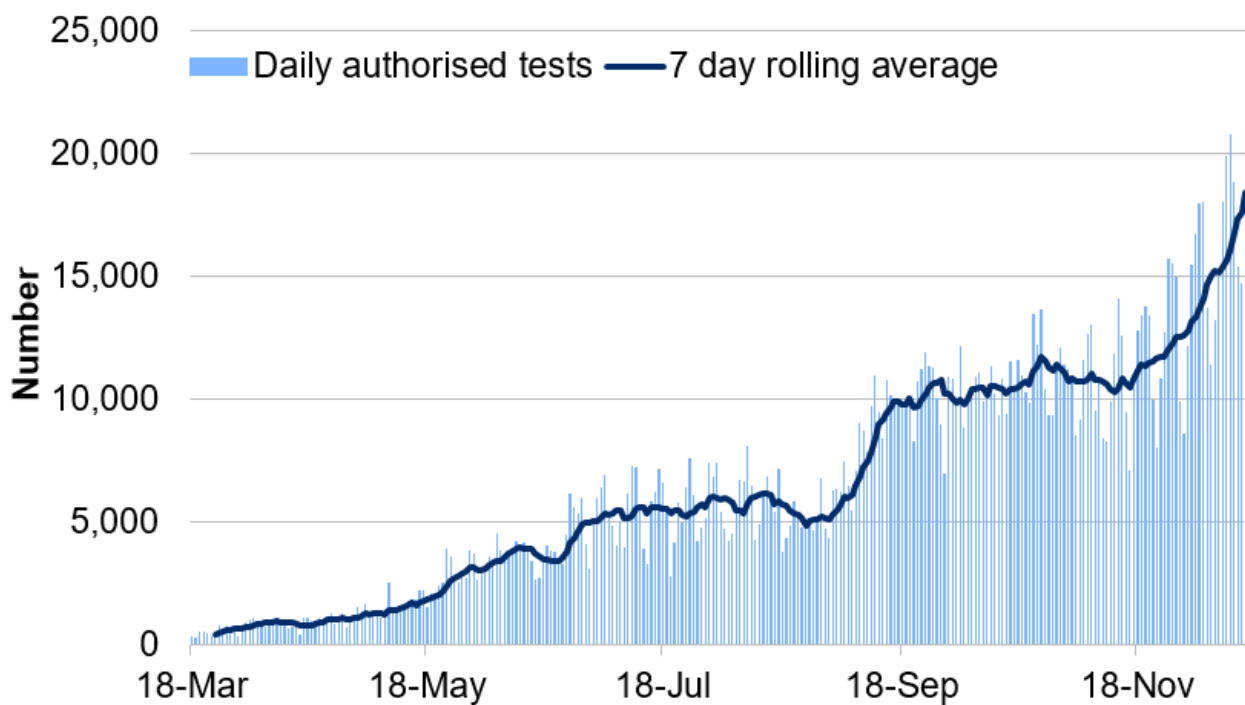
In the latest week:

- 68.1% of tests requiring a rapid turnaround were completed within one calendar day\*
- 57.3% of community and mass testing in person tests and 82.9% of hospital tests processed in NHS Wales laboratories were authorised in one day
- 67.5% of community tests processed in non-NHS Wales laboratories were authorised in one day\*
- 6.3% of tests via the organisation portal and 6.1% 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.

## 2. Antigen tests

### Chart 1: Total number of antigen tests authorised through NHS Wales and non-NHS Wales laboratories as of 20 December 2020



Source: Public Health Wales

#### Total number of antigen tests authorised through NHS Wales and non-NHS Wales laboratories at 9am on 20 December 2020 (MS Excel)

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

The first sample processed by a non-NHS Wales laboratory for a Welsh resident was on 24 April. Testing increased with the roll out of home testing on 18 May. The highest number of tests authorised in a single calendar day was on 16 December 2020, where 21,099 tests were authorised in NHS Wales and non-

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NHS Wales laboratories.

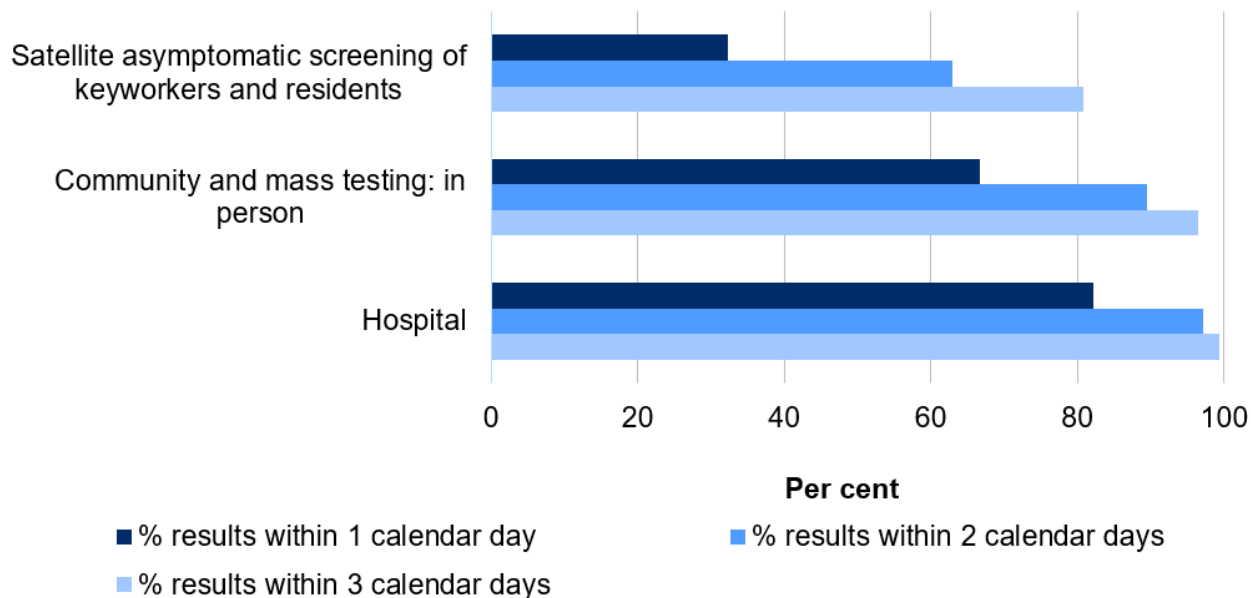
Tests processed through non-NHS Wales laboratories began to increase towards the end of June. This is largely due to Welsh residents beginning to book tests through the newly available organisation portal. In the weeks beginning 31 August and 7 September there was a large growth in the number of authorised tests, this is due to a large increase in community and organisational portal in non-NHS Wales laboratories as demand for testing increased.

## 2.1 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 2: Cumulative proportion of antigen tests authorised from NHS Wales laboratories within one, two and three calendar days as at end 20 December 2020



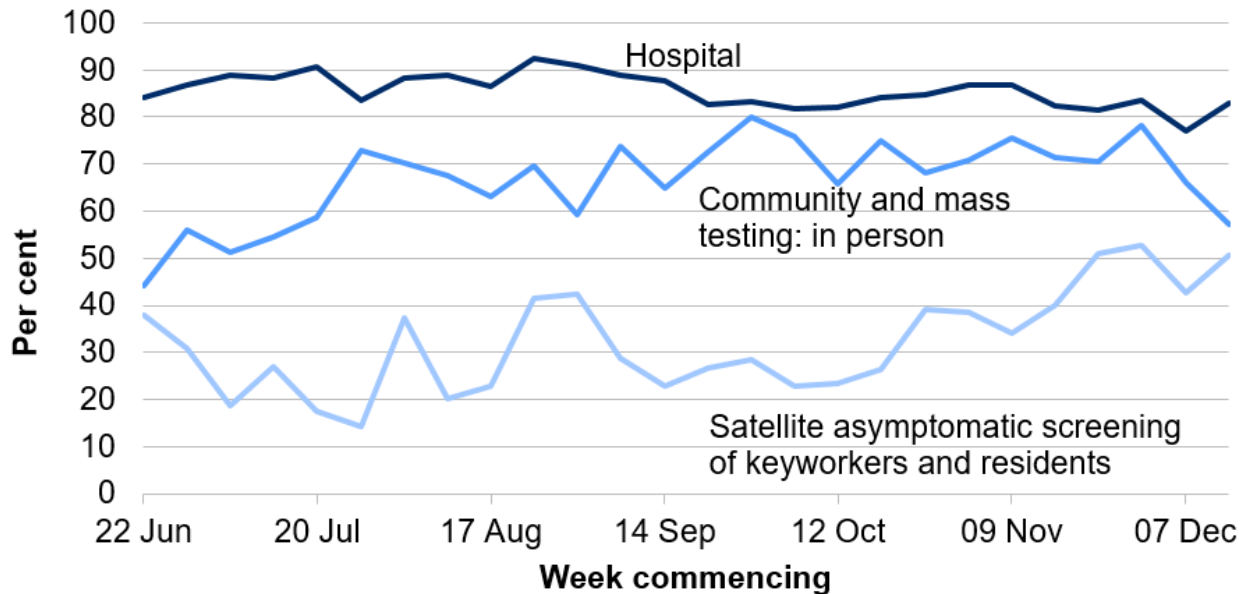
### Cumulative proportion of antigen tests authorised from NHS Wales laboratories within one, two and three calendar days as at end 20 December 2020 (MS Excel)

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### Chart 3: Proportion of antigen tests authorised in one calendar day through NHS Wales laboratories as at end 20 December 2020



Source: Public Health Wales

#### Proportion of antigen tests authorised in one calendar day through NHS Wales laboratories as at end 20 December 2020 (MS Excel)

In the latest week (14 to 20 December 2020):

- there have been 10,590 tests authorised as part of a key worker satellite asymptomatic screening programme with 50.6% authorised within one day, an increase of 7.8 percentage points compared to the previous week
- there have been 10,412 tests authorised as part of community and mass testing in person with 57.3% authorised within one day, a decrease of 8.7 percentage points compared to the previous week
- there have been 10,004 tests authorised at hospital with 82.9% authorised within one day, an increase of 5.9 percentage points compared to the previous week

In the week beginning 7 December 2020 there was a decrease of approximately 10.0 percentage points in the number of tests authorised within one calendar day compared to the previous week. This was due to planned maintenance of

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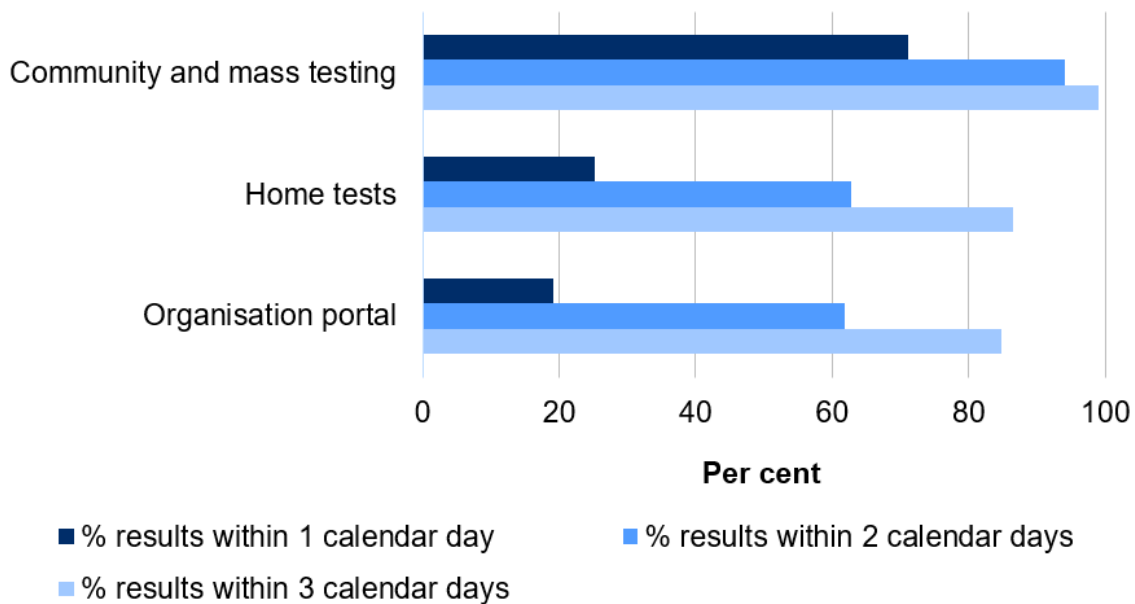
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the Welsh Laboratory Information Management System (WLIMS), the source of the COVID -19 testing data, to allow essential service upgrades to take place. This may still be causing delays in some instances.

#### **Chart 4: Cumulative proportion of antigen tests authorised from non-NHS Wales laboratories within one, two and three calendar days as at end 20 December 2020**



Source: Public Health Wales

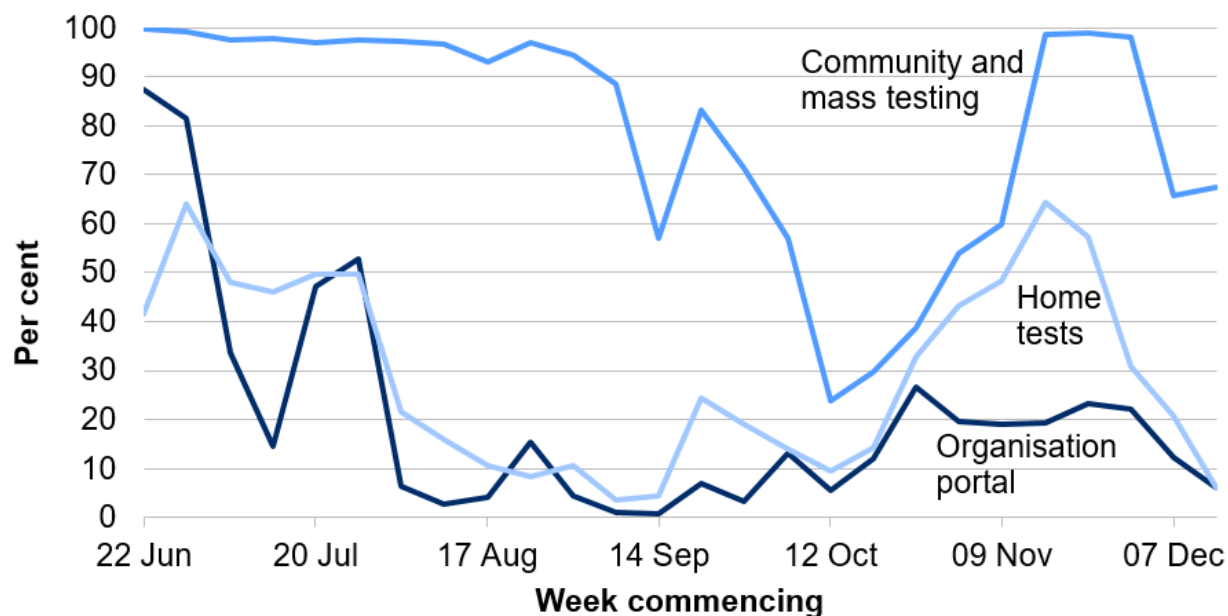
#### **Cumulative proportion of antigen tests authorised from non-NHS Wales laboratories within one, two and three calendar days as at end 20 December 2020 (MS Excel)**

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## Chart 5: Proportion of antigen tests authorised in one calendar day through non-NHS Wales laboratories as at end 20 December 2020



Source: Public Health Wales

### Proportion of antigen tests authorised in one calendar day through non-NHS Wales laboratories as at end 20 December 2020 (MS Excel)

In the latest week of available data (14 to 20 December 2020):

- there have been 24,196 organisation portal tests authorised with 6.3% authorised within one calendar day, a decrease of 6.0 percentage points compared to the previous week.
- there have been 11,628 home tests authorised with 6.1% authorised within one calendar day, a decrease of 14.8 percentage points compared to the previous week.
- there have been 58,192 tests authorised from community tests processed in non-NHS Wales laboratories with 67.5% authorised within one calendar day, an increase of 1.9 percentage points compared to the previous week.

In the week beginning 7 December 2020 there was a decrease of approximately 10.0 percentage points in the number of tests authorised within one calendar day compared to the previous week. This was due to planned maintenance of

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the Welsh Laboratory Information Management System (WLIMS), the source of the COVID-19 testing data, to allow essential service upgrades to take place.

The large increase in number of tests turned around within 24 hours for community and home tests, for week commencing 16 November, is a true reflection of the system. This improvement is mostly due to process changes in one of the lighthouse laboratories.

The reduction in turnaround times for non-NHS Wales home-tests and organisation portal from 27 July were caused by demand for repeating screening across the UK temporarily exceeding the total Lighthouse laboratory capacity, while community testing was prioritised. This resulted in temporary backlogs at the laboratories which impacted on end-to-end turnaround time for tests through these channels.

## 2.2 Critical workers and residents

The number of tests as part of satellite asymptomatic screening of key workers and residents decreased at the beginning of August coinciding with the care homes testing policy from weekly to fortnightly testing. Increases from the end of September reflects the increases in number of test with most areas having moved back to weekly testing in response to rising incidence and transmission rates.

The majority of tests for satellite asymptomatic screening of key workers and residents processed in NHS Wales laboratories are for care homes (56.1%). In the latest week 75.1% of asymptomatic screening of key workers were for care home staff. The breakdown is provided in the [accompanying data tables](#).

In the week 14 to 20 December 2020:

- around 85.7% of all tests for critical workers were performed on care home residents or care home workers
- around 15.1% of tests conducted for healthcare workers identified positive results

### 3. Antibody tests

There are two types of antibody test. Both require a blood sample and currently need to be carried out by trained staff. More information on these tests can be found on the [Welsh Government antibody testing webpages](#).

Since testing began up until the end of 13 December 2020 there have been 20,271 antibody tests for key workers or residents in education and 48,274 antibody tests for healthcare key workers. This reflects the sampling strategy of prioritising antibody testing for these key workers and residents. These data include 13,247 antibody lateral flow tests.

Further breakdowns are provided in the [accompanying data tables](#).

The type of test processed differs between Welsh and English laboratories, please see [quality and methodology section](#) for more information.

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. Currently antibody testing is only available to priority groups, more information is available in the [Antibody testing: coronavirus \(COVID-19\)](#) pages of our website.

If an antibody test is equivocal, it means that the result is inconclusive.

### 4. 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.

From 13 July, 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. Each table in the [Open Data spreadsheet](#) details the reporting timeframe.

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.

Community and mass testing includes samples collected at mass testing centres, community testing units and mobile testing units and pre-operative screening tests. It does not include lateral flow tests taken at mass testing sites.

The majority of samples collected at mass 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. Public Health Wales are conducting further work to fully understand this distinction and may lead to some reallocation of tests between categories in the future.

COVID-19 antibody tests are used to find out whether a person has previously had the virus. 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. Some local health boards are now using lateral flow tests, which are finger prick antibody tests with the sample not analysed in a laboratory.

Antibody testing is only available to priority groups at the moment with testing prioritised for a sample of school staff who have previously worked in education hubs and healthcare workers. Further explanation of antibody testing in Wales can be found on our policy pages: [Antibody testing: coronavirus \(COVID-19\)](#).

Between the weeks commencing 14 September and 12 October, 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.

Antigen lateral flow tests (such as those being used at the mass testing centres in Merthyr Tydfil) are not included in this publication. If a person receives a positive result from an antigen lateral flow test they are required to complete a standard swab antigen test which would be included in the data presented. This will result in an increase to the number of tests proportional to those attending the mass testing centre and an increase in the proportion of positive results due to the increased likelihood that a test will return a positive result.

The large increase in number of tests turned around within 24 hours for community and home tests, for week commencing 16 November, is a true reflection of the system and not a result of increases from mass testing centres.

On the evening of Friday 11 December, 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.

On Monday 14 December, figures were updated for the period of 1pm on Friday 11 to 9am on Sunday 13, a total of 44 hours. However the data flows for tests from the WLIMS had been affected during this period. After this downtime, there was a period of data reconciliation and validation which are reflected in the figures in this publication. There may still be some small changes in numbers

reported for these dates in future publications.

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.

Data included in this release is correct at 23:59 on 20 December 2020 unless otherwise stated.

## 5. 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.

### 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

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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. Further work is needed to fully understand this distinction and may lead to some reallocation of tests between categories in future releases.

## Accuracy

Public Health Wales Communicable Disease Surveillance Centre is responsible for carrying out surveillance of respiratory infections in Wales including the

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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.

Different test dates have been used when reporting test data depending on the nature of the data and the use. For rapid surveillance data the authorised test date has been used and is included in the headline figures presented by Public Health Wales, whereas for detailed surveillance over time the specimen 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 an [Open Document Spreadsheet](#) to allow users to have direct access to the data that underlies the charts in this release.

## Comparability

Public Health Wales produce a [daily surveillance dashboard](#) where users can access the most up to date information on the number of tests authorised, individuals tested (testing episodes) and positive cases.

Data for [England](#) is published on the [Coronavirus \(COVID-19\) in the UK](#)

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pages of the GOV.UK website.

Data for Scotland is published on the [Coronavirus \(COVID-19\): daily data for Scotland](#) pages of the GOV.SCOT website.

[The Department of Health and Social Care \(DHSC\)](#) also publish daily information on tests and positive cases.

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 the National Assembly. The 46 national indicators were laid in March 2016.

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Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being 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

This is currently a weekly statistical release. It will be published at 9.30am every Wednesday. We will review the frequency in line with changing user need.

Please note there will be no update to this release on 30 December 2020. The next update, for the week ending 3 January 2021 will be Wednesday 6 January 2021. Data for the week ending Sunday 27 December 2020 will be included in the accompanying tables published alongside the release on 6 January 2021.

## We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to [kas.covid19@gov.wales](mailto:kas.covid19@gov.wales).

## 6. Contact details

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Email: [kas.covid19@gov.wales](mailto:kas.covid19@gov.wales)

Media: 0300 025 8099

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