



Coronavirus (COVID-19) Infection Survey

Results for Northern Ireland

15th July 2022

Introduction

This report is the latest in a series of weekly publications which will detail findings for Northern Ireland from the Coronavirus (COVID-19) Infection Survey (CIS). The findings set out in this report relate to the most recent week of the study up to 6th July 2022. CIS aims to estimate how many people have the infection and the number of new cases that occur over a given time as well as estimating how many people have developed antibodies to COVID-19.

The survey over time will help track the extent of infection and transmission of COVID-19 among people living in private households. The sample includes people who would not necessarily have otherwise been tested, and is intended to estimate the number of current positive cases in the community in Northern Ireland, including cases where people do not report to having any symptoms.

The Covid-19 Infection Survey is moving from a survey worker data collection method to a more flexible approach for participants, introducing a digital questionnaire, and sending swab and blood sample kits via the post. Further information on what these changes mean and how the survey will continue to be valuable can be found in the recent ONS [blog post](#).

During this period of transition, estimates of incidence and sub-regional analysis will be temporarily paused. Most recent updates for these outputs are available in the [Coronavirus \(COVID-19\) Infection Survey datasets](#). After full transition to the new digital data collection method we will reintroduce these breakdowns. Additionally, variant analysis has not been updated in this release because the majority of cases are compatible with Omicron BA.4 or BA.5 variants. Infections by variant will continue to be monitored and (after we have fully transitioned the new digital data collection method) a breakdown of infections will be introduced where appropriate.

Proportion of people in Northern Ireland who had COVID-19

During the most recent week of the study (30 June– 6 July 2022), it is estimated that 107,600 people in Northern Ireland had COVID-19 (95% credible interval: 86,900 to 129,700). This equates to 5.86% of the population (95% credible interval: 4.73% to 7.07%) or around 1 in 17 people (95% credible interval: 1 in 20 to 1 in 14). This is based on statistical modelling of the trend in rates of positive nose and throat swab results.

Modelling suggests the percentage of people testing positive continued to increase in the week ending 6 July in Northern Ireland. In the latest six-week period, there were 10,711 swab tests taken in total from 9,735 participants. Of these, 385 participants tested positive from 311 different households. In the latest two-week period, of the 3,201 participants in the study, 177 tested positive from 141 households.

Notes:

- The results in this report are provisional and subject to revision.
- As this is a household survey, the statistics refer to infections within the population living in private residential households. The figures exclude infections in hospitals, care homes and/or other communal establishments. In these settings, rates of COVID-19 infection are likely to be different.
- The estimates are based on confirmed positive test results. The remaining swabs are either negative, which are included in the analysis, or are inconclusive, which are not included in the analysis. Some swabs are test failures, which are also not included in the analysis. The impact of excluding inconclusive results on the estimates of positive infections is likely to be very small and unlikely to affect the trend.
- Ratios do not represent a person's risk of becoming infected, since risk of infection depends on a number of factors including contact with others or vaccination status. The ratios presented are rounded to the nearest 100 if over 1,000, to the nearest 10 if under 1,000, to the nearest 5 if under 100 and to 1 if under 20. This may result in credible intervals that appear to be similar to the estimated average ratio.
- The reported headline positivity estimates contain all variants of COVID-19 that were circulating at the time the data was collected.

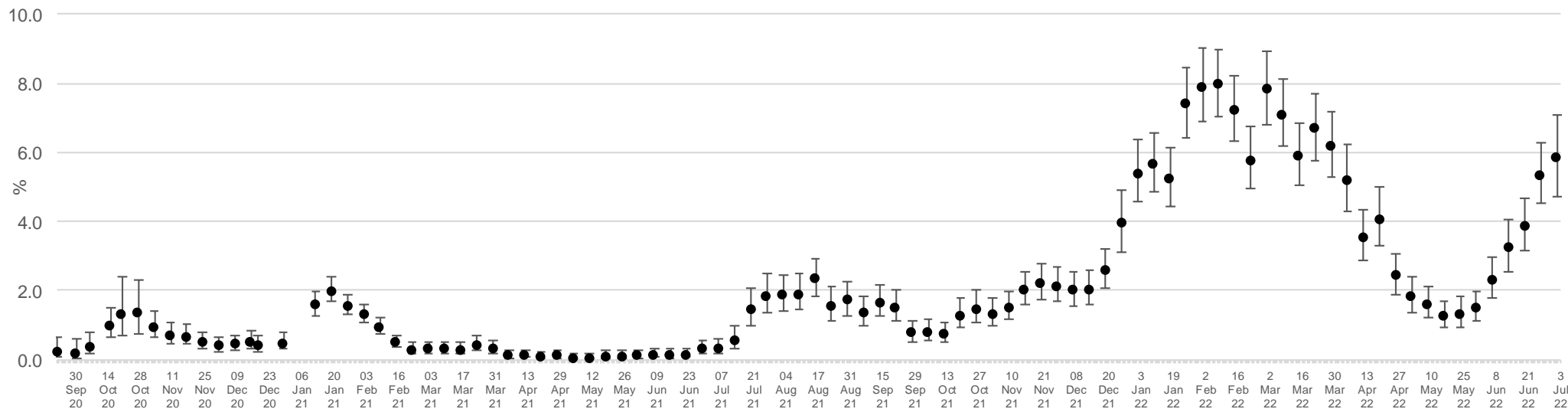
Positivity over time in Northern Ireland

Due to relatively small number of tests and low number of positives within the sample, credible intervals are wide and therefore results should be interpreted with caution.

Modelling suggests the percentage of people testing positive continued to increase in the week ending 6 July in Northern Ireland. The official estimates of the percentage of people in NI previously testing positive for COVID-19 are set out in figure 1a while the modelled trends over time in the overall population for testing positive for COVID-19, including 95% credible intervals, are shown in figure 1b (overleaf). These estimates are calculated using a regression model which adjusts the survey results to be more representative of the overall population in terms of age, sex, and region.

Figure 1a: Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) on nose and throat swabs since 24 September 2020

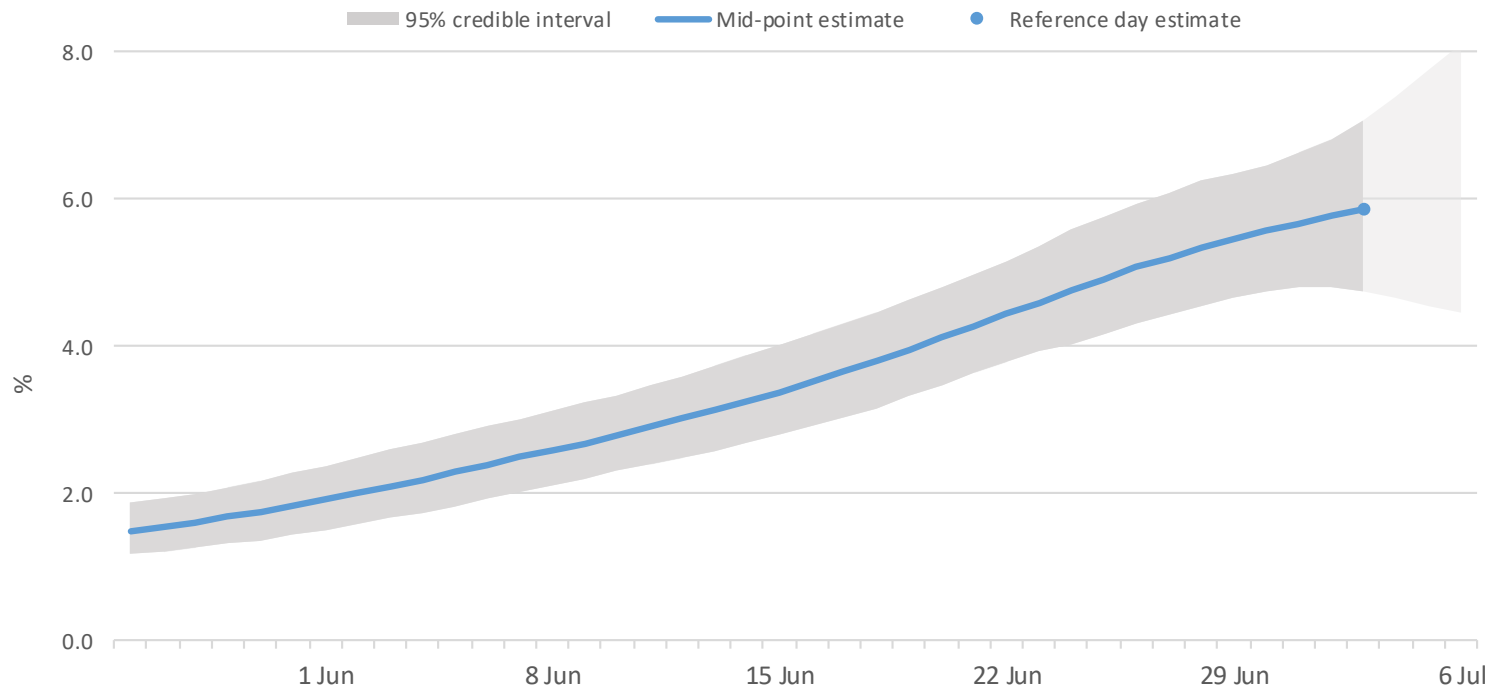
Official Estimates



The point estimates and error bars indicated on the chart represent the official estimates reported in previous weeks based on the best information and methods at each point in time.

Figure 1b:

Percentage of people testing positive for COVID-19 in Northern Ireland Modelled daily estimates



The area marked with light grey has a lower level of certainty due to lab results still being processed for this period
Data from 26 May 2022 to 6 July 2022

Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

Notes:

1. Modelled results are provisional and subject to revision.
2. All estimates are subject to uncertainty, given that a sample is only part of the wider population. Therefore, caution should be taken in over-interpreting any small movements in the latest trends. The model used to provide these estimates is a Bayesian model: these provide 95% credible intervals. A credible interval gives an indication of the uncertainty of an estimate from data analysis. The 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval. A wider interval indicates more uncertainty in the estimate. Overlapping credible intervals indicate that there may not be a true difference between two estimates.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. To improve stability in the modelling while maintaining relative timeliness of estimates, the official estimates that are reported here are based on the midpoint of the reference week.
4. Official estimates (Figure 1a) should be used to understand the positivity rate for a single point in time. This is based on the modelled estimate for the latest week and is the best and most stable estimate and is used in all previous outputs. The modelled estimate (Figure 1b) is more suited to understand the recent trend. This is because the model is regularly updated to include new test results and smooths the trend over time.

Positivity by age over time

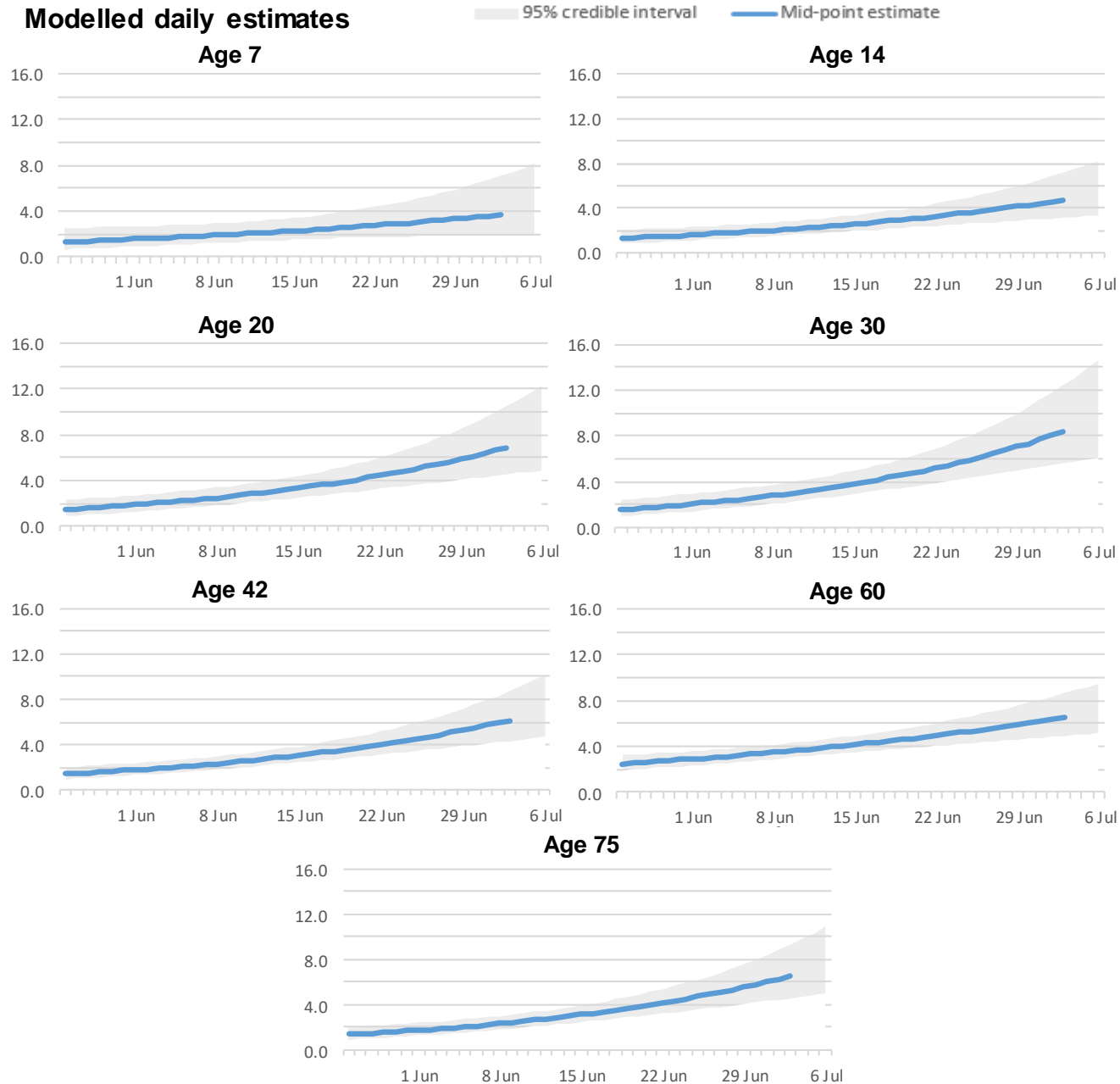
These charts present modelled positivity estimates for selected single years of age in Northern Ireland over the past 6 weeks.

In Northern Ireland, the percentage of people testing positive for COVID-19 continued to increase across all age groups in recent weeks.

It should be noted that there is high uncertainty around these trends due to the relatively smaller number of people included in this analysis, so caution should be taken in interpreting the results. In addition, caution should be taken in over-interpreting any small movements in the latest trend.

Estimates in the most recent week have a lower level of certainty due to lab results still being processed for this period.

Figure 2 – Percentage of people testing positive for COVID-19 for reference ages in Northern Ireland (Data from 26 May 2022 to 6 July 2022)



Positivity in the UK

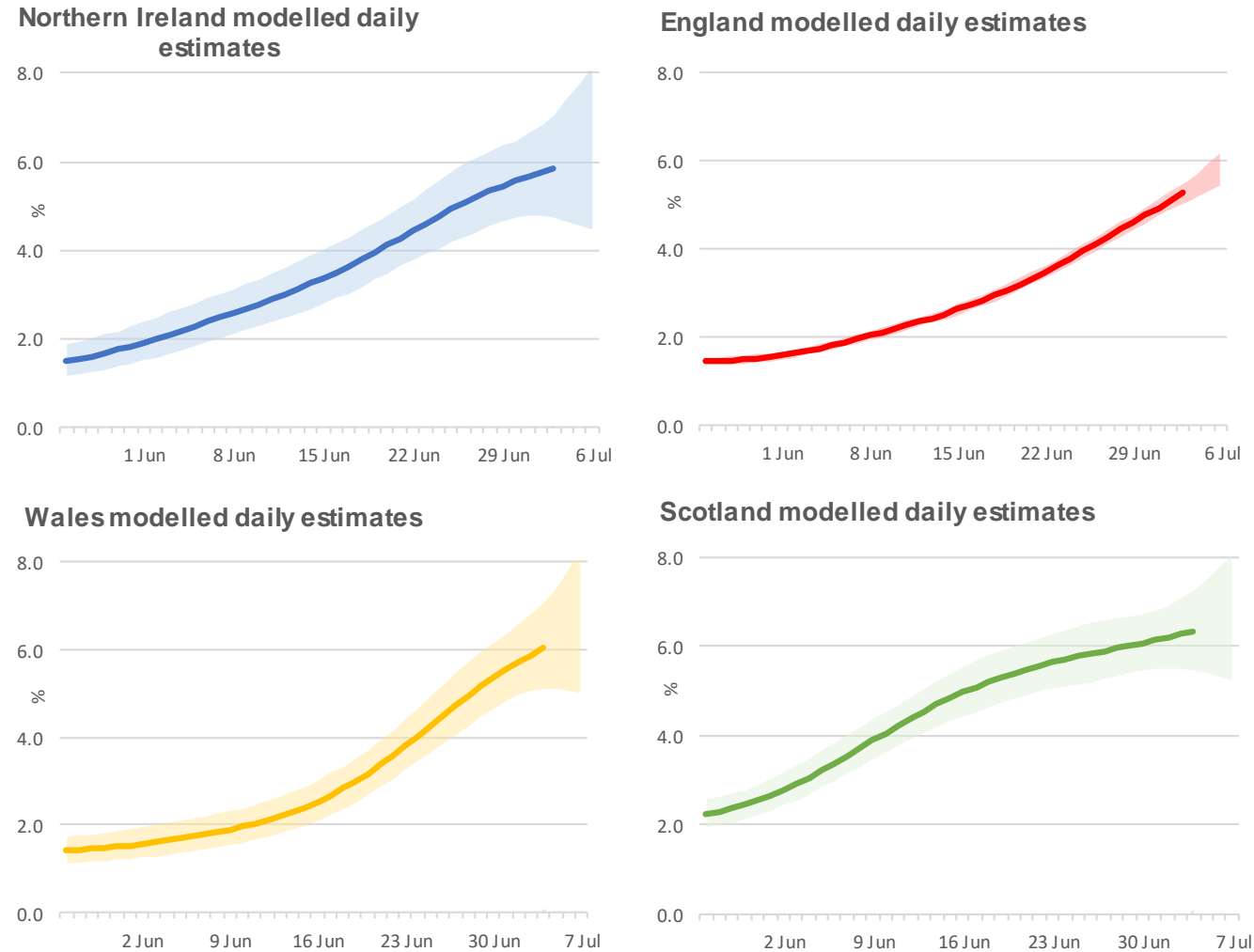
During the most recent week of the study*, based on statistical modelling of the trend in rates of positive nose and throat swab results, 5.86% of the NI population (95% credible interval: 4.73% to 7.07%) had COVID-19. It is estimated that for the same period 5.27% (95% credible interval: 5.05% to 5.49%) of the population in England had COVID-19. It was estimated that 6.04% (95% credible interval: 5.13% to 7.08%) of the population in Wales and 6.34% (95% credible interval: 5.46% to 7.26%) of people in Scotland had COVID-19.

In the most recent week*, the percentage of people testing positive for coronavirus (COVID-19) continued to increase in England, Wales, Scotland and Northern Ireland.

The reported headline positivity estimates contain all variants of COVID-19 that were circulating at the time the data was collected.

** The reference week is 30 June to 6 July 2022 and the reference day is Sunday 3 July 2022 for England, Wales and Northern Ireland. The reference week is 1 to 7 July 2022 and the reference day is Monday 4 July 2022 for Scotland.*

Figure 4a, 4b,4c, 4d: Modelled daily estimate of percentage of the population testing positive for the COVID-19 across the UK



Due to the relatively smaller number of tests in Northern Ireland, Wales and Scotland in the sample, credible intervals are wider and therefore results should be interpreted with caution. Wide credible intervals mean that differences between the central estimates within and between nations may appear smaller or more exaggerated than what they really are.

Variant Analysis

The World Health Organization (WHO) have defined names for [variants of concern](#).

Currently, the variants under surveillance in the UK are:

- Omicron, including sublineages BA.1, BA.2, BA.3, BA.4 and BA.5

The [Coronavirus \(COVID-19\) Infection Survey: technical dataset](#) includes weekly analysis of the genetic lineages of coronavirus seen in the samples that are sequenced. Of the COVID-19 positives successfully sequenced, in the latest week available (week ending 26 June 2022) 42.8% were Omicron BA.5, 37.6% were Omicron BA.2, 17.8% were Omicron BA.4 and there were no Omicron BA.1 (or its sub-lineages) sequences identified.

The genome sequencing analysis shows that almost all infections where the S-gene is not detected are now Omicron variants BA.4 and BA.5. For this reason, cases with gene patterns ORF1ab + N are now labelled as "compatible with Omicron BA.4 and BA.5 variants" in the main variant analysis, although other variants such as Omicron BA.1 may still be having a very small impact. The main variant analysis is not directly comparable with the sequence data. It measures the percentage of the population with a positive test compatible with the Omicron BA.4 and BA.5 variants or the BA.2 variant.

The Omicron variants BA.4 and BA.5 have changes in one of the three genes that the coronavirus survey swab test detects, which means the S-gene is no longer detected. When there is a high viral load (for example, when a person is most infectious), not detecting the S-gene in combination with detecting the other two genes (ORF1ab and N-genes) is a reliable indicator of the Omicron variants BA.4 and BA.5. However, as the viral load decreases (for example, if someone is near the end of their recovery from the infection), not detecting the S-gene is a less reliable indicator of these Omicron variants.

The Omicron variant BA.2 does not have changes in the S gene, and therefore all three genes, or the S-gene and either ORF1ab or N, will usually be detected in infections with this variant.

More information on how variants from positive tests on the survey are measured can be found in the ONS [Understanding COVID-19 Variants blog](#) and the [Coronavirus \(COVID-19\) Infection Survey methods article](#) provides more detail about how the virus' genetic material is sequenced.

We last published our main variant analysis in our [COVID-19 Infection Survey, Northern Ireland: Weekly Report 8th July 2022](#). This showed a very high proportion of infections compatible with the BA.4 and BA.5 variants, so we have not included a breakdown of infections by variants in this release. Infections by variant will continued to be monitored and analysis will be reintroduced when considered helpful.

Methodology

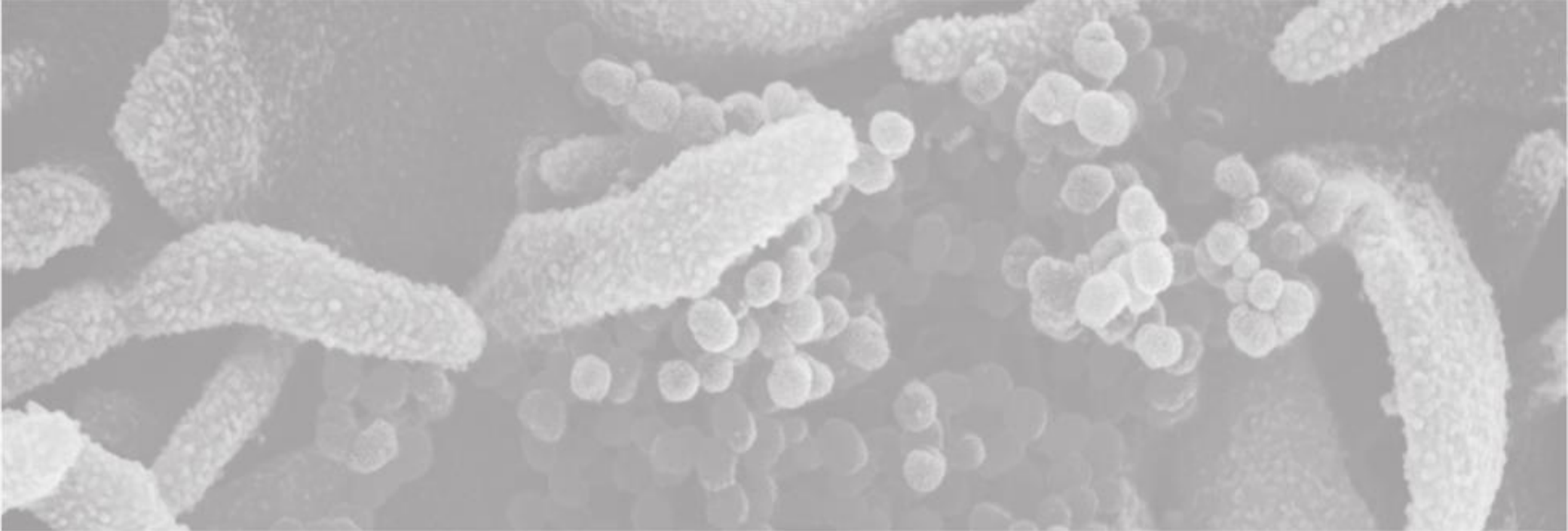
The results are based on nose and throat swabs provided by participants to the study. As well as looking at incidence overall, the survey will be used to examine the characteristics of those testing positive for COVID-19 and the extent to which those infected experience symptoms.

Extending the COVID-19 Infection Survey to Northern Ireland has been achieved by a collaboration between the Department of Health, Public Health Agency (PHA), Northern Ireland Statistics and Research Agency (NISRA) and the Office for National Statistics (ONS) and its various survey partners. Fieldwork commenced in Northern Ireland on 27th July 2020. It is important to note that there is a significant degree of uncertainty with the estimates. This is because, despite a large sample of participants, the number of positive cases identified is small. Estimates are provided with 95% confidence intervals to indicate the range within which we may be confident the true figure lies.

The results are for private households only and do not apply to those in hospitals, care homes and/or other communal establishments.

The Office for National Statistics (ONS) publishes [weekly statistical bulletins and references tables, including results for England, Wales, Scotland and Northern Ireland](#) on its website. Further detail for Northern Ireland is available in the ONS [Coronavirus \(COVID-19\) Infection Survey datasets](#).

Further information about quality and methodology can be found on the [ONS website](#).



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