



Ein Cyf/ Our ref ATISN 14305

12 October 2020

Dear ,

ATISN 14305 – COVID-19 Stats

Thank you for your request to the Welsh Government for information under the Freedom of Information Act (2000) received on 11 September. You asked for –

- 1. How many patients are currently in Welsh hospitals having been diagnosed with COVID-19 by a doctor on the basis of clinical symptoms confirmed by lab test? Please provide a breakdown by Health Board*
- 2. How many symptomatic people have been tested in Wales in the last month?*
- 3. How many asymptomatic people have been tested in the last month?*
- 4. What is the rationale for testing asymptomatic people - what is the clinical evidence that asymptomatic people drive outbreaks?*
- 5. How many PCR amplification cycles are used to test swabs and what is the peer reviewed evidence basis for this?*
- 6. Please detail what steps are taken to eliminate both:*
 - 6.1) False positives and*
 - 6.2) Cold positives (positive results caused by shedding of non infectious viral fragments)*
- 7. In terms of total deaths attributed to Covid 19 in Wales, how many deaths were caused*
 - 7.1 solely and*
 - 7.2) primarily by symptoms of Covid 19 that were diagnosed by a doctor AND confirmed by PCR testing.*

On Q1, this information can be found at the link attached below. The Hospital admission, Hospital inpatient, and Hospital onset tabs covers cases in hospitals.

<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/> (and select Coronavirus data dashboard)

On Q2/3, Public Health Wales holds this information and therefore you are best placed contacting them regarding this particular aspect of your request. I have attached their contact details for your convenience –

Freedom of Information Office
Public Health Wales
Floor 3
2 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ
Email: foi.phw@wales.nhs.uk

On Q4, there is a great deal of clinical evidence to show that asymptomatic cases make up a significant proportion of Covid positive cases. SAGE (Scientific Advisory Group for Emergencies) have recently narrowed the estimation from between 10-80% of cases to probably less than 50% of cases, but enough of them that there is an overwhelming need to include asymptomatic individuals in considerations.

An individual who is symptomatic can know to isolate and seek a test, an asymptomatic individual cannot. Therefore there is an inherent increase in risk for an asymptomatic individual to transmit.

There are also plenty of peer reviewed papers available that show the mean period from infection to infectiousness is around 5 days. The mean period from infection to onset of symptoms is around 7 days. That implies that for many people, even if they do develop symptoms, they will be infectious and asymptomatic at some point.

As cited by the European Centre for Disease Prevention and Control (**link attached below**), asymptomatic transmission (i.e. when the infector has no symptoms throughout the course of the disease), is difficult to quantify. Available data, mainly derived from observational studies, vary in quality and seem to be prone to publication bias [34,43]. Mathematical modelling studies (not peer-reviewed) have suggested that asymptomatic individuals might be major drivers for the growth of the COVID-19 pandemic [44,45].

<https://www.ecdc.europa.eu/en/covid-19/latest-evidence/transmission>

Relating to Q5/6.1/6.2, we are only able to provide information that details Public Health Wales approach, it is important to note that all Welsh Health Boards have their own respective laboratories and may have differing responses in regards to these questions posed. For further information on these questions, may I suggest you contact Welsh Health Board organisations. I have attached a link that provides their contact details below for your convenience.

<http://www.wales.nhs.uk/ourservices/contactus/healthservicesnearyou>

On Q5, real-time PCR across most platforms is run using 45 temperature and read cycles, however the point at which the samples is defined as RNA NOT DETECTED differs by platform. All are run using manufacturer's instructions.



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On Q6.1, true false positives are caused by non-specific amplification OR contamination of the environment or system. Both of these are mitigated against by environmental monitoring and following strict good molecular laboratory practice, including designated equipment in laboratories where amplified product is generated. Non-specific amplification is mitigated against by post run validation by qualified scientific staff.

On 6.2, this cannot easily be stopped, the impact of such results are reduced by reporting all low level positives as such followed up by a repeat sample. In addition, all results should be interpreted within the clinical context of the patient including all past infection history.

On Q7, this information can be found at the link attached below. The PHW Deaths and ONS Deaths tabs cover death data.

<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/> (and select Coronavirus data dashboard)

If you are dissatisfied with the Welsh Government's handling of your request, you can ask for an internal review within 40 working days of the date of this response. Requests for an internal review should be addressed to the Welsh Government's Freedom of Information Officer at:

Information Rights Unit,
Welsh Government,
Cathays Park,
Cardiff,
CF10 3NQ

or Email: Freedom.ofinformation@gov.wales

Please remember to quote the ATISN reference number above.

You also have the right to complain to the Information Commissioner. The Information Commissioner can be contacted at:

Information Commissioner's Office,
Wycliffe House,
Water Lane,
Wilmslow,
Cheshire,
SK9 5AF.

However, please note that the Commissioner will not normally investigate a complaint until it has been through our own internal review process.

Yours sincerely,